THE WORLD OF LAPP

eMobility

LAPP GROUP

Welcome

Please come in and look around. Irrespective of which cable, line, plug and accessory you require for your particular application, you will find exactly what you need here. We have more than 40,000 different standard articles in stock. We also deliver within 24 or 48 hours. Special tasks demand special solutions. In this case too, you need look no further than our company. In addition to the comprehensive range of standard Lapp products, we can also offer you individual cable assemblies and the engineering involved.

You should also be aware of the following: Lapp is one of the leading international system providers. Our brands are used in the most varied of applications, branches and global markets. One of our principles states: when striving for perfection we should rely on no-one but ourselves. This is why we manufacture everything in our own production sites. We also have numerous sales companies and logistics centres around the world, which enable us to be close to our customers. We're somewhere near you too!

To contact your local Lapp Group representative please visit
www.lappgroup.com/worldwide

Source: Title/eMobility-Foto:
Sportservice Lorinser
Bosch Software Innovations GmbH
ROHDE & SCHWARZ GmbH & Co. KG

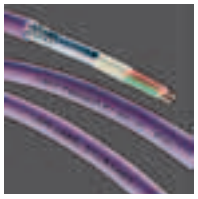
LAPP GROUP

Content

Brand quality from Stuttgart

ÖLFLEX®
Power- and control cables

The world's first brand cable is available in the most varied of versions to match maximum requirements.
Key features: Oil-resistant, flexible and available to match almost any requirement or environmental condition – also free of halogens.
Fields of application: Multipurpose. Special variants are more and more in demand in the area of renewable energies.



UNITRONIC®
Data communication systems

The ideal brand for fast, trend-setting and reliable data transfer.
Key features: UNITRONIC® are not only data lines, but also bus lines, which together with active sensor/actuator modules or gateways provide a perfect system for automation.
Fields of application: Measurement, control, regulation, bus or LAN networks.

HITRONIC®
Optical transmission systems

The brand for split-second, fault-free, intercept-free data transport.
Key features: The HITRONIC® product range includes fibre optic cables in the most varied of versions, along with suitable accessories such as splice boxes, wall distributors or couplings.
Fields of application: Office and industrial sector.

SKINTOP®
Cable glands

The brand for multipurpose cable entries in line with the following: quickly fastened, centred and hermetically sealed.
Key features: Large clamping areas, optimum strain reliefs, the most diverse of versions such as SKINTOP® CLICK, COLD or CUBE.
Fields of application: Everywhere, where cables must be fastened reliably and quickly.

SILVYN®
Protective cable conduit- and cable carrier systems

The brand for all-round cable protection.
Key features: The product range includes SILVYN® cable protection hoses for perfect protection against mechanical and chemical loads, along with SILVYN® CHAIN energy supply chains for highly-dynamic applications.
Fields of application: Everywhere that cables have to be additionally protected or routed.

EPIC®
Industrial connectors

The brand for strong and reliable connections.
Key features: Robust square and circular connectors. Flexible system consisting of housings, inserts, contacts and accessories – for every requirement, the tailor-made solution. Similarly, EPIC® SOLAR plugs for photovoltaics are also part of the extensive product range.
Fields of application: Mechanical and systems engineering, and drive technology.

ETHERLINE®
Data communication systems for ETHERNET-Technology

The brands for network solutions, safety systems and firewalls in the industrial networking sector.
Key features: Integral system consisting of hardware (switches, routers, cables, plugs etc.), software, consulting, network design and support.
Fields of application: Factory automation.

FLEXIMARK®
Cable marking products

The brand for permanent, clearly-arranged cable markings.
Key features: Comprehensive range – from manual labelling solutions onto digital identification. Withstands high chemical, thermal and mechanical loads.
Fields of application: All cable, single cores, control cabinets.

At home in Stuttgart, but known all over the world

The World of Lapp is based in Stuttgart. This is where it all started for our company, which was founded in 1959 as U.I. LAPP KG (now U.I. LAPP GmbH). From its headquarters in Stuttgart we have determinedly evolved to become a global player – with currently 15 production plants in Europe, Asia and America, 40 sales companies and more than 100 sales partners. The larger Lapp companies such as Russia, India, China, Canada and Mexico have their own warehouses The others are promptly supplied through our high-performance logistics centres. At our Lapp Centres we are also strongly committed to enhancing the knowledge of our employees and customers. After all, knowledge is the ink with which the future is written down.

One of our most successful “products” is that of proximity to our customers. On the one hand, we practice intensive dialogue with designers and planners, manufacturers and users. This enables us to identify new requirements and trends at a much earlier stage, to quickly provide you with suitable solutions. Innovation leadership put into active practice.

On the other hand, proximity to our customers really means something to us: our presence extends all round the globe. As a reliable partner on a local basis we support our customers in exploiting markets by providing them with short delivery times and low logistics costs.

Our current addresses see
www.lappgroup.com/worldwide

The Lapp Group worldwide

Algeria
EURL CABELMAT
Cité Mimouni Lotissement 18
Villa N° 14 Bordj El Kifane
Alger, Algérie 16411
Tel.: +213/21 20 10 39
Fax: +213/20 38 82 20
info@cablemat.net
www.cablemat.net

Argentina
NAKASE SRL
Calle 49 No. 5764
B1653AOX
Villa Ballester
1870 Buenos Aires
Tel.: +54 11/4 76 84 24 21 22
Fax: +54 11/4 76 84 24 21 11
gerencia@nakase.com
www.nakase.com.ar

Armenia
Integral Design ev Engineering
8 Tumanyan Street, suite 425 – 426
375002 Yerevan, Armenia
Tel.: +374 10/52 01 88
Fax: +374 10/51 91 88
info@ahbt.am
www.ahbt.am

Australia
DKSH Australia Pty Ltd.
14-17 Dansu Court Hallam
3803 Victoria, AUSTRALIEN
Tel.: +61 3/95 54 66 66
Fax: +61 3/95 54 66 77
info@dksh.com.au

Austria
Lapp Austria GmbH
Bremenstraße 8
A-4030 Linz
Tel.: +43 732/78 12 72 4 44
Fax: +43 732/78 12 72 34
sales@lappaustria.at
www.lappaustria.at

Azerbaijan
Mikhail Ali-Zade
Aga-Neymatulla Str. 47 A, apt. 6
1025 Baku
Tel.: +994 12/4 24 89 73
Fax: +994 12/4 49 92 70
ims.inc@azdata.net

Belarus
PNS „Professional Network Systems“
Temirjaseva Str. House 65 b off. 308
220035 Minsk
Tel.: +375 17/2 90 83 72
Fax: +375 17/2 54 78 28
info@pns.by
www.pns.by

Belgium – Luxembourg
Lapp Benelux B.V.
Van Dijklaan 16,
NL-5581 WG Waalre
Postbus 74 , NL-5580 AB Waalre
Tel.: +32 (0) 78 35 30 60
Fax: +32 (0) 78 35 30 65
info.lappbenelux@lappgroup.com
www.lappbenelux.com

Brazil
Cabos Lapp Brasil Ltda.
Av. Dr. Mauro Lindemberg
Monteiro, 628
Galpao 18, Osasco
CEP 06278-010 Sao Paulo
Tel.: +55 11/21 66 41 66
Fax: +55 11/21 66 41 65
vendas@lappbrasil.com.br
www.lappbrasil.com.br

Bulgaria
V&V Isomatic Ltd.
128, Yanko Sakazov blvd.
1505 Sofia
Tel.: +359/29 58 31 11
Fax: +359/29 58 22 70
v.v@techno-link.com
www.viv-isomatic.com

Canada
Lapp Canada
3505 Laird Road, Unit 10
L5L 5Y7 Mississauga, Ontario
Tel.: +905/8 20 54 92
Fax: +905/8 20 65 16
sales@lappcanada.com
www.lappcanada.com

Chile
Desimat Chile
Av. Puerto Vespucio 9670
Parque Industrial Puerto Santiago
Pudahuel, Santiago
Tel.: +56 2/5 85 12 00
Fax: +56 2/7 47 01 53
importaciones@desimat.cl
www.desimat.cl

China
Lapp Kabel Shanghai Co., Ltd.
23A Zhaofeng Universe Building
1800 Zhongshan Road West
Shanghai 200235
Tel.: +86 21/64 40 08 33
Fax: +86 21/64 40 08 34
info@lappkabel.com.cn
www.lappkabel.com.cn

Costa Rica
Elvatrón, SA
De Rapifreno en La Uruca
400 metros Nte.
San José, Costa Rica.
P.O. Box 8-3770 (1000)
Tel.: +506/22 42-99 55
Fax: +506/25 20-06 97
elvatron@elvatron.com
www.elvatron.com

Colombia
Transmisiones Ltda.
Carrera 69 B No. 21 A 48 Bodega
UE 28-9 Parque Industrial Salitre
Bogotá, D.C.
Tel.: +57 1/4 12 68 98
Fax: +57 1/31 53 31 52 21
info@transmisiones.de

Croatia
TIM KABEL
Savska cesta 103
10360 Zagreb – Sesvete
Tel.: +385 (1) 5 55 59 00
Fax: +385 (1) 5 55 59 01
zagreb@tim-kabel.hr
www.tim-kabel.hr

Cyprus
MARIOS KARANTONIS LTD
6 Pentadactilou Street, CY-2682
P.O. Box 14509, CY-2690
Paleometocho, Nicosia
info@karantonis.com.cy
www.karantonis.com.cy

Czech Republic
LAPP KABEL s.r.o.
Bartosova 315
765 02 Otrokovice
Tel.: +420/5 73 50 10 11
Fax: +420/5 73 39 46 50
info@lappgroup.cz
www.lappgroup.cz

Denmark
Miltronic
Korskildeeng 6
2670 Greve
Tel.: +45 43/95 00 00
Fax: +45 43/95 00 09
info@miltronic.dk
www.miltronic.dk

Ecuador
ELSYSTEC S.A.
Electricidad Sistemas y Tecnologia
Vasco de Contreras y
Mañosca 35-251
Quito
Tel.: +593 2/2 45 56 98
Fax: +593 2/2 45 56 98
info@elsystec.com.ec

El Salvador
INTEK EL SALVADOR S.A. de C.V.
Calle Gabriela Mistral No. 373
Entre Blvd.Los Héroes y 33 Ave. NTE,
C. A.
San Salvador, El Salvador
Tel.: +503/22 60-88 88
Fax: +503/22 60-88 55
inteksv@intek-ca.com
www.intek-ca.com

Estonia
Lapp Miltronic SIA Eesti Filiaal
Kastani pst 10
44307 Rakvere
Tel.: +372/6 51 89 70
Fax: +372/6 51 89 71
orders@lappmiltronic.lv
www.lappmiltronic.ee

Finland
EPIC®
ENERGEL OY
Atomitie 1
00370 Helsinki
Tel.: +358 9/54 07 13 13
Fax: +358 9/54 07 13 30
energel@energel.com
www.energel.com

SKS Automaatio Oy
Martinkyläntie 50
P.O. Box 122
01721 Vantaa
Tel.: +358 2/07 64 61
Fax: +358 2/07 64 68 20
automaatio@sks.fi
www.sks.fi

France
Lapp France s.a.r.l.
Technopôle Forbach-Sud BP 50084
57602 Forbach Cedex
Tel.: +33 387/84 19 29
Fax: +33 387/84 17 94
lappfrance@lappgroup.com
www.lappfrance.fr

LAPP MULLER SAS
Z.A. du Grand Pont
83310 Grimaud
Tel.: +33 494/56 65 00
Fax: +33 494/4 34 87
info@mullercables.com
www.mullercables.com

Georgia
INSTA Ltd.
8, Zakariadze str.
0177 Tbilisi
Tel.: +995 32/20 20 20
Fax: +995 32/20 20 22
sales@insta.ge
www.insta.ge

Germany
U.I. Lapp GmbH
Schulze-Delitzsch-Straße 25
70565 Stuttgart
Tel.: +49 711/78 38 01
Fax: +49 711/78 38 26 40
info@lappkabel.de
www.lappkabel.de

Lapp Systems GmbH
Oskar-Lapp-Str. 5
70565 Stuttgart
Tel.: +49 711/78 38 04
Fax: +49 711/78 38 35 20
info@lappkabel.de
www.lappkabel.de

Ghana
PROCESS AND PLANT AUTOMATION Ltd.
No. 3 Becca Villa, behind Cal Bank
Baatsona, Spintex Road.
P.O. Box Sr 95
Accra
Tel.: +233 302 812 680
ekua@automationghana.com
www.automationghana.com

Great Britain
Lapp Limited
Unit 3 Perivale Park
Horsenden Lane South
UB6 7RL Greenford Middlesex
Tel.: +44 20/87 58 78 00
Fax: +44 20/87 58 78 80
sales@lapplimited.com
www.lapplimited.com

Greece
Dimoulas Special Cables S.A.
100-102 Lenorman Str.
10444 Athens
Tel.: +30 21/05 15 76 10
Fax: +30 21/05 15 76 11
info@dimoulas.gr
www.dimoulas.gr

Guatemala
INTEK GUATEMALA, S.A.
Vía 5 y Ruta 3 4-35 Zona 4
C.P. 01004
Guatemala, GUA
Tel.: +502/23 61-59 77
Fax: +502/23 34-43 38
intekgt@intek-ca.com

Honduras
INTEK HONDURAS, S.A. DE C.V.
3ra. Ave. entre 10 y 11 calle
N.O., local #9, EDIFICIO SIKABUN,
Barrio Las Acacias
San Pedro Sula HON
Honduras, C.A.
Tel.: +504/5 50 31 16
Fax: +504/5 57 80 16
intekhn@intek-ca.com

Hong Kong
Worldtex & Co.
Unit 11, 11/F, Tins Enterprises
Centre
777 Lai Chi Kok Rd.
Cheung Sha Wan
Kowloon, Hong Kong
Tel.: +85 22/7 81 18 60
Fax: +85 22/7 81 47 33
info@worldtex-co.com.hk

Hungary
Lapp Austria GmbH m. k. k. k.
Neumann János u.1
2040 Budaörs
Tel.: +36 23/501-250
Fax: +36 23/501-259
sales@lappgroup.hu
www.lappgroup.hu

India
Lapp India Pvt. Ltd.
Plot No.98, J & K
Jigani Industrial Area, II Phase
Bangalore South – 560 105
Tel.: +91 81 10/30 48 00
Fax: +91 80 27/82 54 79
info@lappindia.com
www.lappindia.com

Indonesia
PT. JJ-LAPP CABLE INDONESIA
Graha INTI FAUZI, 7th Floor
Jl. Buncit Raya No. 22
Jakarta 12510 – Indonesia
Tel.: +62 21 27 53 70 51
Fax: +62 21 27 53 70 52
sales_jjli@jjsea.com
www.jj-lappcable.com

Island
Johan Rönning Ltd.
Klettagardar 12
104 Reykjavik
Tel.: +354 5/20 08 00
Fax: +354 5/20 08 88
ronning@ronning.is
www.ronning.is

Israel
Arrow Control Cables Ltd.
7, Zavitan street
49950 Nehalim
Tel.: +972 3/9 07 48 87
Fax: +972 3/9 07 48 89
info@arrowcables.com
www.arrowcables.com

Italy
LAPP ITALIA S.R.L.
Via Lavoratori Autobianchi 1
Building 20
20832 Desio (MB)
Tel.: +39 364/48 71
Fax: +39 362/48 7 330-340
lappitalia@lappitalia.it
www.lappitalia.it

Camuna Cavi s.r.l.
Via Lavoratori Autobianchi 1
Building 20
20832 Desio (MB)
Tel.: +39 364/77 34 11
Fax: +39 364/77 01 20
info@camunacavi.it
www.camunacavi.it
Production Site:
Via General Treboldi, 128
25048 Edolo (BS)
Tel.: +39 364/77 34 11
Fax: +39 364/77 01 20
info@camunacavi.it
www.camunacavi.it

Japan
K.Mecs Co., Ltd.
Headquarters Yusen Iwamotocho
Bldg. 3F
2-3-3 Iwamotocho, Chiyodaku
101-0032 Tokyo
Tel.: +81 3/58 25 53 33
Fax: +81 3/58 25 85 50
info@kmecs.co.jp
www.kmecs.com

Kazakhstan
SAR
Sales Area Representative
Alexandr Zemlyanoy
Tel.: +77273/28 23 46
Mob.:+7777/2 87 73 30
Alexandr.Zemlyanoy@lappgroup.kz

Korea
Lapp Korea Co., Ltd.
7F, SongWon Bldg.
92-2 Yuljun JangAn
SuWonCity, KyungGi
440-824 Korea
Tel.: +82 31/2 50 10 11
Fax: +82 31/2 50 10 19

Latvia
LAPP MILTRONIC SIA
Ulbrokas 44a
Riga, LV-1021
Tel.: +371/67 50 19 00
Fax: +371/67 50 19 09
pasutijumi@lappmiltronic.lv
www.lappmiltronic.lv

Libya
Al Jouda Co.
Al Fath – Street
Al Buraq – Building 3rd floor
Benghazi
Tel.: +218 91/7 43 33 63
ilsharee@yahoo.co.uk

Lithuania
LAPP Miltronic UAB
P. Vileisio 18N
LT-10306 Vilnius
Tel.: +370 5/2 78 03 90
Fax: +370 5/2 78 03 97
info@lappmiltronic.lt
www.lappmiltronic.lt

Macedonia
Siskon Dooel
Taskenska 4A
1000 Skopje
Tel.: +389 2/3 06 24 23
Fax: +389 2/3 06 12 50
siskon@mt.net.mk
www.siskon.com.mk

Malaysia
JJ-LAPP Cable (M) Sdn Bhd
16, Jalan 51A/225,
46100 Petaling Jaya Selangor
Tel.: +603/78 61 62 88
Fax: +603/78 61 62 99
sales_jjlm@jjsea.com
www.jj-lappcable.com

Malta
G & E Electronics Ltd.
Genics Bldgs.
Giov. Papaffy Str.
B'KARA BKR 4021
Tel.: +356 21/48 68 16
Fax: +356 21/49 71 03
info@gemalta.com
www.gemalta.com

Mexico
Lapp Mexico s de rl de C.V.
Metalurgia # 2730
Industrial El Alamo C.P.
44490 Tlaquepaque, Jalisco
Tel.: +52 33/36 66 02 50
Fax: +52 33/36 66 00 75
ventas@lappmexico.com
www.lappmexico.com

Republic of Moldova
Licuri SRL
Bd. Moskova, 20
2045 mun. Chisinau
Tel.: +37322/40 25 36, 32 94 36
Fax: +37322/40 47 77
office@licuri.md
www.licuri.md

Mongolia
MCS International Co. Ltd.
MCS Anun centera Khan-Uul
districta 3rd khoroo
Ulaanbaatar
Tel.: +976/11 34 63 63
Fax: +976/11 34 60 30
galbadrakh@mcs.mn
www.international.mcs.mn

Netherlands
Lapp Benelux B.V.
Van Dijklaan 16,
NL-5581 WG Waalre
Postbus 74 , NL-5580 AB Waalre
Tel.: +31 (0) 40 228 50 00
Fax: +31 (0) 40 228 50 10
info.lappbenelux@lappgroup.com
www.lappbenelux.com

New Zealand
Engineering Computer Services Ltd.
530 Te Rapa Road
P.O. Box 20204
Hamilton
Tel.: +64 7/8 49 22 11
Fax: +64 7/8 49 22 20
garry@lappgroup.co.nzw
www.lappgroup.co.nz

Nicaragua
EL-TEC
De la óptica Nicaraguense
3c al Este, 1/2 c al Sur
Residencial Bolonia, Managua
Tel.: +505/22 54-49 13
info@el-tec.com
www.el-tec.com

Nigeria
Penz Williams Limited
Suite 7 Canaan Mall, Plot 2
Block 105 Lekki
Lagos
Tel.: +234 8037448810
Fax: +234 84 612169
info@penzwilliams.com
www.penzwilliams.com

Norway
Miltronic AS
Eikveien 11
3036 Drammen
Tel.: +47 32/26 13 00
Fax: +47 32/2 61 39 8
info@miltronic.no
www.miltronic.no

Panamá
CONTEC PANAMA
Consultores Electrotécnicos S.A.
Vía Tocumen, Plaza Conquistador
Local # 33
Panamá
Tel.: +507/2 33 51 19
Fax: +507/2 33 60 28
gerencia@consultorestecnicos.com
www.contecpanama.com

Peru
DESIMAT PERU
Av. Velasco Astete 2371
Surco Lima Peru
Tel.: +51 1/2 75 27 65
Fax: +51 1/2 75 27 76
ventas@desimat.com.pe
www.desimat.com.pe

Philippines
JJ-LAPP Cable (P) Inc
Unit 704, Total Corporate Center
1012 Triangle Drive
Bonifacio Global City
1634 Taguig City, Manila
Tel.: +632/786 7566
Fax: +632/786 7544
sales_jjlp@jjsea.com
www.jj-lappcable.com

Poland
Lapp Kabel Sp. z o.o.
ul. Wrocławska 33 D
Długołęka, 55-095 Mirków
Tel.: +48 0 71/3 30 63 02
Fax: +48 0 71/3 30 63 06
info@lapppolska.pl
www.lappkabel.pl

Portugal
Policabos S.A.
Av. Pedro Álvares Cabral
Lugar da Capa Rota
2710-144 Sintra
Tel.: +351 21/9 17 86 40
Fax: +351 21/9 17 86 49
policabos@policabos.pt
www.policabos.pt

Rumania
COELCO TRADE
Autostrada Bucuresti-Pitesti, km 13,5
A1 ind. park Polo Occidente/Hala M
Judet ILFOF, 077096
Tel.: +40/2 13 10 09-61, -62
Fax: +40/2 13 10 09-59, -89
coelco@dnt.ro
www.coelco.ro

Russia
Lapp Russia OOO
Leninskaya St., 141
443041 Samara
Tel.: +7 846/3 73 17 17
Fax: +7 846/2 76 02 91
lapprussia@lappgroup.ru
www.lappgroup.ru

Serbia
Vesimpex d.o.o.
Petra Konjovića 12v
Poslovni centar-Rakovica, ulaz C
11090 Beograd
Tel.: +381 11/35 10-6 83
Fax: +381 11/30 57-9 47
info@vesimpex.rs
www.vesimpex.rs

Singapore
JJ-LAPP Cable (S) Pte Ltd
No.9 Tuas South St 3
Singapore 638017
Tel.: +65 65 08 62 00
Fax: +65 68 63 12 71
sales_jjls@jjsea.com
www.jj-lappcable.com

Slovakia
LAPP SLOVENSKO, s.r.o.
Piaristicka 2
949 24 Nitra
Tel.: +421/3 76 57 80 95
Fax: +421/3 76 57 80 96
info@lappgroup.sk
www.lappgroup.sk

Slovenia
FINEA TRADE d.o.o.
Limbuška cesta 2
2000 Maribor
Tel.: +386 2/4 21 35 55
Fax: +386 2/4 21 35 71
elektro@finea-trade.si
www.finea-trade.si

South Africa
Lapp Group Southern Africa
51 Brunton Circle
Founders View South
Modderfontein
1645 Gauteng
Tel: +27 11/2 01 32 00
Fax: +27 11/6 09 58 50
info@lappkabel.co.za
www.lappcable.co.za

Spain
Lapp Kabel España, S.L.U.
Avda. de les Garrigues, 34-36
Parque Empresarial Mas Blau II
Nave 1
E-08820 El Prat de Llobregat
(Barcelona)
Tel.: +34 902/10 86 69
Fax: +34 93/4 79 62 72
info@lappkabel.es
www.lappkabel.es

Sweden
Miltronic AB
Kungshagsvägen 7
P.O. Box 1022
611 29 Nyköping
Tel.: +46 155/7 77 00
Fax: +46 155/7 77 01
info@miltronic.se
www.miltronic.se

Fleximark AB
Kungshagsvägen 9
P.O. Box 1022
61129 Nyköping
Tel.: +46 15/57 77 90
Fax: +46 15/57 77 91
info@fleximark.se
www.fleximark.se

Switzerland
EPIC®
Bachofen AG
Ackerstraße 42
8610 Uster
Tel.: +41 44/9 44 11 11
Fax: +41 44/9 44 12 33
info@bachofen.ch
www.bachofen.ch

Volland AG
Ifangstrasse 103
8153 Rümlang
Tel.: +41 4 48 17 97 97
Fax: +41 4 48 17 97 00
info@volland.ch
www.volland.ch

Taiwan
DKSH Taiwan Ltd.
10th Floor, No. 22, Lane 407
Tiding Blvd., Sec. 2
Neihu Technology Park
Taipei City 114-93, Taiwan, R.O.C.
Tel.: +886 2/87 52 76 51
Fax: +886 2/87 51 86 88
paul.lin@dksh.com

Thailand
JJ-LAPP Cable (T) Ltd
23/110-117 Sorachai Building
25-29th FL
Soi Sukhumvit 63 (Ekamai),
Sukhumvit Road, Klongton Nua,
Wattana, Bangkok 10110
Tel.: +66 27 87 82 88
Fax: +66 27 87 82 99
sales_jjlt@jjsea.com
www.jj-lappcable.com

Turkey
LAPP KABLO San.ve.Tic.Ltd.Şti.
Atatürk Bulvarı
Ayanoğlu İş Merkezi No: 1
34758 Ataşehir – Istanbul
Tel.: +90 216/4 56 56 99
Fax: +90 216/4 56 56-87, -89
info@lapp.com.tr
www.lapp.com.tr

Ukraine
Lapp Ukraine LLC
201 – 203, Kharkivske shose
02121 Kiev
Tel.: +38 044/4 95-60 00
Fax: +38 044/4 90-76 30
info@lappukraine.com
www.lappukraine.com

United Arab Emirates
LAPP Cables Middle East FZE
HQ Building A-502
Dubai Silicon Oasis
P.O. Box 341223
Tel.: +971 4/8 86 07 44
Fax: +971 4/8 86 07 42
lappme@lappgroup.com
www.lappgroup.com

Uruguay
Reprinter LTDA.
Avda. Italia 6481
Montevideo
Tel.: +598/26 00-73 43
Fax: +598/26 00-86 58
reprinter@multi.com.uy
www.reprinter.com.uy

USA
Lapp USA, Inc.
29 Hanover Road
Florham Park, NJ 07932
Tel.: +1 973 660 9700
Fax: +1 973 660 9330
sales@lappusa.com
www.lappusa.com

Lapp Tannehill, Inc.
8675 Eagle Creek Parkway Suite 900
Savage, MN 55378
Tel.: +1 952/8 81 67 00
Fax: +1 952/8 81 07 43
sales@lapptannehill.com
www.lapptannehill.com

Uzbekistan
Elektro-Potential LLC
2b, G. Mavlyanov str. off. 311
100084 Tashkent
Tel.: +99 898/3 00 38 21
Fax: +99 871/1 24 92 86
mz1958@yandex.ru

Venezuela
Somerinca C.A.
3era Transversal Dos Caminos
Quinta Corazon de Jesús
1070 Caracas
Tel.: +58 212/2 37 30 03
Fax: +58 212/2 39 93 41
klocmoeller@cantv.net

Vietnam
Jebsen & Jessen Vietnam Co., Ltd
(JJ-Lapp Cable Division)
Sailing Tower, Unit 1206, 12 floor,
111A, Pasteur Street, District 1
Ho Chi Minh City, Vietnam
Tel.: +848/35 20 34 11
Fax: +848/38 27 26 77
sales_jjlv@jjsea.com
www.jj-lappcable.com

Welcome to the client specialist

Sometimes, more than 40,000 standard articles are just not enough. With Lapp Systems you have a specialist within the Lapp Group on hand for customer-specific assembly of cable and line systems, spiral special cables, power carrying systems and special applications with and without coating.

Cable and line systems

- Complete cable sets for mechanical & systems engineering, commercial-vehicle industry and lots more
- Prewired switching units for electronic and control systems
- Assembled single wires
- Ready-to-install connecting cables with special connectors
- Assembled optical fibres
- High-temperature cables with temperature-resistant special connectors

Spiral cables

- For trucks as supply and EBS/ABS coils
- As standard lines
- Made of lines specially assembled for the customer
- Spiral hoses with single wires and lines
- Special versions in cone shape

Energy supply systems

- Ready-to-install energy supply systems in plastic or metal versions. Also with hydraulic and pneumatic lines or mechanical joining technology

Special applications

- Wiring systems for robot applications
- Conductive fabric cable for energy and data systems

Recharge with LAPP CHARGE

New environmentally-friendly mobility concepts, particularly eMobility (hybrid and pure electric vehicles), are a megatrend. It is likely that a global mass market will develop within a few years – with completely new demands being made on vehicle wiring.

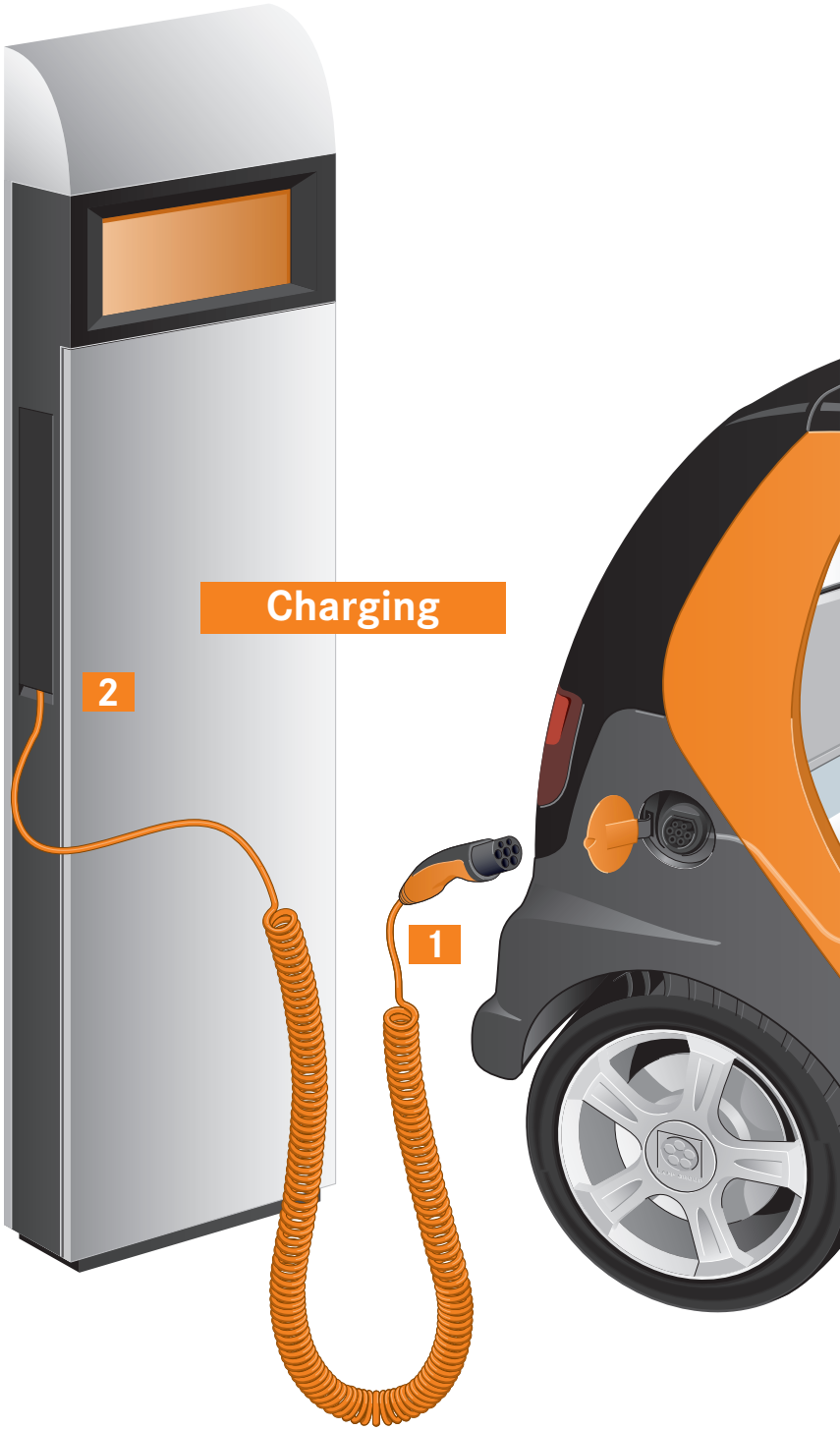
The Lapp Group can be considered a pioneer in eMobility: the Lapp Group was one of the first companies to develop a complete, production-ready charging system with cables and a connection system - its LAPP CHARGE product meets all common safety standards. Its design and colour can be modified to suit a customer's requirements. Drivers of electric and hybrid vehicles are won over by the pleasing, user-friendly design of this charging system.

Customised connectors for electromobility

In addition to products for the charging infrastructure, Lapp also supplies high-voltage cabling for the next generation of vehicles. These high-voltage cables are used in the vehicle interior and can be customised using different connection technologies. Lapp also has its own patented connection solution for use in this sector.

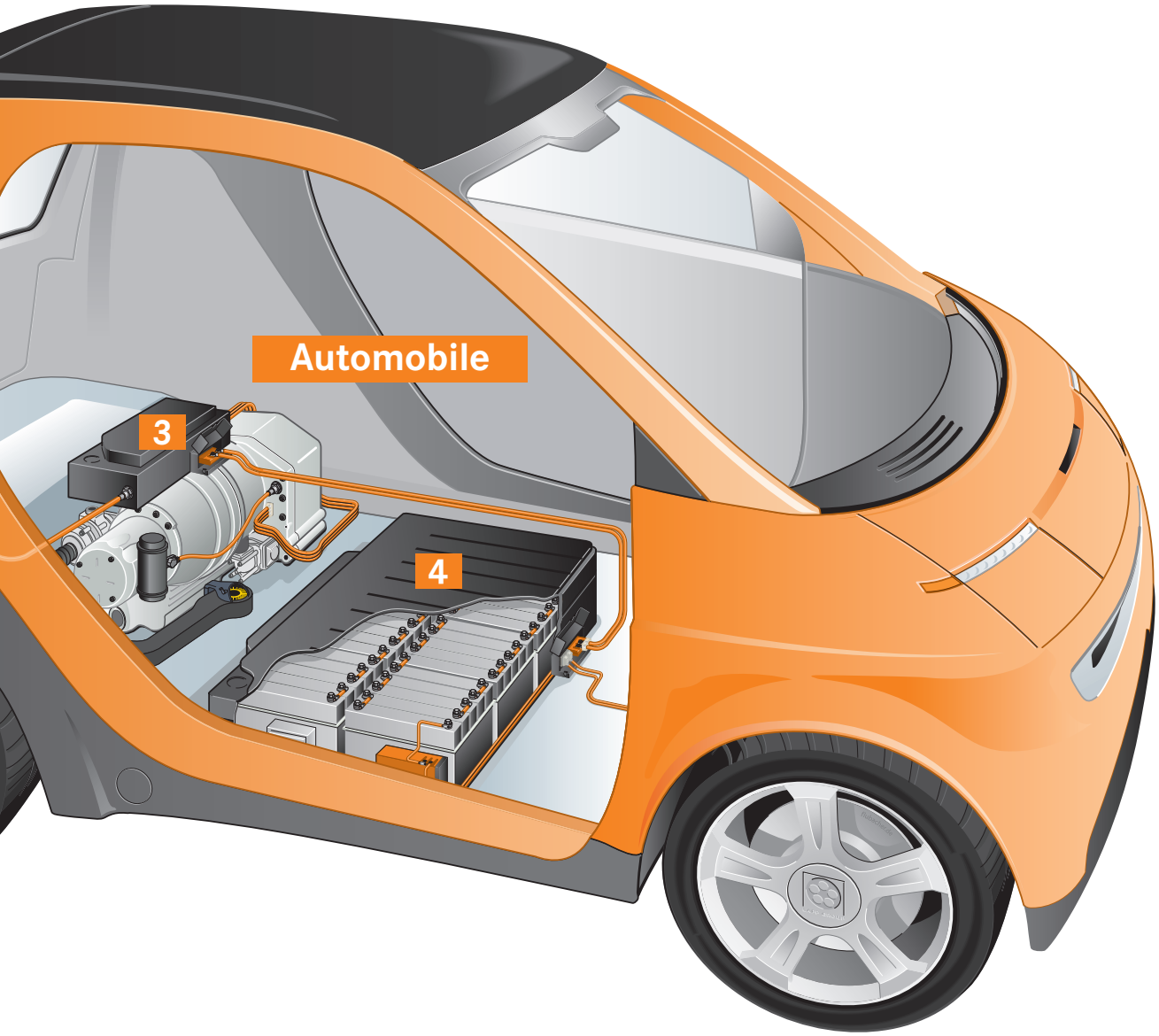
Lapp is already producing special system connections for use in the hybrid power pack of the new Mercedes-Benz S 400 BlueHYBRID. These cables and connection systems are used inside the lithium-ion batteries and meet the high demands for applications in this industry. In addition, Lapp is a engineering partner for several well-known companies currently working on new battery systems which will store electrical energy more effectively.

For more information go to
www.lappgroup.com/industries



1 Charging cable and connector

- Type 2 charging cable and connector
- Type F charging cable and connector
- CEE charging cable and connector



2 Cabling of charging stations

- ÖLFLEX® CLASSIC
  Power- and control cables
  with wide range use
- Control cabinet single cores
- ÖLFLEX® SPIRAL
  Spiralized power cables
- UNITRONIC®
  Data cables
- ETHERLINE®
  Cables for industrial networking
- SKINTOP®
  Cable glands
- Ground straps
- FLEXIMARK® Single core marking,
  Wrappig Labels, Marking systems

3 High voltage cabling

- ÖLFLEX® FD 90 CY
  Highly flexible, shielded single cores
- ÖLFLEX® HEAT
  Cable for expanded ambient temperature
- Customer specific cables and connectors

4 Battery cabling

- Customer specific cables and connectors

New

Type 2 charging cable 7-way Helix two-sided

RoHS

Info

- **Inherently stable Helix design**
- **Less space required, low weight**
- **Assemblies with type 2 coupling on request**

Benefits

- Retains patented Helix design during daily use
- Resistant against oil, dust and water
- Special cable make-up for a long service life
- Cold flexible
- Fire: Low corrosive smoke emission

Application range

- Electro and Hybrid Cars
- Charging stations for cars

Product features

- Charging connector Type 2 accordint to VDE-AR-E-2623-2
- Fine strands of tinned copper wires
- Core insulation: TPE
- Polyurethan outer sheath (PUR)
- All-weather service cord

Design

- Cable for 1-phase charging up to 16A: Ölflex Charge 3G2,5mm²+2x0,5mm²
- Cable for 3-phase charging up to 16A: Ölflex Charge 5G2,5mm²+2x0,5mm²
- Cable for 3-phase charging up to 32A: Ölflex Charge 5G6mm²+2x0,5mm²
- 16A Charging: Every connector with integrated 680 Ohm resistor
- 32A Charging: Every connector with integrated 220 Ohm resistor

Technical data

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Rated voltage
400 V

Range of temperature
-25°C up to +80°C

Part number	Version	Spiral length extended in mm max.	Sheath colour	Copper index kg/1.000 pieces	Weight kg/1000 pieces	PU
74880051	Charging: 1 phase 16A	4,000	orange	355.9	1,957.0	1
74880052	Charging: 3 phase 16A	4,000	orange	564.2	2,026.0	1
74880053	Charging: 3 phase 32A	4,000	orange	1,293.3	3,016.0	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.
Type 1 according to SAEJ1772 on request available

New

Type 2 charging cable 7-way spiral one-sided

RoHS

Info
- Assemblies with type 2 coupling on request

New

Type 2 cable 7-way spiral two-sided

RoHS

Info
- Assemblies with type 2 coupling on request

Benefits
- Robust
- Resistant against oil, dust and water
- Special cable make-up for a long service life
- Cold flexible
- Fire: Low corrosive smoke emission

Application range
- Electro and Hybrid Cars
- Charging stations for cars

Product features
- Charging connector Type 2 accordint to VDE-AR-E-2623-2
- Fine strands of tinned copper wires
- Core insulation: TPE
- Polyurethan outer sheath (PUR)
- All-weather service cord

Design
- Cable for 1-phase charging up to 16A: Ölflex Charge 3G2,5mm²+2x0,5mm²
- Cable for 3-phase charging up to 16A: Ölflex Charge 5G2,5mm²+2x0,5mm²
- Cable for 3-phase charging up to 32A: Ölflex Charge 5G6mm²+2x0,5mm²
- 16A Charging: Every connector with integrated 680 Ohm resistor
- 32A Charging: Every connector with integrated 220 Ohm resistor

Technical data

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Rated voltage
400 V

Range of temperature
-25°C up to +80°C

Part number	Version	Spiral length extended in mm max.	Sheath colour	Copper index kg/1.000 pieces	Weight kg/1000 pieces	PU
Type 2 connector angled, cable orange spiralized, cut off clean						
74880039	Charging: 1 phase 16A	4,000	orange	738.0	2,200.0	1
74880043	Charging: 3 phase 16A	4,000	orange	1,170.0	2,900.0	1
74880047	Charging: 3 phase 32A	4,000	orange	2,390.0	4,500.0	1
Type 2 connector straight, cable yellow spiralized, cut off clean						
74880016	Charging: 1 phase 16A	4,000	yellow	738.0	2,200.0	1
74880020	Charging: 3 phase 16A	4,000	yellow	1,170.0	2,900.0	1
74880024	Charging: 3 phase 32A	4,000	yellow	2,390.0	4,500.0	1
Type 2 Stecker angled, cable orange spiralized, type 2 connector angled						
74880040	Charging: 1 phase 16A	4,000	orange	689.0	2,500.0	1
74880044	Charging: 3 phase 16A	4,000	orange	1,090.0	3,200.0	1
74880048	Charging: 3 phase 32A	4,000	orange	2,150.0	4,600.0	1
Type 2 connector straight, cable yellow spiralized, Type 2 connector straight						
74880017	Charging: 1 phase 16A	4,000	yellow	689.0	2,500.0	1
74880021	Charging: 3 phase 16A	4,000	yellow	1,090.0	3,200.0	1
74880050	Charging: 3 phase 32A	4,000	yellow	2,150.0	4,600.0	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.
Type 1 according to SAEJ1772 on request available

New

Type 2 charging cable 7-way one-sided

RoHS

Info

- Assemblies with type 2 coupling on request

New

Type 2 charging cable 7-way two-sided

RoHS

Info

- Assemblies with type 2 coupling on request

Benefits

- Robust
- Resistant against oil, dust and water
- Special cable make-up for a long service life
- Cold flexible
- Fire: Low corrosive smoke emission

Application range

- Electro and Hybrid Cars
- Charging stations for cars

Product features

- Charging connector Type 2 accordint to VDE-AR-E-2623-2
- Fine strands of tinned copper wires
- Core insulation: TPE
- Polyurethan outer sheath (PUR)
- All-weather service cord

Design

- Cable for 1-phase charging up to 16A: Ölflex Charge 3G2,5mm²+2x0,5mm²
- Cable for 3-phase charging up to 16A: Ölflex Charge 5G2,5mm²+2x0,5mm²
- Cable for 3-phase charging up to 32A: Ölflex Charge 5G6mm²+2x0,5mm²
- 16A Charging: Every connector with integrated 680 Ohm resistor
- 32A Charging: Every connector with integrated 220 Ohm resistor

Technical data

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Rated voltage
400 V

Range of temperature
-25°C up to +80°C

Part number	Version	Spiral length extended in mm max.	Sheath colour	Copper index kg/1.000 pieces	Weight kg/1000 pieces	PU
Type 2 connector angled, cable orange, cut off clean						
74880037	Charging: 1 phase 16A	4,000	orange	335.0	1,300.0	1
74880041	Charging: 3 phase 16A	4,000	orange	531.0	1,600.0	1
74880045	Charging: 3 phase 32A	4,000	orange	1,216.0	2,500.0	1
Type 2 connector straight, cable yellow, cut off clean						
74880014	Charging: 1 phase 16A	4,000	yellow	335.0	1,300.0	1
74880018	Charging: 3 phase 16A	4,000	yellow	531.0	1,600.0	1
74880022	Charging: 3 phase 32A	4,000	yellow	1,216.0	2,500.0	1
Type 2 connector angled, cable orange, Type 2 connector angled						
74880038	Charging: 1 phase 16A	4,000	orange	342.0	1,700.0	1
74880042	Charging: 3 phase 16A	4,000	orange	541.0	2,050.0	1
74880046	Charging: 3 phase 32A	4,000	orange	1,240.0	3,200.0	1
Type 2 connector straight, cable yellow, Type 2 connector straight						
74880015	Charging: 1 phase 16A	4,000	yellow	342.0	1,700.0	1
74880019	Charging: 3 phase 16A	4,000	yellow	541.0	2,050.0	1
74880023	Charging: 3 phase 32A	4,000	yellow	1,240.0	3,200.0	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.
Type 1 according to SAEJ1772 on request available

New

Type 2 charging socket

New

Type 2 Accessories

Benefits

Type 2 charging socket

- Pre-assembled for fast installation
- Robust against mechanical impact

Application range

Type 2 charging socket

- Electro and Hybrid Cars
- Charging stations for cars

Product features

Type 2 charging socket

- Three different types for all installation situations
- Optional with hinged lid for increased dust and water protection
- Types for front and back wall assembly
- Charging connector Type 2 accordint to VDE-AR-E-2623-2

Type 2 Accessories

- The electromechanical locking prevents detacing of the connector during charging

Technical data

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
4 x outer diameter (OD), if used conventionally; 2 x OD at cautious bending

Rated voltage
400 V

Range of temperature
-25°C up to +80°C

Part number	Number of cores and mm² per conductor	Copper index kg/1.000 pieces	PU
Type 2 charging socket, back wall assembly			
74880000	H07V-K 5G4mm² + 2x 0,5mm²	199.6	1
74880001	H07V-K 5G6mm² + 2x 0,5mm²	199.6	1
74880002	H07V-K 5G10mm² + 2x 0,5mm²	489.6	1
Type 2 charging socket, circular cover			
74880003	H07V-K 5G4mm² + 2x 0,5mm²	199.6	1
74880004	H07V-K 5G6mm² + 2x 0,5mm²	299.6	1
74880005	H07V-K 5G10mm² + 2x 0,5mm²	489.6	1
Type 2 Charging socket, circular cover, hinged lid			
74880006	H07V-K 5G4mm² + 2x 0,5mm²	199.6	1
74880007	H07V-K 5G6mm² + 2x 0,5mm²	299.6	1
74880008	H07V-K 5G10mm² + 2x 0,5mm²	489.6	1
Type 2 Charging socket, square cover, hinged lid			
74880009	H07V-K 5G4mm² + 2x 0,5mm²	199.6	1
74880010	H07V-K 5G6mm² + 2x 0,5mm²	299.6	1
74880011	H07V-K 5G10mm² + 2x 0,5mm²	489.6	1
Electromechanical locking, Actuator			
74880012			1
Supply line for Actuator, Pigtail			
74880013	3x FLRY bl/rt/sw	21.6	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

New

Type F charging cable 3-way spiral

RoHS

New

Type F charging cable 3-way

RoHS

Benefits
- Robust
- Resistant against oil, dust and water
- Wear-resistant
- Cold flexible
- Fire: Low corrosive smoke emission

Application range
- Electro and Hybrid Cars
- Charging stations for cars

Product features
- Charging connector Type F
- Fine strands of tinned copper wires
- Core insulation: TPE
- Polyurethan outer sheath (PUR)
- All-weather service cord

Design
- Cable for 1-phase charging up to 16A: Ölflex 540P 3G2,5mm²

Technical data

Approvals
IEC 60309
VDE 0623

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Rated voltage
2+PE: 230V

Range of temperature
-25°C up to +80°C

Part number	Version	Spiral length extended in mm max.	Sheath colour	Copper index kg/1.000 pieces	Weight kg/1000 pieces	PU
Type F connector straight, cable yellow spiralized, Type F connector straight						
74880030	Charging: 1 phase 16A	4,000	yellow	519.0	1,350.0	1
Type F connector straight, cable yellow, Type F connector straight						
74880029	Charging: 1 phase 16A	4,000	yellow	300.0	850.0	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

New

CEE charging cable 3-way spiral

RoHS

New

CEE Charging cable 3-way

RoHS

Benefits
- Robust
- Resistant against oil, dust and water
- Wear-resistant
- Cold flexible
- Fire: Low corrosive smoke emission

Application range
- Electro and Hybrid Cars
- Charging stations for cars

Product features
- Charging connector CEE 3-way
- Fine strands of tinned copper wires
- Core insulation: TPE
- Polyurethan outer sheath (PUR)
- All-weather service cord

Design
- Cable for 1-phase charging up to 16A: Ölflex 540P 3G2,5mm²

Technical data

Approvals
IEC 60309
VDE 0623

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Rated voltage
2+PE: 230V

Range of temperature
-25°C up to +80°C

Part number	Version	Spiral length extended in mm max.	Sheath colour	Copper index kg/1.000 pieces	Weight kg/1000 pieces	PU
CEE 3-way connector straight, cable yellow spiralized, CEE 3-way connector straight						
74880032	Charging: 1 phase 16A	4,000	yellow	598.0	1,450.0	1
CEE 3-pol connector straight, cable yellow, CEE 3-way connector straight						
74880031	Charging: 1 phase 16A	4,000	yellow	300.0	950.0	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

New

CEE charging cable 5-way spiral

New

CEE charging cable 5-way

Benefits
- Robust
- Resistant against oil, dust and water
- Wear-resistant
- Cold flexible
- Fire: Low corrosive smoke emission

Application range
- Electro and Hybrid Cars
- Charging stations for cars

Product features
CEE charging cable 5-way spiral
- Charging connector CEE 5-way
- Fine strands of tinned copper wires
- Core insulation: TPE
- Polyurethan outer sheath (PUR)
- All-weather service cord

CEE charging cable 5-way
- Fine strands of tinned copper wires
- Core insulation: TPE
- Polyurethan outer sheath (PUR)
- All-weather service cord

Design
- Cable for 3-phase charging up to 16A: Ölflex 540P 5G2,5mm²

Technical data
Approvals
IEC 60309
VDE 0623

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Rated voltage
4+PE: 400V

Range of temperature
-25°C up to +80°C

Part number	Version	Spiral length extended in mm max.	Sheath colour	Copper index kg/1.000 pieces	Weight kg/1000 pieces	PU
CEE 5 way connector straight, cable yellow spiralized, CEE 5-way connector straight						
74880034	Charging: 3 phase 16A	4,000	yellow	864.0	2,150.0	1
74880036	Charging: 3 phase 32A	4,000	yellow	2,132.0	4,600.0	1
CEE 5-way connector straight, cable yellow, CEE 5-way connector straight						
74880033	Charging: 3 phase 16A	4,000	yellow	500.0	1,400.0	1
74880035	Charging: 3 phase 32A	4,000	yellow	1,199.0	2,860.0	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

New

Type F Charging socket 3-way

New

CEE charging socket 3-way

New

CEE charging socket 5-way

Benefits

- Easy to assemble
- Robust against mechanical impact

Product features

Type F charging socket 3-way

- Optional with hinged lid for increased dust and water protection
- IP 44
  IP 54 with hinged lid
- Flange 50 x 50 mm
- Bore hole 38 x 38 mm
- With auxiliary “normally open”contact

CEE charging socket 3-way

- IP 44
  IP 54 with hinged lid
- Flange 85 x 85 mm
- Bore hole 70 x 70 mm
- With auxiliary “normally open”contact
- QUICK-CONNECT

CEE charging socket 5-way

- IP 44
  IP 54 with hinged lid
- Flange 85 x 85 mm
- Bore hole 70 x 70 mm
- With auxiliary “normally open”contact
- QUICK-CONNECT

Technical data

Approvals
IEC 60309
VDE 0620

Rated voltage
230V

Range of temperature
-25°C up to +80°C

Part number	PU
Typ F charging socket, 2+PE, 1-phase charging up to 16A	
74880025	1
Typ F charging socket, 2+PE, with hinged lid, 1-phase charging up to 16A	
74880026	1
CEE charging socket, 2+PE, with hinged lid, 1-phase charging up to 16A	
74880027	1
CEE charging socket, 4+PE, with hinged lid, 3-phase charging up to 16A	
74880028	1
CEE charging socket, 4+PE, with hinged lid, 3-phase charging up to 32A	
74880049	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‘Metal price basis’ and ‘Metal index’ see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

New

LAPP KABEL CHARGE 300/500V

Battery charging cable for the charging of electric powered vehicles

Info

- **Halogen free**
- **Technically for charging modes 1 and 3 acc. IEC 61851-1**

Benefits

- Optimised for 1-phase AC battery charging: 3 low voltage power cores with core insulation colour code for 3 cores including PE according to harmonisation document HD 308
- Technically suitable for charging modes 1 and 3 (if harnessed with plug conforming to IEC 61851-1 mode 3) according to IEC 61851-1, thanks to 1 or 2 data transmission cores depending on the item

Application range

- Power and data connection cable between charging source and electric powered vehicle for vehicle battery charging (eMobility)
- Other technically feasible charging applications
- Diverse low voltage applications with parallel control mode
- Outdoors
- In wet rooms

Product features

- Flame retardant according to IEC 60332-1-2
- Halogen-free according to VDE 0472-815
- Outer sheath oil resistant according to EN 60811-2-1,10 and hydrolysis resistant according to EN 50396,10.3
- Cold flexible
- Outer sheath: Protection against water and dirt, abrasion resistance, cutting resistance, microbe resistance

Approvals (Norm references)

CE RoHS

- VDE registration of the cable under way currently
- Design, manufacturing and testing in the style of harmonisation document HD 22.10/ VDE 0282-10

Design

- Fine-wired, tin-coated/tinned, flexible copper conductor according to IEC 60228, conductor class 5
- Core insulation made of thermoplastic elastomer
- Outer jacket: Polyurethane (PUR) compound TMPU according to harmonisation document HD 22.10 and EN 50363-10-2
- Colour of the outer sheath: Yellow similar to RAL 1016, optionally further signal colours on request

Technical data

Core identification code
Power cores: Coloured according to HD 308
Signal cores: Red if one signal core, 1 x red + 1 x white in case of 2 signal cores

Approvals
VDE registration of the cable under way currently

Based on
VDE 0282 Part 10 / HD 22.10

Conductor stranding
fine-wired acc. to IEC 60228/ VDE 0295, class 5
tinned/tin-coated strands

Rated voltage
U_0/U = 300/500 V AC
U_0/U = 450/750 V DC

Test voltage
At the core: 2 kV AC
At the finished cable: 2.5 kV AC

Protective conductor
With protective earthing conductor (PE) always

Range of temperature
-40 °C up to +90 °C

Part number	Number of cores and mm² per conductor	Copper index kg/km
74880513	3 G 16 + 1 x 0,75	468.0
74880514	3 G 16 + 2 x 0,5	470.4
74880515	3 G 16 + 2 x 0,75	475.2
74880500	3 G 2,5 + 1 x 0,5	76.8
74880501	3 G 2,5 + 1 x 0,75	79.2
74880502	3 G 2,5 + 2 x 0,5	81.6
74880503	3 G 2,5 + 2 x 0,75	86.4
74880504	3 G 4 + 1 x 0,5	120.0

Part number	Number of cores and mm² per conductor	Copper index kg/km
74880505	3 G 4 + 1 x 0,75	122.4
74880506	3 G 4 + 2 x 0,5	124.8
74880507	3 G 4 + 2 x 0,75	129.6
74880508	3 G 6 + 1 x 0,5	177.6
74880509	3 G 6 + 1 x 0,75	180.0
74880510	3 G 6 + 2 x 0,5	182.4
74880511	3 G 6 + 2 x 0,75	187.2
74880512	3 G 16 + 1 x 0,5	465.6

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

New

LAPP KABEL CHARGE 450/750V

Battery charging cable for the charging of electric powered vehicles

Info

- **Halogen free**
- **Technically for charging modes 1 and 3 acc. IEC 61851-1**

Benefits

- Optimised for 3-phase AC battery charging: 5 low voltage power cores with core insulation colour code for 5 cores including PE according to harmonisation document HD 308
- Technically suitable for charging modes 1 and 3 (if harnessed with plug conforming to IEC 61851-1 mode 3) according to IEC 61851-1, thanks to 1 or 2 data transmission cores depending on the item

Application range

- Power and data connection cable between charging source and electric powered vehicle for vehicle battery charging (eMobility)
- Other technically feasible charging applications
- Diverse low voltage applications with parallel control mode
- Outdoors
- In wet rooms

Product features

- Flame retardant according to IEC 60332-1-2
- Halogen-free according to VDE 0472-815
- Outer sheath oil resistant according to EN 60811-2-1,10 and hydrolysis resistant according to EN 50396,10.3
- Cold flexible
- Outer sheath: Protection against water and dirt, abrasion resistance, cutting resistance, microbe resistance

Approvals (Norm references)

CE RoHS

- VDE registration of the cable under way currently
- Design, manufacturing and testing in the style of harmonisation document HD 22.10/ VDE 0282-10

Design

- Fine-wired, tin-coated/tinned, flexible copper conductor according to IEC 60228, conductor class 5
- Core insulation made of thermoplastic elastomer
- Outer jacket: Polyurethane (PUR) compound TMPU according to harmonisation document HD 22.10 and EN 50363-10-2
- Colour of the outer sheath: Yellow similar to RAL 1016, optionally further signal colours on request

Technical data

Core identification code
Power cores: Coloured according to HD 308
Signal cores: Red if one signal core, 1 x red + 1 x white in case of 2 signal cores

Approvals
VDE registration of the cable under way currently

Based on
VDE 0282 Part 10 / HD 22.10

Conductor stranding
fine-wired acc. to IEC 60228/ VDE 0295, class 5
tinned/tin-coated strands

Rated voltage
U_0/U = 450/750 V AC
U_0/U = 675/1125 V DC

Test voltage
At the core: 2.5 kV AC
At the finished cable: 3 kV AC

Protective conductor
With protective earthing conductor (PE) always

Range of temperature
-40 °C up to +90 °C

Part number	Number of cores and mm² per conductor	Copper index kg/km
74880528	5 G 16 + 1 x 0,5	772.8
74880529	5 G 16 + 1 x 0,75	775.2
74880530	5 G 16 + 2 x 0,5	777.6
74880531	5 G 16 + 2 x 0,75	782.4
74880516	5 G 2,5 + 1 x 0,5	124.8
74880517	5 G 2,5 + 1 x 0,75	127.2
74880518	5 G 2,5 + 2 x 0,5	129.6
74880519	5 G 2,5 + 2 x 0,75	134.4

Part number	Number of cores and mm² per conductor	Copper index kg/km
74880520	5 G 4 + 1 x 0,5	196.8
74880521	5 G 4 + 1 x 0,75	199.2
74880522	5 G 4 + 2 x 0,5	201.6
74880523	5 G 4 + 2 x 0,75	206.4
74880524	5 G 6 + 1 x 0,5	292.8
74880525	5 G 6 + 1 x 0,75	295.2
74880526	5 G 6 + 2 x 0,5	297.6
74880527	5 G 6 + 2 x 0,75	302.4

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

Wide range use

PVC sheath and coloured cores

New

ÖLFLEX® CLASSIC 100

Info

- **Change to new items with reduced insulation wall thickness up to 1,5 mm²**
- **Customised colour option and printing of the outer sheath on request**

Benefits

- Space saving installation due to small cable diameters
- High electrical performance due to 4kV test voltage
- Increased flexibility due short-twisted conductor layers

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
  Power station
- Dry or damp interiors under medium mechanical load conditions
- Fixed installation as well as occasional flexing at free, non-continuously recurring movement without tensile load

Product features

- Flame retardant according to IEC 60332-1-2
- Good chemical resistance
  see Main Catalogue 2010/11 Appendix T1

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- Cores twisted in layers
- PVC outer sheath, grey (RAL 7001)

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308
(see Main Catalogue 2010/11 Appendix T9)
Starting at 6 cores: ÖLFLEX® colour code
(see Main Catalogue 2010/11 Appendix T7)

Based on
IEC 60227-5
HD 21.5 S3; VDE 0281 Part 5
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
Up to 1.5 mm²: U_0/U: 300/500 V
Starting at 2.5 mm²: U_0/U: 450/750 V
Starting at 2.5 mm², fixed and protected installation: U_0/U: 600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
ÖLFLEX® CLASSIC 100; U_0/U: 300/500 V				
00100004	2 X 0.5	4.8	9.6	35
00100014	3 G 0.5	5.1	14.4	42
00101224	3 X 0.5	5.1	14.4	42
00100024	4 G 0.5	5.7	19.2	54
00101234	4 X 0.5	5.7	19.2	54
00100034	5 G 0.5	6.2	24.0	63
00101244	5 X 0.5	6.2	24.0	63
0010004	6 G 0.5	6.7	28.8	73
0010005	7 G 0.5	6.7	33.6	81
0010006	8 G 0.5	8.0	38.4	97
0010007	10 G 0.5	8.6	48.0	116
0010008	12 G 0.5	8.9	58.0	133
0010009	14 G 0.5	9.5	67.0	151
0010010	16 G 0.5	10.0	76.0	169
0010011	21 G 0.5	11.7	99.0	223
0010012	24 G 0.5	12.4	114.0	254
0010016	40 G 0.5	15.4	192.0	404
00100214	2 X 0.75	5.4	14.4	45
00100224	3 G 0.75	5.7	21.6	55
00101254	3 X 0.75	5.7	21.6	55
00100234	4 G 0.75	6.2	28.8	66
00101264	4 X 0.75	6.2	28.8	66
00100244	5 G 0.75	6.7	36.0	79
00101274	5 X 0.75	6.7	36.0	79
0010025	6 G 0.75	7.3	43.3	104
0010026	7 G 0.75	7.3	50.4	109

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
0010027	8 G 0.75	8.8	56.0	123
0010028	9 G 0.75	9.4	63.0	144
0010029	10 G 0.75	9.6	72.0	153
0010030	12 G 0.75	9.9	86.4	176
0010031	15 G 0.75	10.9	108.0	211
0010032	18 G 0.75	11.7	129.6	268
0010033	21 G 0.75	13.0	151.0	293
0010034	25 G 0.75	13.8	180.0	374
0010036	40 G 0.75	17.3	288.0	571
0010037	50 G 0.75	19.2	360.0	698
00100414	2 X 1.0	5.7	19.2	53
00100424	3 G 1.0	6.0	28.8	65
00102034	3 X 1.0	6.0	28.8	65
00100434	4 G 1.0	6.5	38.4	79
00102044	4 X 1.0	6.5	38.4	79
00100444	5 G 1.0	7.1	48.0	94
00102054	5 X 1.0	7.1	48.0	94
0010045	6 G 1.0	8.0	58.0	124
0010046	7 G 1.0	8.0	67.0	131
0010047	8 G 1.0	9.5	77.0	146
0010049	10 G 1.0	10.2	96.0	183
0010050	12 G 1.0	10.5	115.0	215
0010052	16 G 1.0	11.8	154.0	282
0010053	18 G 1.0	12.7	173.0	315
0010054	20 G 1.0	13.4	192.0	350
0010056	25 G 1.0	14.7	240.0	449
00100634	2 X 1.5	6.3	28.8	68

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
00100644	3 G 1.5	6.7	43.2	84
00101284	3 X 1.5	6.7	43.2	84
00100654	4 G 1.5	7.2	57.6	104
00101294	4 X 1.5	7.2	57.6	104
00100664	5 G 1.5	8.1	72.0	128
00101304	5 X 1.5	8.1	72.0	128
0010068	7 G 1.5	8.9	101.0	166
0010069	8 G 1.5	10.6	115.0	205
0010071	12 G 1.5	12.0	173.0	307
0010072	14 G 1.5	12.7	202.0	349
0010074	18 G 1.5	14.4	259.0	465
0010076	25 G 1.5	16.9	360.0	655
ÖLFLEX® CLASSIC 100; U_o/U: 450/750 V				
0010086	2 X 2.5	8.9	48.0	128
0010087	3 G 2.5	9.6	72.0	162
00100933	3 X 2.5	9.6	72.0	162
00100883	4 G 2.5	10.7	96.0	203
00100893	5 G 2.5	11.8	120.0	242
0010091	7 G 2.5	13.1	168.0	321
0010092	8 G 2.5	15.8	192.0	385
0010100	2 X 4	10.6	76.8	187
0010210	3 G 4	11.4	115.2	244
00101013	4 G 4	12.7	154.0	297
00101023	5 G 4	13.9	192.0	355
0010103	7 G 4	15.4	269.0	471
0010105	3 G 6	12.6	173.0	318
00101063	4 G 6	13.8	230.0	394
00101073	5 G 6	15.6	288.0	489

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
0010108	7 G 6	17.3	403.0	651
0010301	3 G 10	15.9	288.0	516
00101093	4 G 10	17.6	384.0	650
00101103	5 G 10	19.7	480.0	792
0010111	7 G 10	21.7	672.0	1058
0010302	3 G 16	18.3	461.0	728
00101123	4 G 16	20.4	614.0	1087
00101133	5 G 16	22.8	768.0	1118
0010303	3 G 25	23.0	720.0	1388
00101153	4 G 25	25.4	960.0	1582
00101163	5 G 25	28.5	1,200.0	1771
0010304	3 G 35	25.6	1,008.0	1766
00101173	4 G 35	28.5	1,344.0	2106
00101183	5 G 35	31.9	1,680.0	2635
0010305	3 G 50	31.0	1,440.0	2556
00101193	4 G 50	34.5	1,920.0	2943
00103133	5 G 50	38.6	2,400.0	3936
0010306	3 G 70	35.3	2,016.0	3182
00101203	4 G 70	39.4	2,688.0	4092
00103143	5 G 70	44.1	3,360.0	4800
0010307	3 G 95	41.3	2,736.0	4675
00101213	4 G 95	45.8	3,648.0	5290
00103153	5 G 95	51.6	4,560.0	5600
0010308	3 G 120	47.6	3,456.0	5626
00103093	4 G 120	53.1	4,608.0	6994
00103123	4 G 185	62.8	7,104.0	8300

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Single lengths for sizes: ≥ 5G50 max. 500m; ≥ 5G95 max. 400; ≥ 3G120 max. 500m; ≥ 4G120 max. 300; ≥ 4G185 max. 250m
Photographs are not to scale and do not represent detailed images of the respective products.

■ Similar products

- UNITRONIC® 100
- ÖLFLEX® CLASSIC 100 BK POWER 0,6/1kV
- ÖLFLEX® CLASSIC 130 H BK 0,6/1kV

■ Accessories

- SKINTOP® CLICK see page 75
- TY - FAST® standard cable ties
- STAR STRIP stripping tool

ÖLFLEX® CLASSIC 100 YELLOW

Yellow outer sheath for special warning purpose

Info
- For warning purposes

Benefits
- High electrical performance due to 4kV test voltage

Application range
- For electrical circuits which remain live after main switch is disconnected
- Service sockets and illumination circuits in electrical switchboards and cabinets

Product features
- Flame retardant according to IEC 60332-1-2
- Good chemical resistance see Main Catalogue 2010/11 Appendix T1

Approvals (Norm references)
CE RoHS

Design
- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- PVC outer sheath, yellow (RAL 1016)

Technical data

Core identification code
VDE 0293-308, see Main Catalogue 2010/11 appendix T9

Based on
IEC 60227-5
HD 21.5 S3; VDE 0281 Part 5
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 450/750 V
Fixed, protected installation:
U_0/U: 600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
ÖLFLEX® CLASSIC 100 YELLOW; U_0/U: 450/750 V				
0010400	3 G 1.5	8.1	43.0	95
00104023	4 G 1.5	8.9	58.0	117
00104033	5 G 1.5	10.0	72.0	144
0010401	3 G 2.5	9.6	72.0	152
00104043	4 G 2.5	10.7	96.0	205
00104053	5 G 2.5	11.8	120.0	225

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products
- ÖLFLEX® 450 P
- ÖLFLEX® 540 P

Accessories
- SKINTOP® CLICK see page 75
- STAR STRIP stripping tool

ÖLFLEX® CLASSIC 100 CY

Info
- EMC compliant

Benefits
- Space saving installation due to small cable diameters
- High electrical performance due to 4kV test voltage

Application range
- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Conveying and transport systems
- Servo drives
- In EMI critical environment
  (electromagnetic interference)

Product features
- Flame retardant according to IEC 60332-1-2
- Good chemical resistance
  see Main Catalogue 2010/11 Appendix T1
- High coverage degree of the screen
  low transfer impedance
  (max. 250 Ω/km at 30 MHz)

Approvals (Norm references)
CE RoHS

Design
- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- PVC inner sheath, grey
- Tinned copper braid
- PVC outer sheath, transparent

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308
(see Main Catalogue 2010/11 Appendix T9)
Starting at 6 cores: ÖLFLEX® colour code
(see Main Catalogue 2010/11 Appendix T7)

Based on
IEC 60227-5
HD 21.5 S3; VDE 0281 Part 5
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
Up to 1.0 mm²: U_0/U: 300/500 V
Starting at 1.5 mm²: U_0/U: 450/750 V
Fixed, protected installation:
U_0/U: 600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
ÖLFLEX® CLASSIC 100 CY; U_0/U: 300/500 V				
0035001	2 X 0.5	7.0	41.0	75
0035002	3 G 0.5	7.3	46.0	83
00350033	4 G 0.5	7.9	55.0	99
00352013	5 G 0.5	8.4	66.0	112
0035202	7 G 0.5	8.9	80.0	132
0035004	2 X 0.75	7.4	46.0	86
0035005	3 G 0.75	7.9	57.0	100
00350063	4 G 0.75	8.4	64.0	115
00350163	5 G 0.75	8.9	77.0	130
0035203	7 G 0.75	9.7	102.0	161
0035220	2 X 1.0	7.9	56.0	98
0035221	3 G 1.0	8.2	65.0	111
00352223	4 G 1.0	8.7	78.0	130
00352233	5 G 1.0	9.5	89.0	153
0035204	7 G 1.0	10.2	113.0	185
ÖLFLEX® CLASSIC 100 CY; U_0/U: 450/750 V				
0035000	2 X 1.5	9.9	65.0	132
0035458	3 G 1.5	10.3	79.0	170
00354593	4 G 1.5	11.3	97.0	204
00354603	5 G 1.5	12.6	116.0	246
0035461	7 G 1.5	13.9	149.0	320
0035011	3 G 2.5	11.8	146.0	211
00350173	4 G 2.5	13.5	167.0	310
00350123	5 G 2.5	14.6	200.0	326

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
0035289	7 G 2.5	15.9	288.0	444
00350183	4 G 4	15.1	237.0	403
00350133	5 G 4	16.5	328.0	478
00350193	4 G 6	16.6	318.0	521
00350143	5 G 6	18.2	441.0	624
0034953	3 G 10	18.9	414.0	690
00350213	4 G 10	21.1	558.0	843
00352903	5 G 10	23.1	714.0	1004
0034954	3 G 16	21.7	607.0	910
00350223	4 G 16	23.9	804.0	1164
00350153	5 G 16	26.8	1,050.0	1812
0034955	3 G 25	26.6	936.0	1330
00350233	4 G 25	29.4	1,289.0	1903
00350243	5 G 25	32.6	1,446.0	2374
0034956	3 G 35	29.4	1,258.0	1370
00350253	4 G 35	32.4	1,693.0	2489
00350263	5 G 35	36.0	1,975.0	2771
0034952	3 G 50	35.1	1,748.0	2590
00350273	4 G 50	38.8	2,342.0	3362
00350283	4 G 70	43.7	3,035.0	3719
00350293	4 G 95	50.4	4,055.0	5849
00354303	4 G 120	56.8	5,225.0	7509
00354313	4 G 150	62.2	6,300.0	7800
00354323	4 G 185	67.8	7,753.0	9866

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Single lengths for sizes: ≥ 4G50 max. 500m; ≥ 4G95 max. 400m; ≥ 4G120 max. 300m; ≥ 4G150 max. 250m
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products
- ÖLFLEX® SERVO 9YSLCY-JB
- ÖLFLEX® SERVO 2YSLCY-JB

Accessories
- 3M Scotch 1183 screening tape
- SKINTOP® MS-M BRUSH see page 81

Wide range use

PVC sheath and numbered cores

ÖLFLEX® CLASSIC 110

Info

- VDE certificate of conformity with factory surveillance

Benefits

- Space saving installation due to small cable diameters
- High electrical performance due to 4kV test voltage

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
  Power station
  Stage technique
- Fixed installation as well as occasional flexing at free, non-continuously recurring movement without tensile load
- Dry or damp interiors under medium mechanical load conditions

Product features

- Flame retardant according to IEC 60332-1-2
- Good chemical resistance
  see Main Catalogue 2010/11 Appendix T1

Approvals (Norm references)

CE VDE RoHS

- Remark: A RoHS-non-compliant version is marketed under ÖLFLEX® 110 with VDE-REG.-Nr. 8067. To order this, please add appendix <1> to the below stated part numbers. This does not affect the above given further technical data or description.

Design

- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- Cores twisted in layers
- PVC outer sheath, grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

VDE tested
VDE Reg. No. 7030 for following sizes:
up to 2,5 mm²: 2 - 65 cores
starting at 4 mm²: 2 - 7 cores

Part number	Number of cores and mm² per conductor	Standard lengths, meter							Outer diameter in mm	Copper index kg/km	Weight kg/km
		25	50	100	200	300	500	1000			
ÖLFLEX® CLASSIC 110											
1119752	2 X 0.5			100	200	300	500	1000	4.8	9.6	35
1119003	3 G 0.5			100	200	300	500	1000	5.1	14.4	42
1119753	3 X 0.5			100	200	300	500	1000	5.1	14.4	42
1119004	4 G 0.5			100	200	300	500	1000	5.7	19.2	54
1119754	4 X 0.5			100	200	300	500	1000	5.7	19.2	54
1119005	5 G 0.5			100	200	300	500	1000	6.2	24.0	63
1119755	5 X 0.5			100	200	300	500	1000	6.2	24.0	63
1119007	7 G 0.5		50	100	200	300	500	1000	6.7	33.6	81
1119757	7 X 0.5		50	100	200	300	500	1000	6.7	33.6	81
1119010	10 G 0.5		50	100	200	300	500	1000	8.6	48.0	116
1119012	12 G 0.5		50	100	200	300	500	1000	8.9	58.0	131
1119014	14 G 0.5		50	100			500	1000	9.5	67.0	153
1119018	18 G 0.5		50	100			500	1000	10.5	86.4	188
1119021	21 G 0.5		50	100			500	1000	11.7	101.0	221
1119025	25 G 0.5		50	100			500	1000	12.4	120.0	261
1119030	30 G 0.5		50	100			500	1000	13.3	144.0	304
1119035	35 G 0.5		50	100			500	1000	14.5	168.0	356
1119040	40 G 0.5		50	100			500	1000	15.4	192.0	400
1119052	52 G 0.5		50	100			500		17.3	250.0	517
1119061	61 G 0.5		50	100			500		18.5	293.0	603
1119065	65 G 0.5		50	100			500		19.6	312.0	644
1119080	80 G 0.5		50	100			500		21.1	384.0	780
1119100	100 G 0.5		50	100			500		23.6	480.0	975
1119802	2 X 0.75			100	200	300	500	1000	5.4	14.4	45
1119103	3 G 0.75			100	200	300	500	1000	5.7	21.6	55
1119803	3 X 0.75			100	200	300	500	1000	5.7	21.6	55
1119104	4 G 0.75			100	200	300	500	1000	6.2	28.8	66
1119804	4 X 0.75			100	200	300	500	1000	6.2	28.8	66
1119105	5 G 0.75		50	100	200	300	500	1000	6.7	36.0	79
1119805	5 X 0.75		50	100	200	300	500	1000	6.7	36.0	79
1119107	7 G 0.75		50	100	200	300	500	1000	7.3	50.0	101
1119807	7 X 0.75		50	100	200	300	500	1000	7.3	50.0	101
1119109	9 G 0.75		50	100	200	300	500	1000	9.4	65.0	137
1119110	10 G 0.75		50	100	200	300	500	1000	9.6	72.0	150
1119112	12 G 0.75		50	100	200	300	500	1000	9.9	86.0	171
1119812	12 X 0.75		50	100	200	300	500	1000	9.9	86.0	171
1119115	15 G 0.75		50	100			500	1000	10.9	108.0	209
1119117	15 X 0.75		50	100			500	1000	10.9	108.0	209
1119116	16 G 0.75		50	100			500	1000	11.1	115.2	220
1119118	18 G 0.75		50	100			500	1000	11.7	130.0	244
1119121	21 G 0.75		50	100			500	1000	13.0	151.0	286
1119125	25 G 0.75		50	100			500	1000	13.8	180.0	337
1119126	26 G 0.75		50	100			500	1000	14.2	187.2	350
1119134	34 G 0.75		50	100			500	1000	15.9	245.0	448
1119141	41 G 0.75		50	100			500	1000	17.4	296.0	538
1119150	50 G 0.75		50	100			500		19.2	360.0	648
1119151	51 G 0.75		50	100			500		19.2	367.0	646
1119161	61 G 0.75		50	100			500		20.5	439.0	779
1119165	65 G 0.75		50	100			500		21.8	468.0	832
1119180	80 G 0.75		50	100			500		23.6	576.0	1019
1119200	100 G 0.75		50	100			500		26.4	718.0	1271

Part number	Number of cores and mm² per conductor	Standard lengths, meter							Outer diameter in mm	Copper index kg/km	Weight kg/km
		25	50	100	200	300	500	1000			
1119852	2 X 1.0			100	200	300	500	1000	5.7	19.2	53
1119203	3 G 1.0			100	200	300	500	1000	6.0	28.8	65
1119853	3 X 1.0			100	200	300	500	1000	6.0	28.8	65
1119204	4 G 1.0		50	100	200	300	500	1000	6.5	38.4	79
1119854	4 X 1.0		50	100	200	300	500	1000	6.5	38.4	79
1119205	5 G 1.0		50	100	200	300	500	1000	7.1	48.0	94
1119855	5 X 1.0		50	100	200	300	500	1000	7.1	48.0	94
1119206	6 G 1.0		50	100	200	300	500	1000	8.0	58.0	113
1119207	7 G 1.0		50	100	200	300	500	1000	8.0	67.0	126
1119857	7 X 1.0		50	100	200	300	500	1000	8.0	67.0	126
1119208	8 G 1.0		50	100	200	300	500	1000	9.5	77.0	149
1119209	9 G 1.0		50	100	200	300	500	1000	10.0	86.0	164
1119210	10 G 1.0		50	100	200	300	500	1000	10.2	96.0	180
1119212	12 G 1.0		50	100	200	300	500	1000	10.5	115.0	205
1119862	12 X 1.0		50	100	200	300	500	1000	10.5	115.0	205
1119214	14 G 1.0		50	100			500	1000	11.2	134.0	238
1119216	16 G 1.0		50	100			500	1000	11.8	153.6	266
1119218	18 G 1.0		50	100			500	1000	12.7	173.0	320
1119868	18 X 1.0		50	100			500	1000	12.7	173.0	320
1119220	20 G 1.0		50	100			500	1000	13.4	192.0	330
1119870	20 X 1.0		50	100			500	1000	13.4	192.0	330
1119225	25 G 1.0		50	100			500	1000	14.7	240.0	408
1119226	26 G 1.0		50	100			500	1000	15.1	249.0	424
1119234	34 G 1.0		50	100			500	1000	17.1	326.0	551
1119236	36 G 1.0		50	100			500	1000	17.4	346.0	578
1119241	41 G 1.0		50	100			500	1000	18.8	394.0	661
1119250	50 G 1.0		50	100			500		20.6	480.0	797
1119256	56 G 1.0		50	100			500		21.4	538.0	888
1119261	61 G 1.0		50	100			500		22.1	586.0	958
1119265	65 G 1.0		50	100			500		23.6	624.0	1033
1119280	80 G 1.0		50	100			500		25.3	768.0	1251
1119300	100 G 1.0		50	100			500		28.3	960.0	1560
1119902	2 X 1.5			100	200	300	500	1000	6.3	29.0	68
1119303	3 G 1.5	25	50	100	200	300	500	1000	6.7	43.0	84
1119903	3 X 1.5		50	100	200	300	500	1000	6.7	43.0	84
1119304	4 G 1.5	25	50	100	200	300	500	1000	7.2	58.0	104
1119904	4 X 1.5		50	100	200	300	500	1000	7.2	58.0	104
1119305	5 G 1.5	25	50	100	200	300	500	1000	8.1	72.0	128
1119905	5 X 1.5		50	100	200	300	500	1000	8.1	72.0	128
1119306	6 G 1.5		50	100	200	300	500	1000	8.4	86.4	157
1119307	7 G 1.5	25	50	100	200	300	500	1000	8.9	101.0	166
1119907	7 X 1.5		50	100	200	300	500	1000	8.9	101.0	166
1119308	8 G 1.5		50	100			500	1000	10.6	115.0	210
1119313	8 X 1.5		50	100			500	1000	10.6	116.0	210
1119309	9 G 1.5		50	100			500	1000	11.4	130.0	221
1119310	10 G 1.5		50	100			500	1000	11.6	143.0	243
1119311	11 G 1.5		50	100			500	1000	11.6	158.0	258
1119312	12 G 1.5	25	50	100			500	1000	12.0	173.0	279
1119912	12 X 1.5		50	100			500	1000	12.0	173.0	279
1119314	14 G 1.5		50	100			500	1000	12.7	202.0	323
1119316	16 G 1.5		50	100			500	1000	13.4	230.4	361
1119318	18 G 1.5	25	50	100			500	1000	14.4	259.0	407
1119321	21 G 1.5		50	100			500	1000	15.7	302.0	469
1119325	25 G 1.5	25	50	100			500	1000	16.9	360.0	560
1119326	26 G 1.5		50	100			500	1000	17.3	374.4	582
1119332	32 G 1.5		50	100			500	1000	18.7	461.0	704
1119334	34 G 1.5		50	100			500	1000	19.4	490.0	746
1119341	41 G 1.5		50	100			500	1000	21.3	591.0	895
1119350	50 G 1.5		50	100			500		23.5	720.0	1089
1119361	61 G 1.5		50	100			500		25.2	878.0	1309
1119365	65 G 1.5		50	100			500		26.7	936.0	1398
1119952	2 X 2.5	25	50	100	200	300	500	1000	7.5	48.0	101
1119403	3 G 2.5	25	50	100	200	300	500	1000	8.1	72.0	132
1119404	4 G 2.5	25	50	100	200	300	500	1000	8.9	96.0	163
1119405	5 G 2.5	25	50	100	200	300	500	1000	10.0	120.0	200
1119407	7 G 2.5	25	50	100			500	1000	11.1	168.0	267
1119412	12 G 2.5	25	50	100			500	1000	14.8	288.0	445
1119414	14 G 2.5		50	100			500	1000	15.8	336.0	515
1119418	18 G 2.5	25	50	100			500	1000	17.8	432.0	648
1119425	25 G 2.5	25	50	100			500	1000	20.8	600.0	890
1119434	34 G 2.5		50	100			500	1000	24.4	816.0	1208
1119450	50 G 2.5		50	100			500		29.4	1,200.0	1754
1119503	3 G 4	25	50	100			500	1000	9.9	115.0	201
1119504	4 G 4	25	50	100			500	1000	10.8	154.0	249
1119505	5 G 4	25	50	100			500	1000	12.1	192.0	294
1119507	7 G 4	25	50	100			500	1000	13.4	269.0	407
1119511	11 G 4		50	100			500	1000	17.6	422.0	634
1119512	12 G 4		50	100			500	1000	18.1	461.0	660
1119603	3 G 6	25	50	100			500	1000	11.7	172.8	289
1119604	4 G 6	25	50	100			500	1000	13.0	230.0	365
1119605	5 G 6	25	50	100			500	1000	14.5	288.0	447
1119607	7 G 6	25	50	100			500	1000	16.0	403.0	600
1119613	3 G 10	25	50	100			500	1000	14.6	288.0	466
1119614	4 G 10	25	50	100			500	1000	16.2	384.0	590
1119615	5 G 10	25	50	100			500	1000	18.1	480.0	722
1119617	7 G 10	25	50	100			500	1000	20.0	672.0	968
1119624	4 G 16		50	100			500		18.8	614.0	1087
1119625	5 G 16		50	100			500		21.2	768.0	1370
1119627	7 G 16		50	100			500		23.4	1,075.0	1779
1119634	4 G 25		50	100			500		23.5	960.0	1582
1119635	5 G 25		50	100			500		26.4	1,200.0	1998
1119636	7 G 25		50	100			500		29.1	1,680.0	2825
1119644	4 G 35		50	100			500		26.4	1,344.0	2106
1119645	5 G 35		50	100			500		29.6	1,680.0	2635

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

■ Similar products

- ÖLFLEX® 191

■ Accessories

- SKINTOP® CLICK see page 75

ÖLFLEX® CLASSIC 110 ORANGE

Info

- **For warning purposes and for excepted circuits according EN 60204-1, e.g. circuits for maintenance or interlocking circuits**

Benefits

- Space saving installation due to small cable diameters
- High electrical performance due to 4kV test voltage

Application range

- According to EN 60204-1 (VDE0113-1) conductors of control circuits supplied by external source and/or remaining live after disconnected main switch shall be orange coloured
- Electrical lighting and socket circuits for maintenance or repair purposes
- Power sag protection circuits
- Interlocking control circuits

Product features

- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- Orange cores with black numbers
- PVC outer sheath, orange (RAL 2003)

Technical data

Core identification code
Orange cores with black numbers

Based on
IEC 60227-5
HD 21.5 S3; VDE 0281 Part 5
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
ÖLFLEX® CLASSIC 110 ORANGE				
0019700	2 X 1.0	5.7	19.2	57
0019701	3 G 1.0	6.0	28.8	73
0019702	3 X 1.0	6.0	28.8	73
0019706	4 G 1.0	6.5	38.4	85
0019708	4 X 1.0	6.5	38.4	85
0019709	5 G 1.0	7.1	50.0	105
0019710	2 X 1.5	6.3	29.0	77
0019711	3 G 1.5	6.7	43.0	95
0019718	4 G 1.5	7.2	58.0	117
0019720	5 G 1.5	8.1	72.0	114

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- H07V-K see page 43
- Orange coloured single cores

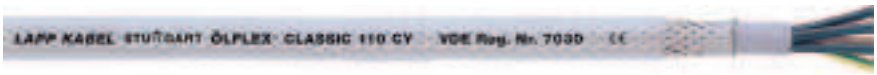
Accessories

- SKINTOP® CLICK see page 75

ÖLFLEX® CLASSIC 110 CY

Info

- EMC compliant
- VDE Reg. No. 7030



Benefits

- Space saving installation due to small cable diameters
- High electrical performance due to 4kV test voltage

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Conveying and transport systems
- In EMI critical environment
  (electromagnetic interference)

Product features

- Flame retardant according to IEC 60332-1-2
- Good chemical resistance
  see Main Catalogue 2010/11 Appendix T1
- High coverage degree of the screen
  low transfer impedance
  (max. 250 Ω/km at 30 MHz)

Approvals (Norm references)

CE VDE RoHS

- Remark: A RoHS-non-compliant version is marketed under ÖLFLEX® 110 CY with VDE-REG.-Nr. 8067. To order this, please add appendix <1> to the below stated part numbers. This does not affect the above given further technical data or description.

Design

- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- PVC inner sheath, grey
- Tinned copper braid
- PVC outer sheath, transparent

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

VDE tested
VDE Reg. No. 7030 for sizes up to and including 65 cores

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
ÖLFLEX® CLASSIC 110 CY				
1135752	2 X 0.5	7.0	41.0	75
1135003	3 G 0.5	7.3	45.5	83
1135753	3 X 0.5	7.3	45.5	83
1135004	4 G 0.5	7.9	55.0	99
1135754	4 X 0.5	7.9	55.0	99
1135005	5 G 0.5	8.4	66.0	112
1135755	5 X 0.5	8.4	66.0	112
1135007	7 G 0.5	8.9	80.5	132
1135757	7 X 0.5	8.9	80.5	132
1135012	12 G 0.5	11.3	138.5	202
1135762	12 X 0.5	11.3	138.5	202
1135018	18 G 0.5	13.3	156.4	289
1135025	25 G 0.5	15.2	250.0	378
1135030	30 G 0.5	16.1	297.0	429
1135040	40 G 0.5	18.2	343.0	542
1135802	2 X 0.75	7.4	46.0	86
1135103	3 G 0.75	7.9	57.9	100
1135803	3 X 0.75	7.9	57.9	100
1135104	4 G 0.75	8.4	64.0	115
1135804	4 X 0.75	8.4	64.0	115
1135105	5 G 0.75	8.9	77.4	130
1135805	5 X 0.75	8.9	77.4	130
1135107	7 G 0.75	9.7	102.0	161
1135807	7 X 0.75	9.7	102.0	161
1135112	12 G 0.75	12.3	177.0	247
1135812	12 X 0.75	12.3	177.0	247
1135118	18 G 0.75	14.5	243.0	356
1135818	18 X 0.75	14.5	243.0	356
1135125	25 G 0.75	16.6	307.3	465
1135134	34 G 0.75	18.9	323.2	601
1135840	40 X 0.75	20.5	369.4	734
1135141	41 G 0.75	20.6	488.0	728
1135852	2 X 1.0	7.9	56.0	98
1135203	3 G 1.0	8.2	65.3	111
1135853	3 X 1.0	8.2	65.3	111
1135204	4 G 1.0	8.7	78.1	130
1135854	4 X 1.0	8.7	78.1	130
1135205	5 G 1.0	9.5	89.4	153
1135207	7 G 1.0	10.2	113.3	185
1135212	12 G 1.0	13.3	188.1	307
1135216	16 G 1.0	14.6	216.0	390
1135218	18 G 1.0	15.5	286.0	418
1135225	25 G 1.0	17.5	388.5	544

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
1135234	34 G 1.0	20.3	505.0	738
1135241	41 G 1.0	22.0	578.0	864
1135250	50 G 1.0	23.8	688.0	1011
1135902	2 X 1.5	8.5	65.0	117
1135303	3 G 1.5	8.9	83.0	136
1135903	3 X 1.5	8.9	83.0	136
1135304	4 G 1.5	9.6	100.0	163
1135904	4 X 1.5	9.6	100.0	163
1135305	5 G 1.5	10.3	125.0	188
1135905	5 X 1.5	10.3	125.0	188
1135307	7 G 1.5	11.3	149.0	237
1135907	7 X 1.5	11.3	149.0	237
1135312	12 G 1.5	14.8	280.0	393
1135318	18 G 1.5	17.2	389.0	538
1135325	25 G 1.5	20.1	535.0	745
1135334	34 G 1.5	22.8	702.0	964
1135341	41 G 1.5	24.7	844.6	1123
1135350	50 G 1.5	27.1	1,006.0	1372
1135402	2 X 2.5	9.9	112.0	165
1135403	3 G 2.5	10.3	146.0	192
1135404	4 G 2.5	11.3	167.0	233
1135405	5 G 2.5	12.6	200.0	283
1135407	7 G 2.5	13.9	288.0	371
1135412	12 G 2.5	17.6	477.3	585
1135502	2 X 4	11.4	120.0	247
1135504	4 G 4	13.4	237.0	347
1135505	5 G 4	14.7	280.0	413
1135602	2 X 6	13.6	180.0	353
1135604	4 G 6	15.8	318.0	485
1135605	5 G 6	17.3	441.0	702
1135607	7 G 6	18.8	530.0	950
1135702	2 X 10	16.4	256.0	492
1135615	3 G 10	17.4	362.4	507
1135614	4 G 10	19.0	558.0	735
1135616	5 G 10	21.2	595.0	847
1135617	7 G 10	23.2	796.0	1039
1135622	2 X 16	18.6	390.0	698
1135624	4 G 16	22.2	804.0	1395
1135623	5 G 16	26.7	935.0	1440
1135626	4 G 25	28.7	1,161.0	1730
1135627	5 G 25	31.6	1,400.0	2090
1135625	4 G 35	32.0	1,543.0	2210
1135628	5 G 35	35.5	1,901.0	2710

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

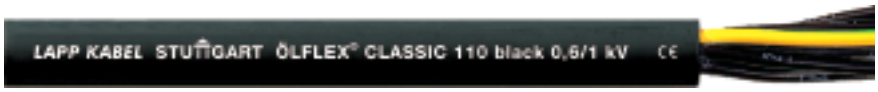
Similar products

- ÖLFLEX® CLASSIC 110 CY BLACK 0,6/1 kV see page 29

Accessories

- SKINTOP® MS-M BRUSH see page 81

ÖLFLEX® CLASSIC 110 BLACK 0,6/1kV



Info

- Suitable for outdoor applications

Benefits

- High electrical performance due to 4kV test voltage

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
  Power station
  Stage technique
- Fixed installation as well as occasional flexing at free, non-continuously recurring movement without tensile load
- Outdoor use suitable considering the temperature range
- Suitable for direct burial

Product features

- Flame retardant according to IEC 60332-1-2
- UV resistant and weather proof

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- PVC outer sheath, black (RAL 9005)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0250-1 and HD 627 S1

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
ÖLFLEX® CLASSIC 110 BLACK				
1120232	2 X 0.75	8.3	14.4	81
1120233	3 G 0.75	8.7	21.6	93
1120234	3 X 0.75	8.7	21.6	93
1120235	4 G 0.75	9.2	29.0	108
1120237	5 G 0.75	9.9	36.0	126
1120241	7 G 0.75	10.7	51.0	162
1120248	12 G 0.75	13.4	86.0	236
1120251	18 G 0.75	15.4	130.0	334
1120259	41 G 0.75	21.6	296.0	713
1120266	2 X 1.0	8.6	19.2	98
1120267	3 G 1.0	9.0	29.0	112
1120268	3 X 1.0	9.0	29.0	112
1120269	4 G 1.0	9.6	38.4	131
1120270	4 X 1.0	9.6	38.4	131
1120271	5 G 1.0	10.4	48.0	152
1120274	7 G 1.0	11.1	67.0	196
1120280	12 G 1.0	14.0	116.0	286
1120284	18 G 1.0	16.1	173.0	419
1120290	25 G 1.0	18.6	240.0	572
1120294	34 G 1.0	21.3	326.0	764
1120298	41 G 1.0	23.2	394.0	891
1120306	2 X 1.5	9.6	29.0	123
1120307	3 G 1.5	10.1	43.0	144
1120308	3 X 1.5	10.1	43.0	144
1120309	4 G 1.5	10.8	58.0	170
1120311	5 G 1.5	11.7	72.0	199
1120314	7 G 1.5	12.6	101.0	261
1120320	12 G 1.5	16.1	173.0	399
1120322	14 G 1.5	17.0	202.0	448
1120324	18 G 1.5	18.8	259.0	547

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
1120328	25 G 1.5	21.7	360.0	770
1120330	34 G 1.5	24.9	490.0	996
1120333	50 G 1.5	29.8	720.0	1427
1120339	2 X 2.5	10.8	48.0	147
1120340	3 G 2.5	11.3	72.0	182
1120342	4 G 2.5	12.2	96.0	225
1120343	4 X 2.5	12.2	96.0	225
1120344	5 G 2.5	13.3	120.0	266
1120346	7 G 2.5	14.4	168.0	354
1120349	12 G 2.5	18.7	288.0	540
1120350	14 G 2.5	19.8	336.0	542
1120351	18 G 2.5	22.0	432.0	788
1120353	25 G 2.5	25.8	600.0	1094
1120360	4 G 4	13.8	154.0	324
1120361	5 G 4	15.1	192.0	385
1120362	7 G 4	16.4	269.0	513
1120366	4 G 6	15.1	230.0	442
1120367	5 G 6	16.8	288.0	526
1120368	7 G 6	18.2	403.0	705
1120370	4 G 10	18.7	384.0	707
1120371	5 G 10	20.7	480.0	881
1120374	4 G 16	21.3	614.0	1100
1120375	5 G 16	23.6	768.0	1600
1120376	7 G 16	26.2	1,075.0	1890
1120378	4 G 25	26.2	960.0	1600
1120379	5 G 25	29.0	1,200.0	2050
1120382	4 G 35	29.1	1,344.0	2400
1120383	5 G 35	32.5	1,680.0	2900
1120385	4 G 50	35.6	1,920.0	3400
1120387	4 G 70	40.7	2,688.0	5050
1120389	4 G 95	46.8	3,648.0	6010
1120390	4 G 120	53.5	4,608.0	7500

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- ÖLFLEX® CLASSIC 100 BK POWER 0,6/1kV
- ÖLFLEX® CLASSIC 130 H BK 0,6/1kV

Accessories

- SKINTOP® MS-M see page 79
- Cable shears KT 4 and KT 5

ÖLFLEX® CLASSIC 110 CY BLACK 0,6/1 kV

Info
- Suitable for outdoor applications
- EMC compliant

Benefits
- High electrical performance due to 4kV test voltage

Application range
- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
  Power station
- In EMI critical environment (electromagnetic interference)
- Fixed installation as well as occasional flexing at free, non-continuously recurring movement without tensile load
- Outdoor use suitable considering the temperature range
- Suitable for direct burial

Product features
- Flame retardant according to IEC 60332-1-2
- UV resistant and weather proof
- High coverage degree of the screen
  low transfer impedance
  (max. 250 Ω/km at 30 MHz)

Approvals (Norm references)
CE RoHS

Design
- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- PVC inner sheath, black
- Tinned copper braid
- PVC outer sheath, black (RAL 9005)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0250-1 and HD 627 S1

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
ÖLFLEX® CLASSIC 110 CY BLACK				
1121232	2 X 0.75	10.5	46.0	183
1121233	3 G 0.75	10.9	56.0	210
1121235	4 G 0.75	11.4	67.0	238
1121236	4 X 0.75	11.4	67.0	238
1121237	5 G 0.75	12.1	78.0	272
1121241	7 G 0.75	12.9	97.0	315
1121247	12 G 0.75	15.8	168.0	464
1121251	18 G 0.75	18.0	229.0	616
1121254	25 G 0.75	20.7	296.0	762
1121266	2 X 1.0	10.8	52.0	198
1121267	3 G 1.0	11.2	66.0	228
1121268	3 X 1.0	11.2	66.0	228
1121269	4 G 1.0	11.8	79.0	261
1121270	4 X 1.0	11.8	79.0	261
1121271	5 G 1.0	12.6	93.0	300
1121274	7 G 1.0	13.3	117.0	335
1121280	12 G 1.0	16.4	204.0	522
1121284	18 G 1.0	18.7	280.0	687
1121290	25 G 1.0	21.6	369.0	884
1121306	2 X 1.5	11.8	69.0	243
1121307	3 G 1.5	12.3	87.0	273
1121308	3 X 1.5	12.3	87.0	273
1121309	4 G 1.5	13.0	102.0	290
1121310	4 X 1.5	13.0	102.0	290
1121311	5 G 1.5	13.9	125.0	352

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
1121314	7 G 1.5	15.0	180.0	448
1121320	12 G 1.5	18.7	281.0	690
1121324	18 G 1.5	21.8	391.0	938
1121328	25 G 1.5	25.1	518.0	1180
1121340	3 G 2.5	13.5	123.0	354
1121342	4 G 2.5	14.6	168.0	413
1121344	5 G 2.5	15.7	204.0	515
1121346	7 G 2.5	17.0	265.0	619
1121349	12 G 2.5	21.7	421.0	936
1121360	4 G 4	16.2	238.0	587
1121361	5 G 4	17.7	302.0	689
1121362	7 G 4	19.0	396.0	828
1121367	4 G 6	17.7	318.0	715
1121368	5 G 6	19.2	419.0	862
1121369	7 G 6	21.2	559.0	1105
1121372	4 G 10	21.7	574.0	1188
1121373	5 G 10	23.0	612.0	1020
1121377	4 G 16	24.3	809.0	1656
1121378	5 G 16	26.7	935.0	1440
1121381	4 G 25	29.8	1,165.0	2179
1121382	5 G 25	31.6	1,400.0	2090
1121385	4 G 35	32.7	1,683.0	2893
1121388	4 G 50	39.6	2,368.0	4094
1121391	4 G 70	44.5	3,261.0	5467
1121394	4 G 95	51.0	4,055.0	5849
1121397	4 G 120	58.1	5,225.0	7509

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products
- ÖLFLEX® CLASSIC 135 CH BK 0,6/1kV

Accessories
- SKINTOP® MS-M BRUSH see page 81

ÖLFLEX® FD 90 CY

Screened, PVC- insulated, PVC sheath, single core, approved

Info

- EMC compliant

Benefits

- Multi-Standard= less part varieties= cost savings
- Easy laying
- For multi-purpose applications

Application range

- In power chains or moving machine parts
- For internal wiring of electric and electronic equipment in switch cabinets
- Specially designed power circuits of servo motors driven by frequency converters as well as main spindle drives in machine tools
- This cable can also substitute multi-core shielded servo drive cables where space requirements or minimum bending radii present problems
- Test systems of the automotive industry, vehicles and stationary fuel cell systems

Product features

- Oil resistant
- Low adhesive surface
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- Designed for operation under a minimum bending radius of at least 7.5 times the cable diameter

Approvals (Norm references)

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines See Main Catalogue 2010/11 Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Approval signs for Canada:
  Sizes up to 120mm² CSA AWM,
  Sizes 150mm² and larger UL cRU AWM

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: PVC
- Nonwoven wrapping
- Tinned copper braid
- Nonwoven wrapping
- PVC outer sheath, orange (RAL 2003)

Technical data

Core identification code
Black, other colours on request.

Approvals
UL-AWM-Style 10107, cRU AWM II A/B FT1 ≥150mm²
CSA AWM IA/B IIA/B FT 1 ≤ 120mm²

Based on
VDE 0250, 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
For flexible applications: 7.5 x outside diameter
Fixed installation: 3 x outer diameter

Rated voltage
IEC: 600/1000 V
UL & CSA: 600 V

Test voltage
4000 V

Protective conductor
X = without protective conductor

Range of temperature
Flexing: -5°C up to +90°C
Fixed installation: -40°C up to +90°C

Part number	Conductor cross section in mm	Outer diameter in mm	Copper index kg/km	Weight kg/km
0026651	10	9.7	127.6	227
0026653	16	11.2	186.2	297
0026655	25	12.5	257.8	410
0026657	35	15.1	400.7	607
0026659	50	17.1	554.8	808
0026661	70	19.4	775.6	1081
0026663	95	20.9	1028.1	1382
0026665	120	24.5	1282.4	1752
0026667	150	26.2	1410.4	1924
0026669	185	29.2	1935.0	2611
0026671	240	32.9	2526.0	3372
0026673	300	34.8	3128.8	4105

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SKINTOP® MS-SC-M see page 80
- SKINTOP® MS-M BRUSH see page 81
- SILVYN® CHAIN Cable protection and guiding systems

ESUY Copper Earthing Cable

Flexible single conductor for grounding and shorting as well as for grounding installation and potential equalisation

Benefits

- Very flexible in spite of large conductor cross section

Application range

- Provides protection during repairs
- For earthing in high voltage power installations of electric supply companies and railway systems
- For earthing devices and potential equibonding on machine parts and EDP systems

Product features

- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)

RoHS

Design

- Strands of bare copper wires
- Braiding of bare copper wires
- PVC based outer sheath, transparent

Technical data

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
see article table

Minimum bending radius
Flexible use: 12 x outer diameter

Test voltage
2000 V

Range of temperature
Flexible use: -5°C up to +70°C

Part number	Conductor cross section in mm²	Conductor stranding: Number of wires x wire diameter in mm	Outer diameter in mm	Copper index kg/km	Weight kg/km
4571101	16	4200 x 0.07	8.8	177.0	230
4571102	25	3192 x 0.1	10.4	275.0	316
4571103	35	4480 x 0.1	12.4	387.0	475
4571104	50	6383 x 0.1	14.6	560.0	670
4571105	70	8918 x 0.1	17.0	791.0	905
4571106	95	12100 x 0.1	19.8	1,069.0	1220

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- X00V3-D Copper Earthing Cable see page 32

Accessories

- Cable shears KT 4 and KT 5

X00V3-D Copper Earthing Cable

Cold-flexible single conductor in the style of <HAR> for grounding and shorting

Info

- **Formerly: H00V3-D Copper Earthing Cable**

Application range

- Provides protection during repairs
- For earthing in high voltage power installations of electric supply companies and railway systems
- For earthing devices and potential equibonding on machine parts and EDP systems
- For applications in cold environments

Approvals (Norm references)

RoHS

Design

- Strands of bare copper wires
- PVC based outer sheath, transparent

Technical data

Based on
VDE 0283 Part 3 or EN 61138

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
VDE 0283 Part 3 or EN 61138

Minimum bending radius
Flexible use: 12 x outer diameter

Test voltage
1000 V

Range of temperature
Flexible use: -25 °C up to +55 °C

Part number	Conductor cross section in mm²	Outer diameter in mm	Copper index kg/km	Weight kg/km
4571110	16	8.1	153.6	223
4571111	25	9.5	240.0	330
4571112	35	11.0	336.0	455
4571113	50	13.2	480.0	648
4571114	70	15.8	672.0	913
4571115	95	18.3	912.0	1234

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- ESUY Copper Earthing Cable see page 31

Accessories

- Cable shears KT 4 and KT 5

ÖLFLEX® TRUCK REFLEX FLRY 11Y

Info

- Reflecting

Benefits

- Fulfils the reflection values according to § 51a/7 StVZO acc. to DIN 67520 part 2 for long material trailers

Application range

- Commercial vehicles
- Long material trailers

Product features

- UV resistant
- Resistant to cold
- Resistant to most oils, weather and chemicals
- Microbe and hydrolysis resistant

Approvals (Norm references)

RoHS

- ISO 4141 and DIN/ISO 6722

Design

- Strands of bare copper wires
- Core insulation: Based on PVC
- Reflex-reflecting foil wrapping
- Special polyurethane outer sheath

Technical data

Core identification code
ISO 4141-3

Insulation resistance
10 MOhm x km

Capacity of data pairs
Related to length between cores, max. 50 pF/m and between each data transmission core and all other cores in the cable, max. 100 pF/m

Conductor stranding
Fine wire according to ISO 6722

Minimum bending radius
12 x outer diameter

Rated voltage
60 V

Test voltage
5 kV root mean square value at least 5 min.

Range of temperature
Fixed installation: -40 °C up to +85 °C
Area of application, Class A

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Colour	Copper index kg/km	Weight kg/km
ÖLFLEX® TRUCK REFLEX FLRY 11Y					
7027039	4 x 1,0	8.0	white/ black/ red/ brown	38.4	85
7027040	7 x 1,5	9.9	white/ black/ yellow/ red/ green/ brown/ blue	100.8	163
7027043	10x1,5+3x2,5+1x(2x1,5)	15.4	white with black numbers; 1.5=No. 1-3,5-8,10-12; 2.5=No. 4,9,13; 1.5=No. 14,15	220.8	360

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

ÖLFLEX® TRAFFIC 3GKW C-flex

Screened multi core cable for increased requirements in railway applications

Info

- Screened to comply with EMC

Benefits

- Copper screening complies with EMC requirements and protects against electromagnetic interference
- High flexibility and slim diameters enable small bending radii at fixed installation
- Resistant to mechanical influences in harsh environmental conditions
- Expanded temperature range
- Reduced formation of toxic gases and fire spreading in the event of fire increase the protection against damage to persons and property

Application range

- For fixed and protected installations inside or outside of railed vehicles and busses
- Suitable for the connection of fixed and moving objects such as lamps, heating, electrical equipment, wiring of vehicles, terminal boxes and power supply

Product features

- Fire behaviour:
  - Halogen-free (IEC 60754-1)
  - No corrosive gases (IEC 60754-2)
  - No toxic gases (EN 50305)
  - Low smoke density (IEC 61034)
  - Flame retardant (IEC 60332-1-2)
  - No fire spreading (IEC 60332-3-24)
  - Low fire load (DIN 51900)
- Chemical properties:
  - Oil and fuel resistance (EN 50305)
  - Ozone resistance (EN 50305)
  - No fluorine (EN 60684-2)

Approvals (Norm references)

CE RoHS

Design

- Tinned copper strand, fine wired
- Electron beam cross-linked polyolefin copolymer insulation
- Core colours: White with black printed numbers
- Tinned copper braid
- Outer sheath of electron beam cross-linked polyolefin copolymer
- Outer sheath colour: Black

Technical data

Conductor stranding
Fine wired according VDE 0295, Class 5
(SRC = Special Round Conductor)

Minimum bending radius
< 10 mm fixed installation > 5 x D
Occasional movement > 7 x D
> 10 mm fixed installation > 6 x D
Occasional movement > 8 x D

Rated voltage
U_0/U AC 0.6/1 kV
U_0/U DC 0.9/1.5 kV

Test voltage
Core/Core: 4 kV
Core/Screen: 4 kV

Range of temperature
Fixed installation:
-45°C up to +120°C
Occasional flexing:
-35 °C up to +90 °C
Short circuit: +200° C

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km	Fire load in kWh/m
ÖLFLEX® TRAFFIC 3GKW C-flex					
4223441	2 X 0.5	6.1	28.4	56	0.120
4223442	3 X 0.5	6.4	34.9	65	0.110
4223443	4 X 0.5	7.1	43.3	81	0.140
4223444	5 X 0.5	7.7	48.9	94	0.180
4223445	7 X 0.5	8.9	63.7	127	0.240
4223446	10 X 0.5	10.0	82.5	156	0.280
4223447	12 X 0.5	10.5	93.9	177	0.320
4223448	2 X 0.75	6.7	35.8	69	0.140
4223449	3 X 0.75	7.0	43.9	79	0.130
4223450	4 X 0.75	7.7	53.7	98	0.170
4223451	5 X 0.75	8.4	66.0	119	0.200
4223452	7 X 0.75	10.0	84.9	164	0.290
4223453	10 X 0.75	11.1	111.0	199	0.330
4223454	12 X 0.75	11.6	127.0	225	0.370
4223455	2 X 1.0	7.1	43.3	82	0.140
4223456	3 X 1.0	7.5	53.7	83	0.140
4223457	4 X 1.0	8.2	68.4	117	0.190
4223458	5 X 1.0	9.0	79.0	139	0.220
4223459	7 X 1.0	10.6	104.0	193	0.330
4223460	2 X 1.5	7.7	54.5	100	0.180
4223461	3 X 1.5	8.1	73.2	114	0.170
4223462	3 G 1.5	8.1	73.2	114	0.170
4223463	4 X 1.5	8.9	88.6	139	0.210
4223464	5 X 1.5	9.9	106.5	173	0.290
4223465	5 G 1.5	9.9	106.5	173	0.290
4223466	7 X 1.5	11.7	145.9	243	0.390
4223467	2 X 2.5	8.9	79.0	133	0.270
4223468	3 X 2.5	9.4	104.7	155	0.210
4223469	3 G 2.5	9.4	104.7	155	0.210
4223470	4 X 2.5	10.5	133.1	200	0.290
4223471	5 X 2.5	11.6	165.1	250	0.390
4223472	5 G 2.5	11.6	165.1	250	0.390
4223473	7 X 2.5	13.7	217.3	345	0.530
4223475	3 X 4	10.8	153.2	216	0.270
4223476	3 G 4	10.8	153.2	216	0.270
4223477	4 X 4	11.9	198.7	279	0.360
4223478	5 X 4	13.4	240.0	353	0.450

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

ÖLFLEX® TRAFFIC 4GKW-AXplus C-flex

Screened single core energy cable for increased voltage ratings

Info

- **Voltage rating 1,8/3 kV**
- **Cold resistant down to -60°C**
- **Screened to comply with EMC**

Benefits

- High electrical strength and mechanical durability due to dual-layer cable construction
- Copper screening complies with EMC requirements and protects against electromagnetic interference
- High flexibility and slim diameters enable small bending radii at fixed installation
- Resistant to mechanical influences in harsh environmental conditions
- Excellent chemical resistance and high flammability rating as well

Application range

- For fixed and protected installations inside or outside of railed vehicles and busses
- For connection of stationary and moving parts
- Suitable for cabling of switchboards, converters, panel units and rheostatic braking blocks

Product features

- Fire behaviour:
  - Halogen-free (IEC 60754-1)
  - No corrosive gases (IEC 60754-2)
  - No toxic gases (EN 50305)
  - Low smoke density (IEC 61034)
  - Flame retardant (IEC 60332-1-2)
  - No fire spreading (IEC 60332-3-24)
  - Low fire load (DIN 51900)
- Chemical properties:
  - Oil and fuel resistance (EN 50305)
  - Ozone resistance (EN 50305)
  - No fluorine (EN 60684-2)

Approvals (Norm references)

RoHS

Design

- Tinned copper strand, fine wired
- Insulation: cross-linked polyolefin copolymer
- Outer layer: electron beam cross-linked elastomer, black
- Tinned copper braid
- Outer sheath: electron beam cross-linked elastomer
- Outer sheath colour: Black

Technical data

Conductor stranding
Fine wired according VDE 0295, Class 5
(SRC = Special Round Conductor)

Minimum bending radius
< 10 mm fixed installation > 5 x D
Occasional movement > 7 x D
> 10 mm fixed installation > 6 x D
Occasional movement > 8 x D

Rated voltage
U_0/U AC 1.8/3 kV
U_0DC 2,7 kV

Test voltage
6.5 kV AC

Range of temperature
Fixed installation:
-60°C up to +120°C
Occasional flexing:
-35 °C up to +90 °C
Short circuit: +200° C

Part number	Conductor cross section in mm²	Outer diameter in mm	Copper index kg/km	Weight kg/km	Fire load in kWh/m
ÖLFLEX® TRAFFIC 4GKW-AXplus C-flex					
4223336	1.5	4.9	25.1	47	0.080
4223337	2.5	5.5	35.6	62	0.100
4223338	4	6.7	59.8	95	0.140
4223339	6	7.4	81.6	123	0.160
4223340	10	8.5	126.0	178	0.210
4223341	16	10.7	192.0	261	0.320
4223342	25	12.5	285.0	371	0.430
4223343	35	14.0	387.0	492	0.530
4223344	50	16.5	562.0	693	0.660
4223345	70	18.6	766.0	913	0.780
4223346	95	20.3	1,019.0	1165	0.910
4223347	120	22.8	1,268.0	1441	1.140
4223348	150	25.1	1,572.0	1730	1.280
4223349	185	27.0	1,917.0	2088	1.450
4223350	240	30.2	2,504.0	2709	1.740
4223351	300	32.8	3,099.0	3329	2.030
4223352	400	37.1	4,088.0	4250	2.420

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- ÖLFLEX® TRAFFIC 4GKW-AXplus

ÖLFLEX® HEAT 145 C MC

Electron beam cross-linked cables for increased application requirements

Info

- Improved characteristics in case of fire
- Screened to comply with EMC
- For thermal class B applications

Benefits

- Safety in areas with high personnel concentration
- Reduction of flame propagation and density and toxicity of smoke gases in event of fire
- Minimizes damage to buildings and equipment caused by the formation of toxic acid fumes in fires
- Certified for maritime application
- Copper braiding assures EMC and screens against electromagnetic interference

Application range

- Suitable for wiring respectively connection of lighting, heating appliances, switch gear cabinets and distributors in mechanical engineering and plant construction
- For use in traffic regulation systems as well as outdoors

Product features

- Halogen-free according to IEC 60754-1
  Flame retardant according to IEC 60332-1-2
  No flame propagation according to IEC 60332.3
- Good moisture, ozone- and UV resistance
- Abrasion and notch resistant

Approvals (Norm references)

CE RoHS

Design

- Fine strands of tinned copper wires
- Electron beam cross-linked polyolefin copolymer insulation
- Cores twisted in layers
- Tinned copper screen braid
- Outher sheath: Electron beam cross-linked polyolefin copolymer, colour black

Technical data

Core identification code
Black with white numbers (without gn/ye)

Approvals
GL (Germanischer Lloyd)

Specific insulation resistance
>2 TOhm x cm

Conductor stranding
Fine wire according to VDE 0295, Class 5 / IEC 60228 Cl. 5 from 0.5 mm²

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 5 x cable diameter

Rated voltage
Up to 1.0mm² U_0/U 300/500 V
From 1.5mm² U_0/U 450/750 V
0.6/1kV from 1.5mm² with fixed and protected installation

Test voltage
C/C 3500 V
C/S 2500 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Fixed installation:
-55°C up to +125°C
Temporary: up to +145°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
ÖLFLEX® HEAT 145 C MC screened 300/500 V				
0026908	2 X 0.75	6.9	38.0	79
0026909	3 X 0.75	6.9	50.0	96
0026910	4 X 0.75	7.6	58.0	116
0026911	5 X 0.75	8.3	70.0	139
0026912	7 X 0.75	9.9	84.9	186
0026916	2 X 1	7.0	43.3	90
0026917	3 X 1	7.4	56.0	104
0026918	4 X 1	8.1	66.0	129
0026919	5 X 1	8.9	95.0	153
0026920	7 X 1	10.5	109.0	211
ÖLFLEX® HEAT 145 C MC screened 450/750 V				
0026924	2 X 1.5	8.2	58.0	114
0026925	3 X 1.5	8.7	71.0	132
0026926	4 X 1.5	9.4	86.0	163
0026927	5 X 1.5	10.5	104.0	200
0026928	7 X 1.5	12.6	136.0	273
0026932	2 X 2.5	9.8	96.0	157
0026933	3 X 2.5	10.4	146.0	198
0026934	4 X 2.5	11.5	150.0	236
0026935	5 X 2.5	12.6	200.0	287
0026938	4 X 4	12.8	220.0	317
0026939	5 X 4	14.3	259.0	376

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- ÖLFLEX® TRAFFIC 3GKW C-flex see page 34

Accessories

- SKINTOP® MS-SC-M see page 80
- SKINTOP® MS-SC
- SKINTOP® MS-M BRUSH see page 81

New

ÖLFLEX® HEAT 180 C MS

Screened and approved silicone cables for Noth America (AWM)

Info

- MS = Multi Standard
  For the use in the USA and in Canada
- UL AWM Style 4476 (150°C/600V)
- Formerly ÖLFLEX® HEAT 180 C UL/CSA

Benefits

- Approved for the USA and Canada for export-oriented appliance and apparatus builders
- Thicker cable design meets the requirements of the FT-1 flame test and is thus also approved for installation in accordance with UL outside of apparatus and appliances
- Good flexibility ease the installation where space is limited
- Copper braiding assures EMC and screens against electromagnetic interference

Application range

- Areas with high ambient temperatures where insulating and sheath materials of conventional cables will embrittle after a short while
- Typical fields of application
  - Steel-, cement-, ceramic and iron works
  - Bakery equipment and industrial furnaces
  - Electric motor industry
  - Sauna/solarium construction
  - Thermal and heating elements
  - Lighting technology
  - Ventilator engineering
  - Air conditioning technology
  - Galvanization technology
  - Polymer processing
  - Generator and transformer building
  - Wind turbine engineering

Product features

- Metric flexible conductor design
- Halogen-free and flame retardant (IEC 60332-1-2)
- Reduced smoke density
- Good hydrolysis and UV resistance
- Resistant against a multitude of oils, alcohols, vegetable and animal fats and chemical media

Approvals (Norm references)

- UL AWM 4476 and cUL AWM II A/B
- Also available on request as special product with AWM rating 200°C/600 V
- Multi-conductor Type AWM cables (Appliance Wiring Material) shall be permitted for industrial machinery (US) when part of a listed assembly suitable for the intended use only. NFPA 79 Edition 2007 §12.2.7.3

Design

- Fine strands of tinned copper wires
- Silicone based core insulation
- Cores twisted together
- Tinned copper screen braiding, interleaved plastic foil wrapping
- Silicone based outer sheath, colour black (RAL 9005)

Technical data

Core identification code
Colour coded according to VDE 0293-308, see Main Catalogue 2010/11 Appendix T9
Starting at 6 cores: Black with white numbers

Approvals
UL AWM Style 4476 (Construction B)
cUL AWM II A/B (Canada)

Specific insulation resistance
>200 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5
(For matching US conductor sizes according AWG please see Main Catalogue 2010/11 technical table T16)

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installation: 6 x cable diameter

Rated voltage
U_0/U: 300/500 V
Working voltage UL: 600 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
According VDE: -50 °C up to +180 °C
According to UL-Style: up to +150 °C
(adequate ventilation provided)

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
ÖLFLEX® HEAT 180 C MS				
0046701	3 G 0.5	8.6	43.4	100
0046702	4 G 0.5	9.3	55.4	122
0046703	5 G 0.5	10.0	60.2	137
0046708	2 X 1	9.0	48.2	104
0046709	3 G 1	9.5	65.0	131
0046710	4 G 1	10.2	74.6	152
0046711	5 G 1	11.0	91.5	181
0046712	7 G 1	11.9	117.9	228
0046716	2 X 1.5	9.6	65.0	126
0046717	3 G 1.5	10.1	79.4	152
0046718	4 G 1.5	10.9	101.1	186
0046719	5 G 1.5	11.8	122.7	222
0046720	7 G 1.5	12.8	158.7	281
0046721	12 G 1.5	16.9	245.2	431
0046723	18 G 1.5	19.6	346.1	600
0046724	25 G 1.5	23.9	495.7	833
0046728	3 G 2.5	11.0	115.5	197
0046729	4 G 2.5	11.9	146.7	244
0046730	5 G 2.5	12.9	177.9	291
0046734	3 G 4	12.3	165.9	261
0046735	4 G 4	13.4	211.5	325
0046736	5 G 4	14.9	257.2	389
0046740	4 G 6	17.2	302.8	482
0046741	5 G 6	18.7	367.6	580
0046742	4 G 10	22.8	508.4	802

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- ÖLFLEX® HEAT 180 MS
- ÖLFLEX® HEAT 180 EWKF C see page 38

ÖLFLEX® HEAT 180 EWKF C

Screened silicone cables with increased mechanical characteristics

Info
- Proven notch resistant EWKF quality
- EMC compliant

Benefits
- Longer durability in harsh applications than conventional silicone cables
- Notch and tear resistant outher sheath material reduces mechanical damage
- Copper braiding assures EMC and screens against electromagnetic interference
- Good flexibility ease the installation where space is limited
- Due to special additives in EWKF silicone steel wire armoured cable versions partly can become unnecessary

Application range
- Areas with high ambient temperatures and additionally high mechanical stress
- Typical fields of application
  - Steel-, cement-, ceramic and iron works
  - Bakery equipment and industrial furnaces
  - Electric motor industry
  - Sauna/solarium construction
  - Thermal and heating elements
  - Lighting technology
  - Ventilator engineering
  - Air conditioning technology
  - Galvanization technology
  - Polymer processing
  - Generator and transformer building
  - Wind turbine engineering

Product features
- Halogen-free and flame retardant (IEC 60332-1-2)
- Reduced smoke density
- Good hydrolysis and UV resistance
- Resistant against a multitude of oils, alcohols, vegetable and animal fats and chemical media
- EWKF Formula: Increased initial tear propagation and notch resistance

Approvals (Norm references)
CE RoHS

Design
- Fine strands of tinned copper wires
- Cores twisted together
- Silicone based core insulation
- Silicone based inner sheath
- Tinned copper screen braiding, interleaved plastic foil wrapping
- Notch resistant silicone based EWKF outer sheath, colour black (RAL 9005)

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (see Main Catalogue 2010/11 Appendix T9)
Starting at 6 cores: Black with white numbers

Specific insulation resistance
>200 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
-50 °C up to +180 °C
(adequate ventilation provided)

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
ÖLFLEX® HEAT 180 EWKF C				
0046301	2 X 0.75	8.6	37.5	104
0046302	3 G 0.75	8.9	46.1	118
00463033	4 G 0.75	10.2	57.3	152
00463043	5 G 0.75	10.9	67.3	176
0046307	2 X 1	9.0	43.0	116
0046308	3 G 1	9.7	55.7	142
00463093	4 G 1	10.9	67.8	175
00463103	5 G 1	11.6	80.3	203
0046312	7 G 1	12.3	113.9	250
0046313	2 X 1.5	10.8	58.0	166
0046314	3 G 1.5	11.2	74.0	188
00463153	4 G 1.5	12.0	91.4	222
00463163	5 G 1.5	12.8	121.7	273
0046318	7 G 1.5	13.6	157.2	341
0046320	3 G 2.5	12.8	121.2	271
00463213	4 G 2.5	13.9	150.9	328
00463223	5 G 2.5	14.8	180.5	387
00463273	4 G 4	16.0	218.0	448
00463283	5 G 4	17.2	262.9	531
0046330	3 G 6	16.4	240.5	489
00463313	4 G 6	17.9	304.7	591
00463323	5 G 6	19.4	370.0	706

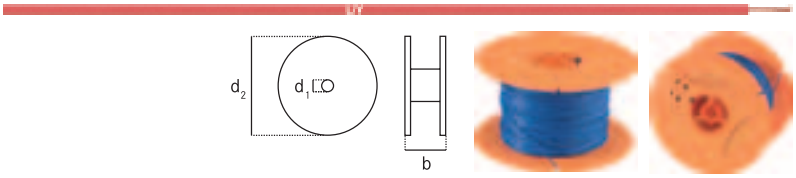
All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products
- ÖLFLEX® HEAT 180 H05SS-F EWKF
- ÖLFLEX® HEAT 180 EWKF

Accessories
- SKINTOP® MS-SC-M see page 80
- SKINTOP® MS-SC
- SKINTOP® MS-M BRUSH see page 81

LiY

RoHS



Application range

- Stranded hook-up wires for wiring of telecommunication devices and electronic components within devices

Product features

- Flame retardant according to IEC 60332-1-2
- Spool: d1=18 mm; d2=150 mm; b=85 mm

Design

- Copper conductor
- Core insulation on PVC basis YI 2/TI 2 acc. VDE 0207-4

Technical data

Peak working voltage
500 V (0.14 sq.mm)
900 V (0.25 sq.mm)

Based on
VDE 0812

Conductor stranding
0.14 sq.mm: ≥ 18 strands (Ø each: 0.10 mm)
0.25 sq.mm: ≥ 14 strands (Ø each: 0.15 mm)

Rated voltage
working voltage < 50 VAC
UPP - peak-to-peak voltage: ≤ 250 V

Test voltage
1200 V (0.14 sq.mm)
2500 V (0.25 sq.mm)

Range of temperature
Fixed installation: -30°C up to +70°C

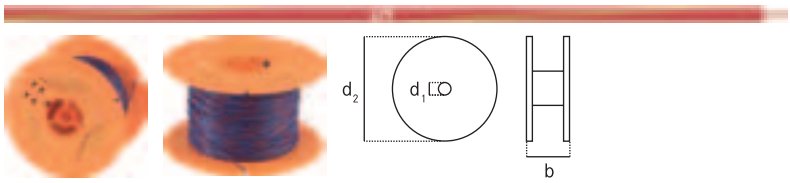
Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	greenyellow	black	blue	dark-blue	brown
0.14	1.1	500	1.3	4125000S	4125001S	4125002S	4125014S	4125003S
0.25	1.3	250	2.4	4126000S	4126001S	4126002S	4126014S	4126003S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	beige	Yellow	green	purple	Pink
0.14	1.1	500	1.3		4125005S	4125006S	4125007S	4125008S
0.25	1.3	250	2.4	4126004S	4126005S	4126006S	4126007S	4126008S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	orange	transparent	red	white	grey
0.14	1.1	500	1.3	4125009S		4125104S	4125105S	4125106S
0.25	1.3	250	2.4	4126009S	4126010S	4126104S	4126105S	4126106S

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

LiY with coloured stripes



RoHS

Application range

- Stranded hook-up wires for wiring of telecommunication devices and electronic components within devices

Product features

- Flame retardant according to IEC 60332-1-2
- Spool: d1=18 mm; d2=150 mm; b=85 mm

Design

- Copper conductor
- Core insulation on PVC basis YI 2/TI 2 acc. VDE 0207-4
- Labeled with coloured stripes

Technical data

Peak working voltage
900 V (0.25 sq.mm)

Based on
VDE 0812

Conductor stranding
0.25 sq.mm: ≥ 14 strands (Ø each: 0.15 mm)

Rated voltage
working voltage < 50 VAC
UPP - peak-to-peak voltage: ≤ 250 V

Test voltage
2500 V (0.25 sq.mm)

Range of temperature
Fixed installation: -30°C up to +70°C

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	black/green	black/red	black/white	blue/black
0.25	1.5	250	2.4	4502202S	4502212S	4502222S	4502232S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	blue/green	blue/red	blue/white	brown/black
0.25	1.5	250	2.4	4502242S	4502252S	4502262S	4502272S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	brown/green	brown/white	yellow/black	yellow/red
0.25	1.5	250	2.4	4502282S	4502292S	4502302S	4502312S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	yellow/white	green/black	green/white	purple/black
0.25	1.5	250	2.4	4502322S	4502332S	4502342S	4502352S

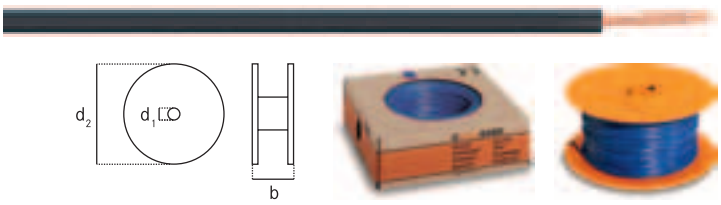
Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	purple/yellow	purple/white	orange/black	orange/white
0.25	1.5	250	2.4	4502362S	4502372S	4502382S	4502392S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	red/black	red/yellow	red/white	white/black
0.25	1.5	250	2.4	4502402S	4502412S	4502422S	4502432S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	white/blue	white/red	grey/black
0.25	1.5	250	2.4	4502442S	4502462S	4502472S

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

H05V-K



Application range

- Internal wiring of devices
- Protected laying in and on lights
- Signal systems in and on plaster in tubes

Product features

- Flame retardant according to IEC 60332-1-2
- Spool: d1=18mm; d2=200 mm; b=85 mm

Design

- Fine strands of bare copper wires
- Core insulation: Based on PVC

Technical data

Approvals
HD 21/VDE 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Acc. to HD 516 at 20 ±10 °C cable temperature
4 x outer diameter (OD), if used conventionally; 2 x OD at cautious bending

Rated voltage
U_0/U: 300/500 V

Test voltage
2000 V

Current rating
VDE 0298 Part 4
HD 516

Range of temperature
Static:
-30°C up to +80°C

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/Spool	Copper index kg/km	Weight kg/km	greenyellow	black	blue	dark-blue	brown
0.5	2.5	100		4.8	9	4510001	4510011	4510021	4510141	4510031
0.75	2.7	100		7.2	12	4510002	4510012	4510022	4510142	4510032
1	2.8	100		9.6	15	4510003	4510013	4510023	4510143	4510033
0.5	2.5		250	4.8	9	4510001S	4510011S	4510021S	4510141S	4510031S
0.75	2.7		250	7.2	12	4510002S	4510012S	4510022S	4510142S	4510032S
1	2.8		250	9.6	15	4510003S	4510013S	4510023S	4510143S	4510033S

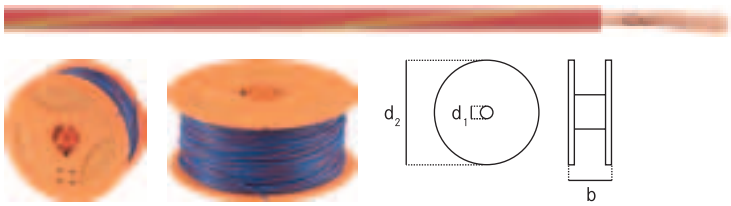
Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/Spool	Copper index kg/km	Weight kg/km	Yellow	green	purple	Pink	orange
0.5	2.5	100		4.8	9	4510111	4510121	4510071	4510081	4510091
0.75	2.7	100		7.2	12	4510112	4510122	4510072	4510082	4510092
1	2.8	100		9.6	15	4510113	4510123	4510073	4510083	4510093
0.5	2.5		250	4.8	9	4510111S	4510121S	4510071S	4510081S	4510091S
0.75	2.7		250	7.2	12	4510112S	4510122S	4510072S	4510082S	4510092S
1	2.8		250	9.6	15	4510113S	4510123S	4510073S	4510083S	4510093S

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/Spool	Copper index kg/km	Weight kg/km	transparent	red	white	grey	ultramarine blue
0.5	2.5	100		4.8	9	4510101	4510041	4510051	4510061	4510161
0.75	2.7	100		7.2	12	4510102	4510042	4510052	4510062	
1	2.8	100		9.6	15	4510103	4510043	4510053	4510063	4510163
0.5	2.5		250	4.8	9	4510101S	4510041S	4510051S	4510061S	4510161S
0.75	2.7		250	7.2	12	4510102S	4510042S	4510052S	4510062S	4510162S
1	2.8		250	9.6	15	4510103S	4510043S	4510053S	4510063S	4510163S

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	dark-blue/ white
0.5	2.5	100	4.8	9	4510921
0.75	2.7	100	7.2	12	4510922
1	2.8	100	9.6	15	4510923

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

X05V-K with coloured stripes



Application range

- Internal wiring of devices
- Protected laying in and on lights
- Signal systems in and on plaster in tubes

Design

- Fine strands of bare copper wires
- Core insulation: Based on PVC
- Labeled with coloured stripes

Product features

- Flame retardant according to IEC 60332-1-2
- Spool: d1=18mm; d2=200 mm; b=85 mm

Technical data

Based on
HD 21/VDE 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
4 x outer diameter (OD) at usage defined for H05V-K; 2xOD at cautious bending

Rated voltage
U_0/U: 300/500 V

Test voltage
2000 V

Current rating
VDE 0298 Part 4
HD 516

Range of temperature
Static:
-30°C up to +80°C

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	Weight kg/km	dark-blue/ white	black/green	black/red	black/white
0.5	2.5	250	4.8	9	4512921S	4512201S	4512211S	4512221S
0.75	2.7	250	7.2	12	4512922S	4512202S	4512212S	4512222S
1	2.8	250	9.6	15	4512923S	4512203S	4512213S	4512223S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	Weight kg/km	blue/black	blue/green	blue/red	blue/white
0.5	2.5	250	4.8	9	4512231S	4512241S	4512251S	4512261S
0.75	2.7	250	7.2	12	4512232S	4512242S	4512252S	4512262S
1	2.8	250	9.6	15	4512233S	4512243S	4512253S	4512263S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	Weight kg/km	brown/black	brown/green	brown/white	yellow/black
0.5	2.5	250	4.8	9	4512271S	4512281S	4512291S	4512301S
0.75	2.7	250	7.2	12	4512272S	4512282S	4512292S	4512302S
1	2.8	250	9.6	15	4512273S	4512283S	4512293S	4512303S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	Weight kg/km	yellow/red	yellow/white	green/black	green/white
0.5	2.5	250	4.8	9	4512311S	4512321S	4512331S	4512341S
0.75	2.7	250	7.2	12	4512312S	4512322S	4512332S	4512342S
1	2.8	250	9.6	15	4512313S	4512323S	4512333S	4512343S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	Weight kg/km	purple/black	purple/yellow	purple/white	orange/black
0.5	2.5	250	4.8	9	4512351S	4512361S	4512371S	4512381S
0.75	2.7	250	7.2	12	4512352S	4512362S	4512372S	4512382S
1	2.8	250	9.6	15	4512353S	4512363S	4512373S	4512383S

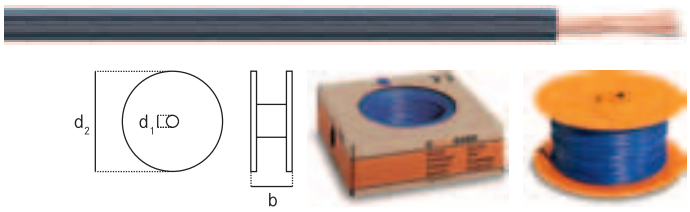
Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	Weight kg/km	orange/white	red/black	red/yellow	red/white
0.5	2.5	250	4.8	9	4512391S	4512401S	4512411S	4512421S
0.75	2.7	250	7.2	12	4512392S	4512402S	4512412S	4512422S
1	2.8	250	9.6	15	4512393S	4512403S	4512413S	4512423S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	Weight kg/km	white/black	white/blue	white/brown	white/red
0.5	2.5	250	4.8	9	4512431S	4512441S	4512451S	4512461S
0.75	2.7	250	7.2	12	4512432S	4512442S	4512452S	4512462S
1	2.8	250	9.6	15	4512433S	4512443S	4512453S	4512463S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	Weight kg/km	grey/black
0.5	2.5	250	4.8	9	4512471S
0.75	2.7	250	7.2	12	4512472S
1	2.8	250	9.6	15	4512473S

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

H07V-K



Technical data

Approvals
HD 21/VDE 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Acc. to HD 516 at 20 ±10 °C cable temperature
OD ≤ 8mm: 4 x OD*/2 x OD**; 8 < OD ≤ 12mm: 5 x OD*/3 x OD**; OD > 12mm: 6 x OD*/4 x OD**

Rated voltage
U_0/U: 450/750 V

Test voltage
2500 V

Current rating
VDE 0298 Part 4
HD 516

Range of temperature
Static:
-30°C up to +80°C

Application range

- Laying in tubes, exposed and buried in plaster and in closed installation ducts
- For direct laying on racks, troughs and tubes only as equipotential binding conductor

Product features

- Flame retardant according to IEC 60332-1-2
- Spool: d1=18mm; d2=200 mm; b=85 mm

Design

- Fine strands of bare copper wires
- Core insulation: Based on PVC

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/Spool	Copper index kg/km	Weight kg/km	greenyellow	black	blue	dark-blue	brown
1.5	3.4		150	14.4	22	4520001S	4520011S	4520021S	4520141S	4520031S
2.5	4.1		100	24.0	37	4520002S	4520012S	4520022S	4520142S	4520032S
1.5	3.4	100		14.4	22	4520001	4520011	4520021	4520141	4520031
2.5	4.1	100		24.0	37	4520002	4520012	4520022	4520142	4520032
4	4.8	100		38.0	45	4520003	4520013	4520023	4520143	4520033
6	5.3	100		58.0	71	4520004	4520014	4520024	4520144	4520034
10	6.8	100		96.0	120	4520005	4520015	4520025	4520145	4520035
16	8.1			153.6	187	4520006	4520016	4520026	4520146	4520036
25	10.2			240.0	290	4521001	4521011	4521021	4521141	4521031
35	11.7			336.0	399	4521002	4521012	4521022	4521142	4521032
50	13.9			480.0	559	4521003	4521013	4521023		4521033
70	16.0			672.0	776	4521004	4521014	4521024		4521034
95	18.2			912.0	1031	4521005	4521015	4521025		
120	20.2			1,152.0	1285	4521006	4521016	4521026		
150	22.5			1,440.0	1563	4521007	4521017			
185	24.9			1,776.0	1915	4521008	4521018	4521028		
240	28.4			2,304.0	2550	4521009	4521019			

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/Spool	Copper index kg/km	Weight kg/km	Yellow	green	purple	Pink	orange
1.5	3.4		150	14.4	22	4520111S	4520121S	4520071S		4520091S
2.5	4.1		100	24.0	37	4520112S	4520122S			4520092S
1.5	3.4	100		14.4	22	4520111	4520121	4520071	4520081	4520091
2.5	4.1	100		24.0	37	4520112	4520122	4520072	4520082	4520092
4	4.8	100		38.0	45	4520113	4520123	4520073		4520093
6	5.3	100		58.0	71	4520114	4520124	4520074		4520094
10	6.8	100		96.0	120		4520125	4520075		4520095
16	8.1			153.6	187		4520126	4520076		4520096
25	10.2			240.0	290		4521121			4521091
35	11.7			336.0	399		4521122			4521092
50	13.9			480.0	559					4521093

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/Spool	Copper index kg/km	Weight kg/km	red	white	grey	ultramarine blue
1.5	3.4		150	14.4	22	4520041S	4520051S	4520061S	
2.5	4.1		100	24.0	37	4520042S	4520052S	4520062S	
1.5	3.4	100		14.4	22	4520041	4520051	4520061	4520161
2.5	4.1	100		24.0	37	4520042	4520052	4520062	4520162
4	4.8	100		38.0	45	4520043	4520053	4520063	4520163
6	5.3	100		58.0	71	4520044	4520054	4520064	4520164
10	6.8	100		96.0	120	4520045	4520055	4520065	4520165
16	8.1			153.6	187	4520046	4520056	4520066	4520166
25	10.2			240.0	290	4521041	4521051	4521061	
35	11.7			336.0	399	4521042		4521062	
50	13.9			480.0	559	4521043		4521063	
70	16.0			672.0	776	4521044			
120	20.2			1,152.0	1285	4521046			4521166

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.
*at conventional usage, **at cautious bending; "OD" = outer diameter

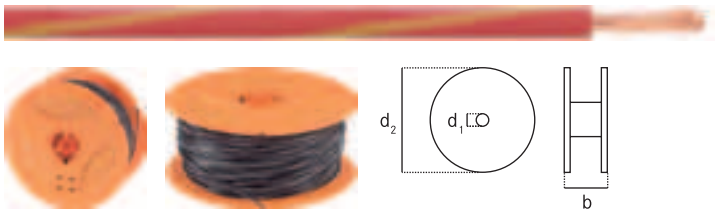
Similar products

- Multi-Standard SC 2.1 see page 48
- Multi-Standard SC 2.2 see page 51

Accessories

- Mobile crimp tool crimping pliers
- DIN-assorted boxes conductor end sleeves
- PEW 8.87 crimping pliers
- FLEXIMARK® Collar Snap-on

X07V-K with coloured stripes



Technical data

Based on
HD 21/VDE 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
4 x outer diameter (OD) at usage defined for H07V-K; 2xOD at cautious bending

Rated voltage
U_0/U: 450/750 V

Test voltage
2500 V

Current rating
VDE 0298 Part 4
HD 516

Range of temperature
Static:
-30°C up to +80°C

Application range

- Laying in tubes, exposed and buried in plaster and in closed installation ducts
- For direct laying on racks, troughs and tubes only as equipotential binding conductor

Design

- Fine strands of bare copper wires
- Core insulation: Based on PVC
- Labeled with coloured stripes

Product features

- Flame retardant according to IEC 60332-1-2
- Spool: d1=18mm; d2=200 mm; b=85 mm

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	Weight kg/km	dark-blue/white	black/green	black/red	black/white	blue/black	blue/green	blue/red
1.5	3.4	150	14.4	22	4522921S	4522201S	4522211S	4522221S	4522231S	4522241S	4522251S
2.5	4.1	100	24.0	37	4522922S		4522212S	4522222S	4522232S	4522242S	4522252S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	Weight kg/km	blue/white	brown/black	brown/green	brown/white	yellow/black	yellow/red	yellow/white
1.5	3.4	150	14.4	22	4522261S	4522271S	4522281S	4522291S	4522301S	4522311S	4522321S
2.5	4.1	100	24.0	37	4522262S	4522272S		4522292S	4522302S	4522312S	4522322S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	Weight kg/km	green/black	green/white	purple/yellow	purple/white	orange/black	orange/white	red/black
1.5	3.4	150	14.4	22	4522331S	4522341S	4522361S	4522371S	4522381S	4522391S	4522401S
2.5	4.1	100	24.0	37	4522332S	4522342S	4522362S	4522372S		4522392S	4522402S

Conductor cross section in mm²	Outer diameter in mm	m/Spool	Copper index kg/km	Weight kg/km	red/yellow	red/white	white/black	white/blue	white/brown	white/red	grey/black
1.5	3.4	150	14.4	22	4522411S	4522421S	4522431S	4522441S	4522451S	4522461S	4522471S
2.5	4.1	100	24.0	37	4522412S	4522422S	4522432S	4522442S	4522452S	4522462S	4522472S

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- X05V-K with coloured stripes see page 42

Accessories

- FLEXIPRINT LF Single core marking see page 85
- DIN-assorted boxes conductor end sleeves
- EASY STRIP 2 stripping and cutting tool
- PEW 8.87 crimping pliers

H05V-K in one-way cardboards

Harmonised, flexible single conductor for protected, fix laying - Economise with cardboards

Info
- Efficient
- Harmonised (HAR)

H05V-K in one-way cardboards

Benefits
- Higher economy by optimum processing volumes
- Single wires are embossed so an additional, later marking by ink printing is readable
- The light weight and the practical hand holes in the cardboard boxes make handling easy

Application range
- Ideal for harnessing to achieve longer operating times and trouble-free printing
- Suitable for assembling cable harnesses and wiring in the switch cabinet installation

Product features
- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)
CE HAR RoHS

Design
- Fine strands of bare copper wires
- Core insulation: Based on PVC

Technical data

Approvals
HD 21/VDE 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Acc. to HD 516 at 20 ±10 °C cable temperature
4 x outer diameter (OD), if used conventionally; 2 x OD at cautious bending

Rated voltage
U_0/U = 300/500 V AC

Test voltage
2000 V AC

Current rating
VDE 0298 Part 4
HD 516

Range of temperature
Static:
-30 °C up to +80 °C

Conductor cross section in mm²	Outer diameter in mm	m/box	Copper index kg/km	Weight kg/km	greenyellow	black	blue	dark-blue	brown
0.5	2.5	3,000	4.8	9	4510001K	4510011K	4510021K	4511064K	4511065K
0.5	2.5	9,000	4.8	9			4510021E	4511060E	
0.75	2.7	2,500	7.2	12	4510002K	4510012K	4510022K	4510142K	4510032K
0.75	2.7	7,500	7.2	12		4510012E	4510022E	4511061E	
1	2.8	2,000	9.6	15	4510003K	4510013K	4510023K	4510143K	4510033K
1	2.8	6,000	9.6	15	4510003E	4510013E	4510023E	4511062E	4511063E

Conductor cross section in mm²	Outer diameter in mm	m/box	Copper index kg/km	Weight kg/km	Yellow	green	purple	Pink	orange
0.5	2.5	3,000	4.8	9	4511066K	4511067K	4511068K	4511069K	4511070K
0.5	2.5	9,000	4.8	9					4510091E
0.75	2.7	2,500	7.2	12	4510112K	4510122K	4510072K	4510082K	4510092K
0.75	2.7	7,500	7.2	12					4510092E
1	2.8	2,000	9.6	15	4510113K	4510123K	4510073K	4510083K	4510093K
1	2.8	6,000	9.6	15					4510093E

Conductor cross section in mm²	Outer diameter in mm	m/box	Copper index kg/km	Weight kg/km	red	white	grey	dark-blue/ white	blue/white
0.5	2.5	3,000	4.8	9	4511071K	4511072K	4511073K		
0.5	2.5	9,000	4.8	9	4510041E				
0.75	2.7	2,500	7.2	12	4510042K	4510052K	4510062K	4510922K	4510262K
0.75	2.7	7,500	7.2	12	4510042E		4510062E		
1	2.8	2,000	9.6	15	4510043K	4510053K	4510063K	4510923K	4510263K
1	2.8	6,000	9.6	15	4510043E	4510053E	4510063E		

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products
- H05V-K see page 41
- H07V-K see page 43

Accessories
- DIN-assorted boxes conductor end sleeves
- EASY STRIP 2 stripping and cutting tool
- BULLI cable shears
- PEW 8.87 crimping pliers

H07V-K in one-way cardboards

Harmonised, flexible single conductor for protected, fix laying - Economise with cardboards

H07V-K in one-way cardboards



Info

- Efficient
- Harmonised (HAR)

Technical data

Approvals
HD 21/VDE 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Acc. to HD 516 at 20 ±10 °C cable temperature
4 x outer diameter (OD), if used conventionally; 2 x OD at cautious bending

Rated voltage
U_0/U = 450/750 V AC

Test voltage
2500 V AC

Current rating
VDE 0298 Part 4
HD 516

Range of temperature
Static:
-30°C up to +80°C

Benefits

- Higher economy by optimum processing volumes
- Single wires are embossed so an additional, later marking by ink printing is readable
- The light weight and the practical hand holes in the cardboard boxes make handling easy

Application range

- Ideal for harnessing to achieve longer operating times and trouble-free printing
- Suitable for assembling cable harnesses and wiring in the switch cabinet installation

Product features

- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)

CE HAR RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Based on PVC

Conductor cross section in mm²	Outer diameter in mm	m/box	Copper index kg/km	Weight kg/km	greenyellow	black	blue	dark-blue	brown
1.5	3.4	1,500	14.4	22	4520001K	4520011K	4520021K		
1.5	3.4	4,000	14.4	22	4520001E	4520011E	4520021E	4520141E	4520031E
2.5	4.1	2,500	24.0	37	4520002E	4520012E	4520022E		
2.5	4.1	900	24.0	37	4520002K	4520012K	4520022K	4520142K	4520032K
4	4.8	2,000	38.0	45	4520003E	4520013E	4520023E		
4	4.8	600	38.0	45	4520003K	4520013K	4520023K	4520143K	4520033K
6	5.3	1,500	57.6	71	4520004E	4520014E	4520024E		
6	5.3	400	58.0	71	4520004K	4520014K	4520024K		4520034K

Conductor cross section in mm²	Outer diameter in mm	m/box	Copper index kg/km	Weight kg/km	Yellow	green	purple	orange	red
1.5	3.4	1,500	14.4	22				4520091K	
1.5	3.4	4,000	14.4	22				4520091E	4520041E
2.5	4.1	2,500	24.0	37				4520092E	4520042E
2.5	4.1	900	24.0	37		4520122K		4520092K	4520042K
4	4.8	600	38.0	45	4520113K		4520073K	4520093K	4520043K
6	5.3	1,500	57.6	71			4520074E		4520044E
6	5.3	400	58.0	71		4520124K	4520074K	4520094K	4520044K

Conductor cross section in mm²	Outer diameter in mm	m/box	Copper index kg/km	Weight kg/km	white	grey	dark-blue/ white	blue/white
1.5	3.4	1,500	14.4	22		4520061K		
1.5	3.4	4,000	14.4	22	4520051E	4520061E		
2.5	4.1	2,500	24.0	37		4520062E		
2.5	4.1	900	24.0	37	4520052K	4520062K	4520922K	
4	4.8	600	38.0	45	4520053K	4520063K		
6	5.3	400	58.0	71	4520054K	4520064K		4520264K

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- H05V-K see page 41
- H07V-K see page 43

Accessories

- DIN-assorted boxes conductor end sleeves
- EASY STRIP 2 stripping and cutting tool
- BULLI cable shears
- PEW 8.87 crimping pliers

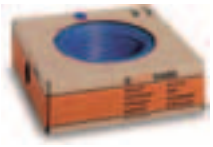
Multi-Standard SC 1

UL-recognized (AWM) + CSA AWM I A/B + <HAR> H05V-K, tinned copper strands

Info

- **Formerly: Multi-Standard single core UL-CSA-HAR 1007/1569**

Multi-Standard SC 1



Benefits

- Usage on the most important global markets
- Reduced technical documentation expense
- Easier storage
- Increased economy in the production process

Application range

- Factory wiring
- Internal wiring of devices
- Control cabinet wiring

Product features

- Flame retardant according to IEC 60332-1-2
- Flame retardant according to UL VW1 / CSA FT1
- Oil resistant

Approvals (Norm references)

- Multi standard cables have conductor strands with nominal sizes in mm² or AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the Main Catalogue 2010/11 appendix table T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine-wired conductor of tinned copper strands
- Special PVC based core insulation

Technical data

Approvals
H05V-K: HD 21;
UL: AWM Style 1007, 1569;
CSA (AWM I A/B)

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
4 x outer diameter (OD), if used conventionally; 2 x OD at cautious bending

Rated voltage
HAR / IEC: U_0/U: 300/500 V;
UL (AWM): U: 300 V;
CSA (AWM I A/B): U: 300 V

Test voltage
2000 V

Range of temperature
Fixed installation:
HAR / IEC: -40°C up to +70°C;
UL (AWM): -40°C up to +105°C;
CSA (AWM I A/B): -40°C up to +105°C

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	greenyellow	black	blue
0.5	2.5	100	4.8	9	4180400	4180401	4180402
0.75	2.6	100	7.2	12	4180500	4180501	4180502
1	2.8	100	9.6	15	4180600	4180601	4180602

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	dark-blue	brown	Yellow
0.5	2.5	100	4.8	9	4180414	4180403	4180410
0.75	2.6	100	7.2	12	4180514	4180503	4180510
1	2.8	100	9.6	15	4180614	4180603	4180610

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	green	purple	orange
0.5	2.5	100	4.8	9		4180407	4180409
0.75	2.6	100	7.2	12		4180507	4180509
1	2.8	100	9.6	15	4180611	4180607	4180609

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	red	white	grey
0.5	2.5	100	4.8	9	4180404	4180405	4180406
0.75	2.6	100	7.2	12	4180504	4180505	4180506
1	2.8	100	9.6	15	4180604	4180605	4180606

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- H05V-K see page 41
- Multi-Standard SC 2.1 see page 48

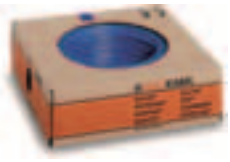
Accessories

- DIN-assorted boxes conductor end sleeves
- EASY STRIP 2 stripping and cutting tool
- PEW 8.87 crimping pliers
- FLEXIMARK® Collar Snap-on

Multi-Standard SC 2.1

USA: UL-listed (MTW), Canada: CSA (TEW), Europe: <HAR> H07V-K (depending on cross s.), tinned strands

Multi-Standard SC 2.1



Info

- **The all-rounder for many markets**

Benefits

- Usage on the most important global markets
- Reduced technical documentation expense
- Easier storage
- Increased economy in the production process
- Works with “Conductor end sleeves XL, insulated”

Application range

- Internal wiring of devices
- Control cabinet wiring
- Field wiring

Product features

- Flame retardant according to IEC 60332-1-2
- Flame retardant according to UL VW1 / CSA FT1
- Oil resistant

Approvals (Norm references)

- NFPA 79 Edition 2007 conform
- Multi standard cables have conductor strands with nominal sizes in mm² or AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the Main Catalogue 2010/11 appendix table T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.
- Please, find detailed information about the certifications in the box “Technical data”

Design

- Fine-wired conductor of tinned copper strands
- Special PVC based core insulation

Technical data

Approvals
H07V-K: HD 21;
UL: AWM (UL758) Style 1015;
UL: MTW (UL1063);
CSA: TEW

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
OD ≤ 8mm: 4 x OD*/2 x OD**; 8 < OD ≤ 12mm: 5 x OD*/3 x OD**; OD > 12mm: 6 x OD*/4 x OD**

Rated voltage
HAR / IEC: U_0/U: 450/750 V;
UL (AWM): U: 600 V;
UL (MTW): U: 600 V;
CSA (TEW): U: 600 V

Test voltage
2500 V

Range of temperature
Fixed installation:
HAR / IEC: -40°C up to +70°C;
UL (AWM): -40°C up to +105°C;
UL (MTW): -40°C to +90°C;
CSA (TEW): -40°C to +105°C

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/km	Weight kg/km	greenyellow	black
0.5	2.7	100		4.8	10	4160100	4160101
0.75	2.9	100		7.2	13	4160200	4160201
1	3.1	100		9.6	16	4160300	4160301
1.5	3.4	100		14.4	22	4160400	4160401
2.5	4.0	100		24.0	37	4160500	4160501
4	4.6	100		38.4	45	4160600	4160601
6	5.1	100		58.0	71	4160700	4160701
10	6.8	100		96.0	120	4160800	4160801
16	9.0	100		154.0	187	4160900	4160901
25	10.2	100		240.0	290	4161000	4161001
35	11.7			336.0	399	4161100	4161101
50	13.9			480.0	559	4161200	4161201
70	16.0			672.0	776	4161300	4161301
95	18.2			912.0	1031	4161400	4161401
120	19.8			1,152.0	1285	4161500	4161501
0.5	2.7		3,000	4.8	10		4160101K
0.75	2.9		2,500	7.2	13	4160200K	4160201K
1	3.1		2,000	9.6	16	4160300K	4160301K
1.5	3.4		1,500	14.4	22	4160400K	4160401K
2.5	4.0		900	24.0	37	4160500K	4160501K
4	4.6		600	38.4	45	4160600K	4160601K
6	5.1		400	58.0	71	4160700K	4160701K

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/km	Weight kg/km	blue	dark-blue
0.5	2.7	100		4.8	10	4160102	4160114
0.75	2.9	100		7.2	13	4160202	4160214
1	3.1	100		9.6	16	4160302	4160314
1.5	3.4	100		14.4	22	4160402	4160414
2.5	4.0	100		24.0	37	4160502	4160514
4	4.6	100		38.4	45	4160602	4160614
6	5.1	100		58.0	71	4160702	4160714
10	6.8	100		96.0	120	4160802	4160814
16	9.0	100		154.0	187	4160902	4160914
25	10.2	100		240.0	290	4161002	4161014
35	11.7			336.0	399	4161102	
50	13.9			480.0	559	4161202	
70	16.0			672.0	776	4161302	
95	18.2			912.0	1031	4161402	
120	19.8			1,152.0	1285	4161502	
0.5	2.7		3,000	4.8	10	4160102K	4160114K
0.75	2.9		2,500	7.2	13	4160202K	4160214K
1	3.1		2,000	9.6	16	4160302K	4160314K
1.5	3.4		1,500	14.4	22	4160402K	4160414K
2.5	4.0		900	24.0	37	4160502K	4160514K
4	4.6		600	38.4	45	4160602K	
6	5.1		400	58.0	71	4160702K	4160714K

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/km	Weight kg/km	brown	Yellow
0.5	2.7	100		4.8	10	4160103	4160110
0.75	2.9	100		7.2	13	4160203	4160210
1	3.1	100		9.6	16	4160303	4160310
1.5	3.4	100		14.4	22	4160403	4160410
2.5	4.0	100		24.0	37	4160503	4160510
4	4.6	100		38.4	45	4160603	4160610
6	5.1	100		58.0	71	4160703	4160710
10	6.8	100		96.0	120	4160803	4160810
16	9.0	100		154.0	187	4160903	4160910
25	10.2	100		240.0	290	4161003	4161010
35	11.7			336.0	399		4161110
50	13.9			480.0	559		4161210
70	16.0			672.0	776		4161310
0.5	2.7		3,000	4.8	10	4160103K	
0.75	2.9		2,500	7.2	13	4160203K	
1	3.1		2,000	9.6	16	4160303K	
1.5	3.4		1,500	14.4	22	4160403K	4160410K
2.5	4.0		900	24.0	37	4160503K	4160510K
4	4.6		600	38.4	45	4160603K	

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/km	Weight kg/km	green	purple
0.5	2.7	100		4.8	10	4160111	4160107
0.75	2.9	100		7.2	13	4160211	4160207
1	3.1	100		9.6	16	4160311	4160307
1.5	3.4	100		14.4	22	4160411	4160407
2.5	4.0	100		24.0	37	4160511	4160507
4	4.6	100		38.4	45	4160611	4160607
6	5.1	100		58.0	71	4160711	4160707
10	6.8	100		96.0	120	4160811	
16	9.0	100		154.0	187	4160911	
25	10.2	100		240.0	290	4161011	
35	11.7			336.0	399	4161111	
50	13.9			480.0	559	4161211	
70	16.0			672.0	776	4161311	
0.5	2.7		3,000	4.8	10	4160111K	4160107K
0.75	2.9		2,500	7.2	13		4160207K
1	3.1		2,000	9.6	16	4160311K	4160307K
1.5	3.4		1,500	14.4	22		4160407K
2.5	4.0		900	24.0	37		4160507K

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/km	Weight kg/km	Pink	orange
0.5	2.7	100		4.8	10	4160108	4160109
0.75	2.9	100		7.2	13	4160208	4160209
1	3.1	100		9.6	16	4160308	4160309
1.5	3.4	100		14.4	22	4160408	4160409
2.5	4.0	100		24.0	37		4160509
4	4.6	100		38.4	45		4160609
6	5.1	100		58.0	71		4160709
10	6.8	100		96.0	120		4160809
16	9.0	100		154.0	187		4160909
25	10.2	100		240.0	290		4161009
35	11.7			336.0	399		4161109
0.75	2.9		2,500	7.2	13		4160209K
1	3.1		2,000	9.6	16		4160309K
1.5	3.4		1,500	14.4	22		4160409K
2.5	4.0		900	24.0	37		4160509K
4	4.6		600	38.4	45		4160609K
6	5.1		400	58.0	71		4160709K

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/km	Weight kg/km	red	white
0.5	2.7	100		4.8	10	4160104	4160105
0.75	2.9	100		7.2	13	4160204	4160205
1	3.1	100		9.6	16	4160304	4160305
1.5	3.4	100		14.4	22	4160404	4160405
2.5	4.0	100		24.0	37	4160504	4160505
4	4.6	100		38.4	45	4160604	4160605
6	5.1	100		58.0	71	4160704	4160705
10	6.8	100		96.0	120	4160804	4160805
16	9.0	100		154.0	187	4160904	4160905
25	10.2	100		240.0	290	4161004	4161005
35	11.7			336.0	399	4161104	4161105
120	19.8			1,152.0	1285		4161505
0.5	2.7		3,000	4.8	10	4160104K	4160105K
0.75	2.9		2,500	7.2	13	4160204K	4160205K
1	3.1		2,000	9.6	16	4160304K	4160305K
1.5	3.4		1,500	14.4	22	4160404K	4160405K
2.5	4.0		900	24.0	37	4160504K	4160505K
4	4.6		600	38.4	45	4160604K	
6	5.1		400	58.0	71	4160704K	4160705K

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/km	Weight kg/km	grey	blue/white
0.5	2.7	100		4.8	10	4160106	4160126
0.75	2.9	100		7.2	13	4160206	4160226
1	3.1	100		9.6	16	4160306	4160326
1.5	3.4	100		14.4	22	4160406	4160426
2.5	4.0	100		24.0	37	4160506	4160526
4	4.6	100		38.4	45	4160606	4160626
6	5.1	100		58.0	71	4160706	4160726
10	6.8	100		96.0	120	4160806	4160826
16	9.0	100		154.0	187	4160906	
25	10.2	100		240.0	290	4161006	
35	11.7			336.0	399	4161106	
70	16.0			672.0	776	4161306	

Power and control cables

Control Cabinet Single Cores

Harmonized and approved

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/km	Weight kg/km	grey	blue/white
95	18.2			912.0	1031	4161406	
0.5	2.7		3,000	4.8	10	4160106K	4160126K
1	3.1		2,000	9.6	16	4160306K	4160326K
1.5	3.4		1,500	14.4	22	4160406K	4160426K

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/km	Weight kg/km	white/blue
0.5	2.7	100		4.8	10	4160144
0.75	2.9	100		7.2	13	4160244
1	3.1	100		9.6	16	4160344
1.5	3.4	100		14.4	22	4160444
2.5	4.0	100		24.0	37	4160544
4	4.6	100		38.4	45	4160644
6	5.1	100		58.0	71	4160744
10	6.8	100		96.0	120	4160844
16	9.0	100		154.0	187	4160944
0.5	2.7		3,000	4.8	10	4160144K
0.75	2.9		2,500	7.2	13	4160244K
1	3.1		2,000	9.6	16	4160344K
1.5	3.4		1,500	14.4	22	4160444K
2.5	4.0		900	24.0	37	4160544K

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.
Nominal cross sections not harmonised: 0.5 mm², 0.75 mm², 1 mm², 16 mm²
*at conventional usage, **at cautious bending; "OD" = outer diameter

■ Similar products

- H07V-K see page 43
- Multi-Standard SC 2.2 see page 51

■ Accessories

- DIN-assorted boxes conductor end sleeves
- Conductor end sleeves XL, insulated
- PEW 8.87 crimping pliers

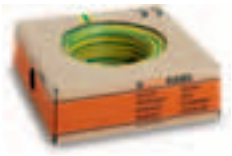
Multi-Standard SC 2.2

UL-listed (MTW), CSA (TEW), <HAR> H07V2-K: max. +90°C, UL (AWM): Umax = 1 kV, tinned copper strands

Info

- **Higher temperature range H07V2-K**
- **Higher voltage range according to UL**

Multi-Standard SC 2.2



Benefits

- Usage on the most important global markets
- Reduced technical documentation expense
- Easier storage
- Increased economy in the production process
- Works with “Conductor end sleeves XL, insulated”

Application range

- Frequency converter power supply
- Internal wiring of devices
- Control cabinet wiring
- Field wiring

Product features

- Flame retardant according to IEC 60332-1-2
- Flame retardant according to UL VW1 / CSA FT1
- Oil resistant

Approvals (Norm references)

- NFPA 79 Edition 2007 conform
- Multi standard cables have conductor strands with nominal sizes in mm² or AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the Main Catalogue 2010/11 appendix table T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.
- Please, find detailed information about the certifications in the box “Technical data”

Design

- Fine-wired conductor of tinned copper strands
- Special PVC based core insulation

Technical data

Approvals
H07V2-K: HD 21;
UL: AWM Style 10269;
UL: MTW 1063;
CSA: TEW

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
OD ≤ 8mm: 4 x OD*/2 x OD**; 8 < OD ≤ 12mm: 5 x OD*/3 x OD**; OD > 12mm: 6 x OD*/4 x OD**

Rated voltage
HAR / IEC: U_0/U: 450/750 V;
UL (AWM): U: 1000 V;
UL (MTW): U: 600 V;
CSA (TEW): U: 600 V

Test voltage
IEC: 2500 V AC
UL: 4000 V AC

Range of temperature
Fixed installation:
HAR / IEC: -40°C up to +90°C;
UL (AWM): -40°Cup to +105°C;
UL (MTW): -40°C to +90°C;
CSA (TEW): -40°C to +105°C

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	greenyellow	black	blue
0.5	2.7	100	4.8	10	4150100	4150101	4150102
0.75	2.9	100	7.2	13	4150200	4150201	4150202
1	3.1	100	9.6	16	4150300	4150301	4150302
1.5	3.4	100	14.4	22	4150400	4150401	4150402
2.5	4.0	100	24.0	37	4150500	4150501	4150502
4	4.6	100	38.4	45	4150600	4150601	4150602
6	5.1	100	58.0	71	4150700	4150701	4150702
10	6.8	100	96.0	120	4150800	4150801	4150802
16	9.0	100	154.0	187	4150900	4150901	4150902
25	10.2	100	240.0	290	4151000	4151001	4151002
35	11.7		336.0	399	4151100	4151101	4151102
50	13.9		480.0	559		4151201	
70	16.0		672.0	776		4151301	
95	18.2		912.0	1031		4151401	
120	19.8		1,152.0	1285	4151500		

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	dark-blue	brown	Yellow
0.5	2.7	100	4.8	10	4150114	4150103	
0.75	2.9	100	7.2	13	4150214	4150203	
1	3.1	100	9.6	16		4150303	
1.5	3.4	100	14.4	22	4150414	4150403	4150410
2.5	4.0	100	24.0	37	4150514	4150503	
4	4.6	100	38.4	45	4150614	4150603	4150610
6	5.1	100	58.0	71		4150703	
10	6.8	100	96.0	120		4150803	
25	10.2	100	240.0	290		4151003	
35	11.7		336.0	399		4151103	

Power and control cables

Control Cabinet Single Cores

Harmonized and approved

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	purple	orange	red
0.5	2.7	100	4.8	10			4150104
0.5	2.7	100	4.8	10		4150109	
0.75	2.9	100	7.2	13		4150209	4150204
1	3.1	100	9.6	16	4150307	4150309	4150304
1.5	3.4	100	14.4	22		4150409	4150404
2.5	4.0	100	24.0	37		4150509	4150504
4	4.6	100	38.4	45		4150609	4150604
6	5.1	100	58.0	71		4150709	4150704
10	6.8	100	96.0	120		4150809	4150804
16	9.0	100	154.0	187		4150909	4150904

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	white	grey	blue/white
0.5	2.7	100	4.8	10	4150105	4150106	
0.75	2.9	100	7.2	13	4150205	4150206	
1	3.1	100	9.6	16	4150305	4150306	4150326
1.5	3.4	100	14.4	22	4150405	4150406	4150426
2.5	4.0	100	24.0	37	4150505	4150506	
4	4.6	100	38.4	45	4150605	4150606	
6	5.1	100	58.0	71	4150705	4150706	
10	6.8	100	96.0	120		4150806	
16	9.0	100	154.0	187		4150906	
35	11.7		336.0	399		4151106	

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	white/blue
1	3.1	100	9.6	16	4150344
1.5	3.4	100	14.4	22	4150444

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.
Nominal cross sections not harmonised: 0.5 mm², 0.75 mm², 1 mm², 16 mm², 50 mm², 70 mm², 95 mm², 120 mm²
*at conventional usage, **at cautious bending; "OD" = outer diameter

■ Similar products

- Multi-Standard SC 2.1 see page 48

■ Accessories

- DIN-assorted boxes conductor end sleeves
- Conductor end sleeves XL, insulated
- EASY STRIP 2 stripping and cutting tool
- PEW 8.87 crimping pliers
- FLEXIMARK® Collar Snap-on

H05Z-K 90°C

Harmonised; Halogen-free for the protection of human life, environment and material assets

Info
- Halogen free
- Harmonised (HAR)

H05Z-K 90°C

Benefits
- Protection of human life and the environment thanks to the avoidance of the formation of acid in case of fire

Application range
- For wiring of lamps, devices, switchgear cabinets and distribution boxes
- For installation in tubes, on, in and under plaster as well as in closed installation ducts
- In buildings with a high concentration of people or valuables
- For use in dry rooms

Product features
- The insulation material is halogen-free and free of other materials which could release corrosive gases in the event of fire
- Low corrosivity of the gases in case of fire
- Low smokes/low smoke density in the event of fire according to IEC 61034
- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)
CE HAR RoHS

Design
- Fine strands of bare copper wires
- Core insulation: Halogen-free

Technical data

Approvals
HD 22.9

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Acc. to HD 516 at 20 ±10 °C cable temperature
4 x outer diameter (OD), if used conventionally; 2 x OD at cautious bending

Rated voltage
U_0/U: 300/500 V

Test voltage
2000 V AC

Current rating
VDE 0298-4
HD 516

Range of temperature
Fixed installation: -15°C up to +90°C

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/km	Weight kg/km	greenyellow	black	blue	dark-blue
0.5	2.6	100		4.8	9	4725001	4725011	4725021	4725141
0.5	2.6		4,000	4.8	9	4725001K	4725011K	4725021K	4725141K
0.75	2.8	100		7.2	11	4725002	4725012	4725022	4725142
0.75	2.8		3,000	7.2	11	4725002K	4725012K	4725022K	4725142K
1	2.9	100		9.6	14	4725003	4725013	4725023	4725143
1	2.9		3,000	9.6	14	4725003K	4725013K	4725023K	4725143K

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/km	Weight kg/km	brown	Yellow	green	purple
0.5	2.6	100		4.8	9	4725031	4725111	4725121	4725071
0.5	2.6		4,000	4.8	9		4725111K	4725121K	4725071K
0.75	2.8	100		7.2	11	4725032	4725112	4725122	4725072
0.75	2.8		3,000	7.2	11	4725032K	4725112K	4725122K	4725072K
1	2.9	100		9.6	14	4725033	4725113	4725123	4725073
1	2.9		3,000	9.6	14	4725033K	4725113K	4725123K	4725073K

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/km	Weight kg/km	Pink	orange	red	white
0.5	2.6	100		4.8	9	4725081	4725091	4725041	4725051
0.5	2.6		4,000	4.8	9	4725081K	4725091K	4725041K	4725051K
0.75	2.8	100		7.2	11	4725082	4725092	4725042	4725052
0.75	2.8		3,000	7.2	11	4725082K	4725092K	4725042K	4725052K
1	2.9	100		9.6	14	4725083	4725093	4725043	4725053
1	2.9		3,000	9.6	14	4725083K	4725093K	4725043K	4725053K

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/km	Weight kg/km	grey
0.5	2.6	100		4.8	9	4725061
0.5	2.6		4,000	4.8	9	4725061K
0.75	2.8	100		7.2	11	4725062
0.75	2.8		3,000	7.2	11	4725062K
1	2.9	100		9.6	14	4725063
1	2.9		3,000	9.6	14	4725063K

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.
*at conventional usage, **at cautious bending; "OD" = outer diameter

H07Z-K 90°C

Harmonised; Halogen-free for the protection of human life, environment and material assets

H07Z-K 90°C

Info

- Halogen free
- Harmonised (HAR)

Benefits

- Protection of human life and the environment thanks to the avoidance of the formation of acid in case of fire

Application range

- For wiring of lamps, devices, switchgear cabinets and distribution boxes
- For installation in tubes, on, in and under plaster as well as in closed installation ducts
- In buildings with a high concentration of people or valuables
- For use in dry rooms

Product features

- The insulation material is halogen-free and free of other materials which could release corrosive gases in the event of fire
- Low corrosivity of the gases in case of fire
- Low smokes/low smoke density in the event of fire according to IEC 61034
- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)

CE HAR RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Halogen-free

Technical data

Approvals
HD 22.9

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Acc. to HD 516 at 20 ±10 °C cable temperature
OD ≤ 8mm: 4 x OD*/2 x OD**; 8 < OD ≤ 12mm: 5 x OD*/3 x OD**; OD > 12mm: 6 x OD*/4 x OD**

Rated voltage
U_0/U: 450/ 750 V

Test voltage
2500 V

Current rating
VDE 0298-4
HD 516

Range of temperature
Fixed installation: -15°C up to +90°C

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/ km	Weight kg/km	greenyellow	black	blue	dark-blue
1.5	3.5	100		14.4	20	4726001	4726011	4726021	4726141
1.5	3.5		2,000	14.4	20	4726001K	4726011K	4726021K	4726141K
2.5	4.3	100		24.0	32	4726002	4726012	4726022	4726142
2.5	4.3		1,500	24.0	32	4726002K	4726012K	4726022K	4726142K
4	4.9	100		38.4	45	4726003	4726013	4726023	4726143
4	4.9		1,000	38.0	45	4726003K	4726013K	4726023K	4726143K
6	5.5	100		58.0	65	4726004	4726014	4726024	4726144
6	5.5		750	58.0	65		4726014K	4726024K	4726144K
10	7.1	100		96.0	110	4726005	4726015	4726025	4726145
16	8.4	100		154.0	170	4726006	4726016	4726026	4726146
25	10.6	100		240.0	290	4726007	4726017	4726027	4726147
35	12.1			336.0	380	4726008	4726018	4726028	4726148
50	14.4			480.0	530	4726009	4726019	4726029	4726149
70	16.6			672.0	750	4727001	4727011	4727021	4727141
95	18.8			912.0	1000	4727002	4727012	4727022	4727142

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/ km	Weight kg/km	brown	Yellow	green	purple
1.5	3.5	100		14.4	20	4726031	4726111	4726121	4726071
1.5	3.5		2,000	14.4	20	4726031K	4726111K	4726121K	4726071K
2.5	4.3	100		24.0	32	4726032	4726112	4726122	4726072
2.5	4.3		1,500	24.0	32	4726032K	4726112K	4726122K	4726072K
4	4.9	100		38.4	45	4726033	4726113	4726123	4726073
4	4.9		1,000	38.0	45	4726033K	4726113K	4726123K	4726073K
6	5.5	100		58.0	65	4726034	4726114	4726124	4726074
6	5.5		750	58.0	65	4726034K	4726114K	4726124K	4726074K
10	7.1	100		96.0	110	4726035	4726115	4726125	4726075
16	8.4	100		154.0	170	4726036	4726116	4726126	4726076
25	10.6	100		240.0	290	4726037	4726117	4726127	4726077
35	12.1			336.0	380	4726038	4726118	4726128	4726078
50	14.4			480.0	530	4726039	4726119	4726129	4726079
70	16.6			672.0	750	4727031	4727111	4727121	4727071
95	18.8			912.0	1000	4727032	4727112	4727122	4727072

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/ km	Weight kg/km	Pink	orange	red	white
1.5	3.5	100		14.4	20	4726081	4726091	4726041	4726051
1.5	3.5		2,000	14.4	20	4726081K	4726091K	4726041K	4726051K
2.5	4.3	100		24.0	32	4726082	4726092	4726042	4726052
2.5	4.3		1,500	24.0	32	4726082K	4726092K	4726042K	4726052K
4	4.9	100		38.4	45	4726083	4726093	4726043	4726053
4	4.9		1,000	38.0	45	4726083K	4726093K	4726043K	4726053K
6	5.5	100		58.0	65	4726084	4726094	4726044	4726054
6	5.5		750	58.0	65	4726084K	4726094K	4726044K	4726054K
10	7.1	100		96.0	110	4726085	4726095	4726045	4726055
16	8.4	100		154.0	170	4726086	4726096	4726046	4726056
25	10.6	100		240.0	290	4726087	4726097	4726047	4726057
35	12.1			336.0	380	4726088	4726098	4726048	4726058
50	14.4			480.0	530	4726089	4726099	4726049	4726059
70	16.6			672.0	750	4727081	4727091	4727041	4727051
95	18.8			912.0	1000	4727082	4727092	4727042	4727052

Conductor cross section in mm²	Outer diameter in mm	m/Coil	m/box	Copper index kg/km	Weight kg/km	grey
1.5	3.5	100		14.4	20	4726061
1.5	3.5		2,000	14.4	20	4726061K
2.5	4.3	100		24.0	32	4726062
2.5	4.3		1,500	24.0	32	4726062K
4	4.9	100		38.4	45	4726063
4	4.9		1,000	38.0	45	4726063K
6	5.5	100		58.0	65	4726064
6	5.5		750	58.0	65	4726064K
10	7.1	100		96.0	110	4726065
16	8.4	100		154.0	170	4726066
25	10.6	100		240.0	290	4726067
35	12.1			336.0	380	4726068
50	14.4			480.0	530	4726069
70	16.6			672.0	750	4727061
95	18.8			912.0	1000	4727062

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.
*at conventional usage, **at cautious bending; "OD" = outer diameter

X05Z-K 110°C

Halogen-free for the protection of human life, environment and material assets; increased temperature resistance

Info

- **Formerly: H05Z-K 110°C**
- **Halogen free**
- **Maximum conductor temperature of +110 °C**

Benefits

- Protection of human life and the environment thanks to the avoidance of the formation of acid in case of fire

Application range

- For wiring of lamps, devices, switchgear cabinets and distribution boxes
- For installation in tubes, on, in and under plaster as well as in closed installation ducts
- In buildings with a high concentration of people or valuables
- For use in dry rooms

Product features

- The insulation material is halogen-free and free of other materials which could release corrosive gases in the event of fire
- Low corrosivity of the gases in case of fire
- Low smokes/low smoke density in the event of fire according to IEC 61034
- Flame retardant according to IEC 60332-1-2
- Bundle flame test (flame propagation) according to IEC 60332-3-24/ EN 50266-2-4/ EN 60332-3-24/ VDE 0482-266-2-4/ VDE 0482-332-3-24

Approvals (Norm references)

CE RoHS

- 110°C version isn't harmonised (no HAR sign), but VDE-tested and VDE-marked

Design

- Fine strands of bare copper wires
- Core insulation: Halogen-free

Technical data

Based on
HD 22.9

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
4 x outer diameter (OD), if used conventionally; 2 x OD at cautious bending

Rated voltage
U_0/U: 300/500 V

Test voltage
2000 V AC

Current rating
VDE 0298-4
HD 516

Range of temperature
Fixed installation: -40°C up to +110°C

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	greenyellow	black	blue	dark-blue
0.5	2.6	100	4.8	9	4710001	4710011	4710021	4710141
0.75	2.8	100	7.2	11	4710002	4710012	4710022	4710142
1	2.9	100	9.6	14	4710003	4710013	4710023	4710143

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	brown	Yellow	green	purple
0.5	2.6	100	4.8	9	4710031	4710111	4710121	4710071
0.75	2.8	100	7.2	11	4710032	4710112	4710122	4710072
1	2.9	100	9.6	14	4710033	4710113	4710123	4710073

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	Pink	orange	red	white
0.5	2.6	100	4.8	9	4710081	4710091	4710041	4710051
0.75	2.8	100	7.2	11	4710082	4710092	4710042	4710052
1	2.9	100	9.6	14	4710083	4710093	4710043	4710053

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	grey
0.5	2.6	100	4.8	9	4710061
0.75	2.8	100	7.2	11	4710062
1	2.9	100	9.6	14	4710063

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.
*at conventional usage, **at cautious bending; "OD" = outer diameter

X07Z-K 110°C

Halogen-free for the protection of human life, environment and material assets; increased temperature resistance

Info

- Formerly: H07Z-K 110°C
- Halogen free
- Maximum conductor temperature of +110 °C

Benefits

- Protection of human life and the environment thanks to the avoidance of the formation of acid in case of fire

Application range

- For wiring of lamps, devices, switchgear cabinets and distribution boxes
- For installation in tubes, on, in and under plaster as well as in closed installation ducts
- In buildings with a high concentration of people or valuables
- For use in dry rooms

Product features

- The insulation material is halogen-free and free of other materials which could release corrosive gases in the event of fire
- Low corrosivity of the gases in case of fire
- Low smokes/low smoke density in the event of fire according to IEC 61034
- Flame retardant according to IEC 60332-1-2
- Bundle flame test (flame propagation) according to IEC 60332-3-24/ EN 50266-2-4/ EN 60332-3-24/ VDE 0482-266-2-4/ VDE 0482-332-3-24

Approvals (Norm references)

CE RoHS

- 110°C version isn't harmonised (no HAR sign), but VDE-tested and VDE-marked

Design

- Fine strands of bare copper wires
- Core insulation: Halogen-free

Technical data

Based on
HD 22.9

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
OD ≤ 8mm: 4 x OD*/2 x OD**; 8 < OD ≤ 12mm: 5 x OD*/3 x OD**; OD > 12mm: 6 x OD*/4 x OD**

Rated voltage
U_0/U: 450/750 V

Test voltage
2500 V AC

Current rating
VDE 0298-4
HD 516

Range of temperature
Fixed installation: -40°C up to +110°C

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	greenyellow	black	blue	dark-blue
1.5	3.5	100	14.4	20	4720001	4720011	4720021	4720141
2.5	4.3	100	24.0	30	4720002	4720012	4720022	4720142
4	4.9	100	38.4	45	4720003	4720013	4720023	4720143
6	5.5	100	58.0	65	4720004	4720014	4720024	4720144
10	7.1	100	96.0	110	4720005	4720015	4720025	4720145
16	8.4	100	154.0	170	4720006	4720016	4720026	4720146
25	10.6	100	240.0	290	4720007	4720017	4720027	
35	12.1		336.0	400	4720008	4720018	4720028	
50	14.4		480.0	550	4720009	4720019		
70	16.6		672.0	770	4721001	4721011		
95	18.8		912.0	1160		4721012		

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	brown	Yellow	green	purple
1.5	3.5	100	14.4	20	4720031	4720111	4720121	4720071
2.5	4.3	100	24.0	30	4720032	4720112	4720122	4720072
4	4.9	100	38.4	45	4720033		4720123	4720073
6	5.5	100	58.0	65	4720034	4720114	4720124	
10	7.1	100	96.0	110	4720035			
16	8.4	100	154.0	170	4720036			

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	Pink	orange	red	white
1.5	3.5	100	14.4	20	4720081	4720091	4720041	4720051
2.5	4.3	100	24.0	30	4720082	4720092	4720042	4720052
4	4.9	100	38.4	45		4720093	4720043	4720053
6	5.5	100	58.0	65	4720084	4720094	4720044	4720054
10	7.1	100	96.0	110	4720085	4720095	4720045	4720055
16	8.4	100	154.0	170	4720086	4720096	4720046	4720056
25	10.6	100	240.0	290	4720087	4720097	4720047	
35	12.1		336.0	400	4720088	4720098	4720048	
50	14.4		480.0	550	4720089	4720099		
70	16.6		672.0	770	4721081	4721091		
95	18.8		912.0	1160	4721082	4721092		

Conductor cross section in mm²	Outer diameter in mm	m/Coil	Copper index kg/km	Weight kg/km	grey
1.5	3.5	100	14.4	20	4720061
2.5	4.3	100	24.0	30	4720062
4	4.9	100	38.4	45	4720063
6	5.5	100	58.0	65	4720064
10	7.1	100	96.0	110	4720065
16	8.4	100	154.0	170	4720066

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.
*at conventional usage, **at cautious bending; "OD" = outer diameter

ÖLFLEX® STATIC CY black

Closely shielded, doubly insulated PVC single conductor for fix laying

Info

- **Flexible alternative to NYY**
- **EMC optimised**

Benefits

- Low-cost, double-insulated single core for fixed installation indoors and outdoors
- High degree of the screens coverage offers very good EMC performance
- No additional protection such as a closed cable duct or protective conduit is required in free installation

Application range

- Especially suitable for power circuits as external connection or for internal wiring of electric and electronic equipment
- In dry and damp rooms at low mechanical stress
- Can be used in the photovoltaic sector indoors as connection to the frequency converter
- Outdoor use is possible under consideration of the temperature range

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Based on PVC
- Nonwoven wrapping
- Tinned copper braid
- PVC based outer sheath

Technical data

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Fixed installation: 6 x outer diameter

Rated voltage
U_0/U: 600/1000 V

Test voltage
Core/screen: 2000 V

Range of temperature
Static:
-30°C up to +80°C

Part number	Conductor cross section in mm²	Outer diameter in mm	Copper index kg/km	Weight kg/km
4600023	16	10.3	177.0	275
4600024	25	12.7	267.0	396
4600025	35	14.3	384.0	542
4600026	50	16.9	537.0	752
4600027	70	18.7	763.0	1004
4600028	95	21.7	1,012.0	1368
4600029	120	24.7	1,264.0	1719

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- ÖLFLEX® FD 90
- ÖLFLEX® FD 90 CY see page 30

Accessories

- KS 20 cable shears

NYY-J, NYY-O

Fixed, buried PVC cable with different application areas

Application range

- As a fixed installation power and control cable for the following applications:
- For indoor- and outdoor use
- Direct burial
- In concrete
- In water

Product features

- Flame retardant according to IEC 60332-1-2
- Power rating acc. to HD 603 part 3G for outdoor laying and as per VDE 0298 part 4 (see Main Catalogue 2010/11 also appendix T12) for laying in and on buildings

Approvals (Norm references)

CE VDE RoHS

Design

- Conductor of bare copper wires
- Core insulation: Based on PVC
- Filling compound over the core assembly
- PVC based outer sheath

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (see Main Catalogue 2010/11 Appendix T9)
Starting at 6 cores: Black with white numbers

Approvals
VDE 0276 Part 603 (for 1-5 cores)
VDE 0276 Part 627 (from 7 cores)

Conductor stranding
Single or multi-wire

Minimum bending radius
Single core: 15 x outer diameter
multi-core: 12 x outer diameter

Rated voltage
U_0/U: 0,6/1,0 kV

Test voltage
4000 V

Range of temperature
For installation: +5°C up to +50°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
NYY-J				
1550030	1 x 25rm	13.0	240.0	380
1550038	1 x 35rm	14.0	336.0	447
1550032	1 x 50rm	15.0	480.0	650
1550033	1 x 70rm	17.0	672.0	864
1550037	1 x 185rm	26.0	1,776.0	2000
15500013	3 x 1,5re	12.0	43.0	223
15500023	4 x 1,5re	13.0	58.0	256
15500033	5 x 1,5re	14.0	72.0	293
1550004	7 x 1,5re	15.0	101.0	360
1550005	10 x 1,5re	18.0	144.0	520
1550006	12 x 1,5re	19.0	173.0	560
1550084	14 x 1,5re	20.0	202.0	620
1550007	16 x 1,5re	21.0	230.0	680
1550008	19 x 1,5re	22.0	274.0	760
1550009	24 x 1,5re	24.0	346.0	900
1550086	30 x 1,5re	26.0	432.0	1100
15500103	3 x 2,5re	13.0	72.0	272
15500113	4 x 2,5re	14.0	96.0	316
15500123	5 x 2,5re	15.0	120.0	323
1550013	7 x 2,5re	16.0	168.0	450
1550090	10 x 2,5re	20.0	240.0	630
1550091	12 x 2,5re	20.0	288.0	680
1550092	14 x 2,5re	21.0	336.0	790
1550094	19 x 2,5re	23.0	456.0	990
1550096	24 x 2,5re	26.0	576.0	1300
1550097	30 x 2,5re	28.0	720.0	1400
15500583	3 x 4re	15.0	115.0	373
15500203	4 x 4re	16.0	154.0	439
15500263	5 x 4re	17.0	192.0	510
15500593	3 x 6re	16.0	173.0	466
15500213	4 x 6re	17.0	230.0	547
15500273	5 x 6re	19.0	288.0	640
15500603	3 x 10re	18.0	288.0	629
15500223	4 x 10re	19.0	384.0	743
15500823	5 x 10re	21.0	480.0	899
15500613	3 x 16re	20.0	461.0	850
15500233	4 x 16re	22.0	614.0	1039
15500833	5 x 16re	23.0	768.0	1240
15500713	3 x 25rm/16re	25.0	874.0	1595
15500243	4 x 25rm	27.0	960.0	1620
15500153	3 x 35sm/16re	27.0	1,162.0	1718
15500753	4 x 35sm	27.0	1,344.0	1916
15500163	3 x 50sm/25rm	31.0	1,680.0	2383
15500253	4 x 50sm	31.0	1,920.0	2639
15500173	3 x 70sm/35sm	33.0	2,352.0	3196
15500763	4 x 70sm	35.0	2,688.0	3576
15500183	3 x 95sm/50sm	38.0	3,216.0	4271
15500773	4 x 95sm	40.0	3,648.0	4746
15500723	3 x 120sm/70sm	41.0	4,128.0	5281

Power and control cables

Building Installation

Cables for direct burial

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
15500783	4 x 120sm	43.0	4,608.0	5813
15500733	3 x 150sm/70sm	46.0	4,992.0	6408
15500793	4 x 150sm	48.0	5,760.0	7263
15500743	3 x 185sm/95sm	50.0	6,240.0	7909
15500803	4 x 185sm	53.0	7,104.0	8905
15500193	3 x 240sm/120sm	57.0	8,064.0	10162
15500813	4 x 240sm	60.0	9,216.0	11430
NYY-O				
1550205	1 x 10re	10.0	96.0	176
1550206	1 x 16re	11.0	154.0	239
1550207	1 x 25rm	13.0	240.0	380
1550208	1 x 35rm	14.0	336.0	447
1550209	1 x 50rm	15.0	480.0	650
1550210	1 x 70rm	17.0	672.0	864
1550211	1 x 95rm	19.0	912.0	1132
1550212	1 x 120rm	21.0	1,152.0	1405
1550213	1 x 150rm	22.0	1,440.0	1710
1550214	1 x 185rm	24.0	1,776.0	2086
1550215	1 x 240rm	27.0	2,304.0	2669
1550216	1 x 300rm	30.0	2,880.0	3305
1550218	1 x 500rm	39.0	4,800.0	5400
15502003	2 x 1,5re	11.0	29.0	210
15502193	2 x 2,5re	12.0	48.0	250
15502203	2 x 4re	14.0	77.0	360
15502213	2 x 6re	15.0	115.0	400
15502223	2 x 10re	17.0	192.0	500
15502533	4 x 16re	22.0	614.0	1039
15502543	4 x 25rm	27.0	960.0	1620
15502563	4 x 50sm	31.0	1,920.0	2639
15502573	4 x 70sm	35.0	2,688.0	3576
15502583	4 x 95sm	40.0	3,648.0	4746

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: Excluding Copper; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

■ Similar products

- NYCY see page 61
- NYCWY see page 62
- NAYY-J see page 63

■ Accessories

- V 1311 pressing pliers, hydraulic
- STAR STRIP stripping tool
- Cable shears KT 4 and KT 5

NYCY

Fixedly installed, buried PVC cable with concentric, helical copper conductor and cross-conductive spiral

Benefits

- Concentric conductor above all as PE

Application range

- As a fixed installation power and control cable for the following applications:
- For indoor- and outdoor use
- Direct burial
- In concrete
- In water

Product features

- Power rating acc. to HD 603 part 3G for outdoor laying and as per VDE 0298 part 4 (see Main Catalogue 2010/11 also appendix T12) for laying in and on buildings

Approvals (Norm references)

CE VDE RoHS

Design

- Conductor of bare copper wires
- Core insulation: Based on PVC
- Filling compound over the core assembly
- Concentric, helical, outside conductor of bare copper strands with inductance-reducing, cross-conductive copper bond counter spiral
- PVC based outer sheath

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (see Main Catalogue 2010/11 Appendix T9)
Starting at 6 cores: Black with white numbers

Approvals
VDE 0276 Part 603 (for 1-5 cores)
VDE 0276 Part 627 (from 7 cores)

Conductor stranding
Single or multi-wire

Minimum bending radius
Fixed installation: 12 x outer diameter

Rated voltage
U_0/U: 0,6/1,0 kV

Test voltage
4000 V

Range of temperature
For installation: +5°C up to +50°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
15503003	2 x 1,5re/1,5	14.0	52.0	245
15503103	3 x 1,5re/1,5	14.0	66.0	280
15503203	4 x 1,5re/1,5	15.0	81.0	302
1550330	7 x 1,5re/2,5	17.0	133.0	450
1550332	12 x 1,5re/2,5	20.0	205.0	580
1550337	24 x 1,5re/6	26.0	413.0	1100
15503113	3 x 2,5re/2,5	15.0	104.0	316
15503213	4 x 2,5re/2,5	16.0	128.0	360
1550350	7 x 2,5re/2,5	18.0	200.0	530
1550355	16 x 2,5re/6	23.0	451.0	950
15503223	4 x 4re/4	18.0	200.0	485
15503233	4 x 6re/6	19.0	297.0	616

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: Excluding Copper; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- NYY-J, NYY-O see page 59

NYCWY

Fixedly installed, buried PVC cable with concentric, wavelike copper conductor and cross-conductive spiral

Benefits

- Concentric conductor above all as PE
- Easier connection thanks to the wave form of the concentric copper conductor

Application range

- As a fixed installation power and control cable for the following applications:
- For indoor- and outdoor use
- Direct burial
- In concrete
- In water

Product features

- Power rating acc. to HD 603 part 3G for outdoor laying and as per VDE 0298 part 4 (see Main Catalogue 2010/11 also appendix T12) for laying in and on buildings

Approvals (Norm references)

CE VDE RoHS

Design

- Conductor of bare copper wires
- Core insulation: Based on PVC
- Filling compound over the core assembly
- Concentric, wavelike, outside conductor of bare copper strands with inductance-reducing, cross-conductive copper bond counter spiral
- PVC based outer sheath

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (see Main Catalogue 2010/11 Appendix T9)

Approvals
VDE 0276 Part 603 (for 1-5 cores)

Conductor stranding
Single or multi-wire

Minimum bending radius
Fixed installation: 12 x outer diameter

Rated voltage
U_0/U: 0,6/1,0 kV

Test voltage
4000 V

Range of temperature
For installation: +5°C up to +50°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
15505003	2 x 10re/10	19.0	312.0	610
15505263	3 x 10re/10	20.0	408.0	775
15505403	4 x 10re/10	21.0	504.0	897
15505273	3 x 16re/16	22.0	643.0	1066
15505413	4 x 16re/16	24.0	796.0	1250
15505283	3 x 25rm/25	26.0	1,003.0	1584
15505423	4 x 25rm/16	28.0	1,142.0	1822
15505303	3 x 35sm/35	26.0	1,402.0	1710
15505433	4 x 35sm/16	29.0	1,526.0	2146
15505163	3 x 50sm/50	30.0	2,000.0	2368
15505443	4 x 50sm/25	33.0	2,203.0	3031
15505453	4 x 70sm/35	38.0	3,082.0	4056
15505143	3 x 95sm/50	38.0	3,296.0	4256
15505323	3 x 95sm/95	39.0	3,791.0	4600
15505463	4 x 95sm/50	43.0	4,208.0	5364
15505153	3 x 120sm/70	41.0	4,236.0	5314
15505473	4 x 120sm/70	46.0	5,388.0	6748
15505353	3 x 150sm/70	45.0	5,100.0	6344
15505483	4 x 150sm/70	51.0	6,540.0	8159
15505173	3 x 185sm/95	50.0	6,383.0	8054

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: Excluding Copper; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- NYY-J, NYY-O see page 59

Accessories

- V 1311 pressing pliers, hydraulic
- Cable shears KT 4 and KT 5

NAYY-J

Fixedly installed, buried PVC cable with solid aluminium conductors

Application range

- As a fixed installation power and control cable for the following applications:
- For indoor- and outdoor use
- Direct burial
- In concrete
- In water

Product features

- Flame retardant according to IEC 60332-1-2
- Maximum tensile load for aluminium conductors is 30 N/mm²
- Power rating acc. to HD 603 part 3G for outdoor laying and as per VDE 0298 part 4 (see Main Catalogue 2010/11 also appendix T12) for laying in and on buildings

Approvals (Norm references)

CE VDE RoHS

Design

- Conductor of aluminium
- Core insulation: Based on PVC
- Filling compound over the core assembly
- PVC based outer sheath

Technical data

Core identification code
According to VDE 0293-308 (table T9)

Approvals
VDE 0276 Part 603

Conductor stranding
Single wire

Minimum bending radius
Fixed installation: 12 x outer diameter

Rated voltage
U_0/U: 0,6/1,0 kV

Test voltage
4000 V

Range of temperature
For installation: +5°C up to +50°C
Fixed installation: -30°C to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Alu index kg/km	Weight kg/km
1552010	4 x 35re	28.2	406.0	1170
1552011	4 x 50se	29.8	580.0	1305
1552012	4 x 70se	34.2	812.0	1730
1552013	4 x 95se	38.6	1,102.0	2205
1552014	4 x 120se	41.9	1,392.0	2655
1552015	4 x 150se	45.6	1,740.0	3150
1552016	4 x 185se	50.8	2,146.0	3925
1552017	4 x 240se	59.6	2,784.0	4880

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Aluminium price basis: Excluding Aluminium; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- NYY-J, NYY-O see page 59

Accessories

- V 1311 pressing pliers, hydraulic
- STAR STRIP stripping tool
- Tube Cable lugs and other connectors made of aluminium or bimetall AlCu are available on request

SPIRAL H07BQ-F BLACK

Black, robust PUR spiral cable with high recoiling forces

Info

- **Black**
- **Heavy construction type, well-priced**
- **Outer PUR sheath, high recoiling forces**

Benefits

- Robust
- Broad application range
- Cost-saving

Application range

- Construction of engines and appliances with flexible power connections as well as at dockyards
- Construction machines and powered doors
- Measurement and control technology
- Any commercial/ industrial/ agricultural facility: Connection of tools, appliances and mobile motors
- Increased tensile and abrasion requirements as well as in damp or wet environments (no submersion)

Product features

- Black, robust outer PUR sheath
- Increased tensile strength and abrasion resistance
- High restoring forces
- Resistant to microbes, solvents and certain fuels
- Hydrolysis-resistant

Approvals (Norm references)

CE RoHS

Design

- Tinned copper conductor with class 5 according to IEC 60228/ VDE 0295
- Core insulation: EI 6 rubber according to HD 22.1 & EN 50363-1; coloured according to HD 308; VDE and HAR marking
- Available core quantities: 3, 4 and 5
- Black, outer PUR sheath made of TMPU according to HD 22.10/ VDE 0282-10; marking “H07BQ-F ...”
- 4 available basic lengths, see article table below
- End lengths: 200 mm at the first end / 600 mm at the other end
- Radial outflow of the cable

Technical data

Core identification code
Coloured acc. HD 308

Approvals
HD 22.10 H07BQ-F (only initial, unspiralled metre ware: HAR cable type certification gets lost normatively due to process of spiralling)

Based on
HD 22.10 H07BQ-F

Conductor stranding
fine-wired acc. to IEC 60228/ VDE 0295, class 5
tinned/tin-coated strands

Minimum bending radius
Flexible use: 12.5 x outer diameter

Rated voltage
U_0/U: 450/750 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
-25 °C to +50 °C (spiralled)

Part number	Number of cores and mm² per conductor	Spiral length extended in mm max.	Spiral length unextended in mm	Cable diameter, in mm	Spiral outer diameter mm	Copper index kg/1.000 pcs
70002750	3 G 1.5	1,500	500	9.0	31.0	207.3
70002751	3 G 1.5	3,000	1,000	9.0	31.0	371.5
70002752	3 G 1.5	4,500	1,500	9.0	31.0	535.6
70002753	3 G 1.5	6,000	2,000	9.0	31.0	699.8
70002754	4 G 1.5	1,500	500	10.0	38.0	305.2
70002755	4 G 1.5	3,000	1,000	10.0	38.0	547.2
70002756	4 G 1.5	4,500	1,500	10.0	38.0	789.1
70002757	4 G 1.5	6,000	2,000	10.0	38.0	1,031.0
70002758	5 G 1.5	1,500	500	11.0	40.0	367.2
70002759	5 G 1.5	3,000	1,000	11.0	40.0	655.2
70002760	5 G 1.5	4,500	1,500	11.0	40.0	936.0
70002761	5 G 1.5	6,000	2,000	11.0	40.0	1,231.2

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‘Metal price basis’ and ‘Metal index’ see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.
Each piece is packed in a plastic bag individually.

Similar products

- ÖLFLEX® SPIRAL 400 P see page 65
- ÖLFLEX® SPIRAL 540 P

Accessories

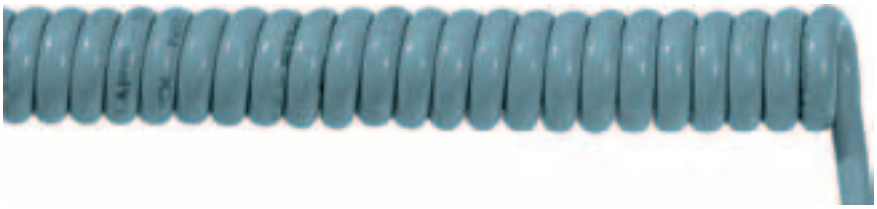
- SKINTOP® CLICK / CLICK-R see page 75
- SKINTOP® BS
- SKINTOP® BS-M see page 77
- SKINTOP® BT
- SKINTOP® CLICK BS see page 78

ÖLFLEX® SPIRAL 400 P

PUR spiral cable with increased chemical resistance

Info

- **Higher resistance to benzols, benzines and further substances according to Main Catalogue 2010/11 appendix T1**



Benefits

- High recoiling forces and extension lengths up to 3 times the unextended spiral length

Application range

- As control and power cables on machines
- Mechanical engineering
- Apparatus construction

Product features

- Resistant against microbes, hydrolysis and almost all mineral oils
- Highly chemical resistant to benzols, benzenes and other agents according to Main Catalogue 2010/11 Selection Table T1 in Appendix

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Special PVC P8/1
- Special polyurethane outer sheath

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
Core: VDE 0812/0281
Sheath: VDE 0250/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Rated voltage
U_0/U: 300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: +5°Cup to +50°C

Part number	Number of cores and mm² per conductor	Spiral length extended in mm max.	Spiral length unextended in mm	Cable diameter, in mm	Spiral outer diameter mm	Copper index kg/1.000 pcs
U_0/U: 300/500 V						
70002622	2 X 0.75	1,500	500	5.4	19.5	64.8
70002623	2 X 0.75	3,000	1,000	5.4	19.5	123.8
70002624	2 X 0.75	4,500	1,500	5.4	19.5	170.6
70002625	2 X 0.75	6,000	2,000	5.4	19.5	234.7
70002628	3 G 0.75	1,500	500	5.7	20.0	101.5
70002629	3 G 0.75	3,000	1,000	5.7	20.0	172.8
70002630	3 G 0.75	4,500	1,500	5.7	20.0	261.3
70002631	3 G 0.75	6,000	2,000	5.7	20.0	326.1
70002634	4 G 0.75	1,500	500	6.2	21.0	123.8
70002635	4 G 0.75	3,000	1,000	6.2	21.0	221.7
70002636	4 G 0.75	4,500	1,500	6.2	21.0	129.6
70002637	4 G 0.75	6,000	2,000	6.2	21.0	453.6
70002640	5 G 0.75	1,500	500	6.7	24.0	154.8
70002641	5 G 0.75	3,000	1,000	6.7	24.0	306.0
70002642	5 G 0.75	4,500	1,500	6.7	24.0	439.2
70002643	5 G 0.75	6,000	2,000	6.7	24.0	594.0
70002726	7 G 0.75	1,500	500	7.3	27.0	245.0
70002727	7 G 0.75	3,000	1,000	7.3	27.0	525.0
70002728	7 G 0.75	4,500	1,500	7.3	27.0	660.0
70002729	7 G 0.75	6,000	2,000	7.3	27.0	1,025.0
70002731	12 G 0.75	1,500	500	9.9	35.0	371.5
70002732	12 G 0.75	3,000	1,000	9.9	35.0	682.5
70002734	18 G 0.75	1,500	500	11.7	40.0	699.8
70002735	18 G 0.75	3,000	1,000	11.7	40.0	1,127.5
70002646	2 X 1	1,500	500	5.7	20.0	88.3
70002647	2 X 1	3,000	1,000	5.7	20.0	161.2
70002648	2 X 1	4,500	1,500	5.7	20.0	230.4
70002649	2 X 1	6,000	2,000	5.7	20.0	272.6
70002651	3 G 1	1,500	500	6.0	21.0	129.6
70002652	3 G 1	3,000	1,000	6.0	21.0	244.8
70002653	3 G 1	4,500	1,500	6.0	21.0	350.5
70002654	3 G 1	6,000	2,000	6.0	21.0	417.6
70002656	4 G 1	1,500	500	6.5	24.0	176.6
70002657	4 G 1	3,000	1,000	6.5	24.0	322.5
70002658	4 G 1	4,500	1,500	6.5	24.0	503.0
70002659	4 G 1	6,000	2,000	6.5	24.0	587.5
70002661	5 G 1	1,500	500	7.1	25.0	220.8
70002662	5 G 1	3,000	1,000	7.1	25.0	408.0
70002663	5 G 1	4,500	1,500	7.1	25.0	600.0
70002664	5 G 1	6,000	2,000	7.1	25.0	744.0
70002666	7 G 1	1,250	500	8.0	30.0	328.3
70002667	7 G 1	2,500	1,000	8.0	30.0	562.8
70002668	7 G 1	3,750	1,500	8.0	30.0	770.5
70002669	7 G 1	5,000	2,000	8.0	30.0	1,175.1
70002670	12 G 1	1,500	500	10.5	37.0	598.0
70002671	12 G 1	3,000	1,000	10.5	37.0	1,012.0
70002672	18 G 1	1,500	500	12.7	45.0	891.0

Power and control cables

Harnessed cables

Spiralized

Part number	Number of cores and mm² per conductor	Spiral length extended in mm max.	Spiral length unextended in mm	Cable diameter, in mm	Spiral outer diameter mm	Copper index kg/1.000 pcs
70002673	18 G 1	3,000	1,000	12.7	45.0	1,402.5
70002681	2 X 1.5	1,500	500	6.3	23.0	142.1
70002682	2 X 1.5	3,000	1,000	6.3	23.0	266.8
70002683	2 X 1.5	4,500	1,500	6.3	23.0	379.9
70002684	2 X 1.5	6,000	2,000	6.3	23.0	493.0
70002687	3 G 1.5	1,500	500	6.7	24.0	210.7
70002688	3 G 1.5	3,000	1,000	6.7	24.0	365.5
70002689	3 G 1.5	4,500	1,500	6.7	24.0	498.8
70002690	3 G 1.5	6,000	2,000	6.7	24.0	662.2
70002699	5 G 1.5	1,250	500	8.1	30.0	338.4
70002700	5 G 1.5	2,500	1,000	8.1	30.0	597.6
70002701	5 G 1.5	3,750	1,500	8.1	30.0	864.0
70002702	5 G 1.5	5,000	2,000	8.1	30.0	1,173.6
70002705	7 G 1.5	1,250	500	8.9	31.0	454.5
70002706	7 G 1.5	2,500	1,000	8.9	31.0	808.0
70002707	7 G 1.5	3,750	1,500	8.9	31.0	1,111.0
70002708	7 G 1.5	5,000	2,000	8.9	31.0	1,504.9
70002709	12 G 1.5	1,500	500	12.0	46.0	968.8
70002710	12 G 1.5	3,000	1,000	12.0	46.0	1,660.8
70002711	18 G 1.5	1,500	500	13.4	52.0	1,261.4
70002712	18 G 1.5	3,000	1,000	13.4	52.0	2,261.0
70002716	3 G 2.5	1,250	500	8.1	28.5	338.4
70002717	3 G 2.5	2,500	1,000	8.1	28.5	640.8
70002718	3 G 2.5	3,750	1,500	8.1	28.5	885.6
70002719	3 G 2.5	5,000	2,000	8.1	28.5	1,072.8
70002721	5 G 2.5	1,250	500	10.0	37.0	624.0
70002722	5 G 2.5	2,500	1,000	10.0	37.0	1,068.0
70002723	5 G 2.5	3,750	1,500	10.0	37.0	1,489.2
70002724	5 G 2.5	5,000	2,000	10.0	37.0	1,980.0

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

■ Similar products

- ÖLFLEX® SPIRAL 540 P

■ Accessories

- SKINTOP® CLICK / CLICK-R see page 75

ÖLFLEX® SPIRAL 540 P with angular plug

Robust, VDE-registered spiral cable with high recoiling forces and angular plug

Info

- Robust
- High restoring forces
- With shock-proof angular plug

Benefits

- Extension lengths of up to 3.5 times the unextended spiral length and especially high recoiling forces
- VDE approval for cable and connector
- Safety colour: Yellow

Application range

- Harsh use conditions
- Mechanical engineering
- Construction industry
- Medical equipment
- In damp rooms or outdoors

Product features

- Good resistance of the outer sheath to cutting and abrasion
- High resistance to oil, low temperatures, microbes and hydrolysis
- Special, flame-retardant polyurethane sheath compound

Approvals (Norm references)

CE VDE RoHS

Design

- Strands of tinned copper wires
- Core insulation: TPE
- Special polyurethane outer sheath

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (see Main Catalogue 2010/11 Appendix T9)

Approvals
No. 57126 acc. to VDE 0620

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Rated voltage
U_o: 250 V ac

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: -30 °C up to +50 °C

Part number	Number of cores and mm² per conductor	Spiral length extended in mm max.	Spiral length unextended in mm	Cable diameter, in mm	Spiral outer diameter mm	Copper index kg/1.000 pcs
73220852	3 G 0.75	1,000	300	7.0	24.0	70.1
73220853	3 G 0.75	2,000	600	7.0	24.0	122.8
73220854	3 G 0.75	3,500	1,000	7.0	24.0	193.2
73220855	3 G 1	1,000	300	7.4	29.0	110.0
73220856	3 G 1	2,000	600	7.4	29.0	196.7
73220863	3 G 1	3,500	1,000	7.4	29.0	312.3
73220860	3 G 1.5	1,000	300	8.9	32.0	148.6
73220861	3 G 1.5	2,000	600	8.9	32.0	262.8
73220862	3 G 1.5	3,500	1,000	8.9	32.0	415.1

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
1 piece in polyester bag
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- ÖLFLEX® SPIRAL 540 P

UNITRONIC® SPIRAL

Spiral cable with outer PUR sheath and over-all shielding for exact impulse transmission

Info

- **Secure against electrical disturbance**

Benefits

- Overall screening prevents high frequency interference and guarantees accurate pulse transmission
- Extended lengths of up to 4 times the unextended spiral length

Application range

- In measurement and controlling engineering
- Used wherever screened cables with smallest dimensions are required

Product features

- Abrasion and cut resistant
- Very high flexibility

Approvals (Norm references)

RoHS

Design

- Strands of bare copper wires
- Core insulation: Based on PVC
- Screening by copper wrapping
- Outer sheath: Polyurethane (PUR) compound

Technical data

Core identification code
DIN 47100

Peak working voltage
250 V (not for power applications)

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Test voltage
1200 V

Range of temperature
Flexible use: -5°C up to +50°C

Part number	Number of cores and mm² per conductor	Spiral length extended in mm max.	Spiral length unextended in mm	Cable diameter, in mm	Spiral outer diameter mm	Copper index kg/1.000 pcs
73220200	2 x 0.14	400	100	4.0	15.0	16.5
73220201	2 x 0.14	800	200	4.0	15.0	23.8
73220202	2 x 0.14	1,200	300	4.0	15.0	29.7
73220203	2 x 0.14	1,600	400	4.0	15.0	36.9
73220204	2 x 0.14	2,000	500	4.0	15.0	48.0
73220205	3 x 0.14	400	100	4.2	18.0	21.0
73220206	3 x 0.14	800	200	4.2	18.0	30.8
73220207	3 x 0.14	1,200	300	4.2	18.0	43.5
73220208	3 x 0.14	1,600	400	4.2	18.0	54.8
73220209	3 x 0.14	2,000	500	4.2	18.0	63.8
73220210	4 x 0.14	400	100	4.4	19.0	23.4
73220211	4 x 0.14	800	200	4.4	19.0	33.6
73220212	4 x 0.14	1,200	300	4.4	19.0	45.8
73220213	4 x 0.14	1,600	400	4.4	19.0	58.6
73220214	4 x 0.14	2,000	500	4.4	19.0	67.2
73220215	5 x 0.14	400	100	5.1	20.0	24.4
73220216	5 x 0.14	800	200	5.1	20.0	38.1
73220217	5 x 0.14	1,200	300	5.1	20.0	50.4
73220218	5 x 0.14	1,600	400	5.1	20.0	60.4
73220219	5 x 0.14	2,000	500	5.1	20.0	72.0
73220220	6 x 0.14	400	100	5.4	21.0	31.1
73220221	6 x 0.14	800	200	5.4	21.0	44.8
73220222	6 x 0.14	1,200	300	5.4	21.0	56.3
73220223	6 x 0.14	1,600	400	5.4	21.0	77.9
73220224	6 x 0.14	2,000	500	5.4	21.0	73.9
73220230	12 x 0.14	400	100	7.0	27.0	56.4
73220231	12 x 0.14	800	200	7.0	27.0	95.2
73220232	12 x 0.14	1,200	300	7.0	27.0	118.1
73220233	12 x 0.14	1,600	400	7.0	27.0	161.0
73220234	12 x 0.14	2,000	500	7.0	27.0	179.2
73220235	18 x 0.14	400	100	7.8	29.0	75.1
73220236	18 x 0.14	800	200	7.8	29.0	110.5
73220237	18 x 0.14	1,200	300	7.8	29.0	150.2
73220238	18 x 0.14	1,600	400	7.8	29.0	198.9
73220239	18 x 0.14	2,000	500	7.8	29.0	221.0

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SKINTOP® CLICK / CLICK-R see page 75

UNITRONIC® LiYCY

Application range

- Used for computer systems, MSR technology, office machinery, scales - screened cables with small dimensions.
- Dry and damp indoors

Product features

- Colour code in accordance with DIN 47100
- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)

RoHS

Design

- Colour: pebble grey (RAL 7032)
- Bare copper wire stranded conductor
- PVC core insulation and outer sheath
- Tinned copper braid

Technical data

Core identification code
DIN 47100 without colour repetition, see Main Catalogue 2010/11 Appendix T9

Mutual capacitance
C/C approx. 120 nF/km
C/S: approx. 160 nF/km

Peak working voltage
(not for power applications) 250 V

Based on
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Strand, fine wire
0.34 mm², 7 wire

Conductor resistance
see Main Catalogue 2010/11 Appendix T11

Minimum bending radius
For flexible applications:
15 x outer diameter
fixed installation:
6 x cable diameter

Test voltage
At 0.14 mm2: 1200 V
> 0.14 mm²: 1500 V

Range of temperature
Fixed installation: -40°C up to +80°C
Flexing: -5°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
UNITRONIC® LiYCY				
0034302	2 x 0.14	3.9	12.0	20
0034303	3 x 0.14	4.1	13.0	28
0034304	4 x 0.14	4.3	14.3	33
0034305	5 x 0.14	4.6	15.5	38
0034306	6 x 0.14	4.9	18.2	38
0034307	7 x 0.14	4.9	19.0	49
0034308	8 x 0.14	5.8	21.2	56
0034310	10 x 0.14	6.1	28.5	66
0034312	12 x 0.14	6.3	30.4	78
0034314	14 x 0.14	6.7	32.0	80
0034315	15 x 0.14	6.9	37.8	86
0034316	16 x 0.14	7.0	43.0	90
0034318	18 x 0.14	7.3	48.8	104
0034320	20 x 0.14	7.7	53.9	116
0034321	21 x 0.14	7.9	55.5	121
0034325	25 x 0.14	8.4	63.0	149
0034328	28 x 0.14	8.5	66.1	153
0034330	30 x 0.14	8.7	69.0	158
0034332	32 x 0.14	9.0	73.6	164
0034336	36 x 0.14	9.3	83.0	183
0034340	40 x 0.14	10.4	87.5	210
0034344	44 x 0.14	10.7	110.5	225
0034350	50 x 0.14	11.1	122.5	253
0034402	2 x 0.25	4.5	16.0	32
0034403	3 x 0.25	4.7	21.0	37
0034404	4 x 0.25	5.0	24.0	41.3
0034405	5 x 0.25	5.6	29.0	51.2
0034406	6 x 0.25	6.0	30.0	58
0034407	7 x 0.25	6.0	37.0	65
0034408	8 x 0.25	7.1	42.0	73
0034410	10 x 0.25	7.5	46.0	82
0034412	12 x 0.25	7.7	53.0	98
0034414	14 x 0.25	8.0	59.0	99
0034415	15 x 0.25	8.3	61.0	111
0034416	16 x 0.25	8.4	64.0	124
0034418	18 x 0.25	8.8	83.0	143
0034420	20 x 0.25	9.3	88.0	152.3
0034421	21 x 0.25	9.6	93.0	161
0034425	25 x 0.25	10.7	114.0	172
0034428	28 x 0.25	10.8	126.0	181.1

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
0034430	30 x 0.25	11.0	132.0	189
0034432	32 x 0.25	11.4	138.0	203
0034436	36 x 0.25	11.8	148.0	220
0034440	40 x 0.25	12.7	157.0	248
0034450	50 x 0.25	13.8	178.0	318
0034461	61 x 0.25	15.0	205.0	365.2
0034502	2 x 0.34	4.9	21.0	37
0034503	3 x 0.34	5.1	27.0	49
0034504	4 x 0.34	5.7	28.0	59
0034505	5 x 0.34	6.2	30.0	66
0034506	6 x 0.34	6.8	45.0	79
0034507	7 x 0.34	6.8	48.0	83
0034508	8 x 0.34	7.8	52.0	94
0034510	10 x 0.34	8.3	74.0	129.2
0034512	12 x 0.34	8.5	80.0	142
0034514	14 x 0.34	8.9	86.0	154
0034515	15 x 0.34	9.2	90.0	155
0034516	16 x 0.34	9.4	94.0	160
0034518	18 x 0.34	10.2	103.0	173
0034520	20 x 0.34	10.7	112.0	192
0034521	21 x 0.34	11.1	116.0	199.2
0034525	25 x 0.34	11.9	135.0	259
0034528	28 x 0.34	12.0	153.0	280
0034530	30 x 0.34	12.3	159.0	291.1
0034532	32 x 0.34	13.0	165.0	305
0034536	36 x 0.34	13.4	179.0	331
0034540	40 x 0.34	14.8	200.0	365
0034550	50 x 0.34	15.9	235.0	431
0034602	2 x 0.50	5.6	29.0	54
0034603	3 x 0.50	5.9	38.0	67
0034604	4 x 0.50	6.3	43.0	77
0034605	5 x 0.50	7.0	51.0	90
0034606	6 x 0.50	7.6	59.0	104
0034607	7 x 0.50	7.6	65.0	112
0034608	8 x 0.50	8.7	70.0	135
0034610	10 x 0.50	9.3	88.0	160
0034612	12 x 0.50	9.6	99.0	177
0034618	18 x 0.50	11.8	134.0	239
0034620	20 x 0.50	12.1	149.0	276
0034625	25 x 0.50	13.7	211.0	352
0034630	30 x 0.50	14.5	230.0	397

DIN colour code

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
0034702	2 x 0.75	6.0	38.0	64
0034703	3 x 0.75	6.3	49.0	76
0034704	4 x 0.75	7.0	58.0	92
0034705	5 x 0.75	7.6	67.0	109
0034707	7 x 0.75	8.2	100.0	156
0034710	10 x 0.75	10.5	130.0	187
0034712	12 x 0.75	10.8	154.0	218
0034718	18 x 0.75	13.0	195.0	327
0034725	25 x 0.75	15.3	280.0	454
0034730	30 x 0.75	15.8	312.0	486
0034802	2 x 1.00	6.3	43.0	72
0034803	3 x 1.00	6.8	56.0	90
0034804	4 x 1.00	7.3	68.0	109
0034805	5 x 1.00	8.0	79.0	126

Part number	Number of cores and mm² per conductor	Outer diameter in mm	Copper index kg/km	Weight kg/km
0034807	7 x 1.00	8.6	118.0	171
0034810	10 x 1.00	11.1	140.0	228
0034812	12 x 1.00	11.4	168.0	259
0034818	18 x 1.00	13.4	252.0	389
0034825	25 x 1.00	16.2	335.0	517
0034902	2 x 1.50	7.5	58.0	90
0034903	3 x 1.50	7.9	74.0	115
0034904	4 x 1.50	8.5	108.0	153
0034905	5 x 1.50	9.3	129.0	176
0034907	7 x 1.50	10.5	164.0	220
0034912	12 x 1.50	13.7	254.0	376
0034918	18 x 1.50	16.3	350.0	519
0034925	25 x 1.50	19.9	550.0	901

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Photographs are not to scale and do not represent detailed images of the respective products.

■ Similar products

- Li2YCY
- Li5YC5Y

■ Accessories

- SKINTOP® MS-SC
- Multipurpose shears A and B

ETHERLINE® 2-pairs CAT.5/5e

Info

- **Industrial Ethernet Cable**
- **CAT.5/5e**

Benefits

- ETHERNET with the globally accepted TCP/IP protocol will most probably either provide a connection to the established “Fieldbus World” or the Sensor-Actuator level. Either via a gateway to the “Fieldbus World” or straight through downwards to the lowest communication level. The transmission rates are presently either 10 Mbit/s (ETHERNET) or at least 100 Mbit/s = LAN CAT.5 requirements (Fast Ethernet = Industrial Ethernet) respectively CAT.6a or CAT.7 requirements.
- With regard to transmission rates, the “ETHERNET world” is cut into:
- ETHERNET = 10 Mbit/s
- FAST ETHERNET = 100 Mbit/s
- GIGABIT ETHERNET = 1000 Mbit/s

Product features

- In order to reach 100 m link length (like in the office area acc. to ISO 11801) for flexible and highly flexible cable types a cross section of AWG22 is necessary.
- All ETHERLINE® cables with a cross section of AWG22 are PROFINET® compliant.
- Further technical data: see Data Sheet

Approvals (Norm references)

RoHS

Design

- AWG22: colour: yellow green (RAL 6018)

Technical data

Z_∞ **Characteristic impedance**
100 Ohm at 1 - 100 MHz

Part number	Article designation	Number of pairs and AWG per conductor	Outer diameter in mm max.	Copper index kg/km	Weight kg/km
Conductor AWG24 (outer sheath colour marine blue RAL 5021)					
2170280	ETHERLINE® H CAT.5e	2 x 2 x AWG24/1	5.8	22.0	45
2170281	ETHERLINE® P CAT.5e	2 x 2 x AWG24/1	5.8	22.0	53
Conductor AWG22 = PROFINET-conform (outer sheath colour yellow-green RAL 6018)					
For fixed installation (solid conductor) = type A					
2170891	ETHERLINE® Y UL/CSA CAT.5e	2 x 2 x AWG22/1	6.4	30.4	56
Conductor AWG22 = PROFINET-conform					
For flexible application (7 wire stranded conductor) = Type B					
2170886	ETHERLINE® Y FLEX FC UL/CSA (CMG) CAT.5	2 x 2 x AWG22/7	6.5	31.3	67

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‘Metal price basis’ and ‘Metal index’ see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
PROFINET® is a registered trademark of the PNO (PROFIBUS user organisation)
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- Connector RJ45 CAT.5 Hirose TM11
- Connector RJ45 CAT.5 Stewart SS37
- Field-Terminable Connector RJ45 CAT.5e FM45 see page 72
- Multipurpose shears A and B
- DATA STRIP stripping tool

ETHERLINE® 4-pairs solidwire CAT.5e

ETHERLINE® 4-pairs flexible/high flexible CAT.5e

Benefits

- With regard to transmission rates, the "ETHERNET world" is cut into:
- ETHERNET = 10 Mbit/s
- FAST ETHERNET = 100 Mbit/s
- GIGABIT ETHERNET = 1000 MBit/s (1GBit/s)

Application range

ETHERLINE® 4-pairs solidwire CAT.5e

- Stationary application
- Connection with the "Fieldbus World" via gateway or straight through downwards to the Sensor-Actuator level

ETHERLINE® 4-pairs flexible/high flexible CAT.5e

- Flexible and highly flexible applications
- Connection with the "Fieldbus World" via gateway or straight through downwards to the Sensor-Actuator level

Approvals (Norm references)

RoHS

Design

- Technical data: see detailed Data Sheet (on request)

Technical data

Characteristic impedance
100 Ohm at 1 - 100 MHz

Part number	Article designation	Number of pairs and AWG per conductor	Outer diameter in mm max.	Copper index kg/km	Weight kg/km
Conductor AWG24 + AWG26 (outer sheath colour marine blue RAL 5021)					
For fixed installation (solid conductor)					
2170296	ETHERLINE® H CAT.5e	4 x 2 x AWG24/1	6.3	32.0	54
2170297	ETHERLINE® P CAT.5e	4 x 2 x AWG24/1	6.3	32.0	62
For flexible application (7-wire stranded conductor)					
2170299	ETHERLINE® H Flex CAT.5e	4 x 2 x AWG26/7	6.1	25.0	48
2170300	ETHERLINE® P Flex CAT.5e	4 x 2 x AWG26/7	6.1	25.0	54

Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
PROFINET® is a registered trademark of the PNO (PROFIBUS user organisation)
Photographs are not to scale and do not represent detailed images of the respective products.

Field-Terminable Connector RJ45 CAT.5e FM45

Product features

- Shielded version
- FM45 is a tool-free switchable, field-terminable RJ45 Connector with IDC contacting and CAT.5e performance. The eight pin connection can be re-switched, tension-resistant, and vibration-resistant. The connecting block can accommodate both screened as well as unscreened cable up to 8 mm diameter.
- Suitable for AWG23 - 26, AWG22 possible with restrictions
- IDC/piercing terminal in acc. with 60352-4
- Suitable for solid and stranded/flexible conductors
- Suitable for use in industrial applications
- Protection type: IP20

Approvals (Norm references)

RoHS

Part number	Article designation	PU
21700540	Field-Terminable Connector RJ45 CAT.5e FM45	1 piece

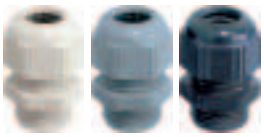
Photographs are not to scale and do not represent detailed images of the respective products.

SKINTOP® STR-M / SKINTOP® ST-M

Info

- **Now with IP 69 K approval! Proven functionality also during hardest cleaning procedures at industrial machinery with high-pressure cleaners and hot water!**

SKINTOP® STR-M



SKINTOP® ST-M

Benefits

SKINTOP® ST-M

- Increased oil resistant for maximum reliability
- Permanent vibration protection
- Large, variable clamping ranges
- Optimal strain relief
- Various accessories (e. g. multiple sealing inserts)

SKINTOP® STR-M

- Benefits see SKINTOP® ST-M

Application range

SKINTOP® ST-M

- Everywhere where cables must be safely inserted into housings.
- Machine and apparatus construction
- Photovoltaic
- Automation technology
- Mobile off shore units, equipment and ship yards

SKINTOP® STR-M

- With reducing seal insert, to seal cables with smaller outer diameters.

Approvals (Norm references)

- UL File Nr. E79903

Design

- Metric connection thread acc. to EN 50262

Note

SKINTOP® ST-M

- For suitable accessories see SKINTOP® metric accessories
- Counter nut to be used SKINTOP® GMP-GL-M
- SKINTOP® ST M ISO types have a extralong connection thread
- Versions SKINTOP® ST M ISO with extra long connection thread, see table, have no DNV approval

SKINTOP® STR-M

- For suitable accessories see SKINTOP® metric accessories
- Counter nut to be used SKINTOP® GMP-GL-M
- SKINTOP® STR M ISO types have a extralong connection thread
- Versions SKINTOP® STR M ISO with extra long connection thread, see table, have no DNV approval

Suitable cables

- For IP 69 K applications we recommend to use the following cables:
  ÖLFLEX® ROBUST 200
  H07RN8-F

Suitable tools

SKINTOP® ST-M

- SKINMATIC® QUICK Set 1 see Main Catalogue 2010/11 page 703
- SKINMATIC® RZ see Main Catalogue 2010/11 page 704

Technical data

Caution
Installation dimensions and tightening torques see Main Catalogue 2010/11 Appendix T21

Colour delivered
RAL 7001 silver-grey
RAL 7035 light grey
RAL 9005 black / UV resistant

Material
Body: Polyamide
Seal: CR

Tests
GGVS: TÜ.EGG.020-95

Degree of protection
IP 68 - 5 bar
IP 69 K

Range of temperature
Static: -40°C up to +100°C
Dynamic: -20°C up to +100°C

Part number	Part designation / size	Clamping range ØF mm	SW mm	Overall length C mm	Thread length D mm	Pieces / PU
SKINTOP® ST-M silver grey						
53111000	ST-M 12 x 1,5	3,5-7	15	30.0	8.0	100
53111010	ST-M 16 x 1,5	4,5-10	19	34.0	8.0	100
53111020	ST-M 20 x 1,5	7-13	25	37.0	9.0	100
53111030	ST-M 25 x 1,5	9-17	30	40.0	10.0	50
53111040	ST-M 32 x 1,5	11-21	36	47.0	10.0	25
53111050	ST-M 40 x 1,5	19-28	46	52.0	10.0	10
53111060	ST-M 50 x 1,5	27-35	55	62.0	12.0	5
53111070	ST-M 63 x 1,5	34-45	66	71.0	12.0	5
SKINTOP® ST-M black						
53111200	ST-M 12 x 1,5	3,5-7	15	30.0	8.0	100
53111210	ST-M 16 x 1,5	4,5-10	19	34.0	8.0	100
53111220	ST-M 20 x 1,5	7-13	25	37.0	9.0	100
53111230	ST-M 25 x 1,5	9-17	30	40.0	10.0	50
53111240	ST-M 32 x 1,5	11-21	36	47.0	10.0	25
53111250	ST-M 40 x 1,5	19-28	46	52.0	10.0	10
53111260	ST-M 50 x 1,5	27-35	55	62.0	12.0	5
53111270	ST-M 63 x 1,5	34-45	66	71.0	12.0	5
SKINTOP® ST-M light grey						
53111400	ST-M 12 x 1,5	3,5-7	15	30.0	8.0	100
53111410	ST-M 16 x 1,5	4,5-10	19	34.0	8.0	100
53111420	ST-M 20 x 1,5	7-13	25	37.0	9.0	100
53111430	ST-M 25 x 1,5	9-17	30	40.0	10.0	50
53111440	ST-M 32 x 1,5	11-21	36	47.0	10.0	25
53111450	ST-M 40 x 1,5	19-28	46	52.0	10.0	10
53111460	ST-M 50 x 1,5	27-35	55	62.0	12.0	5
53111470	ST-M 63 x 1,5	34-45	66	71.0	12.0	5
SKINTOP® ST M ISO silver-grey (with long metric connecting thread)						
53017010	ST M 16 x 1,5	3,5-8	19	40.0	12.0	100
53017030	ST M 20 x 1,5	5-12	24	45.0	13.0	100
53017040	ST M 25 x 1,5	9-14	27	47.0	13.0	50
SKINTOP® ST M ISO black (with long metric connecting thread)						
53017210	ST M 16 x 1,5	3,5-8	19	40.0	12.0	100
53017230	ST M 20 x 1,5	5-12	24	45.0	13.0	100

Cable glands

SKINTOP® cable glands plastic metric

SKINTOP® Standard

Part number	Part designation / size	Clamping range ØF mm	SW mm	Overall length C mm	Thread length D mm	Pieces / PU
53017240	ST M 25 x 1,5	9-14	27	47.0	13.0	50
SKINTOP® STR-M silver grey						
53111100	STR-M 12 x 1,5	1-5	15	30.0	8.0	100
53111110	STR-M 16 x 1,5	2-7	19	34.0	8.0	100
53111120	STR-M 20 x 1,5	5-10	25	37.0	9.0	100
53111130	STR-M 25 x 1,5	6-13	30	40.0	10.0	50
53111140	STR-M 32 x 1,5	7-15	36	47.0	10.0	25
53111150	STR-M 40 x 1,5	15-23	46	52.0	10.0	10
53111160	STR-M 50 x 1,5	22-29	55	62.0	12.0	5
53111170	STR-M 63 x 1,5	28-39	66	71.0	12.0	5
SKINTOP® STR-M black						
53111300	STR-M 12 x 1,5	1-5	15	30.0	8.0	100
53111310	STR-M 16 x 1,5	2-7	19	34.0	8.0	100
53111320	STR-M 20 x 1,5	5-10	25	37.0	9.0	100
53111330	STR-M 25 x 1,5	6-13	30	40.0	10.0	50
53111340	STR-M 32 x 1,5	7-15	36	47.0	10.0	25
53111350	STR-M 40 x 1,5	15-23	46	52.0	10.0	10
53111360	STR-M 50 x 1,5	22-29	55	62.0	12.0	5
53111370	STR-M 63 x 1,5	28-39	66	71.0	12.0	5
SKINTOP® STR-M light grey						
53111500	STR-M 12 x 1,5	1-5	15	30.0	8.0	100
53111510	STR-M 16 x 1,5	2-7	19	34.0	8.0	100
53111520	STR-M 20 x 1,5	5-10	25	37.0	9.0	100
53111530	STR-M 25 x 1,5	6-13	30	40.0	10.0	50
53111540	STR-M 32 x 1,5	7-15	36	47.0	10.0	25
53111550	STR-M 40 x 1,5	15-23	46	52.0	10.0	10
53111560	STR-M 50 x 1,5	22-29	55	62.0	12.0	5
53111570	STR-M 63 x 1,5	28-39	66	71.0	12.0	5
SKINTOP® STR M ISO silver-grey (with long metric connecting thread)						
53017110	STR M 16 x 1,5	2-6	19	40.0	12.0	100
53017130	STR M 20 x 1,5	4-9	24	45.0	13.0	100
53017140	STR M 25 x 1,5	6-12	27	47.0	13.0	50
SKINTOP® STR M ISO black (with long metric connecting thread)						
53017310	STR M 16 x 1,5	2-6	19	40.0	12.0	100
53017330	STR M 20 x 1,5	4-9	24	45.0	13.0	100
53017340	STR M 25 x 1,5	6-12	27	47.0	13.0	50

Photographs are not to scale and do not represent detailed images of the respective products.

■ Accessories

SKINTOP® ST-M

- SKINTOP® DIX-M see page 82
- SKINTOP® GMP-GL-M
- SKINTOP® DIX-M AUTOMATION
- SKINTOP® SDV-M ATEX
- SKINTOP® SD-M
- SKINTOP® DV-M

SKINTOP® STR-M

- SKINTOP® GMP-GL-M
- SKINTOP® SDVR-M ATEX
- SKINTOP® SD-M

New

SKINTOP® CLICK-R / SKINTOP® CLICK

Info

- **The most innovative cable insertion system on the market for very fast, highly flexible assembly. Simply click in - turn to left - turn to right - finished. Result: fixed, centred, strain reliefed and maximum protection class in seconds.**

SKINTOP® CLICK-R

SKINTOP® CLICK

Benefits

SKINTOP® CLICK

- Fewer parts, counter nut no longer needed
- Up to 70% time saving due to innovative CLICK system
- Simple, free assembly in any position
- Vibration protection
- No thread required

SKINTOP® CLICK-R

- Benefits see SKINTOP® CLICK

Application range

SKINTOP® CLICK

- Automation technology
- Solar applications
- Switch cabinet building
- Measurement, control and electrical applications
- Air conditioning technology

SKINTOP® CLICK-R

- With reducing seal insert, to seal cables with smaller outer diameters.

Approvals (Norm references)

- UL File Nr. E79903

Scope of delivery

- Disassembly tool contained in the delivery scope

Technical data

Colour delivered
RAL 7001 silver-grey
RAL 7035 light grey
RAL 9005 black / UV resistant

Material
Body: special polyamide
Seal: special elastomer

Degree of protection
SKINTOP® CLICK
IP 68 - 4 bar (M12)
IP 68 - 5 bar (M16 - M32)

Range of temperature
Dynamic: -20°C up to +100°C
Static: -40°C up to +100°C

Part number	Part designation / size	Clamping range ØF mm	M (hole mm)	SW1 / SW2 mm	Overall length C mm	Thread length D mm	S (wall thickness mm)	Pieces / PU
SKINTOP® CLICK light grey								
53112692	CLICK 12	3.5 - 7	12,3 (-0,2)	15 / 18	40.0	8.0	1.0 - 4.0	50
53112686	CLICK 16	5 - 9	16,3 (-0,2)	19 / 22	42.0	8.0	1.0 - 4.0	50
53112687	CLICK 20	7 - 13	20,3 (-0,2)	25 / 27	45.5	8.0	1.0 - 4.0	25
53112688	CLICK 25	9 - 17	25,3 (-0,2)	30 / 34	48.5	8.0	1.0 - 4.0	25
53112694	CLICK 32	11 - 21	32,3 (-0,2)	36 / 40	55.0	8.0	1.0 - 4.0	25
SKINTOP® CLICK silver grey								
53112921	CLICK 12	3.5 - 7	12,3 (-0,2)	15 / 18	40.0	8.0	1.0 - 4.0	50
53112876	CLICK 16	5 - 9	16,3 (-0,2)	19 / 22	42.0	8.0	1.0 - 4.0	50
53112877	CLICK 20	7 - 13	20,3 (-0,2)	25 / 27	45.5	8.0	1.0 - 4.0	25
53112878	CLICK 25	9 - 17	25,3 (-0,2)	30 / 34	48.5	8.0	1.0 - 4.0	25
53112922	CLICK 32	11 - 21	32,3 (-0,2)	36 / 40	55.0	8.0	1.0 - 4.0	25
SKINTOP® CLICK black								
53112923	CLICK 12	3.5 - 7	12,3 (-0,2)	15 / 18	40.0	8.0	1.0 - 4.0	50
53112882	CLICK 16	5 - 9	16,3 (-0,2)	19 / 22	42.0	8.0	1.0 - 4.0	50
53112883	CLICK 20	7 - 13	20,3 (-0,2)	25 / 27	45.5	8.0	1.0 - 4.0	25
53112884	CLICK 25	9 - 17	25,3 (-0,2)	30 / 34	48.5	8.0	1.0 - 4.0	25
53112924	CLICK 32	11 - 21	32,3 (-0,2)	36 / 40	55.0	8.0	1.0 - 4.0	25
SKINTOP® CLICK-R light grey								
53112925	CLICK-R 12	1 - 5	12,3 (-0,2)	15 / 18	40.0	8.0	1.0 - 4.0	50
53112689	CLICK-R 16	4 - 7	16,3 (-0,2)	19 / 22	42.0	8.0	1.0 - 4.0	50
53112690	CLICK-R 20	5 - 10	20,3 (-0,2)	25 / 27	45.5	8.0	1.0 - 4.0	25
53112691	CLICK-R 25	6 - 13	25,3 (-0,2)	30 / 34	48.5	8.0	1.0 - 4.0	25
53112926	CLICK-R 32	7 - 15	32,3 (-0,2)	36 / 40	55.0	8.0	1.0 - 4.0	25
SKINTOP® CLICK-R silver grey								
53112927	CLICK-R 12	1 - 5	12,3 (-0,2)	15 / 18	40.0	8.0	1.0 - 4.0	50
53112879	CLICK-R 16	4 - 7	16,3 (-0,2)	19 / 22	42.0	8.0	1.0 - 4.0	50
53112880	CLICK-R 20	5 - 10	20,3 (-0,2)	25 / 27	45.5	8.0	1.0 - 4.0	25
53112881	CLICK-R 25	6 - 13	25,3 (-0,2)	30 / 34	48.5	8.0	1.0 - 4.0	25
53112928	CLICK-R 32	7 - 15	32,3 (-0,2)	36 / 40	55.0	8.0	1.0 - 4.0	25
SKINTOP® CLICK-R black								
53112929	CLICK-R 12	1 - 5	12,3 (-0,2)	15 / 18	40.0	8.0	1.0 - 4.0	50
53112885	CLICK-R 16	4 - 7	16,3 (-0,2)	19 / 22	42.0	8.0	1.0 - 4.0	50
53112886	CLICK-R 20	5 - 10	20,3 (-0,2)	25 / 27	45.5	8.0	1.0 - 4.0	25
53112887	CLICK-R 25	6 - 13	25,3 (-0,2)	30 / 34	48.5	8.0	1.0 - 4.0	25
53112931	CLICK-R 32	7 - 15	32,3 (-0,2)	36 / 40	55.0	8.0	1.0 - 4.0	25

Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

SKINTOP® CLICK

- SKINTOP® DIX-M see page 82
- SKINTOP® DIX-M AUTOMATION
- SKINTOP® SDV-M ATEX
- SKINTOP® SD-M
- SKINTOP® DV-M

SKINTOP® CLICK-R

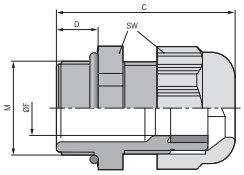
- SKINTOP® SDVR-M ATEX

New

SKINTOP® ST-HF-M

SKINTOP® halogen-free

SKINTOP® ST-HF-M



Benefits

- Maximum reliability
- Extremely flame retardant according to UL 94 V0
- Completely halogen-free (inclusive seal material)
- Self extinguishing, no dripping
- Permanent vibration protection

Application range

- Where personal and property protection is a priority.
- Public buildings
- Ventilation systems
- Tunnel construction
- Underground railways and trains

Approvals (Norm references)

CE VDE RoHS

Design

- Metric connection thread acc. to EN 50262

Technical data

Caution
Installation dimensions and tightening torques see Main Catalogue 2010/11 Appendix T21

Colour delivered
RAL 7035 light grey

Material
Polyamide UL94 V0 - halogen-free
Seal: LSE 1 - halogen-free
O-ring: LSE 1 - halogen-free

Tests
Filament wire test
EN 60695-2-1/1
+960°C

Degree of protection
IP 68 - 5 bar

Range of temperature
-20°C up to +100°C

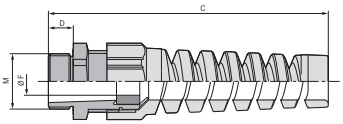
Part number	Part designation / size	Clamping range ØF mm	SW mm	Overall length C mm	Thread length D mm	Pieces / PU
SKINTOP® ST-HF-M						
53111407	ST-HF-M 12 x 1,5	4-5,5	15	30.0	8.0	100
53111417	ST-HF-M 16 x 1,5	4,5-9	19	34.0	8.0	100
53111427	ST-HF-M 20 x 1,5	7-13	25	37.0	9.0	100
53111437	ST-HF-M 25 x 1,5	9-17	30	40.0	10.0	50
53111447	ST-HF-M 32 x 1,5	11-21	36	47.0	10.0	25
53111457	ST-HF-M 40 x 1,5	19-28	46	52.0	10.0	10
53111467	ST-HF-M 50 x 1,5	27-35	55	62.0	12.0	5
53111477	ST-HF-M 63 x 1,5	34-45	66	71.0	12.0	5

Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SKINTOP® GMP-HF-M

SKINTOP® BS-M



SKINTOP® BS-M

Benefits

- Reliable bending and antikink protection
- Conservation
- Functional reliability
- To protect flexible cables

Application range

- Cables for electrical appliances and machinery, which are moved under normal use, must be protected against excessive bending, as required in accordance with VDE 0730.
- Hand-held equipment
- Robotics industry
- Light and sound applications
- Flexing machine parts

Approvals (Norm references)

- UL File Nr. E79903

Design

- Metric connection thread acc. to EN 50262

Note

- For suitable accessories see SKINTOP® metric accessories
- Counter nut to be used SKINTOP® GMP-GL-M
- Counter nut to be used SKINTOP® GMP-GL-M
- Versions SKINTOP® BS M ISO with extra long connection thread, see table, have no DNV approval

Technical data

Caution
Installation dimensions and tightening torques see Main Catalogue 2010/11 Appendix T21

On request
With reducing sealing ring

Colour delivered
RAL 7001 silver-grey
RAL 7035 light grey
RAL 9005 black / UV resistant

Material
Body: Polyamide
Seal: CR

Degree of protection
IP 68 - 5 bar
IP 69 K pending

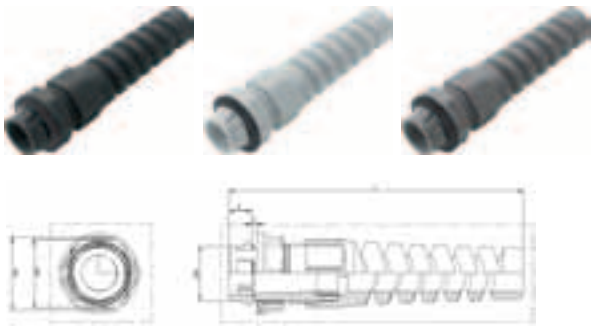
Range of temperature
-20°C up to +100°C

Part number	Part designation / size	Clamping range ØF mm	SW mm	Overall length C mm	Thread length D mm	Pieces / PU
SKINTOP® BS-M silver grey						
53111600	BS-M 12x1,5	3,5-7	15	64.0	8.0	100
53111610	BS-M 16x1,5	4,5-10	19	86.0	8.0	100
53111620	BS-M 20x1,5	7-13	25	101.0	8.0	50
53111630	BS-M 25x1,5	9-17	30	125.0	9.0	25
53111640	BS-M 32x1,5	11-21	36	149.0	10.0	25
SKINTOP® BS-M black						
53111700	BS-M 12x1,5	3,5-7	15	64.0	8.0	100
53111710	BS-M 16x1,5	4,5-10	19	86.0	8.0	100
53111720	BS-M 20x1,5	7-13	25	101.0	8.0	50
53111730	BS-M 25x1,5	9-17	30	125.0	9.0	25
53111740	BS-M 32x1,5	11-21	36	149.0	10.0	25
SKINTOP® BS-M light grey						
53111800	BS-M 12x1,5	3,5-7	15	64.0	8.0	100
53111810	BS-M 16x1,5	4,5-10	19	86.0	8.0	100
53111820	BS-M 20x1,5	7-13	25	101.0	8.0	50
53111830	BS-M 25x1,5	9-17	30	125.0	9.0	25
53111840	BS-M 32x1,5	11-21	36	149.0	10.0	25
SKINTOP® BS M ISO silver-grey (with long metric connecting thread)						
53017610	BS M16 x 1,5 PG 9	3,5-8	19	77.5	12.0	100
53017630	BS M 20 x 1,5 PG 13,5	5-12	24	102.0	13.0	50
53017640	BS M 25 x 1,5 PG 16	9-14	27	114.5	13.0	50
SKINTOP® BS M ISO black (with long metric connecting thread)						
53017810	BS M 16 x 1,5 PG 9	3,5-8	19	77.5	12.0	100
53017830	BS M 20 x 1,5 PG 13,5	5-12	24	102.0	13.0	50
53017840	BS M 25 x 1,5 PG 16	9-14	27	114.5	13.0	50

Photographs are not to scale and do not represent detailed images of the respective products.

New

SKINTOP® CLICK BS



SKINTOP® CLICK BS

Info

- **The most innovative cable insertion system on the market for very fast, highly flexible assembly. Simply click in - turn to left - turn to right - finished. Result: fixed, centred, strain reliefed and maximum protection class in seconds.**

Benefits

- Reliable bending protection for cable conservation and functional reliability
- Up to 70% time saving due to innovative CLICK system
- No thread required
- To protect flexible cables
- Fewer parts, counter nut no longer needed

Application range

- Cables for electrical appliances and machinery, which are moved under normal use, must be protected against excessive bending, as required in accordance with VDE 0730.
- Robotics industry
- Flexing machine parts
- Apparatus construction
- Light and sound applications

Approvals (Norm references)

Scope of delivery

- Disassembly tool contained in the delivery scope

Technical data

Colour delivered
RAL 7001 silver-grey
RAL 7035 light grey
RAL 9005 black / UV resistant

Material
Body: special polyamide
Seal: special elastomer

Degree of protection
IP 68 - 4 bar (M12)
IP 68 - 5 bar (M16 - M32)

Range of temperature
-20°C up to +100°C

Part number	Part designation / size	Clamping range ØF mm	M (hole mm)	SW1 / SW2 mm	Overall length C mm	Thread length D mm	S (wall thickness mm)	Pieces / PU
SKINTOP® CLICK BS light grey								
53112932	CLICK BS 12	3,5-7	12,3 (-0,2)	15 / 18	74.0	8.0	1.0 - 4.0	50
53112888	CLICK BS 16	5-9	16,3 (-0,2)	19 / 22	94.0	8.0	1.0 - 4.0	50
53112889	CLICK BS 20	7-13	20,3 (-0,2)	19 / 22	108.0	8.0	1.0 - 4.0	25
53112890	CLICK BS 25	9-17	25,3 (-0,2)	30 / 34	127.0	8.0	1.0 - 4.0	25
53112933	CLICK BS 32	11-21	32,3 (-0,2)	36 / 40	155.0	8.0	1.0 - 4.0	25
SKINTOP® CLICK BS silver grey								
53112934	CLICK BS 12	3,5-7	12,3 (-0,2)	15 / 18	74.0	8.0	1.0 - 4.0	50
53112906	CLICK BS 16	5-9	16,3 (-0,2)	19 / 22	94.0	8.0	1.0 - 4.0	50
53112907	CLICK BS 20	7-13	20,3 (-0,2)	19 / 22	108.0	8.0	1.0 - 4.0	25
53112908	CLICK BS 25	9-17	25,3 (-0,2)	30 / 34	127.0	8.0	1.0 - 4.0	25
53112935	CLICK BS 32	11-21	32,3 (-0,2)	36 / 40	155.0	8.0	1.0 - 4.0	25
SKINTOP® CLICK BS black								
53112936	CLICK BS 12	3,5-7	12,3 (-0,2)	15 / 18	74.0	8.0	1.0 - 4.0	50
53112909	CLICK BS 16	5-9	16,3 (-0,2)	19 / 22	94.0	8.0	1.0 - 4.0	50
53112911	CLICK BS 20	7-13	20,3 (-0,2)	19 / 22	108.0	8.0	1.0 - 4.0	25
53112912	CLICK BS 25	9-17	25,3 (-0,2)	30 / 34	127.0	8.0	1.0 - 4.0	25
53112937	CLICK BS 32	11-21	32,3 (-0,2)	36 / 40	155.0	8.0	1.0 - 4.0	25

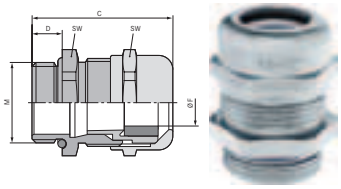
Photographs are not to scale and do not represent detailed images of the respective products.

New

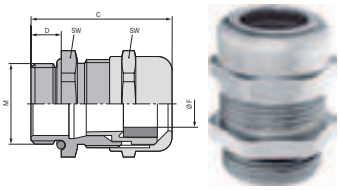
SKINTOP® MSR-M / SKINTOP® MS-M

Info

- **Sizes SKINTOP® MS-M 75x1,5 to 110x2 with innovative double lamella gasket for easier assembling of cables with large diameters.**
- **Now with IP 69 K approval! Proven functionality also during hardest cleaning procedures at industrial machinery with high-pressure cleaners and hot water!**



SKINTOP® MSR-M



SKINTOP® MS-M

Benefits

SKINTOP® MS-M

- Maximum reliability
- Optimal strain relief
- Large, variable clamping ranges
- For cable diameters up to 98 mm

SKINTOP® MSR-M

- Benefits see SKINTOP® MS-M

Application range

SKINTOP® MS-M

- In areas with high demands on special mechanical and chemical stability.
- Machine and apparatus construction
- Measurement and control technology
- Machine and apparatus construction
- Plant engineering

SKINTOP® MSR-M

- With reducing seal insert, to seal cables with smaller outer diameters.

Approvals (Norm references)

Design

- Metric connection thread acc. to EN 50262

Note

- Counter nut to be used SKINDICHT® SM-M
- For suitable accessories see SKINTOP® metric accessories

Suitable cables

SKINTOP® MS-M

- For IP 69 K applications we recommend to use the following cables:
  ÖLFLEX® ROBUST 200
  H07RN8-F

Technical data

Caution
Installation dimensions and tightening torques see Main Catalogue 2010/11 Appendix T21

Approvals
IP 69 K approval for sizes M75x1,5 to M110x2 pending
UL, CSA, DNV, VDE approval for size M90x2 to M110x2 pending

Material
Body: Nickel plated brass
Insert: Polyamide
Seal: CR
O-ring: NBR

Degree of protection
IP 68
IP 69 K

Range of temperature
-30 °C up to +100 °C

Part number	Part designation / size	Clamping range ØF mm	SW mm	Overall length C mm	Thread length D mm	Pieces / PU
SKINTOP® MS-M/SKINTOP® MSR-M						
53112000	12 x 1,5	3-7	16	26.5	6.5	100
53112010	16 x 1,5	4,5-10	20	32.0	7.0	100
53112020	20 x 1,5	7-13	24	35.5	8.0	50
53112030	25 x 1,5	9-17	29	37.5	8.0	25
53112040	32 x 1,5	11-21	36	42.2	9.0	25
53112050	40 x 1,5	19-28	45	49.5	9.0	10
53112060	50 x 1,5	27-35	54	52.0	10.0	5
53112070	63 x 1,5	34-45	67	61.3	15.0	5
53112080	63 x 1,5 plus	44-55	75	65.5	15.0	5
53112510	75 x 1,5	58-68	95	105.0	15.0	1
53112514	110 x 2	86-98	135	154.0	25.0	1
53112512	90 x 2	66-78	115	136.0	20.0	1
SKINTOP® MSR-M						
53112100	12 x 1,5	1-5	16	26.5	6.5	100
53112110	16 x 1,5	2-7	20	32.0	7.0	100
53112120	20 x 1,5	5-10	24	35.5	8.0	50
53112130	25 x 1,5	6-13	29	37.5	8.0	25
53112140	32 x 1,5	7-15	36	42.2	9.0	25
53112150	40 x 1,5	15-23	45	49.5	9.0	10
53112160	50 x 1,5	22-29	54	52.0	10.0	5
53112170	63 x 1,5	28-39	67	61.3	15.0	5
53112511	75 x 1,5	53-63	95	105.0	15.0	1
53112515	110 x 2	76-88	135	154.0	25.0	1

Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

SKINTOP® MS-M

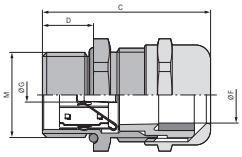
- SKINDICHT® SM-M
- SKINTOP® DIX-M see page 82
- SKINTOP® DIX-M AUTOMATION
- SKINTOP® SDV-M ATEX
- SKINTOP® SD-M
- SKINTOP® DV-M

SKINTOP® MSR-M

- SKINDICHT® SM-M
- SKINTOP® SDVR-M ATEX
- SKINTOP® SD-M

SKINTOP® MS-SC-M

SKINTOP® MS-SC-M



Benefits

- Suitable for cables and wires with and without inner sheath
- Also suitable for continuing the cable screen to another connection
- Low resistance screen contact, optimal EMC protection
- High conductive, flexible EMC contact for clamping of various screen diameters
- Few operation steps, easy to assemble

Application range

- For EMC compliant earthing of the copper braiding and copper shaft sheath
- Tele communication
- Plant engineering and construction
- Measurement and control technology
- Plant engineering and construction

Approvals (Norm references)

Design

- Metric connection thread acc. to EN 50262

Note

- For painted, anodised or powdered-coated housings, you will require our EMC counter nut SKINDICHT® SM-PE-M for best contact
- For suitable accessories see SKINTOP® metric accessories
- As a variant for thick wall housings we recommend SKINTOP® MS-SC-M-XL with long connection thread in the sizes M16 to M50

Technical data

Caution
Installation dimensions and tightening torques see Main Catalogue 2010/11 Appendix T21

Material
Body: Nickel plated brass
Insert: Polyamide
Seal: CR
O-ring: NBR

Degree of protection
IP 68 - 10 bar

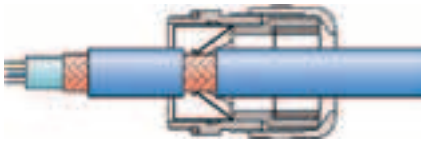
Range of temperature
-30°C up to +100°C

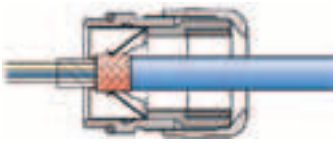
Part number	Part designation / size	Outer-Ø mm from - to	Minimum Ø above braiding in mm	SW mm	Thread length D mm	Pieces / PU
SKINTOP® MS-SC-M						
53112610	12 x 1,5	3,5-7.0	2.0	16	6.5	50
53112620	16 x 1,5	4,5-9.0	4.0	20	7.0	50
53112630	20 x 1,5	7.0-12,5	5.0	24	8.0	25
53112640	25 x 1,5	9.0-16,5	7.5	29	8.0	25
53112650	32 x 1,5	11.0-21.0	9.0	36	9.0	25
53112660	40 x 1,5	19.0-28.0	15.0	45	9.0	10
53112670	50 x 1,5	27.0-35.0	21.0	54	10.0	5
SKINTOP® MS-SC-M-XL						
53112625	16 x 1,5	4,5-9.0	4.0	20	12.0	50
53112635	20 x 1,5	7.0-12,5	5.0	24	12.0	25
53112645	25 x 1,5	9.0-16,5	7.5	29	12.0	25
53112655	32 x 1,5	11.0-21.0	9.0	36	15.0	25
53112665	40 x 1,5	19.0-28.0	15.0	45	15.0	10
53112675	50 x 1,5	27.0-35.0	21.0	54	15.0	5

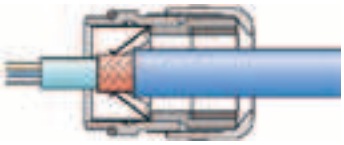
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SKINDICHT® SM-PE-M







New

SKINTOP® MS-M BRUSH

Benefits

- Faster, easier screen contact
- Optimal low-resistance 360° screen contact
- Faster than any other comparable system
- Uncomplicated and reliable
- Maximum assembly and adjustment possibility

Application range

- For EMC compliant earthing of the copper braiding and copper shaft sheath
- Automotive systems
- High power drives
- Frequency converters
- Frequency converters

Approvals (Norm references)

- UL File Nr. E79903

Design

- Metric connection thread acc. to EN 50262

Note

- For painted, anodised or powdered-coated housings, you will require our EMC counter nut SKINDICHT® SM-PE-M for best contact

Info

- **Sizes SKINTOP® MS-M BRUSH 75x1,5 to 110x2 with innovative double lamella gasket for easier assembling of cables with large diameters.**
- **Formerly product name: SKINTOP® MS-SC-M BRUSH**

Technical data

Caution
Installation dimensions and tightening torques see Main Catalogue 2010/11 Appendix T21

Approvals
VDE, UL, CSA, DNV approval for size M90x2 and 110x2 pending

Material
Body: nickel plated brass
Insert: polyamide
Seal: special elastomer
O-ring: special elastomer

Degree of protection
IP 68
IP 69 K (M25x1,5 - M63x1,5)

Range of temperature
Dynamic: -30°C up to +100°C
Static: -40°C up to +100°C

Part number	Part designation / size	Outer-Ø mm from - to	Minimum Ø above braiding in mm	SW mm	Thread length D mm	Pieces / PU
SKINTOP® MS-M BRUSH						
53112676	25 x 1,5	9.0-17.0	6.0	29	8.0	10
53112677	32 x 1,5	11.0-21.0	8.0	36	9.0	1
53112678	40 x 1,5	19.0-28.0	10.0	45	9.0	1
53112679	50 x 1,5	27.0-35.0	14.0	54	10.0	1
53112680	63 x 1,5	34.0-45.0	20.0	67	15.0	1
53112681	63 x 1,5 plus	44.0-55.0	25.0	75	15.0	1
53112501	75 x 1,5	53.0-63.0	35.0	95	15.0	1
53112500	75 x 1,5 plus	58.0-68.0	35.0	95	15.0	1
53112503	90 x 2	66.0-78.0	45.0	115	20.0	1
53112505	110 x 2	76.0-88.0	55.0	135	25.0	1
53112504	110 x 2 plus	86.0-98.0	55.0	135	25.0	1

Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SKINDICHT® SM-PE-M

SKINTOP® DIX-M

Benefits

- For inserting different cables or wires into only one gland
- Higher packing density allows smaller part construction

Application range

- To be used in SKINTOP® cable glands.
- A sealing ring with several holes is used in place of the inner sealing insert.

Approvals (Norm references)

CE RoHS

Note

- IP 68 can be achieved when all openings are closed and all bores are optimally occupied, i.e. when using cables with nominal diameter and/or SKINTOP® DIX-DV

Design

- SKINTOP® DIX-M VITON® is resistant to oil, water, alkaline solutions, acids, solvents,...

Technical data

On request
Special shapes

Colour delivered
RAL 9005 black

Material
NBR
VITON®

Degree of protection
IP 54

Range of temperature
-40°C up to +100°C

Part number	Part designation / size	Size M	Number of cables x Cable Ø	Pieces / PU
SKINTOP® DIX-M				
53316220	16,220	M 16	2 x 2.0	100
53316230	16,230	M 16	2 x 3.0	100
53316240	16,240	M 16	2 x 4.0	100
53320250	20,250	M 20	2 x 5.0	100
53320260	20,260	M 20	2 x 6.0	100
53320340	20,340	M 20	3 x 4.0	100
53320353	20,353	M 20	3 x 5.3	100
53320440	20,440	M 20	4 x 4.0	100
53320920	20,920	M 20	9 x 2.0	100
53320430	20,430	M 20	4 x 3.0	100
53325260	25,260	M 25	2 x 6.0	50
53325350	25,350	M 25	3 x 5.0	50
53325360	25,360	M 25	3 x 6.0	50
53325370	25,370	M 25	3 x 7.0	50
53325450	25,450	M 25	4 x 5.0	50
53325540	25,540	M 25	5 x 4.0	50
53325640	25,640	M 25	6 x 4.0	50
53332270	32,270	M 32	2 x 7.0	50
53332280	32,280	M 32	2 x 8.0	50
53332290	32,290	M 32	2 x 9.0	50
53332370	32,370	M 32	3 x 7.0	50
53332380	32,380	M 32	3 x 8.0	50
53332460	32,460	M 32	4 x 6.0	50
53332470	32,470	M 32	4 x 7.0	50
53332560	32,560	M 32	5 x 6.0	50
53332650	32,650	M 32	6 x 5.0	50
53332840	32,840	M 32	8 x 4.0	50
53332850	32,850	M 32	8 x 5.0	50
53332940	32,940	M 32	9 x 4.0	50
53340290	40,290	M 40	2 x 9.0	25
53340310	40,310	M 40	3 x 10.0	25
53340480	40,480	M 40	4 x 8.0	25
53340490	40,490	M 40	4 x 9.0	25
53340580	40,580	M 40	5 x 8.0	25
53340590	40,590	M 40	5 x 9.0	25
53340670	40,670	M 40	6 x 7.0	25
53340860	40,860	M 40	8 x 6.0	25
53340969	40,969	M 40	9 x 6.9	25
53350680	50,680	M 50	6 x 8.0	10
53350780	50,780	M 50	7 x 8.0	10
53350870	50,870	M 50	8 x 7.0	10
53350164	50,164	M 50	16 x 4.0	10
53350166	50,166	M 50	16 x 6.0	10
SKINTOP® DIX-M VITON®				
53420250	20,250	M 20	2 x 5.0	100
53420260	20,260	M 20	2 x 6.0	100
53440969	40,969	M 40	9 x 6.9	25

Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

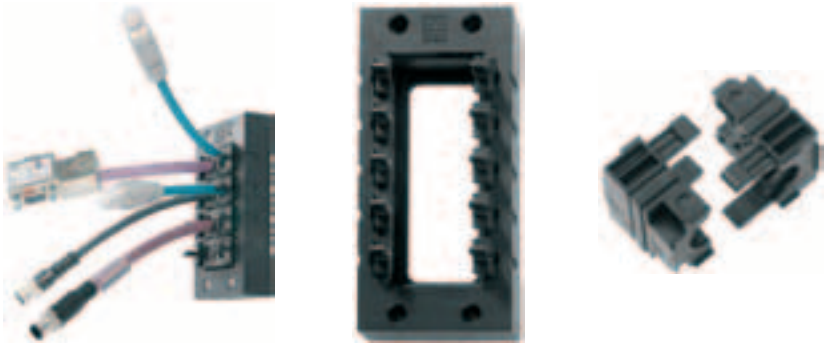
- SKINTOP® CLICK see page 75
- SKINTOP® ST-M see page 73
- SKINTOP® DIX-DV

New

SKINTOP® CUBE

Info

- **Innovative multi cable bushing system with variable clamping ranges for high assembling flexibility.**
- **In case of disassembling frame can remain on housing and clip module on the cable.**



SKINTOP® CUBE

Benefits

- Various clamping range
- Vibration safe fixed modules
- Strain relief
- Oil resistance
- Simplified service due to easy assembling and disassembling

Application range

- For installation of harnessed cables
- Everywhere where cables must be safely inserted into housings.
- Apparatus and switch cabinet construction
- Electronic installations
- Automation technology

Approvals (Norm references)

CE RoHS

Design

- SKINTOP® CUBE consists of SKINTOP® CUBE FRAME and the flexible clip module SKINTOP® CUBE MODULE.
- For cut-outs for industrial connectors with standard defined bore holes.
- For cut-outs for 16-pole industrial connectors (36 x 86mm)
- For cut-outs for 24-pole industrial connectors (36 x 112mm)

Note

- SKINTOP® CUBE MODULE 20x20 BLIND can be used as blind module, as well as for clamping ranges 1-3 mm

Scope of delivery

- SKINTOP® CUBE FRAME including mounting material

Suitable tools

- Kraftform Kompakt® 10

Technical data

Approvals
UL pending

Material
Frame: Glas fibre reinforced polyamide
Frame seal: CR
Clip Module: Special polypropylene
Clip Module Seal: LSE 2

Degree of protection
IP 64
NEMA 12

Range of temperature
-20°C up to +80°C

Part number	Part designation / size	Clamping range ØF mm	Max. Number of executions	Pieces / PU
SKINTOP® CUBE Frame				
52220000	SKINTOP® CUBE FRAME 16		8	1
52220001	SKINTOP® CUBE FRAME 24		10	1
SKINTOP® CUBE Clip Module				
52220004	SKINTOP® CUBE MODULE 20x20 BLIND	1 - 3		5
52220002	SKINTOP® CUBE MODULE 20x20 SMALL	4 - 6		5
52220003	SKINTOP® CUBE MODULE 20x20 LARGE	6 - 9		5
52220040	SKINTOP® CUBE MODULE 20x20 AS-I BUS	AS-I BUS CABLE		5
52220005	SKINTOP® CUBE MODULE 40x40 SMALL	9 - 12		5
52220006	SKINTOP® CUBE MODULE 40x40 LARGE	12 - 16		5
52220007	SKINTOP® CUBE MODULE 40x40 BLIND			5

Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- SKINDICHT® Cable Bushing System CABLEFIX

Accessories

- FLEXIMARK® LB-10 W

Ground Straps / Flat Ground Straps

Application range

- Switch cabinet building
- The protective earth safety measure is prescribed by standard
- Fixed and moving metal parts such as doors in switch cabinet building must be earthed

Product features

- Fixed-lengths for M6 and M8 screws

Approvals (Norm references)

CE RoHS

Design

- Ground Straps:
  - Strands of bare copper wires
  - PVC based core insulation
  - Harnessed with ring cable lugs
- Flat Ground Straps with sleeves:
  - Strands of tinned copper wires
  - Welded ends
- Flat Ground Straps with sleeves:
  - Strands of tinned copper wires
  - Harnessed with pressed contact sleeves

Technical data

Core identification code
Harnessed Ground Straps
green/yellow

Conductor stranding
Harnessed Ground Straps
IEC 60 228 Class 6
Harnessed Flat Ground Straps
IEC 60 228 Class 6, tinned
Extra fine wire

Minimum bending radius
Harnessed Ground Straps
7 x outer diameter
Harnessed Flat Ground Straps
5 x outer diameter

Test voltage
Harnessed Ground Straps
2500 V

Range of temperature
Harnessed Ground Straps
-30°C to +70°C
Harnessed Flat Ground Straps
-5°C to +70°C

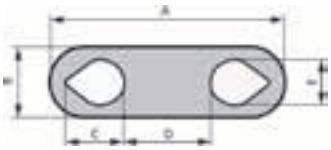
Artikelnummer	Cross-section in mm²	Article designation	For	Length in mm	Copper index kg/km	PU
Harnessed ground straps						
4571120	4	Ground Strap 4X4/M6/170mm	M6	170	6.5	25
4571121	16	SZ 2565.000/EB	M6	170	26.2	25
4571122	25	SZ 2566.000/EB	M6	170	40.8	25
4571123	4	SZ 2567.000/EB	M8	300	11.4	25
4571124	16	SZ 2568.000/EB	M8	300	46.2	25
4571125	25	SZ 2569.000/EB	M8	300	72.0	25
Harnessed Flat Ground Straps welded ends						
4571132	10	SZ 2412.210/FEP	M6	200	18.0	25
4571133	16	SZ 2412.216/FEP	M8	200	29.0	25
4571134	25	SZ 2412.225/FEP	M8	200	45.0	25
4571135	10	SZ 2412.310/FEP	M6	300	27.0	25
4571136	16	SZ 2412.316/FEP	M8	300	43.5	25
4571137	25	SZ 2412.325/FEP	M8	300	67.5	25
Harnessed Flat Ground Straps with sleeves						
4571126	10	SZ 2412.210/FEH	M6	200	18.0	25
4571127	16	SZ 2412.216/FEH	M8	200	29.0	25
4571128	25	SZ 2412.225/FEH	M8	200	45.0	25
4571129	10	SZ 2412.310/FEH	M6	300	27.0	25
4571130	16	SZ 2412.316/FEH	M8	300	43.5	25
4571131	25	SZ 2412.325/FEH	M8	300	67.5	25

All product related values as shown are nominal values unless specified differently. Further values, e.g. tolerances we submit on request - if available and released for publication.
Copper price basis: EUR 150 / 100 kg; For utilization and definition of 'Metal price basis' and 'Metal index' see Main Catalogue 2010/11 Appendix T17
Photographs are not to scale and do not represent detailed images of the respective products.

FLEXIPRINT LF Single core marking

Info

- **Download www.lappkabel.de - Service - Download-center - marking software**



FLEXIPRINT LF Single core marking

Benefits

- FLEXIMARK® Software is the marking software that enables you to print all kinds of labels. It is especially suitable for FLEXIMARK® labels, which are already defined in this catalogue. With the FLEXIMARK® Software you can use all Microsoft® Windows options to print your labels: graphics, cliparts, fonts and font sizes. Integrated word processing will give you any desired result for your label text quickly and easily. You will be able to import data, store individual logos and apply bar codes easily.

Application range

- Polyester single core marking for laser printers
- Use of original toner is recommended. Insert sheet in manual paper feed mode.

Product features

- Printable on both sides with standard laser printers and the Fleximark® Software (front yellow, rear white)
- Fast and easy assembly
- FLEXIPRINT LF for laser printers

Approvals (Norm references)

RoHS

Design

- Flexiprint consists of single marking cards that contain 20-60 perforated markers, depending on the size (F0/F1/F1b/F2/F3)

Design

- For cable cross-sections over 16.00 mm², cable ties can be used for installing single markers

Technical data

Caution
Resistant against oil and water; commonly used chemicals, UV light

Note
Thickness: 0.175 mm

Colour delivered
Front yellow, back white

Material
Halogen-free polyester

Range of temperature
-40 °C up to +125 °C

Part number	Article designation	Cablediameter	Cards per PU	Marker / PU	PU
Flexiprint for laser printers					
83280005	Flexiprint L-F0	0.25 - 0.75	75	4,500	1
83254420	Flexiprint L-F1	0.75 - 1.5	75	4,500	1
83254460	Flexiprint L-F1B	1.5 - 2.5	75	4,500	1
83254480	Flexiprint L-F1BL	1.5 - 2.5	75	2,250	1
83254500	Flexiprint L-F2	2.5 - 6	75	4,500	1
83254520	Flexiprint L-F3	6 - 16	75	1,500	1

Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- FLEXIMARK® Software 10.0

LCK Wrapping labels

LCK Wrapping labels

Info

- **For checking the print quality of your printer, you can obtain sample labels on request**

Benefits

- Transparent foil is wrapped around the cable and pasted over the printed field, so that the printing is protected against abrasion, moisture, oils and solvents

Application range

- Especially suitable for cable marking and for marking switch cabinets

Product features

- White or yellow labelling field
- Printing field can be printed with laser printer and using the FLEXIMARK® Software or written with water-proof, smear-proof marker pens MS

Approvals (Norm references)

RoHS

Design

- LCK labels for laser printers
- On DIN-A4 sheets. The use of original toner is recommended. Insert sheet in manual paper feed mode. Best printing results from laser printers are with straight sheet feed without going over rollers and without heat build-up

Technical data

Caution
Halogen free

Colour delivered
White or yellow labelling field

Material
Polyester foil
Thickness: 0.025 mm

Range of temperature
-40°C up to +125°C
Minimum working temperature: +10°C

Part number	Article designation	Width x length mm	Labelling surface mm	For outer - Ø mm	Labels per side	Labels / PU	PU
LCK labels for laser printers							
83256143	LCK 32 white	25.0 x 35.5	25 x 12	4 - 7	64	640	1
83256142	LCK 32 yellow	25.0 x 35.5	25 x 12	4 - 7	64	640	1
83256145	LCK 35 white	25.0 x 57.0	25 x 19	6 - 12	40	400	1
83256144	LCK 35 yellow	25.0 x 57.0	25 x 19	6 - 12	40	400	1
83256147	LCK 40 white	25.0 x 95.0	25 x 25	8 - 22	24	240	1
83256146	LCK 40 yellow	25.0 x 95.0	25 x 25	8 - 22	24	240	1
83256149	LCK 45 white	25.0 x 142.5	25 x 25	8 - 37	16	160	1
83256148	LCK 45 yellow	25.5 x 142.5	25 x 25	8 - 37	16	160	1
83256160	LCK 48 white	34.0 x 95.0	34 x 25	8 - 22	18	180	1
83256161	LCK 48 yellow	34.0 x 95.0	34 x 25	8 - 22	18	180	1
83256151	LCK 60 white	50.0 x 57.0	50 x 19	6 - 12	20	200	1
83256150	LCK 60 yellow	50.0 x 57.0	50 x 19	6 - 12	20	200	1
83256153	LCK 65 white	50.0 x 95.0	50 x 25	8 - 22	12	120	1
83256152	LCK 65 yellow	50.0 x 95.0	50 x 25	8 - 22	12	120	1
83256155	LCK 70 white	50.0 x 142.5	50 x 25	8 - 37	8	80	1
83256154	LCK 70 yellow	50.0 x 142.5	50 x 25	8 - 37	8	80	1

Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- FLEXIMARK® Software 10.0

New

DYMO® Industry Rhino Pro 6000 Kit / DYMO® Rhino Pro 5200

The mobile label printer for the industrial industry

Info

- **Including RHINO CONNECT Software**




DYMO® Industry Rhino Pro 6000 Kit / DYMO® Rhino Pro 5200

Benefits

- The new industrial printers simplify labelling of components for installation technicians and tradesmen in the field of electrical engineering and Datacom.

Application range

- Labelling of cables and wires
- Labelling of terminal blocks
- Labelling of modules and components
- Labelling of patch panels and protective sockets

Product features

- New high-performance labels ID1 with a strong adhesive assure durable, smudge proof and scratch proof lettering. The flexible NYLON- or VINYL straps are especially well-suited for uneven surfaces and cable marking, the permanent POLYESTER straps for reliable marking indoors or outdoorsHeat shrink tubing cartridges are ideal for cable marking.
- With direct access to the various label layouts such a cable, patch panel and component designation.

Design

- DYMO® Rhino PRO 5200:
  without PC interface
  big display for several labels
- DYMO® Rhino Pro 6000 Kit
  With PC interface and software. For instance, E-Plan data can be stored on the memory card and printed on site.

Technical data

General
Power supply pack and USB cable
Short user manual and registration card

On request
Hard case robust
Two D1 tapes incl.
- Nylon tape BK/WH 24mm
- Vinyl tape BK/WH 9 mm

Note
RHINO 6000 printer
RHINO CONNECT Software

Colour delivered
black, yellow and white

Material
Due to the fact of the thermal transer printing technology the labels are really durable and indelible.
Li-Ion storage battery

Part number	Article designation	Pieces / PU
DYMO® Rhino Pro 6000 Kit		
61800360	RHINO 6000 printer	1
DYMO® Rhino PRO 5200		
61800335	DYMO® Rhino PRO 5200	1
61800336	Rhino PRO 5200 with hard case	1
61800251	Battery pack	1

DYMO® is a registered trademark of Sanford GmbH,a Newell Rubbermaid Company
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- ID1 - Industry tape D1

Notices

For the use of our producs is valid

The conformity of our products with the relevant European directives and compliance with the provisions contained therein shall be indicated by the CE marking.

The safety of our products is closely associated with how they are used. A knowledge of and adherence to the respective international/national standards of use (e.g. DIN VDE 0100; 0298) are mandatory.

There are particular risks if installed improperly. This applies to all our products/items:

Processing is only to be done by an authorized electrician! Otherwise, there is the risk of an electric shock or a fire ignited by electric current!

Safety

Without exception our products are tested for application safety in accordance with laid down standards and our own regulations, which complement the standards. Relevant legal requirements and safety regulations are also observed. Provided due care and attention is paid, the possibility of product-specific danger to the user may thus reasonably be excluded. Where products are used carelessly or incorrectly, however, considerable danger to persons and the environment may arise. For this reason, our cables must only be processed and /or used responsibly by trained electricians or specialists. This catalogue contains general information for the application of each product. Independent of such information, the application standards DIN VDE 0298 and DIN VDE 001 for cables will apply. Excerpts from these standards, as well as complementary selection and application tables, design and installation guidelines, are contained in the tables in the appendix to our Main Catalogue 2010/11. Our machines and installation tools are – where necessary – designed in accordance with the machine guidelines and display the CE identification mark. It must be noted, however, that our machines and installation tools must only be used by trained specialized personnel and for the purpose for which they were designed.

ÖLFLEX®

UNITRONIC®

ETHERLINE®

HITRONIC®

EPIC®

SKINTOP®

SILVYN®

FLEXIMARK®

AVS Stuttgart

LAPP GROUP

www.lappgroup.com

To contact your local Lapp Group representative
please visit **www.lappgroup.com/worldwide**

Terms of Trade:
Our general conditions of sale
can be downloaded from our website
www.lappgroup.com/terms

10/11.7000.91110825