

THE WORLD OF LAPP

Photovoltaic Solutions for the North American Market





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 centers 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 send an email to: solutions@lappcanada.com

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Ideas that make the world go round

Since 1957 we have registered more than 100 patents, and we carry a delivery program of more than 40,000 products, which are used wherever electrical energy is used to power, drive, light or control things. Most of this also happens out of sight. For example inside the Cheops pyramid in El Gîza. ÖLFLEX® cables are used there to safeguard smooth operation of the air-conditioning units. We also equipped the K2 base camp at an altitude of 5,00 meters. At -46° Celsius, we also clearly demonstrated that our products work even at the lowest of temperatures.

You will discover Lapp in up to 200 m long paper-making machines and in the 178 m high Singapore Flyer, the world's most spectacular big wheel. We are also on-board the Transrapid train in Shanghai and in navy submarines diving deep below the sea. At the opera house in Beijing we made everyone very happy, and we toured the world recently with the Rolling Stones. We equipped international airports in London, Sofia and Munich with hundreds of kilometers of lines and we are out there listening inside one of the world's largest radio telescopes, well beyond the frontiers of our own solar system.

And we play our part in using sun, wind and other green energy sources more efficiently – in the meantime Lapp is one of the leading partners to companies in the application fields of photovoltaics, wind power, biomass and fuel-cell technology.

In use worldwide

Wherever you wish to realize your photovoltaic project – you can count on the performance of our products. For example, in Bovera, Spain over 5,000 solar modules have been installed over an area of 24,700 m². Here ÖLFLEX® SOLAR cables with a total length of 20 km ensure perfect operation. But we are not only glad to be your partner for big projects, you can also count on us for smaller systems.

Quality Counts

A wealth of characteristics make the components so popular among users: They are not only UV resistant, but also extremely weatherproof and temperature resistant. In a nutshell – the brand products demonstrate their top performance in diverse applications around the world.



Solar products from Lapp – System competence for photovoltaics:

Put your trust in a partner who offers you perfect system competence from a single source for cables, plugs and connectors for photovoltaics. With Lapp brand products you are fully equipped for your individual project if you place importance on excellent quality and services.



Brand products for your solar units:

The following products are used in the solar energy sector:

ÖLFLEX® SOLAR XL Multi



EPIC® SOLAR Module Box



EPIC® SOLAR THIN pre-assembled



Tools



SKINTOP® CLICK/ SKINTOP® CLICK-R



SKINTOP® ST-M/STR-M



SKINTOP® DIX



SILVYN® RILL PA 6/ PA 6 SINUS



ÖLFLEX® FORTIS



ÖLFLEX® TRAY II



EPIC® SOLAR 4 THIN

Functional reliability and durability are two essential quality criteria for wiring systems in photovoltaics. The SOLAR brand components from Lapp Group are UV resistant, waterproof and temperature resistant. They are used worldwide and ensure durable connections with effective energy transmission in major projects, as well for small solar plants. Super-slim, super-effective, super-durable Backed up by in-depth expertise and decades of experience in the use of cable systems under extreme environmental conditions – heat and cold, as well as mechanical and chemical stresses.

Made in Germany:
Zero-resistance cable connection
for super-effective energy transmission.

Zero-resistance cable connection by virtue of an innovative welded joint

High packing density with a super-flat 12 mm

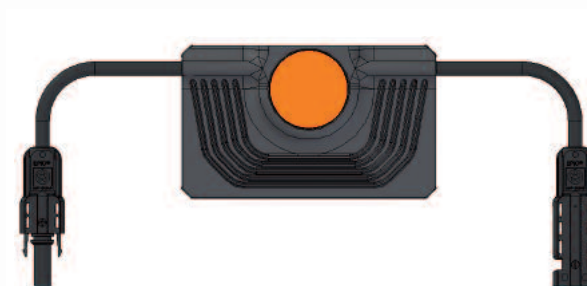
Conductor cross-sections from 1.5 mm² to 6 mm²

EPIC® SOLAR 4 THIN puts the focus on panel producers' quality requirements:

- No warming of the connector and therefore little aging and durable functional reliability
- Plug and cable preassembled. Every part is tested!
- Development according to international TÜV and UL standards



Module box made to measure!



When it comes to customer-orientation and flexibility, the sun always shines at Lapp Group. For instance, we offer EPIC® SOLAR! connection boxes for weatherproof wiring, also as a customized solution for your solar panels. Just ask us!

ÖLFLEX® SOLAR XL multi

Multiple Rated and Cross-Linked Solar Cable for Weather-Proof Wiring of Photovoltaic Systems



ÖLFLEX® SOLAR XL multi is a single conductor, double insulated, cross-linked, halogen-free and flame retardant solar cable for photovoltaic installations, suitable for use in all seasons.

RECOMMENDED APPLICATIONS:

Designed for outdoor connection of individual solar panels and connection of the panels with the inverter

APPLICATION ADVANTAGE:

- Halogen-free and flame retardant
- UV and Ozone resistant
- Weather and abrasion resistant
- Wide temperature range
- Coded version to differentiate between positive & negative
- Suitable for direct burial
- Fine stranding-more flexible- easier routing and installation

ÖLFLEX® SOLAR XL multi Construction:

Finely stranded tinned copper conductors, polyolefin insulation; black halogen-free cross linked polyolefin outer jacket.

LAPP KABEL STUTTGART ÖLFLEX® SOLAR XL multi (UL) USE-2 600V c(UL) RWU 90 1000V SUNLIGHT RESISTANT RoHS

TECHNICAL DATA:

Minimum Bending Radius for installation:	4 x cable diameter	Conductor Stranding:	Fine Wire per VDE 0295, Class 5 IEC 60228 Cl.5
Temperature Range Fixed Installation:	-40°C to +120°C	Color Code:	Black
Nominal Voltage:	600V (USE-2) 1000V (RWU90)	Approvals:	UL: USE-2 c(UL): RWU90
Test Voltage:	4000V		

Part Number	Conductor Stranding	Nominal Outer Diameter inches mm	Copper Weight lbs/mft	Approx. Weight lbs/mft kg/km	Part Number	Conductor Stranding	Nominal Outer Diameter inches mm	Copper Weight lbs/mft	Approx. Weight lbs/mft kg/km
Black					Black-Coded				
14 AWG (2.5 mm ²)					14 AWG (2.5 mm ²)				
0026585	50 x 0.26	.220 5.6	16	30 45	0026590	50 x 0.26	.220 5.6	16	30 45
12 AWG (4 mm ²)					12 AWG (4 mm ²)				
0026586	56 x 0.31	.236 6.0	26	48 72	0026591	56 x 0.31	.236 6.0	26	48 72
10 AWG (6 mm ²)					10 AWG (6 mm ²)				
0026587	84 x 0.31	.280 7.1	39	69 102	0026592	84 x 0.31	.280 7.1	39	69 102
8 AWG (10 mm ²)					8 AWG (10 mm ²)				
0026588	80 x .041	.335 8.5	65	107 159	0026593	80 x .041	.335 8.5	65	107 159
6 AWG (16 mm ²)					6 AWG (16 mm ²)				
0026589	128 x .041	.390 9.9	103	166 247	0026594	128 x .041	.390 9.9	103	166 247

EPIC® SOLAR 4 Thin

4mm connector system with double hook



BENEFITS:

- Unresistant cable connection for efficient power transmission
- Innovative, patented pending contact system, current leaves the connection cool
- High reliability and longevity by welded bonding
- Extra Thin 12mm for high density packing

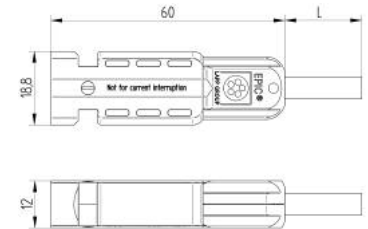
APPLICATION RANGE:

- Pre-assembled connector cables for weather proof cabling of Photovoltaic systems

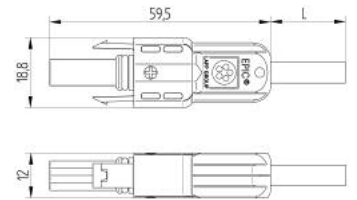
PRODUCT FEATURES:

- 4mm connector system with double hook
- Pre-assembled with 100% automatic control
- Wide range of wire sizes from 1.5mm² up to 6mm²
- TÜV Rheinland and UL/CSA in preparation

EPIC® SOLAR THIN M pre-assembled



EPIC® SOLAR THIN F pre-assembled



TECHNICAL DATA:

Temperature Range: -40°C to +105°C

IP Protection:

IP68 (10H/1M)

Rated Voltage: 1000V AC/DC
Rated Impulse Voltage: 8kV

Protection Class II

Cycle of Mechanical Operation 100

Pollution Degree: 3

Contact Resistance: <0.2mOHM

Part Number	Cross Section in mm ²	Rated Current in A	Length in m	Copper kg/ 1000 pcs.	Standard Pack Size
EPIC® SOLAR 4 THIN male with cable ÖLFLEX® SOLAR XLR					
44428100	1.5 mm ²	16	1	14.4	100
44428101	2.5 mm ²	21	1	24.0	100
44428102	4 mm ²	24	1	38.4	100
44428103	6 mm ²	29	1	57.6	100
EPIC® SOLAR 4 THIN male with cable ÖLFLEX® SOLAR XL multi					
44428108	1.5 mm ²	21	1	24.0	100
44428109	2.5 mm ²	24	1	38.4	100
44428110	4 mm ²	29	1	57.6	100
EPIC® SOLAR 4 THIN female with cable ÖLFLEX® SOLAR XLR					
44428104	1.5 mm ²	16	1	14.4	100
44428105	2.5 mm ²	21	1	24.0	100
44428106	4 mm ²	24	1	38.4	100
44428107	6 mm ²	29	1	57.6	100
EPIC® SOLAR 4 THIN female with cable ÖLFLEX® SOLAR XL multi					
44428111	2.5 mm ²	21	1	24.0	100
44428112	4 mm ²	24	1	38.4	100
44428113	6 mm ²	29	1	57.6	100

EPIC® SOLAR Module Box

Junction Boxes for Weather Proofing Cabling for Photovoltaic Systems



APPLICATION RANGE:

- The Module Box is used to glue on the backside of the solar modules. The ribbon bands are terminated in the Module Box
- For further cabling the pre-assembled solar cables, like EPIC® SOLAR 4 THIN or EPIC® SOLAR are terminated at the Module Box

PRODUCT FEATURES

- EPIC® SOLAR Module Box: Rugged junction boxes for cabling of the solar modules with ÖLFLEX® SOLAR cable
- Dimensions (WxHxD): 118 x 28,5 x 109 mm
- Housing material: PPO/PPS
- CSA/UL: in preparation




TECHNICAL DATA:

 Temperature Range: -40°C to +105°C

 IP Protection:

IP68 (10H/1M)

 Rated Voltage: 1000V AC/DC
Rated Impulse Voltage: 8kV

Protection Class II

Cycle of Mechanical Operation 100

Pollution Degree: 3

Contact Resistance: <0.2mOHM

Part Number	Cross Section in mm ²	Connection Type	Cross section in mm ²	Cable Clamping range, mm	Length in mm	Standard Pack Size
EPIC® SOLAR Module Box						
44428043	EPIC® SOLAR ST 200 3D	Assembled with 3 bypass diodes	max. 6	3.7 - 7.1		100
44428044	EPIC® SOLAR ST 200 6D	Assembled with 6 bypass diodes	max. 6	3.7 - 7.1		100
EPIC® SOLAR Module Box with cable and EPIC® plug connector						
44428045	EPIC® SOLAR ST200 XL multi	Pre-assembled with solar cables	4	-	1.0	100
44428046	EPIC® SOLAR ST200 XL multi	Pre-assembled with solar cables	6	-	1.0	100
EPIC® SOLAR Module Box with cable and EPIC® Solar 4 Thin						
44428062	EPIC® SOLAR ST200 4 THIN XLR TF	Pre-assembled with solar cables	4	-	1.0	100
44428063	EPIC® SOLAR ST200 4 THIN XLR TF	Pre-assembled with solar cables	6	-	1.0	100

CABLE ACCESSORIES: TOOLS

Universal Stripping Tool

BENEFITS:

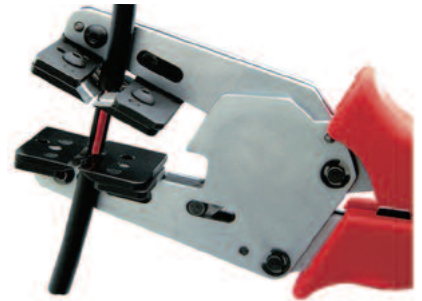
Special stripping tool for high quality dismantling of single cores

PRODUCT SPECIFICATIONS:

Applicable with a great variety of insulations differing in hardness and dimension

TOOL DESIGN:

- Compact construction, easy to handle
- Chrome-plated with plastic handle cover



Part Number	Blade Part Number	Cutting Range ø mm	Standard Pack Size
21920120	21920122	1.5 - 6	1

KS-20

BENEFITS:

- Cuts copper and aluminum cables up to 20 mm outer diameter
- Low force due to favorableness transmission ratio and new blade geometry
- Easy, clean cut when operating with one hand

PRODUCT SPECIFICATIONS:

- For single and multi-wire copper and aluminum cables
- Pre and after cut (1st and 2nd blade) allows cables with an external outer diameter up to 20 mm to be cut
- Not suitable for steel wire and hard extruded copper wire



Part Number	For Outer ø mm	Weight kg	Length in mm	Standard Pack Size
62120045	20	.300	200	1

SKINTOP® CLICK/ CLICK-R

Liquid Tight, Non-Metallic Strain Relief with Quick “Click” Insertion System



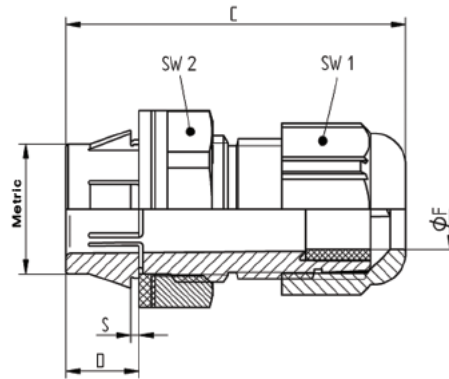
SKINTOP® CLICK is an innovative cable insertion system that provides fast, highly flexible assembly. Easy snap in place installation results in fixed, centered, strain relief with maximum protection in seconds.

RECOMMENDED APPLICATIONS:

Applications where locknut installation is difficult to reach or secure, such as dual wall enclosures and temperature controlled assemblies where insulation is used.

APPLICATION ADVANTAGE:

- Up to 70% installation time savings due to innovative CLICK system
- Ideal for hard to reach dual wall enclosures and limited access spaces
- Reduced inventory as no locknuts are required
- The heavy duty SKINTOP® design provides great pullout strength and very reliable strain relief
- Superior integrated locking mechanism includes an internal ratchet for vibration proof protection



* Includes 1 disassembly tool per pack

TECHNICAL DATA:

Materials:		Color:	Black (RAL 9005), UV Resistant Gray (RAL 7001)
Body:	Special Polyamide		
Seal:	Special Elastomer		
Temperature range:	-20° C to +100° C	Protection:	IP 68, 5 bar

SKINTOP® CLICK: Liquid Tight, Non-Metallic Strain Relief with Metric Threads

Black	Part Number Gray	Thread Type & Size	UL Status	Clamping Range øF inches	SW1/ SW2 Wrenching Flats inches	C Overall Length inches	D Thread Length inches	M Hole inches	S Wall Thickness inches	Standard Pack Size
53112923	53112921	M-12	R	.138 - .276	0.591/ 0.709	1.575	0.315	0.484 (-.008)	.039 - .157	50
53112882	53112876	M-16	R	.197 - .354	0.748/ 0.866	1.654	0.315	0.642 (-.008)	.039 - .157	50
53112883	53112877	M-20	L	.276 - .512	0.984/ 1.063	1.791	0.315	0.799 (-.008)	.039 - .157	25
53112884	53112878	M-25	L	.354 - .669	1.181/ 1.339	1.909	0.315	0.996 (-.008)	.039 - .157	25
53112924	53112922	M-32	L	.433 - .827	1.417/ 1.575	2.165	0.315	1.272 (-.008)	.039 - .157	25

SKINTOP® CLICK-R: Liquid Tight, Non-Metallic Strain Relief with Reducer Bushing & Metric Threads

Black	Part Number Gray	Thread Type & Size	UL Status	Clamping Range øF inches	SW1/ SW2 Wrenching Flats inches	C Overall Length inches	D Thread Length inches	M Hole inches	S Wall Thickness inches	Standard Pack Size
53112929	53112927	M-12	R	.039 - .197	0.591/ 0.709	1.575	0.315	0.484 (-.008)	.039 - .157	50
53112885	53112879	M-16	L	.157 - .276	0.748/ 0.866	1.654	0.315	0.642 (-.008)	.039 - .157	50
53112886	53112880	M-20	L	.197 - .394	0.984/ 1.063	1.791	0.315	0.799 (-.008)	.039 - .157	25
53112887	53112881	M-25	L	.236 - .512	1.181/ 1.339	1.909	0.3150	0.996 (-.008)	.039 - .157	25
53112931	53112928	M-32	R	.276 - .591	1.417/ 1.575	2.165	.315	1.272 (-.008)	.039 - .157	25

UL Status: R = Recognized; L = Listed

SKINTOP® SLM/ SLRM

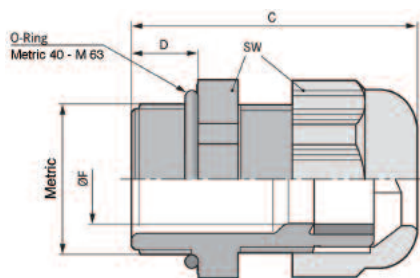
Liquid Tight, Non-Metallic Strain Relief Cable Gland with Metric Threads



SKINTOP® SLM/ SLRM is a durable, liquid tight, easy to assemble strain relief cable gland with Metric threads that is universally suited for all types of machinery & equipment, including automation, motion control, process control and robotics.

APPLICATION ADVANTAGE:

- The heavy duty SKINTOP® design provides great pullout strength and very reliable strain relief
- Superior integrated locking mechanism includes an internal ratchet for vibration proof protection
- Multi-trapezoidal thread requires just one twist to tighten
- Generous high quality neoprene bushing provides a liquid tight and dust proof, hermetic seal
- Economical solution that covers a large clamping range with only 8 sizes



TECHNICAL DATA:



Materials:
Body: Polyamide
Bushing: CR
Locknuts: Included



Protection: 70 PSI
Seal: IP 68, 5 Bar
(Exceeds NEMA 6/ 6P Pressure rating)
IP 69K



Color: - Black (RAL 9005)
UV Resistant
- Gray (RAL 7001)



Temperature range:
Static: -40° C to +100° C
Dynamic: -20° C to +100° C

SKINTOP® SLM: Liquid Tight, Non-Metallic Strain Relief Cable Gland with Metric Threads

Black	Part Number	Gray	Thread Type & Size	UL Status	Clamping Range øF inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
	S2507	S1507	M-12X1.5	R	0.138 - 0.276	0.591	1.181	.315	100	1.00
	S2509	S1509	M-16X1.5	R	0.177 - 0.394	0.748	1.339	.315	100	1.50
	S2513	S1513	M-20X1.5	L	0.276 - 0.512	0.984	1.457	.354	100	2.50
	S2516	S1516	M-25X1.5	L	0.354 - 0.669	1.181	1.575	.394	50	3.50
	S2521	S1521	M-32X1.5	L	0.433 - 0.827	1.417	1.850	.394	25	6.00
	S2529	S1529	M-40X1.5	L	0.748 - 1.102	1.811	2.047	.394	10	10.50
	S2536	S1536	M-50X1.5	L	1.063 - 1.378	2.165	2.441	.472	5	17.50
	S2542	S1542	M-63X1.5	L	1.339 - 1.772	2.598	2.795	.472	5	25.50

SKINTOP® SLRM: Liquid Tight, Non-Metallic Strain Relief Cable Gland with Reducer Bushing

Black	Part Number	Gray	Thread Type & Size	UL Status	Clamping Range øF inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
	S2607	S1607	M-12X1.5	R	0.039 - 0.197	0.591	1.181	.315	100	1.00
	S2609	S1609	M-16X1.5	R	0.079 - 0.276	0.748	1.339	.315	100	1.50
	S2613	S1613	M-20X1.5	L	0.197 - 0.394	0.984	1.457	.354	100	2.50
	S2616	S1616	M-25X1.5	L	0.236 - 0.512	1.181	1.575	.394	50	3.50
	S2621	S1621	M-32X1.5	L	0.276 - 0.591	1.417	1.850	.394	25	6.00
	S2629	S1629	M-40X1.5	L	0.591 - 0.906	1.811	2.047	.394	10	10.50
	S2636	S1636	M-50X1.5	L	0.866 - 1.142	2.165	2.441	.472	5	17.50
	S2642	S1642	M-63X1.5	L	1.102 - 1.535	2.598	2.795	.472	5	25.50

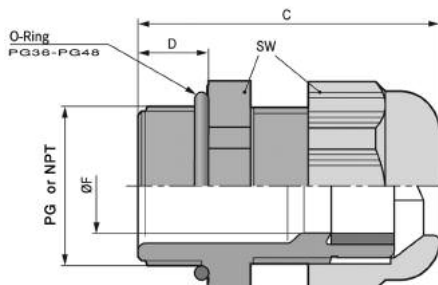
UL Status: R = Recognized; L = Listed

SKINTOP® SLN & SL

Liquid Tight, Vibration Proof, Strain Relief Cable Gland with NPT or PG Threads



PG Only



TECHNICAL DATA:



Materials:
Body: Polyamide
Bushing: CR
Locknuts: Included



Protection: 70 PSI
Seal: IP 68, 5 Bar
(Exceeds NEMA 6/ 6P Pressure rating)
IP 69K



Color:
- Black (RAL 9005)
UV Resistant
- Gray (RAL 7001)



Temperature range:
Static: -40°C to +100°C
Dynamic: -20°C to +100°C

SKINTOP® SLN: NPT Threads

Part Number		Thread Type & Size	UL Status	Clamping Range of inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
Black	Gray								
S2138	S1138	NPT-3/8"	R	.138 - 0.315	0.748	1.693	.591	100	2.00
S2112	S1112	NPT-1/2"	L	.197 - 0.472	0.945	1.772	.591	100	2.50
S2134	S1134	NPT-3/4"	L	.512 - 0.709	1.299	2.087	.591	50	5.50
S2101	S1101	NPT-1"	L	.748 - 1.000	1.654	2.362	.591	25	9.00

SKINTOP® SL: PG Threads

Part Number		Thread Type & Size	UL Status	Clamping Range of inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
Black	Gray								
S2107	S1107	PG-7	R	0.098 - 0.256	0.591	1.260	.315	100	1.00
S2109	S1109	PG-9	R	0.138 - 0.315	0.748	1.417	.315	100	1.50
S2111	S1111	PG-11	R	0.157 - 0.394	0.866	1.496	.315	100	2.00
S2113	S1113	PG-13	L	0.236 - 0.472	0.945	1.614	.354	100	2.50
S2116	S1116	PG-16	L	0.354 - 0.551	1.063	1.732	.394	50	3.00
S2121	S1121	PG-21	L	0.512 - 0.709	1.299	1.929	.433	50	5.00
S2129	S1129	PG-29	R	0.551 - 0.984	1.654	2.205	.433	25	8.50
S2136	S1136	PG-36	L	0.945 - 1.260	2.087	2.598	.512	10	17.50
S2142	S1142	PG-42	R	1.378 - 1.496	2.362	2.677	.512	5	24.00
S2148	S1148	PG-48	L	1.535 - 1.732	2.559	2.717	.551	5	29.00



SKINTOP® DIX-M BUSHINGS






Multiple Cable Sealing Bushing for Metric SKINTOP® Cable Glands

SKINTOP® DIX is a multiple hole sealing bushing designed to allow several cables to be inserted through one cable gland. This results in a reduction of space and cost, as a separate cable gland is not required for each cable.



TECHNICAL DATA:

-  Materials: NBR (Rubber)
-  Temperature: -40°C to +100°C
-  Seal: IP 54
IP 68 when all holes are optimally filled.

Special shapes available on request. Consult factory for details

Part Number	Thread Type & Size	# of Holes	Size of Holes		Standard Pack Size
			inches	mm	
53316220	M-16	2	.079	2.0	100
53316230	M-16	2	.118	3.0	100
53316240	M-16	2	.157	4.0	100
53320250	M-20	2	.197	5.0	100
53320260	M-20	2	.236	6.0	100
53320340	M-20	3	.157	4.0	100
53320353	M-20	3	.209	5.3	100
53320440	M-20	4	.157	4.0	100
53320920	M-20	9	.079	2.0	100
53320430	M-20	4	.118	3.0	100
53325260	M-25	2	.236	6.0	50
53325350	M-25	3	.197	5.0	50
53325360	M-25	3	.236	6.0	50
53325370	M-25	3	.276	7.0	50
53325450	M-25	4	.197	5.0	50
53325540	M-25	5	.157	4.0	50
53325640	M-25	6	.157	4.0	50
53332270	M-32	2	.276	7.0	50
53332280	M-32	2	.315	8.0	50
53332290	M-32	2	.354	9.0	50
53332370	M-32	3	.276	7.0	50
53332380	M-32	3	.315	8.0	50
53332460	M-32	4	.236	6.0	50
53332470	M-32	4	.276	7.0	50
53332560	M-32	5	.236	6.0	50
53332650	M-32	6	.197	5.0	50
53332840	M-32	8	.157	4.0	50
53332850	M-32	8	.197	5.0	50
53332940	M-32	9	.157	4.0	50
53340290	M-40	2	.354	9.0	25
53340310	M-40	3	.394	10.0	25
53340480	M-40	4	.315	8.0	25
53340490	M-40	4	.354	9.0	25
53340580	M-40	5	.315	8.0	25
53340590	M-40	5	.354	9.0	25
53340670	M-40	6	.276	7.0	25
53340860	M-40	8	.236	6.0	25
53340969	M-40	9	.272	6.9	25
53350680	M-50	6	.315	8.0	10
53350780	M-50	7	.315	8.0	10
53350870	M-50	8	.276	7.0	10
53350164	M-50	16	.157	4.0	10
53350166	M-50	16	.236	6.0	10

SKINTOP® DIX BUSHINGS



Multiple Cable Sealing Bushing for PG & NPT SKINTOP® Cable Glands

SKINTOP® DIX is a multiple hole sealing bushing designed to allow several cables to be inserted through one cable gland. This results in a reduction of space and cost, as a separate cable gland is not required for each cable.



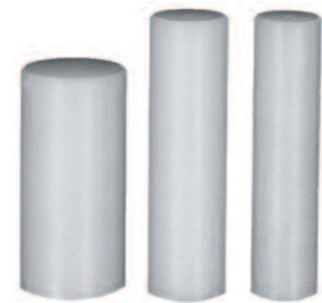
TECHNICAL DATA:

Color:	Natural
Materials:	Silicone
Temperature:	-30°C to +100°C
Seal:	IP 54 IP 68 when all holes are optimally filled.

Part Number	Thread Type & Size	Thread Type & Size	# of Holes	Size of Holes		Standard Pack Size
				inches	mm	
53607225	PG-7	-	2	.098	2.5	100
53607417	PG-7	-	4	.067	1.7	100
53609230	PG-9	NPT-3/8"	2	.118	3.0	100
53611225	PG-11	-	2	.098	2.5	100
53611240	PG-11	-	2	.157	4.0	100
53611330	PG-11	-	3	.118	3.0	100
53611430	PG-11	-	4	.118	3.0	100
53613250	PG-13	NPT-1/2"	2	.197	5.0	100
53613340	PG-13	NPT-1/2"	3	.157	4.0	100
53613440	PG-13	NPT-1/2"	4	.157	4.0	100
53616140	PG-16	-	1	.157	4.0	50
53616225	PG-16	-	2	.098	2.5	50
53616240	PG-16	-	2	.157	4.0	50
53616260	PG-16	-	2	.236	6.0	50
53616340	PG-16	-	3	.157	4.0	50
53616350	PG-16	-	3	.197	5.0	50
53616356	PG-16	-	3	.220	5.6	50
53616360	PG-16	-	3	.236	6.0	50
53616440	PG-16	-	4	.157	4.0	50
53616450	PG-16	-	4	.197	5.0	50
53616540	PG-16	-	5	.157	4.0	50
53621270	PG-21	NPT-3/4"	2	.276	7.0	50
53621280	PG-21	NPT-3/4"	2	.315	8.0	50
53621370	PG-21	NPT-3/4"	3	.276	7.0	50
53621380	PG-21	NPT-3/4"	3	.315	8.0	50
53621460	PG-21	NPT-3/4"	4	.236	6.0	50
53621550	PG-21	NPT-3/4"	5	.197	5.0	50
53621640	PG-21	NPT-3/4"	6	.157	4.0	50
53629290	PG-29	NPT-1"	2	.354	9.0	50
53629390	PG-29	NPT-1"	3	.354	9.0	50
53629470	PG-29	NPT-1"	4	.276	7.0	50
53629480	PG-29	NPT-1"	4	.315	8.0	50
53629490	PG-29	NPT-1"	4	.354	9.0	50
53629556	PG-29	NPT-1"	5	.220	5.6	50
53629570	PG-29	NPT-1"	5	.276	7.0	50
53629675	PG-29	NPT-1"	6	.295	7.5	50

SKINTOP® DIX-DV INSERTS

Inserts for SKINTOP® DIX NPT, PG & Metric



SKINTOP® DIX-DV inserts are designed to seal unused positions in SKINTOP® DIX bushings, which need to be closed to ensure the proper class protection.

TECHNICAL DATA:

Materials:	Polyamide
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Part Number	Diameter		Length		Standard Pack Size
	inches	mm	inches	mm	
53100003	.118	3.0	.354	9	100
53100004	.157	4.0	.354	9	100
53100005	.197	5.0	.433	11	100
53100006	.236	6.0	.551	14	100
53100007	.276	7.0	.551	14	100
53100008	.315	8.0	.551	14	100
53100009	.354	9.0	.551	14	100

SILVYN® RILL PA 6

Non-Metallic Flexible Quick Connect Conduit Systems



The SILVYN® RILL PA 6 is a flexible, non-metallic corrugated conduit suitable for use in various industrial applications. It is resistant to liquids, oils and gases, and highly resistant to acids and solvents.

APPLICATION ADVANTAGES:

- Halogen-free , flame retardant and self-extinguishing
- Durable, long lasting conduit that is rugged yet flexible
- For use in controls, moving machine parts, motor and internal connections, as well as industrial, medical and electrical applications



SILVYN® KLICK-G




SILVYN® KLICK-W

TECHNICAL DATA:

 Materials: Polyamide
Halogen & Silicone Free
UL 94 V0

 Color: Black or Gray

 Temperature range: -40°C to +115°C

 Protection: IP 68

SILVYN® RILL PA 6: Non-Metallic Flexible Conduit




Part Number	Outer Diameter	Inner Diameter	Bend Radius	Conduit Coil	Thread Type & Size for Fittings						
					PG	Metric					
Black	Gray	inches	mm	inches	mm	inches	mm	Put-Ups Feet	NPT	PG	Metric
61746935	61746939	.394	10.0	.256	6.5	.512	13	164	NPT-1/4"	PG-7	M-10X1.0
61746945	61746940	.512	13.0	.394	10.0	.787	20	164	NPT-1/4"	PG-9	M-12X1.5
61746955	61746950	.622	15.8	.472	12.0	1.378	35	164	NPT-3/8"	PG-11	M-16X1.5
61747015	61747010	.728	18.5	.563	14.3	1.575	40	164	—	PG-13	—
61746965	61746960	.835	21.2	.650	16.5	1.772	45	164	NPT-1/2"	PG-16	M-20X1.5
61746975	61746970	1.122	28.5	.906	23.0	2.165	55	164	NPT-3/4"	PG-21	M-25 X1.5
61746985	61746980	1.358	34.5	1.142	29.0	2.559	65	82	NPT-1"	PG-29	M-32X1.5
61746995	61746990	1.673	42.5	1.417	36.0	3.543	90	82	NPT-1-1/4"	PG-36	M-40X1.5
61747005	61747000	2.146	54.5	1.890	48.0	3.937	100	82	NPT-1-1/2"	PG-48	M-50X1.5

SILVYN® CONDUIT & TOOLS

SILVYN® RILL PA 6 SINUS Polyamide Conduit



TECHNICAL DATA:

 Material:	PA6 heat modified Cadmium free Halogen-free
 Color:	Black, UV Resistant & Weather proof
 Temperature range:	-40° C up to +140° C

Part Number	Inside Diameter mm	Outside Diameter mm	Fitting for Holder SILVYN®	Standard Pack Rings mm
61806550	6.7	10.0	FCL 10/ 55506905	50
61806555	8.4	11.4	-	50
61806560	9.9	13.0	FCL 13/ 55506915	50
61806565	12.2	15.7	FCL 16 / 55506925	50
61806570	16.6	21.2	FCL 21/ 55506935	50
61806575	21.3	25.4	SPLIT COS 20/ 61806710	50
61806580	23.2	28.3	FCL 28/ 5506945	50

Cable Guide Tool- Cable pulling tool for SILVYN® RILL PA 6 SINUS



APPLICATION RANGE:

Cable pull-in tool for SILVYN RILL PA6 SINUS

Part Number	Type	Cable Bundling mm	Standard Pack Rings mm
61830340	STKP 8	6 - 9	1
61830350	STKP 15	10 - 16	1
61830360	STKP 20	17 - 21	1
61830370	STKP 25	21 - 28	1

SILVYN® CC01



BENEFITS:

Proper and safe cutting to length of plastic conduits

APPLICATION RANGE:

Conduit shears for non-metallic conduit, e.g. parallel corrugated protective conduit.

Part Number	Cutting Range ø mm	Standard Pack Size
61722285	0 - 45	1

ÖLFLEX® FORTIS



Flexible & Oil Resistant Tray Cable with UL/CSA
-40°C Flexible/ -55°C Stationary

ÖLFLEX® FORTIS is named after the Latin word meaning “strength”. It offers outstanding mechanical performance, particularly at low temperatures. The specially formulated elastomeric jacket passes UL’s -40°C cold impact and -40°C cold bend test. ÖLFLEX® FORTIS also offers outstanding oil resistance (UL OIL RES I & II) and meets all Tray Cable (UL-1277) and Wind Turbine Tray Cable (UL-2277) requirements.

RECOMMENDED APPLICATIONS:

Wind energy, Machine tool, Forestry equipment, Oil & petrochem equipment, Cold temperature storage & packaging facilities

APPLICATION ADVANTAGES:

- Arctic grade jacket passes UL’s -40°C cold impact test
- Passes UL OIL RES I & II requirements
- Meets all Tray Cable (UL-1277) requirements
- Outstanding mechanical toughness: TC-ER Rated
- Meets all Wind Turbine Tray Cable (UL-2277) requirements
- Meets Torsion Requirements for Wind Turbine Applications
- Copper core is dual rated for North American and European standards 18 AWG (1.0mm²) to 6 AWG (16mm²)

ÖLFLEX® FORTIS CONSTRUCTION:

Finely stranded bare copper conductors; specially blended PVC/nylon insulation; formulated oil resistant and elastomeric polymer alloy black jacket.

LAPP KABEL STUÏGART ÖLFLEX® FORTIS P/N 331404- 14 AWG (2.50MM²)/4C (UL)TYPE TC-ER

TECHNICAL DATA:

Minimum Bend Radius for installation:	5 x cable diameter	Conductor Stranding:	Fine wire per Class 5
Temperature Range: for stationary use:	-55°C to +105°C (UL 90°C)	Color Code:	Black with white numbers plus grn/yel ground
for flexible use:	-40°C to +105°C (UL 90°C)	Approvals:	UL: - Type TC-ER (Exposed Run), UL WTTC - Type MTW or UL AWM, NFPA 79 2007 - Oil Res I/II - Class 1, Div. 2 per NEC Art. 336, 392, 501
Nominal Voltage:	600V - TC 1000V- TC Wind Turbine (WTTC)	CSA:	- c(UL) Type TC and CIC FT4 -40°C - CSA-AWM I/II A/B FT4 -40°C

Part Number	Number of Conductors includes ground	Nominal Outer Diameter inches	mm	Copper Weight lbs/mft	Approx. Weight lbs/mft	kg/km	Part Number	Number of Conductors includes ground	Nominal Outer Diameter inches	mm	Copper Weight lbs/mft	Approx. Weight lbs/mft	kg/km
18 AWG (19/30) 1.00 mm ²							331409						
331803	3	.297	7.5	19	57	85	331412	9	.571	4.516	135	225	335
331804	4	.320	8.1	25	66	98	331418	12	.636	.2	179	308	459
331805	5	.346	8.8	31	77	115	331425	18	.737	18.7	269	439	654
331807	7	.373	9.5	44	100	149	331425	25	.886	22.5	374	587	874
331809	9	.429	10.9	56	112	167	12 AWG (56/.0117) 4 mm ²						
331812	12	.477	12.1	75	171	255	331204	4	.460	11.71	100	152	226
331818	18	.587	14.9	113	245	365	331205	5	.503	2.814	125	187	279
331825	25	.677	17.2	156	322	479	331207	7	.581	.8	176	258	384
16 AWG (28/30) 1.50 mm ²							10 AWG (82/.0117) 6 mm ²						
331603	3	.325	8.3	27	69	103	331003	3	.500	12.7	110	222	330
331604	4	.351	8.9	36	83	124	331004	4	.578	14.7	147	265	394
331605	5	.381	9.7	45	98	146	331005	5	.631	16.0	184	317	472
331607	7	.412	10.5	64	127	189	331007	7	.686	17.4	257	443	661
331609	9	.476	12.1	82	171	255	8 AWG (74/.0159) 10 mm ²						
331612	12	.565	14.4	109	220	328	330804	4	.703	17.9	245	412	615
331616	16	.621	15.8	145	271	403	330805	5	.772	19.6	306	518	771
331618	18	.652	16.6	163	289	431	6 AWG (119/.0159) 16 mm ²						
331625	25	.741	18.8	227	397	592	330604	4	.899	22.8	393	580	864
14 AWG (46/30) 2.50 mm ²							330605	5	.982	24.9	491	725	1080
331403	3	.362	9.2	45	87	130	4 AWG (413/30) 25 mm ²						
331404	4	.392	10.0	60	107	159	330404	4	1.094	27.8	541	952	1418
331405	5	.427	10.8	75	128	191	2 AWG (66/30) 35mm ²						
331407	7	.463	11.81	105	169	252	330204	4	1.272	32.3	903	1394	2077
							330205	5	1.408	35.8	1068	1749	2606

ÖLFLEX® TRAY II/ II CY

Flexible & Oil Resistant Tray Cable with both
UL & CSA TC Approval for Industrial Applications



OLFLEX® Tray II is an industrial grade tray cable with superior oil performance for long cable life. It has a pressure extruded jacket and fine copper stranding for excellent flexibility making it much easier to pull through tray. With UL TC-ER approval, no conduit is needed so you can reduce material costs along with saving on labor.

RECOMMENDED APPLICATIONS:

Industrial plant expansions, Automotive plants, Tray wiring, anywhere that VNTC® cables are used

APPLICATION ADVANTAGE:

- Oil resistant pressure extruded PVC jacket for improved flexibility
- Easier to pull than standard tray cables minimizing labor costs
- UL TC-ER approval to reduce material costs. No conduit is needed.
- Black numbered conductors for easy identification
- UV resistant and direct burial
- UL wet rating 75°C

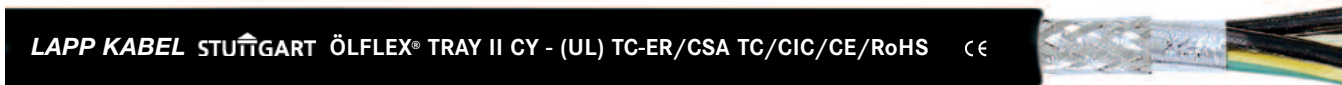
ÖLFLEX® TRAY II Construction:

Finely stranded bare copper conductors; specially blended PVC/nylon insulation; specially formulated oil resistant black PVC jacket.



ÖLFLEX® TRAY II CY Construction:

Finely stranded bare copper conductors; specially blended PVC/nylon insulation; 100% shielding with foil tape and tinned copper braid (70% coverage); specially formulated oil resistant black PVC jacket



TECHNICAL DATA:

Minimum Bending Radius for installation: < 1 AWG: 5 x cable diameter ≥ 1 AWG: 7.5 x cable diameter	Color Code: Black with white numbers plus green/yellow ground
Temperature Range: -40°C to +90°C UL/CSA TC -40°C to +90°C UL AWM	Approvals: UL: - Type TC-ER (Exposed Run) per UL 1277 & 2277 or DP-1 - UL AWM, Oil Res I & II, Wet Rating 75°C UL 83 - UL MTW, NFPA 79 2007 - Class 1, Div. 2 per NEC Art. 336, 392, 501 - Submersible pump (14 AWG & Larger: 2 to 7 conductors)
Nominal Voltage: 600V - TC 1000V - AWM 1000V - TC Wind Turbine (WTTC)	CSA: - c(UL) Type TC and CIC FT4 - CSA-AWM I/II A/B FT4
Conductor Stranding: Fine wire	Additional: - MSHA-P-07-KA050016-MSHA (Shielded Only)

Please note that VNTC® is a trademark for General Cable Technologies Corporation.

ÖLFLEX® TRAY II/ II CY

Flexible & Oil Resistant Tray Cable with both
UL & CSA TC Approval for Industrial Applications



ÖLFLEX® Tray II: Flexible and Oil Resistant Tray Cable

Part Number	Number of Conductors includes ground	Nominal Outer Diameter inches	mm	Copper Weight lbs/mft	Approx. Weight lbs/mft	kg/km	Part Number	Number of Conductors includes ground	Nominal Outer Diameter inches	mm	Copper Weight lbs/mft	Approx. Weight lbs/mft	kg/km
18 AWG (19/30) 1.00 mm ²							221207						
221803	3	.297	7.5	19	57	85	7	.581	14.8	176	258	384	
221804	4	.320	8.1	25	66	98	10 AWG (82/.0117) 6 mm ²						
221805	5	.346	8.8	31	77	115	221004	4	.578	14.7	147	265	394
221807	7	.373	9.5	44	100	149	221005	5	.631	16.0	184	317	472
221809	9	.429	10.9	56	112	167	221007	7	.686	17.4	257	443	661
221812	12	.477	12.1	75	171	255	8 AWG (74/.0159) 10 mm ²						
221818	18	.587	14.9	113	245	365	220804	4	.703	17.9	245	412	615
221825	25	.664	16.9	156	322	479	220805	5	.772	19.6	306	518	771
221850	50	.939	23.9	313	646	961	6 AWG (119/.0159) 16 mm ²						
16 AWG (28/30) 1.50 mm ²							220603	3	.776	19.7	295	462	688
221603	3	.325	8.3	27	69	103	220604	4	.899	22.8	393	580	864
221604	4	.351	8.9	36	83	124	220605	5	.982	24.9	491	725	1080
221605	5	.381	9.7	45	98	146	4 AWG (413/30) 25 mm ²						
221607	7	.412	10.5	64	127	189	220403	3	.999	25.3	406	918	1367
221608	8	.444	11.3	73	136	203	220404	4	1.094	27.8	541	952	1418
221609	9	.476	12.1	82	171	255	2 AWG (665/30) 35 mm ²						
221612	12	.565	14.4	109	220	328	220203	3	1.155	29.3	640	1169	1741
221616	16	.621	15.8	145	271	403	220204	4	1.272	32.3	853	1394	2077
221618	18	.652	16.6	163	289	431	1 AWG (836/30) 42.3 mm ²						
221625	25	.741	18.8	227	397	592	220104	4	1.400	35.6	1096	1978	2947
221641	41	.986	25.0	372	625	931	1/0 AWG (1045/30) 52.9 mm ²						
221650	50	1.048	26.6	454	760	1132	221104	4	1.466	37.2	1344	2195	3271
221661	61	1.085	27.6	553	769	1148	2/0 AWG (1330/30) 67.3 mm ²						
14 AWG (46/30) 2.50 mm ²							222204	4	1.674	42.5	1777	2750	4098
221403	3	.362	9.2	45	87	130	3/0 AWG (1672/30) 84.8 mm ²						
221404	4	.392	10.0	60	107	159	223304	4	1.695	43.1	2255	3717	5538
221405	5	.427	10.8	75	128	191	4/0 AWG (2107/30) 106.7 mm ²						
221407	7	.463	11.8	105	169	252	224404	4	2.059	52.3	2839	4694	6994
221409	9	.571	14.5	135	225	335	250 KCMIL (33 x 19/24) 128.4 mm ²						
221412	12	.636	16.2	179	308	459	222504	4	2.167	55.0	3314	5102	7602
221418	18	.737	18.7	269	439	654	350 KCMIL (24 x 37/24) 181.9 mm ²						
221425	25	.886	22.5	374	587	874	223504	4	2.501	63.5	4687	5578	8311
12 AWG (56/.0117) 4 mm ²							500 KCMIL (34 x 37/24) 257.6 mm ²						
221203	3	.423	10.7	75	111	165	225004	4	2.902	73.7	6615	7090	10564
221204	4	.460	11.7	100	152	226							
221205	5	.503	12.8	125	187	279							

ÖLFLEX® Tray II CY: Shielded Flexible and Oil Resistant Tray Cable

Part Number	Number of Conductors includes ground	Nominal Outer Diameter inches	mm	Copper Weight lbs/mft	Approx. Weight lbs/mft	kg/km	Part Number	Number of Conductors includes ground	Nominal Outer Diameter inches	mm	Copper Weight lbs/mft	Approx. Weight lbs/mft	kg/km
18 AWG (19/30) 1.00 mm ²							2214070						
2218030	3	.322	8.2	21	80	119	7	.494	12.5	125	220	327	
2218040	4	.346	8.8	35	92	137	2214120	12	.667	16.9	208	400	595
2218050	5	.371	9.4	42	100	149	2214180	18	.768	19.5	303	527	784
2218070	7	.398	10.1	56	130	193	2214250	25	.917	23.3	426	704	1048
2218120	12	.508	12.9	96	222	330	12 AWG (56/.0117) 4 mm ²						
2218180	18	.618	15.7	138	294	438	2212040	4	.491	12.5	121	212	315
2218250	25	.695	17.7	190	386	574	2212050	5	.568	14.4	151	261	388
16 AWG (28/30) 1.5 mm ²							2212070	7	.612	15.5	201	335	499
2216030	3	.350	8.9	38	97	144	10 AWG (82/.0117) 6 mm ²						
2216040	4	.376	9.6	48	116	173	2210040	4	.609	15.5	173	371	552
2216050	5	.406	10.3	59	127	189	2210050	5	.662	16.8	211	412	613
2216070	7	.443	11.3	82	165	246	2210070	7	.717	18.2	291	575	856
2216120	12	.596	15.1	134	286	426	8 AWG (74/.0159) 10 mm ²						
2216180	18	.683	17.3	196	346	515	2208040	4	.737	18.7	279	576	857
2216250	25	.772	19.6	261	476	708	6 AWG (119/.0159) 16 mm ²						
14 AWG (46/30) 2.5 mm ²							2206040	4	.918	23.3	435	812	1208
2214030	3	.387	9.8	57	121	180	4 AWG (413/30) 25 mm ²						
2214040	4	.423	10.7	78	150	223	2204040	4	1.127	28.6	613	1332	1982
2214050	5	.458	11.6	93	180	268	2 AWG (665/30) 35 mm ²						
							2202040	4	1.309	33.2	945	1951	2903

The zero at the end of the part number denotes foil and braid shielding.

ÖLFLEX®

Power & Control Cables

SKINTOP®

Cable Glands

SILVYN®

Conduit

ETHERLINE®

Industrial Ethernet

EPIC®

Connectors

UNITRONIC®

Data Cables

FLEXIMARK®

Marking Systems

HITRONIC®

Fiber Optic Cables



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