

Cables, Wires & Accessories for

# INDUSTRIAL AUTOMATION

Ed. 1 // EN



**( Channeling  
POWER )** 

# Connection Technology for the Next Generation of Industry

An increasing number of production processes are being automated across industries around the world; for example, in the automotive industry and its suppliers, the food industry, the trade sector and logistics.

Autonomous handling and transport systems as well as industrial robots and computer-controlled machining centres ensure greater productivity, consistent high quality and flexible manufacturing to batch size 1.

Integrated automation systems in industry require a very large number of processors, sensors, drives and controls that are intelligently and digitally interconnected with each other. The right cables and wires are indispensable for this: they ensure that all system components reliably receive the power and data they need.

They must also meet complex requirements, depending on the application: for example, they might need to be resistant to high temperatures, chemicals, oil or mechanical stresses such as

bending and torsion, be suitable for use in confined spaces or capable of ever higher data transmission rates. Such requirements make industrial automation a challenging environment for cables and wires.

For decades, HELUKABEL has been a renowned partner to numerous leading companies in this field and offers a comprehensive product portfolio for automation technology: our range includes motor, servo and encoder cables for electrical drives, flexible and torsion-resistant robot cables, cable accessories, data, bus and ethernet cables and even space-saving hybrid cables that combine power and data transmission.

Customer-specific designs, pre-assembled components, ready-to-use system solutions and drag chains are just as much our strengths as our worldwide logistics network, which ensures high product availability and short delivery times.

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# The suitable solution for every application

See how cables, wires and accessories are used in various areas of industrial automation.

- [1] Data cables (Bus/Ethernet/Fibre cables)
- [2] Drive cables (Servo/Feedback/Hybrid)
- [3] Cables for robot applications
- [4] Drag chain cables
- [5] Installation cables
- [6] Pre-assembled cables (Data/Drive technology)
- [7] HELUTEK® circular connectors
- [8] HELUKAT® data connector
- [9] HELUTOP® cable glands
- [10] Components for earthing concepts
- [11] Protection tubes
- [12] Tools and accessories
- [13] EKD Systems - Drag chains
- [14] SANGEL® Systemtechnik - Industrial Luminaires

## **A** Control Station

Key point for controlling and monitoring manufacturing and logistics processes.

[1] [5] [6] [8] [9] [12]

## **B** Laser-Cut Device

System for separating workpieces using laser radiation.

[1] [2] [4] [5] [6] [7] [8] [9] [12] [13] [14]

## **C** Machining Centre

Machine tool containing several functions such as turning, milling and drilling.

[1] [2] [4] [5] [6] [7] [8] [9] [10] [11] [12] [13] [14]

## **D** Control Panel

Stationary or mobile device with display and/or keyboard for operating machines and systems.

[1] [3] [6] [8] [9] [11] [12] [13]

## **E** Switching cabinet

Contains all electrical and electronic components that are not directly installed in the machine or system.

[1] [2] [5] [6] [7] [8] [9] [10] [11] [12] [13] [14]

## **F** Pick & Place Area

Device that independently grips, sorts and places goods or workpieces.

[1] [2] [6] [7] [8] [9] [13] [14]

## **G** Conveyor System

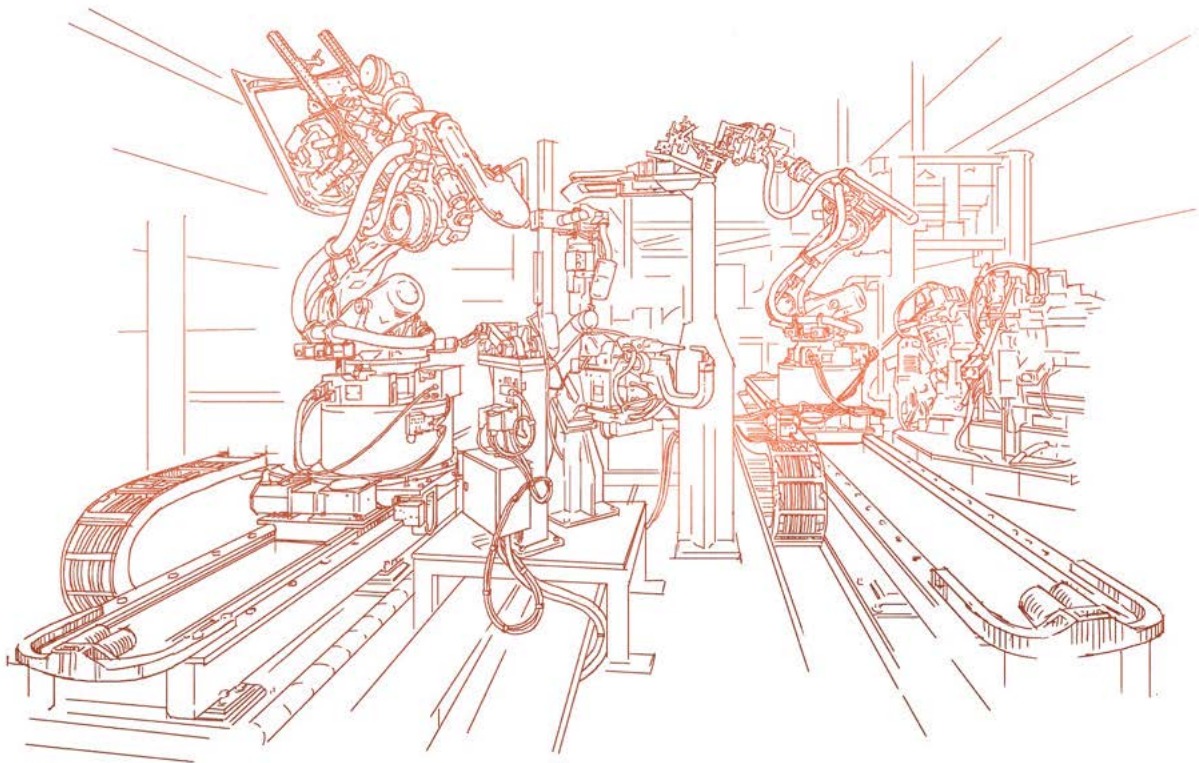
Stationary conveyor system for transporting various goods or workpieces.

[1] [2] [5] [6] [7] [8] [9] [10] [11] [12]

## **H** 6 Axis Robot

Articulated arm robot with six rotary axes for carrying out a wide range of movements and tasks.

[1] [2] [3] [6] [7] [8] [9] [10] [11] [12] [13]



### **I** Driverless Transport System

Floor-bound conveyor with its own travel drive, which is automatically controlled and guided without contact.  
[1] [2] [5] [6] [8]

### **J** Labelling Area

Used to apply barcodes or labels to goods and workpieces.  
[1] [4] [5] [6] [8] [9] [12] [13] [14]

### **K** Stacker Crane

Rail-guided, single-track vehicle used to store and retrieve goods in a high-bay warehouse.  
[1] [2] [4] [5] [6] [7] [8] [9] [12] [13]

### **L** High-bay warehouse

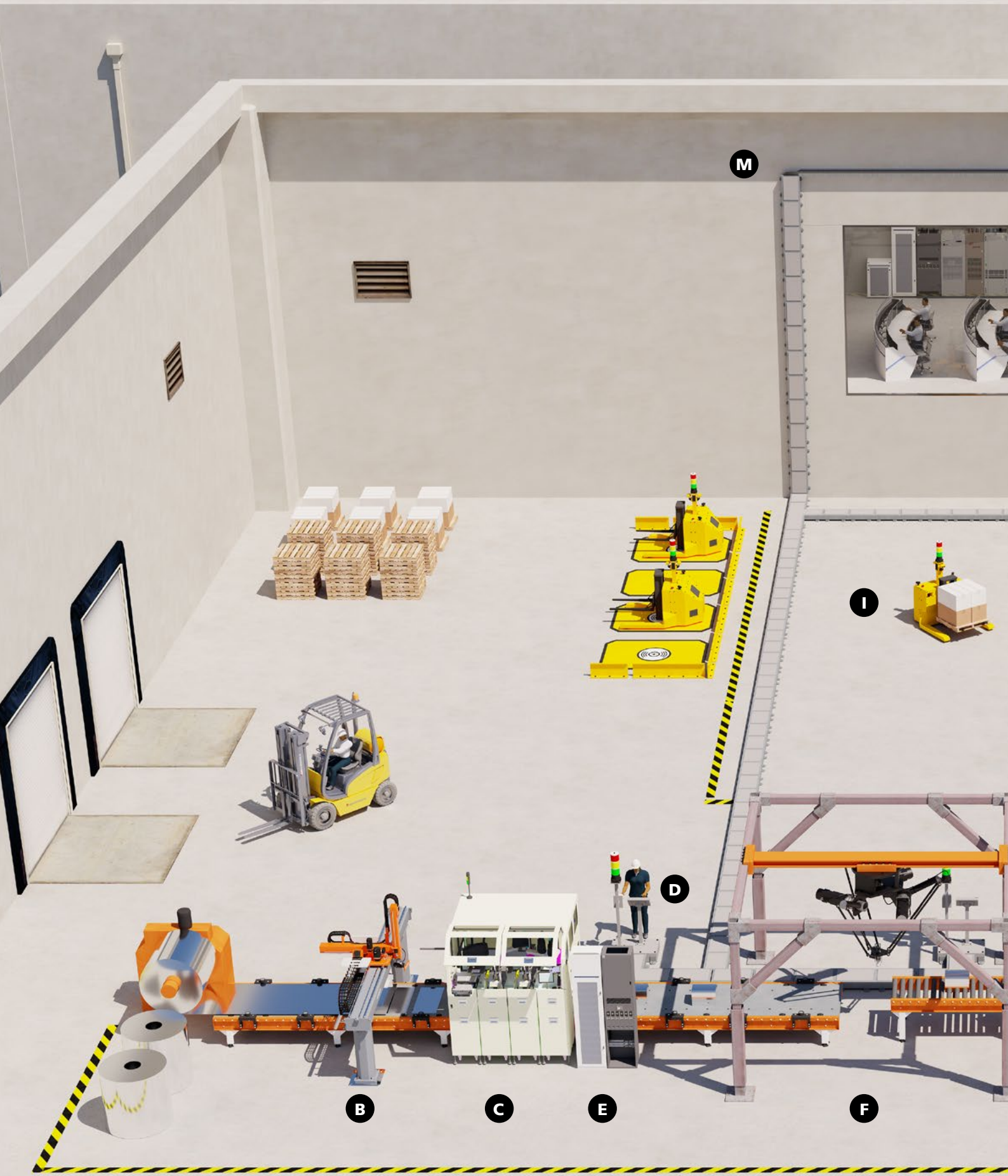
Storage area with permanently installed shelf constructions where goods or workpieces are stored on top of each other.  
[1] [2] [4] [5] [7] [8] [9] [12]

### **M** Cable Trays

Load-bearing structure made of sheet metal or plastic for cables and wires.  
[1] [5] [11] [12]

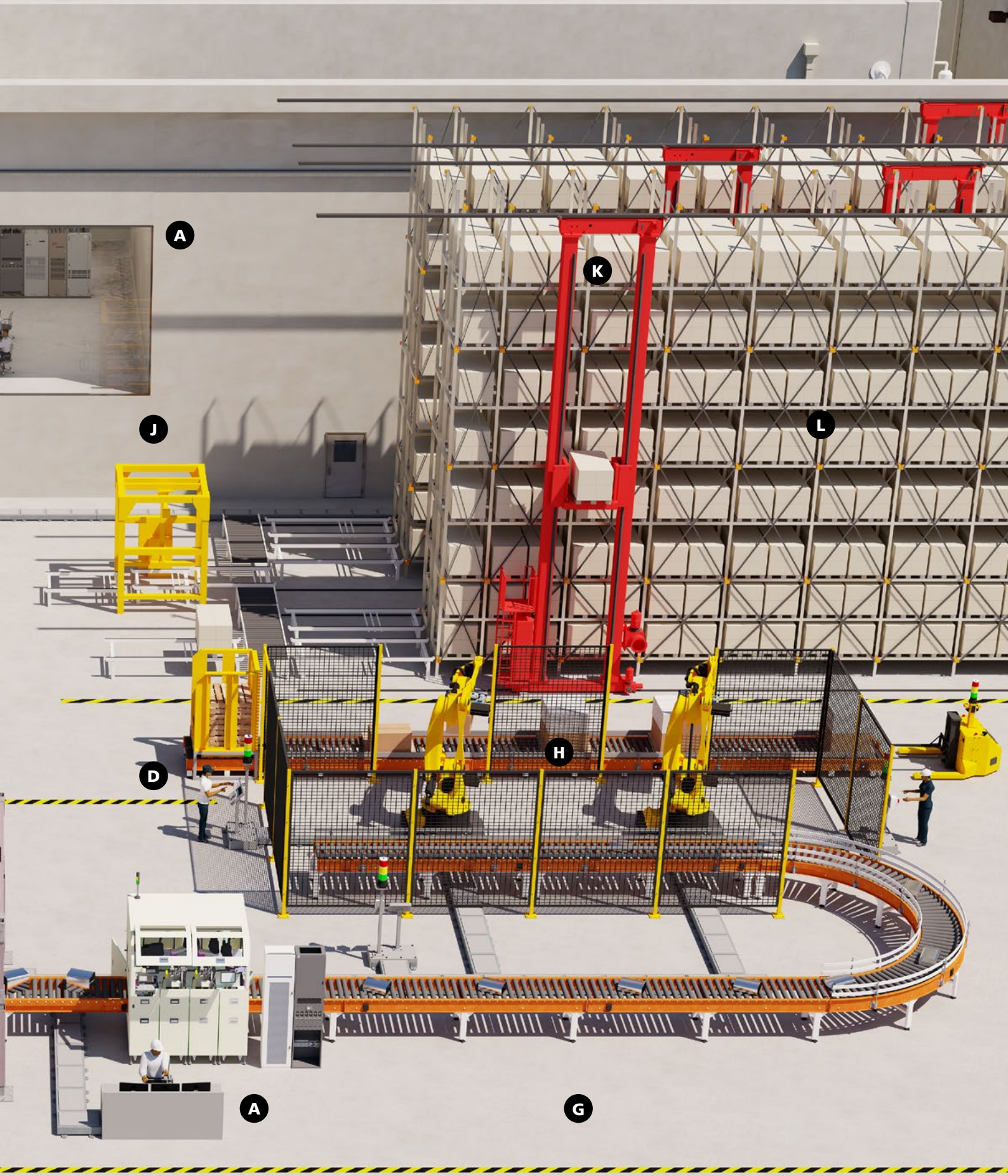


You can find further information material on our products in our Download Centre: [www.helukabel.com/download-center](http://www.helukabel.com/download-center)



- A** Control Station
- B** Laser-Cut Device
- C** Machining Centre
- D** Control Panel

- E** Switching Cabinet
- F** Pick & Place Area
- G** Conveyor System



**H** 6 Axis Robot

**I** Driverless Transport System

**J** Labelling Area

**K** Stacker Crane

**L** High-bay Warehouse

**M** Cable Trays

# Solutions for the Industrial Automation

For further information, variants and dimensions, see data sheets under: [www.helukabel.com/999999en](http://www.helukabel.com/999999en)  
(replace the **red numbers** with the corresponding part no.)

## [1] DATA CABLES

### HELUKAT® PROFINET TYP B Cat. 5e SF/UTP PVC FLEX

2 x 2 x AWG 22 /7 green  
for mobile use, quick contact  
PVC flame retardant, UL approved  
**Part no. 800654**



### HELUKABEL® Profibus SK PVC STATIC

1 x 2 x 0.64 mm<sup>2</sup> purple  
fixed installation, quick contact  
PVC flame retardant, UL approved  
**Part no. 81903**



### HELUKABEL® A-BUS PUR LONG DISTANCE CHAIN

2 x 2.5 mm<sup>2</sup> black  
approved for drag chain, suitable for ASI 5.0  
PUR halogen-free, UL approval  
**Part no. 804411**



### HELUCOM® AT-W(ZN)H(ZN)H

2G50/125 OM4 green  
fixed installation, splittable  
FRNC, UL approval  
**Part no. 805691**



## [2] DRIVE CABLES

### TOPSERV® Hybrid PVC

(4G1+(2x0.75)C+(2x22AWG)C)C mm<sup>2</sup> orange  
PVC sheath flame retardant, hybrid cable acc. to  
SICK Hyperface DSL, bending cycle: 100,000,  
PVC sheathed cable with UL/CSA  
**Part no. 709932**



*Hybrid cables, version acc. to Siemens OCC*

*TOPSERV® Hybrid PVC Siemens OCC (4G0.75+(2x0.50)C+(4x0.20)C)C mm<sup>2</sup> orange*

*Part no. 17001156*

**TOPSERV® 108 PVC - Siemens**

(4G1.5)C mm<sup>2</sup> orange, PVC sheath flame retardant,  
Motor servo cable acc. to div. standards, bending  
cycles: 100,000, PVC sheathed cable with UL/CSA

**Part no. 707250**

*Motor servo cable, version acc. to Siemens 6FX5002*

*TOPSERV® 112 PVC - Siemens (4G1.5+(2x1.5)C)C mm<sup>2</sup> orange,*

*Part no. 707280*

**TOPGEBER® 511 PVC, Siemens**

(3x(2x0.14)D+4x0.14+4x0.25+2x0.5)C mm<sup>2</sup> green  
PVC sheath flame retardant, feedback cable acc. to Siemens  
6FX5002, bending cycles: 100,000, PVC sheathed cable  
with UL/CSA

**Part no. 707390**

**HMCB500S DRIVE CLIQ™ PVC CHAIN**

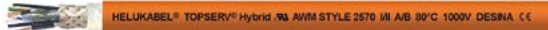
(2x2x0.22+1x2x0.34)C mm<sup>2</sup> green  
PVC sheath flame retardant, feedback cable acc. to Siemens  
6FX5002, bending cycles: 100,000, PVC sheathed cable  
with UL/CSA

**Part no. 803672**

**TOPSERV® Hybrid PUR**

DSL (4G1.5+(2x0.75)C)+(2x22AWG)C)C mm<sup>2</sup> orange,  
PUR sheath halogen-free, hybrid cable acc. to SICK Hyperface  
DSL, bending cycles: 5 Mio., drag chain cable with UL/CSA

**Part no. 708544**



*Hybrid cables, version acc. to Heidenhain EnDat ,*

*TOPSERV® Hybrid PUR, EnDat (4G1.5+(2x0.75)C)+(2x0.24+2x2x0.09)C)C mm<sup>2</sup> orange*

*Part no. 709722*

*Hybrid cables, version acc. to Hengstler Acuro Link*

*TOPSERV® Hybrid PUR, Acuro Link (4G1.5+(2x0.75)C)+(4x24AWG)C)C mm<sup>2</sup> orange*

*Part no. 17000505*

*Hybrid cables, version acc. to Siemens OCC*

*TOPSERV® Hybrid PUR, Siemens OCC (4G0.38+(2x0.38)C)+(4x0.20)C)C mm<sup>2</sup> orange*

*Part no. 17001157*

**TOPSERV® 109 PUR - Siemens**

(4G2.5)C mm<sup>2</sup> orange, PUR sheath halogen-free,  
motor servo cable acc. to various standards,  
bending cycles: 5 Mio., drag chain cable with UL/CSA

**Part no. 75944**



*Motor servo cable, version acc. to Siemens 6FX8002*

*TOPSERV® 113 PUR - Siemens (4G1.5+(2x1.5)C)C mm<sup>2</sup> orange*

*Part no. 78948*

*Motor servo cable, version acc. to Bosch Rexroth*

*TOPSERV® 121 PUR - Bosch Rexroth (4G1.5+2x(2x0.75)C)C mm<sup>2</sup> orange*

*Part no. 700561*

**TOPGEBER® 512 PUR - Siemens**

(3x(2x0.14)D+4x0.14+2x0.5)C mm<sup>2</sup> green  
 PUR sheath halogen-free, feedback cable acc. to  
 Siemens 6FX8002, bending cycles: 5 Mio.,  
 drag chain cable with UL/CSA



**Part no. 700657**

*version acc. to Siemens,*

*TOPGEBER® 512 PUR - Siemens (3x(2x0.14)D+4x0.14+4x0.25+2x0.5)C mm<sup>2</sup> green*

*Part no. 700540*

*version acc. to Bosch Rexroth Standard,*

*TOPGEBER® 512 PUR - Bosch Rexroth (4x2x0.25+2x0.5)C mm<sup>2</sup> green*

*Part no. 78080*

*version acc. to Bosch Rexroth Standard,*

*TOPGEBER® 512 PUR - Bosch Rexroth (4x2x0.25+2x0.5)C mm<sup>2</sup> orange*

*Part no. 707739*

**HMCB800W DRIVE CLIQ™ PUR CHAIN**

(2x2x0.20+1x2x0.38)C mm<sup>2</sup> green  
 PUR sheath halogen-free, feedback cable acc. to  
 Siemens 6FX8002, bending cycles: 5 Mio.,  
 drag chain cable with UL/CSA



**Part no. 804767**

*version acc. to Heidenhain Standard,*

*TOPGEBER® 512 PUR - Heidenhain (1x4x0.14+4x0.34)C mm<sup>2</sup> black*

*Part no. 710106*

*version acc. to Fanuc Standard,*

*TOPGEBER® 512 PUR - Fanuc (1x2x0.18+5x0.5)C mm<sup>2</sup> green*

*Part no. 707115*

*version acc. to Bosch Rexroth Standard,*

*TOPGEBER® 512 PUR - Bosch Rexroth (4x2x0.25+2x1.0)C mm<sup>2</sup> orange*

*Part no. 707738*

## [3] CABLES FOR ROBOT APPLICATIONS

**HELUPOWER® ROBOFLEX® PUR UL/CSA**

3G2.5 mm<sup>2</sup> black,  
 torsion cycles: 5 Mio. at +/- 360°/m,  
 10 Mio. at +/- 180°/m, bending cycles: 10 Mio.



**Part no. 11022415**

**HELUCONTROL® ROBOFLEX®-D PUR UL/CSA**

18G0.75 mm<sup>2</sup> black  
 torsion cycles: 5 Mio. at +/- 180°/m,  
 bending cycles: 5 Mio.



**Part no. 11022444**

**HELUPOWER® ROBOFLEX®-D PUR UL/CSA**4G 1.5 mm<sup>2</sup> black

torsion cycles: 5 Mio. at +/- 180°/m,

bending cycles: 5 Mio.

**Part no. 11022454****HELUDATA® ROBOFLEX®-D PUR UL/CSA**10x0.14 mm<sup>2</sup> black

torsion cycles: 5 Mio. at +/- 180°/m,

bending cycles: 5 Mio.

**Part no. 11022427****HELUDATA® ROBOFLEX®-PAIR-D PUR UL/CSA**4x2x0.25 mm<sup>2</sup> black

torsion cycles: 5 Mio. at +/- 180°/m,

bending cycles: 5 Mio.

**Part no. 11022466****HELUDATA® ROBOFLEX®-recycle PUR UL/CSA**4x0.34 mm<sup>2</sup> black

torsion cycles: 10 Mio. at +/- 360°/m,

bending cycles: 10 Mio.

**Part no. 11022476****HELUPOWER® ROBOFLEX® HYBRID PUR UL/CSA**16 G 1.0 mm<sup>2</sup> + (2 x 1.0 mm<sup>2</sup>) D black,

torsion cycles: 5 Mio. at +/- 360°/m,

10 Mio. at +/- 180°/m, bending cycles: 10 Mio.

**Part no. 11022542****HELUPOWER® ROBOFLEX® HYBRID-D PUR UL/CSA**(4 G 1.5 mm<sup>2</sup> + 2 x (2 x 1.5 mm<sup>2</sup>) D) D black

torsion cycles: 5 Mio. at +/- 180°/m,

bending cycles: 5 Mio.

**Part no. 11022491****HELUKAT® PROFInet R+ Cat. 5e SF/UTP PUR TORSION**

2 x 2 x AWG 22/19 green, double screening,

applications with torsional stress,

e.g. robot, UL recognized, PROFInet Type R 100 Mbit

**Part no. 11007800****HELUKAT® 600T Cat. 7 SF/FTP PUR TORSION**

4 x 2 x AWG 24 /7 green, double total + pair screening,

applications with torsional stress,

e.g. robot, UL listed &amp; recognized 600V

**Part no. 805828****Profibus L2 PUR TORSION**1 x 2 x 0.80 mm<sup>2</sup> purple, double screening

applications with torsional stress,

e.g. robot, UL recognized, Profibus L2 Torsion

**Part no. 800109**

## [4] DRAG CHAIN CABLES

### HELUKAT® PROFInet Typ C

Cat. 5e SF/UTP PUR CHAIN, 2 x 2 x AWG 22 /7 green  
highly dynamic application, double screening, UL listed  
**Part no. 800655**



### HELUKAT® 600S

Cat. 7 SF/FTP PUR CHAIN, 4 x 2 x AWG 24 /7 green  
highly dynamic application, double screening +  
pair screening, UL listed + recognized  
**Part no. 805614**



### SPE 1000BASE-T1 Highflex

PUR CHAIN, 1 x 2 x AWG 22/19 green  
highly dynamic application, double screening,  
UL recognized  
**Part no. 11018068**



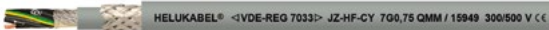
### MULTISPEED® 500-PUR

12G1.5 mm<sup>2</sup> black, max. movement distance 450 m,  
min. bending radius 7.5 x Ø, max. speed 5 m/s,  
max. acceleration 50 m/s<sup>2</sup>, max. bending cycles 11 Mio.  
**Part no. 24147**



### JZ-HF-CY

4G1.5 mm<sup>2</sup> grey, max. movement distance 10 m,  
min. bending radius 10 x Ø, max. speed 2 m/s,  
max. acceleration 10 m/s<sup>2</sup>, max. bending cycles 9 Mio.  
**Part no. 15978**



### SUPERTRONIC®-PURö

3x0.25 mm<sup>2</sup> grey, max. movement distance 5 m,  
min. bending radius 5 x Ø, max. speed 3 m/s,  
max. acceleration 10 m/s<sup>2</sup>, max. bending cycles 9 Mio.  
**Part no. 49595**



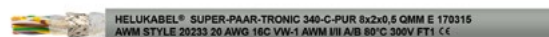
### SUPERTRONIC®-PURö

4x0.25 mm<sup>2</sup> grey, max. movement distance 5 m,  
min. bending radius 5 x Ø, max. speed 3 m/s,  
max. acceleration 10 m/s<sup>2</sup>, max. bending cycles 9 Mio.  
**Part no. 49596**



### SUPER-PAAR-TRONIC 340-C-PUR

4x2x0.25 mm<sup>2</sup> grey, max. movement distance 30 m,  
min. bending radius 10 x Ø, max. speed 4 m/s,  
max. acceleration 50 m/s<sup>2</sup>, max. bending cycles 11 Mio.  
**Part no. 49833**



### MULTIFLEX 512®-PUR

3G1.5 mm<sup>2</sup> grey, max. movement distance 100 m,  
min. bending radius 5 x Ø, max. speed 4 m/s,  
max. acceleration 10 m/s<sup>2</sup>, max. bending cycles 11 Mio.

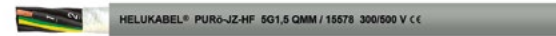
**Part no. 22535**



### PURö-JZ-HF

7G1 mm<sup>2</sup> grey, max. movement distance 15 m,  
min. bending radius 7.5 x Ø, max. speed 3 m/s,  
max. acceleration 10 m/s<sup>2</sup>, max. bending cycles 10 Mio.

**Part no. 15560**



### PURö-J-HF

1G16 mm<sup>2</sup> grey, max. movement distance 15 m,  
min. bending radius 7.5 x Ø, max. speed 3 m/s,  
max. acceleration 10 m/s<sup>2</sup>, max. bending cycles 10 Mio.

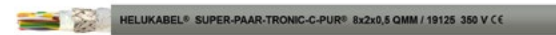
**Part no. 15655**



### SUPER-PAAR-TRONIC-C-PUR®

2x2x0.25 mm<sup>2</sup> grey, max. movement distance 30 m,  
min. bending radius 10 x Ø, max. speed 4 m/s,  
max. acceleration 50 m/s<sup>2</sup>, max. bending cycles 9 Mio.

**Part no. 19102**



### SUPERTRONIC®-C-PVC

12x0.25 mm<sup>2</sup> grey, max. movement distance 5 m,  
min. bending radius 7.5 x Ø, max. speed 2 m/s,  
max. acceleration 10 m/s<sup>2</sup>, max. bending cycles 9 Mio.

**Part no. 49637**



### MULTISPEED® 500-C-PUR

4G1 mm<sup>2</sup> black, max. movement distance 450 m,  
min. bending radius 7.5 x Ø, max. speed 5 m/s,  
max. acceleration 50 m/s<sup>2</sup>, max. bending cycles 11 Mio.

**Part no. 24175**



### SUPERTRONIC®-310-C-PVC

5x0.34 mm<sup>2</sup> (22AWG) grey, max. movement distance 5 m,  
min. bending radius 7.5 x Ø, max. speed 2 m/s,  
max. acceleration 10 m/s<sup>2</sup>, max. bending cycles 9 Mio.

**Part no. 49945**



### SUPERTRONIC®-PVC

2x0.14 mm<sup>2</sup> grey, max. movement distance 5 m,  
min. bending radius 5 x Ø, max. speed 2 m/s,  
max. acceleration 10 m/s<sup>2</sup>, max. bending cycles 9 Mio.

**Part no. 49550**



## [5] INSTALLATION CABLES

### HELUKAT® 500IND Cat. 6A SK S/FTP PVC STATIC

4 x 2 x AWG green, 22 / 1 fixed laying,  
Cat.6A Gbit, UL listed

**Part no. 803693**



### HELUCOM® AT-W(ZN)Y(ZN)11Y

Fibre optic PUR drag chain cable green, 2G50/125 OM2,  
drag chain cable OM2 Profinet, splittable, PUR sheath

**Part no. 805690**



## [6] PRE-ASSEMBLED CABLES

### HELUKAT® CONNECTING SYSTEMS - INDUSTRY HELUKAT 100S SF/UTP CAT.5e RJ45 180° green 5m

Drag chain cable with UL, RJ45 straight-mounted plugs on  
both ends, PUR outer sheath, halogen-free

**Part no. 806550**



### HELUKAT® CONNECTING SYSTEMS - INDUSTRY HELUKAT 600 S/FTP CAT.6A M12-X (male) 180° green 3m

Robustflex with UL, M12 x-coded straight-mounted  
connectors at both ends, PUR outer sheath, halogen-free

**Part no. 806639**



### HELUKAT® CONNECTING SYSTEMS - INDUSTRY HELUKAT 600 S/FTP CAT.6A ix Industrial (male) 180° green 5m

Robustflex with UL, ix plug a-coded straight-mounted  
plugs on both sides, PUR sheath, halogen-free

**Part no. 11023239**



### TOPSERV® CONNECTING SYSTEMS

#### PVC Siemens 5DN06

According to Siemens standard 6FX5002, PVC sheathed cable  
with UL/CSA, 100,000 bending cycles, PVC flame retardant

**Part no. 17004711**



### TOPSERV® CONNECTING SYSTEMS

#### PUR Siemens 5DS01

According to Siemens standard 6FX8002, drag chain  
cable with UL/CSA, 5 Mio. bending cycles, PUR sheath,  
halogen-free

**Part no. 661875**



### TOPGEBER® CONNECTING SYSTEMS

#### PVC Siemens 2EQ10

According to Siemens standard 6FX5002, PVC sheathed cable with UL/CSA, 100,000 bending cycles, PVC flame retardant

Part no. 662167



### TOPSERV® Hybrid CONNECTING SYSTEMS

#### PUR Siemens 8QN04

According to Siemens standard 6FX8002, drag chain cable with UL/CSA, 5 Mio. bending cycles, PUR sheath, halogen-free

Part no. 17005185



### TOPGEBER® CONNECTING SYSTEMS

#### PUR Siemens 2DC10

According to Siemens standard 6FX8002, drag chain cable with UL/CSA, 5 Mio. bending cycles, PUR sheath, halogen-free

Part no. 661156



## [7] HELUTEC® CIRCULAR CONNECTORS

### HELUTEC® signal & power connectors

For feedback (signal) and motor (power) cables up to IP 66/67, optionally up to IP 68/69, rotatable housing, quick-locking system, EMC standard - 360° shielding end closure, -20°C to 130°C, VDE, UL/CSA, modular design principle

## Online Cable Configurator



**HELUTEC®**



[www.helutec.com](http://www.helutec.com)

### Configure connectors simply online

Our HELUTEC® online configurator provides you with access to our complete product range in the field of signal, power and hybrid connectors.

## [8] HELUTOP® CABLE GLANDS

### HELUTOP® HT-PA

IP66/IP68-5bar, polyamide PA6, test standard: EN62444 VDE/UL/CSA  
the plastic cable gland with vibration protection

**Part no. 93908**



### HELUTOP® HT-MS

IP66/IP68-5bar/IP69K, brass, nickel-plated, test standard: EN62444  
VDE/UL/CSA, the cable gland for standard applications

**Part no. 90760**



### HELUTOP® HT-E

IP68-5bar, stainless steel 1.4305, test standard: EN62444 VDE/UL,  
particularly robust, high chemical resistance

**Part no. 99980**



### HELUTOP® Easy

IP66/IP68-5bar, polyamide PA6, test standard: EN62444 VDE/UL,  
threadless cable gland for easy, toolless and quick assembly with  
patented spring/engagement system

**Part no. 908054**



### HELUTOP® HT-MS-EP4

IP68-5bar, brass, nickel-plated, test standard: EN62444 VDE/UL/CSA  
EMC cable gland with integrated contact system

**Part no. 905181**



## [9] HELUKAT® DATA CONNECTOR

### **PROFInet Copper Connector RJ45**

Cat 5, 4 PIN, straight metal, AWG 22-24, PROFInet types A, B and C, screened version, 6.3-6.7 mm cable Ø

**Part no. 805401**



### **Industrial Ethernet Copper Connector RJ45**

Cat 6A, 8 PIN, straight metal, AWG 22-27 stranded, PROFInet and Industrial Ethernet, screened version, 8-pin, AWG 22-26 solid, 5.0-9.5 mm cable Ø

**Part no. 804544**



### **PROFInet Copper Connector M12**

Cat 5, 4 PIN, straight, AWG 22-26, M12 d-coded, PROFInet types A, B, C and R, screened version, 4.0-8.0 mm cable Ø

**Part no. 805966**



### **Industrial Ethernet Copper Connector M12**

Cat 6A, 8 PIN, straight, AWG 22-26, M12 x-coded, PROFInet and Industrial Ethernet, screened version, 5.0-9.7 mm cable Ø

**Part no. 806206**



## [10] COMPONENTS FOR EARTHING CONCEPTS

### **CU- Earthing strap**

Copper, tin-plated, single wire thickness 0.2 mm, EMC, -20°C to + 125°C

**Part no. 11008412**



### **HELUTOP® MS-EP4**

IP68-5bar, brass, nickel-plated, test standard: EN62444 VDE/UL/CSA

EMC cable gland with integrated contact system

**Part no. 905181**



## [11] PROTECTION TUBES

### HELUcond corrugated tube PA12

Polyamide PA12, highly flexible, -50°C to +120°C,  
flammability acc. to UL94: HB

**Part no. 920156**



### HELUcond corrugated tube PA6-UL

Polyamide PA 6, high load capacity, -40°C to +140°C,  
flammability acc. to UL94: V0

**Part no. 920384**



### Corrugated tubes-conduit gland HSSV

Polyamide PA 6, protection class: IP65, -40°C to +110°C,  
flammability acc. to UL94: V0

**Part no. 905858**



### Cable conduit Type S

PVC with integrated, insulated spring steel wire helix,  
extremely flexible, -25°C to +80°C, in combination with  
USK tube connector: protection class: IP54

**Part no. 91219**



### Tube connector USK

Polypropylene, vibration-resistant, -10°C to +110°C,  
in combination with protective conduit type S: protection  
class: IP54

**Part no. 97594**



### Tube connector US

Brass, nickel-plated, vibration-resistant, -25°C to +100°C,  
in combination with protective conduit type S: protection  
class: IP54

**Part no. 98331**



## [12] TOOLS & ACCESSORIES

### SKABI-Tool Profinet

For A, B, C with nom. 6.5 mm, Fast Connect compatible, cut and strip in one operation, for plugs with SK or Fast Connect technology

**Part no. 801497**



### SKABI-Tool Profibus

For Profibus SK types with nom. 8.0 mm, Fast Connect compatible, cutting and stripping in one operation, for connectors with SK or Fast Connect technology

**Part no. 81233**



### HELUTOOL D20

For cutting CU- and AL-cables single- / multi-wire up to 20 mm outer diameter, cuts smoothly and cleanly without crushing, hardened cutting edges with precision grinding, VDE tested, 1000 Volt

**Part no. 904933**



### HELUTOOL HKS32

For cutting stranded CU and AL cables single / multi-wire, for cutting ranges up to 32 mm, blades made of forged, specially hardened tool steel, weight 1500 g

**Part no. 907603**



### HELUTOOL 250 pocket

For easy unwinding of cable drums, dynamic unwinding brake, weight 1 kg, load capacity 190 kg

**Part no. 903716**



### HELUTOOL 190

For easy unwinding of cable drums, dynamic unwinding brake, weight 7 kg, load capacity 380 kg

**Part no. 93529**



## [13] EKD-SYSTEMS - DRAG CHAINS

Drag chains configurable in length, width, radius, design, etc.

### **Kolibri**

Standard drag chain made of plastic, cost-effective, versatile energy chain system for light machine construction



### **PKK**

Variable drag chain made of plastic, light to more sophisticated applications, all the advantages of plastic cable guides in a universally applicable system



### **PLE**

Robust drag chain made of plastic, with aluminium bars, stable, for medium applications, chain widths in 1 mm increments



### **SLP**

Solid steel or stainless steel drag chain, the first choice for long unsupported lengths, large cable quantities and heavy hydraulic hoses



## [14] SANGEL® SYSTEMTECHNIK - INDUSTRIAL LUMINAIRES

All luminaires have a service life of 60,000 h.

### LED FLS 450 ESGd-M8-57

Lumen 3,200 lm, IP protection class 67, light colour 5,700 K

**Part no. 15070223**



### LED LR40 540 ESGd-O-M12-57

Lumen 1,600 lm, IP protection class 67, light colour 5,700 K

**Part no. 15070538**



### LED SL 280 S-PMMAAd-M8-57

Lumen 1,200 lm, IP protection class 40/69, depending on cover, light colour 5,700 K

**Part no. 15070709**



### LED LR40-RGBW 610 PMMAAd-M12-57

Lumen 1,820 lm, IP protection class 67, light colour 5,700 K

**Part no. 15070984**



### LED ELN 560 PMMAAd-M8-57

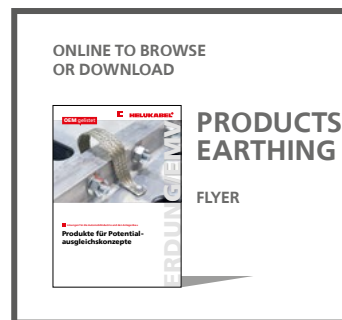
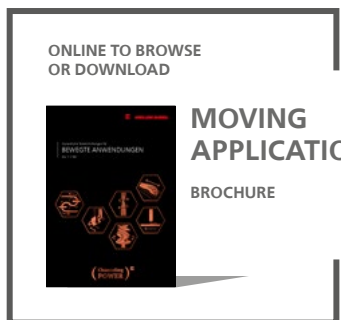
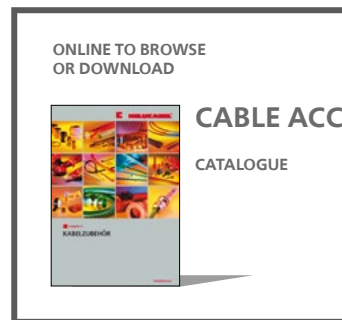
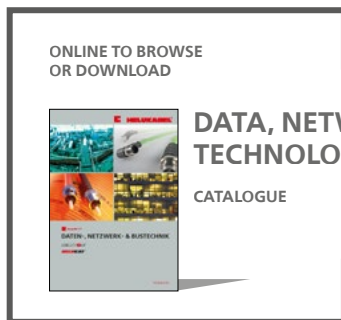
Lumen 2,400 lm, IP protection class 54, light colour 5,700 K

**Part no. 15070246**



# Glossary

You can find further information material in our Download Centre:  
[www.helukabel.com/download-center](http://www.helukabel.com/download-center)



# Contact

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POWER )** 