

**Table 6-1: Type designations for control cables and harmonised cables (excerpts)**

**Control cables**

□ □ □ □ □ □ □ x □  
 1 2 3 4 5 6 7 8

**1. Basic type**

N VDE standard  
 (N) in line with VDE

**2. Insulating material**

Y Thermoplastic resins  
 X Cross-linked thermoplastic resins  
 G Elastomers  
 HX Halogen-free materials

**3. Cable designation**

A Core cable  
 D Solid wire  
 AF Fine-wire core cable  
 F Socket core  
 L Fluorescent tube cable  
 LH Connecting cable, light mechanical loads  
 MH Connecting cable, moderate mechanical loads  
 SH Connecting cable, heavy mechanical loads  
 SSH Connecting cable for special loads  
 SL Control cable/welding cable  
 S Control cable  
 LS Light control cable  
 FL Flat cable  
 Si Silicone cable  
 Z Twin cable  
 GL Glass fibre  
 Li Braided conductor as per VDE 0812  
 LiF Braided conductor as per VDE 0812, extra-fine wire

**4. Special features**

T Supporting element  
 Ö Enhanced oil resistance  
 U Flame-retardant  
 w Heat-resistant, weather-resistant  
 FE Insulation retained for a limited time  
 C Screening braid  
 D Screening as Cu wire wrapping  
 S Steel wire braiding as mech. protection

**5. Sheaths**

As point 2.  
 "Insulating material" P/PUR polyurethane

**6. Protective conductor**

-O Without protective conductor  
 -J With protective conductor

**7. Number of cores**

... number of cores

**8. Conductor cross-section**

Figures in mm<sup>2</sup>

**EXAMPLE: NSHTÖU 24G 1.5**  
 ÖLFLEX® CRANE NSHTÖU cable, 24-core, with protective cond., cross-section: 1.5 mm<sup>2</sup>

**Harmonised cables**

□ □ □ □ □ - □ □ □ □  
 1 2 3 4 5 6 7 8 9

**1. Basic type**

H Harmonised type  
 A National type  
 X or S in the style of a harmonized type

**2. Nominal voltage**

01 100/100 volts  
 03 300/300 volts  
 05 300/500 volts  
 07 450/750 volts

**3. Insulating material**

V PVC  
 V2 PVC +90 °C  
 V3 PVC flexible at cold temperatures  
 B Ethylene propylene rubber  
 E PE polyethylene  
 X XPE, cross-linked PE  
 R Rubber  
 S Silicone rubber

**4. Outer/inner sheath material**

V PVC  
 V2 PVC +90 °C  
 V3 PVC flexible at cold temperatures  
 V5 PVC with enhanced oil resistance  
 R Rubber  
 N Chloroprene based rubber  
 Q Polyurethane  
 J Glass fibre braiding  
 T Textile braiding  
 S Silicone rubber

**5. Special features**

C4 Copper wire screen braiding  
 H Flat cable, divisible  
 H2 Flat cable, not divisible  
 H6 Flat cable, not divisible, for lifts  
 H8 Helical/spiral cable

**6. Conductor type**

U Single-wire  
 R Multi-wire  
 K Fine-wire (fixed installation)  
 F Fine-wire (flexible installation)  
 H Extra-fine wire  
 Y Tinsel wire  
 D Fine-wire conductor for welding cable  
 E Extra-fine wire conductor for welding cable

**7. Number of cores**

... number of cores

**8. Protective conductor**

X Without protective conductor  
 G With protective conductor

**9. Conductor cross-section**

Figures in mm<sup>2</sup>

**EXAMPLE: H05 VV-F 3G 1.5**  
 Medium PVC hose, 3-core, with protective cond., cross-section: 1.5 mm<sup>2</sup>

**Telecommunications cables**

□ □ - □ □ □ □ □ x □ x □ □ □  
 1 2 3 4 5 6 7 8 9 10

**1. Basic type**

A- Outdoor cable  
 G- Mining cable  
 J- Installation cable  
 Li Stranded conductor, flexible cable  
 S- Jumper cable

**2. Additional designation**

J Induction protection  
 E Electronics

**3. Insulating material**

Y PVC  
 11Y PUR  
 2Y Polyethylene  
 O2Y Cellular PE  
 9Y PP  
 5Y PTFE  
 6Y FEP  
 7Y ETFE  
 H Halogen-free compound

**4. Special features**

C Copper screen braiding  
 D Copper wrapping  
 (ST) Metal foil screening  
 (L) Aluminium strip  
 F Petroleum jelly filling  
 LD Corrugated aluminium sheath  
 (K) Copper strip screening  
 (Z) Steel wire braiding  
 W Corrugated steel sheath  
 b Armouring

**5. Sheathing**

(see point 3. "Insulating material")

**6. Number of elements**

... number of stranding elements

**7. Stranding element**

1 Single core  
 2 Pair  
 3 Triple

**8. Conductor diameter or cross section**

... in mm or mm<sup>2</sup>

**9. Stranding element**

St Star quad (phantom)  
 StI Star quad (trunk cable)  
 StIII Star quad (local cable)  
 TF Star quad for TF  
 S Signal cable (railway)  
 PiMF Screened pair  
 (TP) Twisted Pair  
 PiD Pairs in copper wrapping

**10. Stranding type**

Lg Twisted into layers  
 Bd Twisted into bundles

**EXAMPLE: A2Y(L)2Y 6 x 2 x 0.8 Bd**  
 Telephone cable for local network with PE insulation and layered sheath

**Table 6-2: Type designations for telecommunications cables and fibre-optic cables**

**Fibre-optic cables**



**1. Product application area**

- A Outdoor cable
- AT Outdoor cable, divisible
- J Indoor cable
- J/A or U Indoor/outdoor cable, universal cable

**2. Buffered fibre type**

- B Loose tube, unfilled
- D Loose tube, filled
- V Tight-buffered fibres

**3. Design elements**

- F Petroleum jelly filling
- Q Swelling tape

**4. Further design elements**

- S Metal element in cable core

**5. Sheath materials**

- 2Y PE sheath
- 11Y PUR sheath
- H Halogen-free sheath
- (ZM) With metallic strain relief elements
- (ZN) With non-metallic strain relief elements
- (ZN)2Y PE sheath with non-metallic strain relief elements

**6. Armouring**

- B Armouring
- B2Y Armouring with PE casing
- (BN) Glass yarn armouring
- (SG) Steel sheath
- (SR) Corrugated steel sheath
- (SR)2Y Corrugated steel sheath with PE Sheath

**7. Number of fibres**

Number of fibres

**8. Fibre type**

- E Single-mode fibre glass/glass (SM GOF)
- G Gradient fibre glass/glass (MM GOF)
- K Step index fibre glass/plastic (PCF)
- P Polymer optical fibre/plastic (POF)

**9. Core diameter/fibre sheath diameter**

- 50/125 Multimode glass fibre
- 62.5/125 Multimode glass fibre
- 9/125 Single-mode glass fibre
- 200/230 Plastic-coated glass fibre
- 980/1000 Polymer optical fibre

**10. Category: fibre quality**

- OM4 For 50/125 OM4 multimode fibres
- OM3 For 50/125 OM3 multimode fibres
- OM2 For 50/125 OM2 multimode fibres
- OM1 For 62.5/125 OM1 multimode fibres
- OS2 For 9/125 OS2 Single-mode fibres (G 652D)

**EXAMPLE 1: A-DQ(ZN)(SR)2Y 12G 50/125 OM3**

Outdoor cable with corrugated steel sheath, central loose tube, non-metallic strain relief made of glass yarn, 12 fibres, 50/125 µm OM3 multimode fibres

**EXAMPLE 2: J-V2Y(ZN)11Y 2P 980/1000**

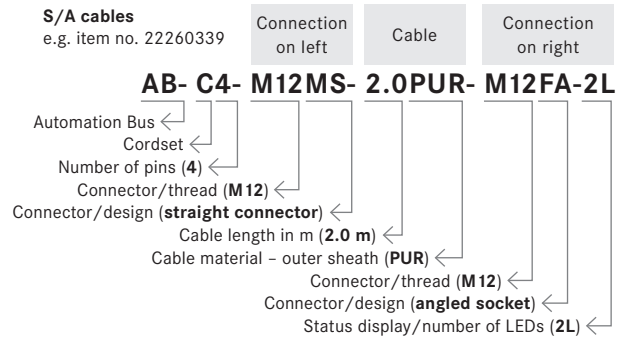
Plastic fibre-optic cable, two-fibre (duplex), indoor cable with PE inner sheath, non-metallic strain relief, PUR outer sheath

**Type designations for UNITRONIC® SENSOR**



**S/A cables**

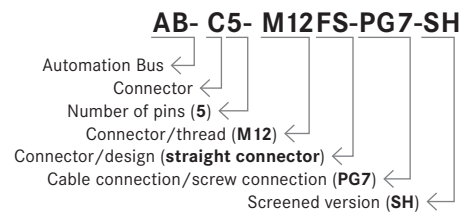
e.g. item no. 22260339



- MS – straight connector
- MA – angled connector
- FS – straight socket
- FA – angled socket
- M8, M12, M16, M23 – thread
- L – status display/LEDs
- SH – screened version
- HD – Hygienic Design
- VA – stainless steel knurl
- M12Y – M12 Y connector
- B – bridged
- 3-, 4-, 5-, 8-, .. number of pins
- A, AD, B, BI, C, CI – valve connector type
- S – valve connector with Z diode
- SV – valve connector with varistor
- SVC – valve connector with varistor and commutator
- SUP – valve connector with suppressor diode



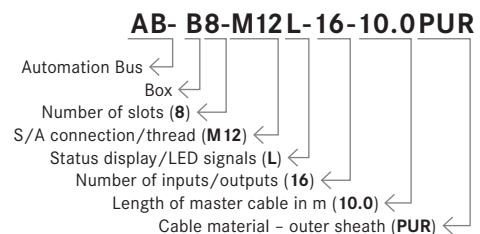
**mountable connector** e.g. item no. 22260127



- MS – straight connector
- MA – angled connector
- FS – straight socket
- FA – angled socket
- P – piercing connection
- SH – screened version
- M8, M12, M16, M23 – thread
- 3-, 4-, 5-, 8-, .. number of pins
- PG7, PG9, PG11, PG13 – cable connection
- F0.34 (fast connection, max. 0.34 mm² cond. cross-sec.)
- F0.75 (fast connection, max. 0.75 mm² cond. cross-sec.)
- M16-0.5 (M16 flush-type conn. with 0.5 m PUR strand)
- PG9-0.5 (PG9 flush-type conn. with 0.5 m PUR strand)
- DSI – flush-type connector (rear wall mounting)
- PO – flush-type connector (can be positioned)



**S/A passive distributor box** e.g. item no. 22260025



INFO: S/A box with **double** assignment →  $\frac{\text{(number of inputs/outputs)}}{\text{(number of slots)}} = 2$

- PUR – distributor box with perm. connected master cable (PUR)
- C – distributor box with master cable conn. (pluggable screw connection)
- M8L – distributor box with M8 slots and LED signals
- M16 – distributor box with M16 master cable conn.
- M12 – distributor box with M12 master cable conn.

Further abbreviations:

- AB-PC – Automation Bus Power Cable
- AB-PB – Automation Bus PROFIBUS
- AB-DN – Automation Bus DeviceNet
- AB-ASI – Automation Bus AS-Interface
- AB-ASI-J – AS-Interface distributor