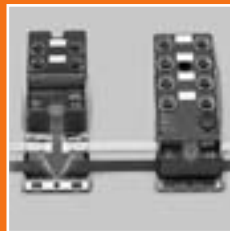




ELECTROUSTIC
DISTRIBUTION OF CONNECTIVITY SOLUTIONS

Unlimited Possibilities

UNITRONIC® Fieldbus System Solutions



LAPP GROUP

The Lapp Group



Headquarters in Stuttgart



Lapp-Center in Stuttgart



Photo: Dürr AG

A strong partner for automation

The Lapp Group provides a complete range of cables for all manner of industries and markets. Sourcing from a single supplier means competent advice and consistently high quality down to the last detail for designers, planners and manufacturers. Not only that, they can also be sure that all components are perfectly harmonised and enjoy fast, hassle-free ordering. Lapp Group's products are predominantly manufactured in the Lapp Group's own production plants.

Over 40,000 different standard products are currently available off the shelf. In addition, special cables are developed and produced to create individual customer solutions.

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

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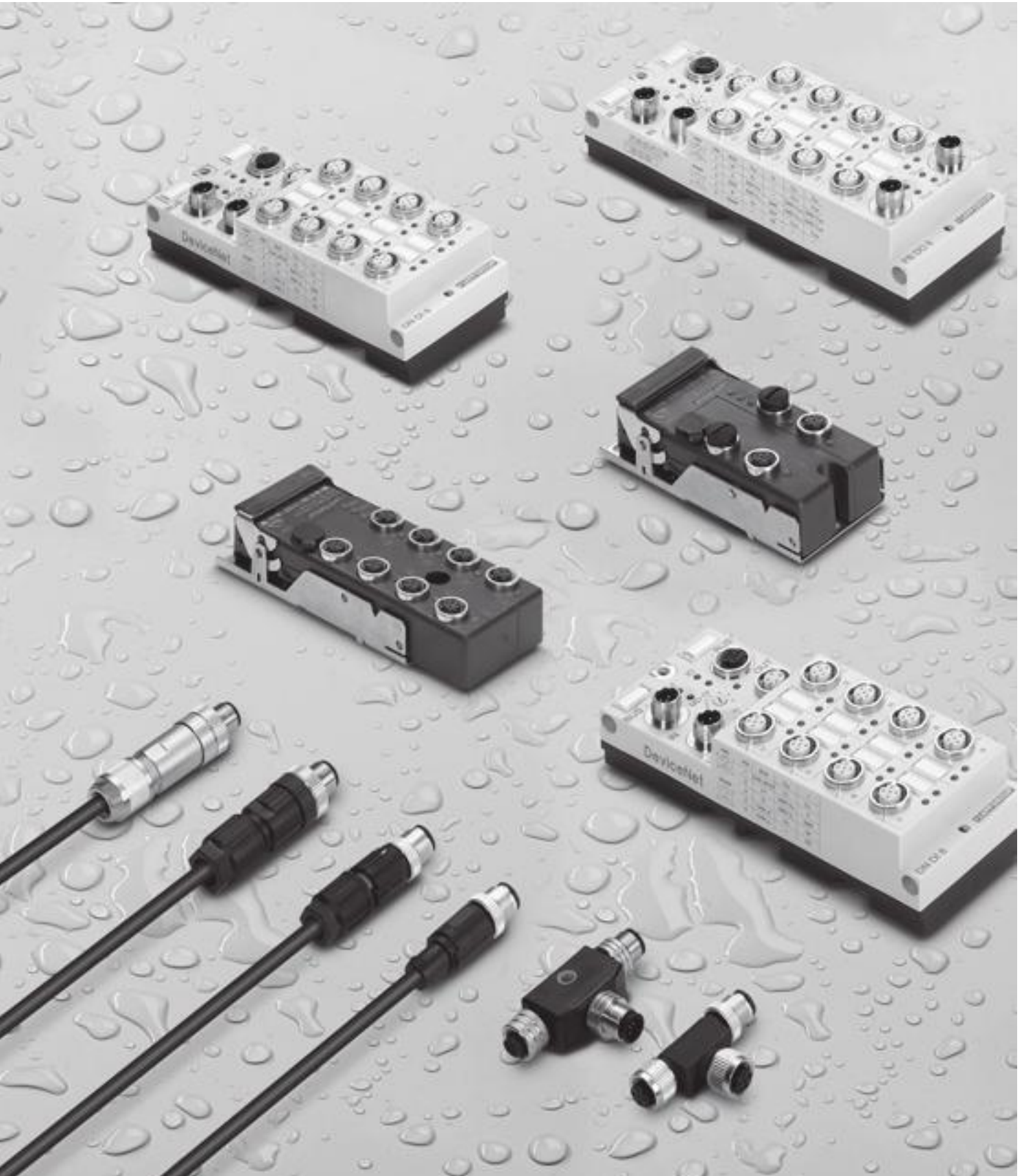
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The complete range

Sensor/Actuator boxes

Sensor/actuator boxes with the standardized connection technology provide connections to all commercially available sensors and -actuators and are the solution for decentralizing small numbers of I/O's. Sensor/actuator boxes can be connected to the Profibus, DeviceNet™ and CANopen field-bus systems. Regardless of -whether you

are installing them on profiles, on flat surfaces or under rough conditions – the assembly concept ensures flexibility and reduces the installation costs. The devices enable assembly in two directions and are thus suitable for every application. The arrangement of connectors minimizes the installation time even under rough conditions.



Sensor/Actuator cables

A comprehensive range of preassembled conductors with M8-, M12- and valve-connectors for rapid wiring of sensors and actuators in the field are available. Sensor/actu-

ator cables with LEDs can be used for simplified control of signal status. Shielded wiring types are also available for those applications with higher EMV capability.

AS-i boxes – Easy cabling in the lower field level

The AS-i devices were designed for efficiently networking sensors and actuators in the AS-i network and allow for fast and safe installation with tool-free contacting. AS-i devices can be installed quickly and easily. The locking mechanism allows a tool-free connection to the AS-i flat conductors.

They are pressed into the corresponding guide aids and the module electronics are moved forward. The devices are connected to the AS-i flat conductors using the penetration technique by snapping the hinged section into place.



Sensor/Actuator flush type connectors and customer assembled plug connectors

M8 and M12 flush type connectors with integrated braid for device connection to the PCB is available. Freely customizable plug connectors can be used for rapid assembly of individual wiring

lengths of M8 and M12 sensor/actuator cables. Here it is possible to choose between versions with screw or fast connectors.



Eight strong brands



ÖLFLEX® Power- and control cables

ÖLFLEX® is used in machinery, machine tools, system and appliance engineering, measuring, control, heating and air conditioning technologies. For permanent connections or in cable chains, halogen-free

or internationally certified, you can choose from our comprehensive range of standard products.



UNITRONIC® Data communication systems

Lapp produces a full range of data cables for fast and secure transfers of large volumes of data. From machine electronics and bus systems to super-fast LAN data

networks or highly-versatile applications: We have the data cables you need for virtually any situation.



HITRONIC® Optical transmission systems

HITRONIC® fibre optic cables are designed to transfer large volumes of data. Communications media via fibre optics are fast, efficient, and secure. Not even electromagnetic interference can affect HITRONIC®

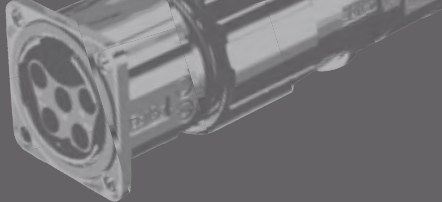
fibre optic cable. The HITRONIC® range of products includes cables for office communications, industrial applications, simplex, duplex, hybrid wiring, or cable chain applications.



SKINTOP® Cable glands

SKINTOP® cable glands guarantee secure connections every time. Simply thread the cable and twist. That's all! Your cables are perfectly centered, secured, hermetically sealed, and ready for action. Choose from

a wide range of models in plastic or brass, for EX and EMC applications, halogen-free types or anti-kink protection, metric, PG or NPT.



SILVYN® Protective cable conduit systems and cable carrier systems

In many applications cables have to be additionally protected against mechanical and chemical stress. For this type of application, Lapp Group can supply the universal **SILVYN®** protective cable conduit program. Cable conduits manufactured from metal or plastic material, which can be used with matching glands to form a perfect

system connection. The complete system results in all round protection for cables in indoor and outdoor installations. With **SILVYN® CHAIN**, Lapp Group's widely variable programme of power chains we offer both cable protection and guidance for highly dynamic applications.



FLEXIMARK® Cable marking products

Labels on single cores, cables, and control cabinets need to remain legible for years to come. This is the best way to keep things well organized and avoid potential problems.

From plastic to durable stainless steel, manual or electronic identification, with **FLEXIMARK®** you can be sure that your labels will last a lifetime.



EPIC® Industrial connectors

When we talk about secure connections, you can take us at our word. **EPIC®** industrial connectors produce an absolutely secure connection in combination with ÖLFLEX® cables. We provide the right contact for all

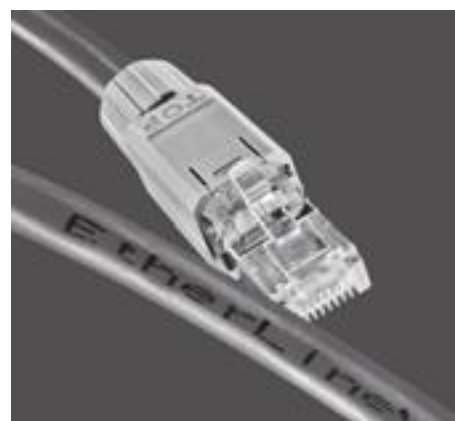
your needs: From rectangular or circular connectors, to housings, inserts, contacts and accessories, bus or fibre optic cable applications.



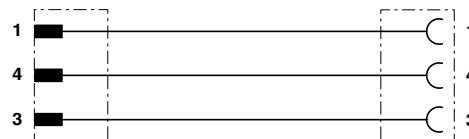
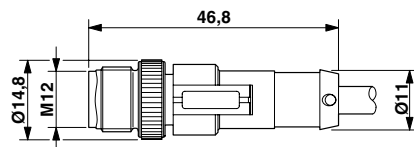
ETHERLINE® Data communication systems for ETHERNET-Technology

The Lapp Group is now in a position to offer comprehensive system solutions in the field of industrial networking. Its Factory Automation division supplies active network components that are used to supplement existing cable and plug technologies. These include services and security systems incor-

porating firewall solutions, in addition to distribution components such as switches, routers, cables and plug connectors. For its industrial customers, all of this means that a solution from the Lapp Group represents a considerable step forward in terms of security, safety and availability.



S/A cable: M 12 connector on free conductor end



S/A cable: M 12 connector on free conductor end

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 3-pos. connector

- Plug design with M12 thread on free conductor end
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 3 x 0.34 mm² (42 x 0.1 mm)
- Conductor colors brown, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection

IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40 °C up to +80 °C

Cable, flexible installation

-5 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

TPU, hardly inflammable, self-extinguishing

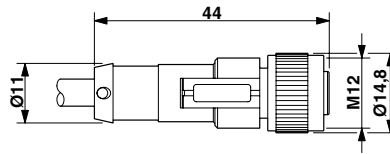
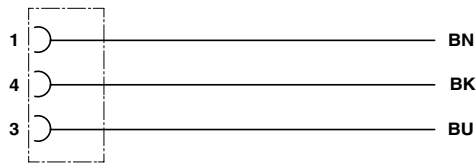
Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	PU
Straight connector					
22260221	AB-C3-M12MS-2,0PUR	2	250	4	1
22260222	AB-C3-M12MS-5,0PUR	5	250	4	1
22260249	AB-C3-M12MS-10,0PUR	10	250	4	1
Angled connector					
22260223	AB-C3-M12MA-2,0PUR	2	250	4	1
22260224	AB-C3-M12MA-5,0PUR	5	250	4	1
22260256	AB-C3-M12MA-10,0PUR	10	250	4	1

Copper price basis: including

Special cable lengths, other outer sheath materials (e.g. PVC) and individual connector types on request

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M12 socket on free conductor end



S/A cable: M12 socket on free conductor end

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 3-pos. connector

- Socket design with M12 thread on free conductor end
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 3 x 0.34 mm² (42 x 0.1 mm)
- Conductor colors brown, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection

IP65/IP68/IP69K

Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40 °C up to +80 °C

Cable, flexible installation

-5 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

TPU, hardly inflammable, self-extinguishing

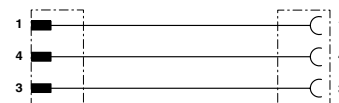
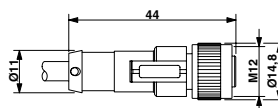
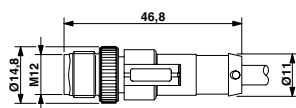
Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight socket						
22260257	AB-C3-2,0PUR-M12FS	2	250	4	No	1
22260250	AB-C3-5,0PUR-M12FS	5	250	4	No	1
22260251	AB-C3-10,0PUR-M12FS	10	250	4	No	1
Angled socket						
22260258	AB-C3-2,0PUR-M12FA	2	250	4	No	1
22260259	AB-C3-5,0PUR-M12FA	5	250	4	No	1
22260260	AB-C3-10,0PUR-M12FA	10	250	4	No	1
Straight socket						
22260252	AB-C3-2,0PUR-M12FS-2L	2	24	4	2 LEDs	1
22260265	AB-C3-5,0PUR-M12FS-2L	5	24	4	2 LEDs	1
22260266	AB-C3-10,0PUR-M12FS-2L	10	24	4	2 LEDs	1
Angled socket						
22260253	AB-C3-2,0PUR-M12FA-2L	2	24	4	2 LEDs	1
22260254	AB-C3-5,0PUR-M12FA-2L	5	24	4	2 LEDs	1
22260255	AB-C3-10,0PUR-M12FA-2L	10	24	4	2 LEDs	1

Copper price basis: including

Special cable lengths, other outer sheath materials (e.g. PVC) and individual connector types on request

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M12 connector on M12 socket



S/A cable: M12 connector on M12 socket

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 3-pos. connector

- Plug design with M12 thread on socket with M12 thread
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 3 x 0.34 mm² (42 x 0.1 mm)
- Conductor colors brown, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection
IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket
-25 °C to +90 °C
Cable, fixed installation
-40°C up to +80°C
Cable, flexible installation
-5°C up to +80°C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

TPU, hardly inflammable, self-extinguishing

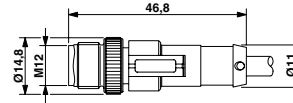
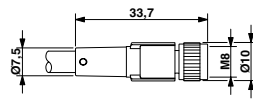
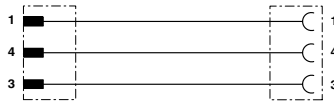
Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight connector on straight socket						
22260233	AB-C3-M12MS-0,3PUR-M12FS	0.3	250	4	No	1
22260234	AB-C3-M12MS-0,6PUR-M12FS	0.6	250	4	No	1
22260235	AB-C3-M12MS-1,0PUR-M12FS	1	250	4	No	1
22260236	AB-C3-M12MS-2,0PUR-M12FS	2	250	4	No	1
Straight connector on angled socket						
22260237	AB-C3-M12MS-0,3PUR-M12FA	0.3	250	4	No	1
22260238	AB-C3-M12MS-0,6PUR-M12FA	0.6	250	4	No	1
22260239	AB-C3-M12MS-1,0PUR-M12FA	1	250	4	No	1
22260240	AB-C3-M12MS-2,0PUR-M12FA	2	250	4	No	1
Straight connector on angled socket with LEDs						
22260261	AB-C3-M12MS-0,3PUR-M12FA-2L	0.3	24	4	2 LEDs	1
22260262	AB-C3-M12MS-0,6PUR-M12FA-2L	0.6	24	4	2 LEDs	1
22260263	AB-C3-M12MS-1,0PUR-M12FA-2L	1	24	4	2 LEDs	1
22260264	AB-C3-M12MS-2,0PUR-M12FA-2L	2	24	4	2 LEDs	1

Copper price basis: including

Special cable lengths, other outer sheath materials (e.g. PVC) and individual connector types on request

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M12 connector on M8 socket



S/A cable: M12 connector on M8 socket

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 3-pos. connector

- Plug design with M12 thread on socket with M8 thread
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 3 x 0.34 mm² (42 x 0.1 mm)
- Conductor colors brown, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data

IP	Degree of protection IP65/IP68/IP69K
0-1	Ambient temperature (operation) Plug / socket -25 °C to +90 °C Cable, fixed installation -40 °C up to +80 °C Cable, flexible installation -5 °C up to +80 °C
	Contact material CuSn
	Contact surface material Ni/Au
	Coding A - Standard
	Material, knurls Zinc die-cast, (nickel-plated)
	Material of grip body TPU, hardly inflammable, self-extinguishing

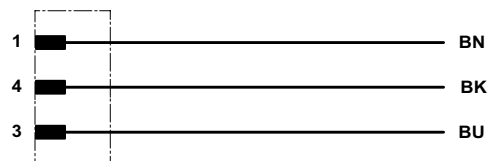
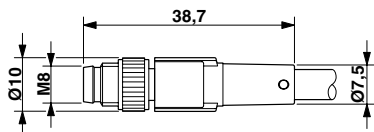
Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight connector on straight socket						
22260225	AB-C3-M12MS-0,3PUR-M8FS	0.3	60	3	No	1
22260226	AB-C3-M12MS-0,6PUR-M8FS	0.6	60	3	No	1
22260227	AB-C3-M12MS-1,0PUR-M8FS	1	60	3	No	1
22260228	AB-C3-M12MS-2,0PUR-M8FS	2	60	3	No	1
Straight connector on angled socket						
22260229	AB-C3-M12MS-0,3PUR-M8FA	0.3	60	3	No	1
22260230	AB-C3-M12MS-0,6PUR-M8FA	0.6	60	3	No	1
22260231	AB-C3-M12MS-1,0PUR-M8FA	1	60	3	No	1
22260232	AB-C3-M12MS-2,0PUR-M8FA	2	60	3	No	1
Straight connector on angled socket with LEDs						
22260267	AB-C3-M12MS-0,3PUR-M8FA-2L	0.3	24	3	2 LEDs	1
22260268	AB-C3-M12MS-0,6PUR-M8FA-2L	0.6	24	3	2 LEDs	1
22260269	AB-C3-M12MS-1,0PUR-M8FA-2L	1	24	3	2 LEDs	1
22260270	AB-C3-M12MS-2,0PUR-M8FA-2L	2	24	3	2 LEDs	1

Copper price basis: including

Special cable lengths, other outer sheath materials (e.g. PVC) and individual connector types on request

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M8 connector on free conductor end



S/A cable: M8 connector on free conductor end

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 3-pos. connector

- Plug design with M8 thread on free conductor end
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 3 x 0.25 mm² (42 x 0.1 mm)
- Conductor colors brown, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection

IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40 °C up to +80 °C

Cable, flexible installation

-5 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

TPU, hardly inflammable, self-extinguishing

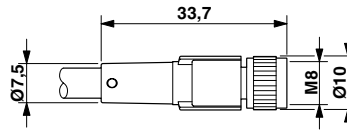
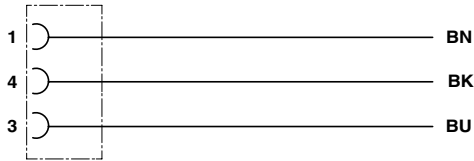
Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	PU
Straight connector					
22260204	AB-C3-M8MS-2,0PUR	2	60	3	1
22260205	AB-C3-M8MS-5,0PUR	5	60	3	1
22260218	AB-C3-M8MS-10,0PUR	10	60	3	1

Copper price basis: including

Special cable lengths, other outer sheath materials (e.g. PVC) and individual connector types on request

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M8 socket on free conductor end



S/A cable: M8 socket on free conductor end

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 3-pos. connector

- Socket design with M8 thread on free conductor end
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 3 x 0.25 mm² (42 x 0.1 mm)
- Conductor colors brown, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data

IP	Degree of protection
	IP65/IP68/IP69K
0-1	Ambient temperature (operation)
	Plug / socket
	-25 °C to +90 °C
	Cable, fixed installation
	-40 °C up to +80 °C
	Cable, flexible installation
	-5 °C up to +80 °C
	Contact material
	CuSn
	Contact surface material
	Ni/Au
	Coding
	A - Standard
	Material, knurls
	Zinc die-cast, (nickel-plated)
	Material of grip body
	TPU, hardly inflammable, self-extinguishing

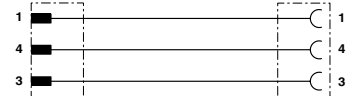
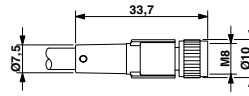
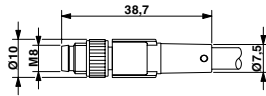
Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight socket						
22260202	AB-C3-2,0PUR-M8FS	2	60	3	No	1
22260200	AB-C3-5,0PUR-M8FS	5	60	3	No	1
22260219	AB-C3-10,0PUR-M8FS	10	60	3	No	1
Angled socket						
22260203	AB-C3-2,0PUR-M8FA	2	60	3	No	1
22260201	AB-C3-5,0PUR-M8FA	5	60	3	No	1
22260220	AB-C3-10,0PUR-M8FA	10	60	3	No	1
Angled socket with LEDs						
22260275	AB-C3-2,0PUR-M8FA-2L	2	24	3	2 LEDs	1
22260276	AB-C3-5,0PUR-M8FA-2L	5	24	3	2 LEDs	1
22260277	AB-C3-10,0PUR-M8FA-2L	10	24	3	2 LEDs	1

Copper price basis: including

Special cable lengths, other outer sheath materials (e.g. PVC) and individual connector types on request

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M8 connector on M8 socket



S/A cable: M8 connector on M8 socket

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 3-pos. connector

- Plug design with M8 thread on socket with M8 thread
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 3 x 0.25 mm² (42 x 0.1 mm)
- Conductor colors brown, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection
IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket
-25 °C to +90 °C
Cable, fixed installation
-40 °C up to +80 °C
Cable, flexible installation
-5 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

TPU, hardly inflammable, self-extinguishing

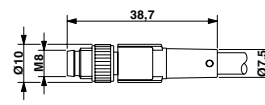
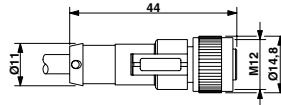
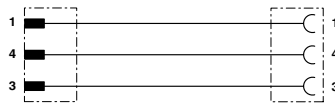
Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight connector on straight socket						
22260206	AB-C3-M8MS-0,3PUR-M8FS	0.3	60	3	No	1
22260207	AB-C3-M8MS-0,6PUR-M8FS	0.6	60	3	No	1
22260208	AB-C3-M8MS-1,0PUR-M8FS	1	60	3	No	1
22260209	AB-C3-M8MS-2,0PUR-M8FS	2	60	3	No	1
Straight connector on angled socket						
22260210	AB-C3-M8MS-0,3PUR-M8FA	0.3	60	3	No	1
22260211	AB-C3-M8MS-0,6PUR-M8FA	0.6	60	3	No	1
22260212	AB-C3-M8MS-1,0PUR-M8FA	1	60	3	No	1
22260213	AB-C3-M8MS-2,0PUR-M8FA	2	60	3	No	1
Straight connector on angled socket with LEDs						
22260214	AB-C3-M8MS-0,3PUR-M8FA-2L	0.3	24	3	2 LEDs	1
22260215	AB-C3-M8MS-0,6PUR-M8FA-2L	0.6	24	3	2 LEDs	1
22260216	AB-C3-M8MS-1,0PUR-M8FA-2L	1	24	3	2 LEDs	1
22260217	AB-C3-M8MS-2,0PUR-M8FA-2L	2	24	3	2 LEDs	1

Copper price basis: including

Special cable lengths, other outer sheath materials (e.g. PVC) and individual connector types on request

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M8 connector on M12 socket



S/A cable: M8 connector on M12 socket

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 3-pos. connector

- Plug design with M8 thread on socket with M12 thread
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 3 x 0.25 mm² (42 x 0.1 mm)
- Conductor colors brown, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection

IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40 °C up to +80 °C

Cable, flexible installation

-5 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

TPU, hardly inflammable, self-extinguishing

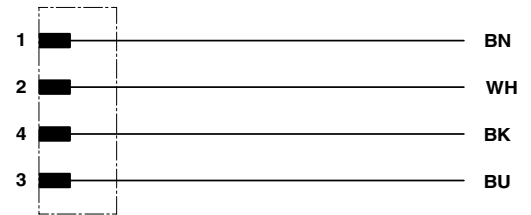
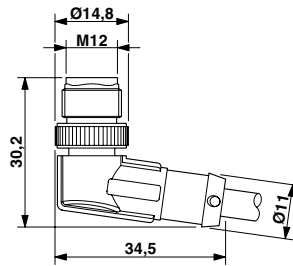
Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight connector on straight socket						
22260241	AB-C3-M8MS-0,3PUR-M12FS	0.3	60	3	No	1
22260242	AB-C3-M8MS-0,6PUR-M12FS	0.6	60	3	No	1
22260243	AB-C3-M8MS-1,0PUR-M12FS	1	60	3	No	1
22260244	AB-C3-M8MS-2,0PUR-M12FS	2	60	3	No	1
Straight connector on angled socket						
22260245	AB-C3-M8MS-0,3PUR-M12FA	0.3	60	3	No	1
22260246	AB-C3-M8MS-0,6PUR-M12FA	0.6	60	3	No	1
22260247	AB-C3-M8MS-1,0PUR-M12FA	1	60	3	No	1
22260248	AB-C3-M8MS-2,0PUR-M12FA	2	60	3	No	1
Straight connector on angled socket with LEDs						
22260271	AB-C3-M8MS-0,3PUR-M12FA-2L	0.3	24	3	2 LEDs	1
22260272	AB-C3-M8MS-0,6PUR-M12FA-2L	0.6	24	3	2 LEDs	1
22260273	AB-C3-M8MS-1,0PUR-M12FA-2L	1	24	3	2 LEDs	1
22260274	AB-C3-M8MS-2,0PUR-M12FA-2L	2	24	3	2 LEDs	1

Copper price basis: including

Special cable lengths, other outer sheath materials (e.g. PVC) and individual connector types on request

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M12 connector on free conductor end



S/A cable: M12 connector on free conductor end

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 4-pos. connector

- Plug design with M12 thread on free conductor end
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 4 x 0.34 mm² (42 x 0.1 mm)
- Conductor colors brown, white, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection

IP65/IP68/IP69K

Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40°C up to +80°C

Cable, flexible installation

-5°C up to +80°C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

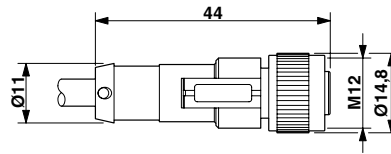
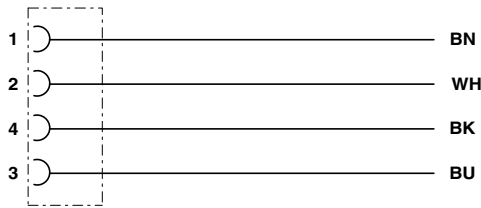
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	PU
Straight connector					
22260320	AB-C4-M12MS- 2,0PUR	2	250	4	1
22260321	AB-C4-M12MS- 5,0PUR	5	250	4	1
22260342	AB-C4-M12MS-10,0PUR	10	250	4	1
Angled connector					
22260301	AB-C4-M12MA-2,0PUR	2	250	4	1
22260302	AB-C4-M12MA-5,0PUR	5	250	4	1
22260303	AB-C4-M12MA-10,0PUR	10	250	4	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M12 socket on free conductor end



S/A cable: M12 socket on free conductor end

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 4-pos. connector

- Socket design with M12 thread on free conductor end
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 4 x 0.34 mm² (42 x 0.1 mm)
- Conductor colors brown, white, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection

IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40 °C up to +80 °C

Cable, flexible installation

-5 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

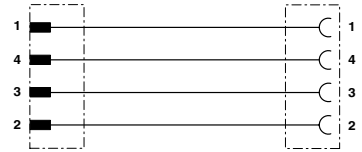
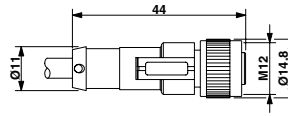
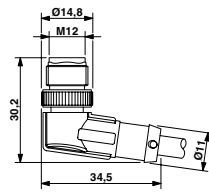
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight socket						
22260322	AB-C4- 2,0PUR-M12FS	2	250	4	No	1
22260323	AB-C4- 5,0PUR-M12FS	5	250	4	No	1
22260343	AB-C4-10,0PUR-M12FS	10	250	4	No	1
Angled socket						
22260324	AB-C4- 2,0PUR-M12FA	2	250	4	No	1
22260325	AB-C4- 5,0PUR-M12FA	5	250	4	No	1
22260341	AB-C4-10,0PUR-M12FA	10	250	4	No	1
Straight socket with LEDs						
22260344	AB-C4- 2,0PUR-M12FS-2L	2	24	4	2 LEDs	1
22260345	AB-C4- 5,0PUR-M12FS-2L	5	24	4	2 LEDs	1
22260346	AB-C4-10,0PUR-M12FS-2L	10	24	4	2 LEDs	1
Angled socket with LEDs						
22260326	AB-C4- 2,0PUR-M12FA-3L	2	24	4	3 LEDs	1
22260327	AB-C4- 5,0PUR-M12FA-3L	5	24	4	3 LEDs	1
22260340	AB-C4-10,0PUR-M12FA-3L	10	24	4	3 LEDs	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M12 connector on M12 socket



S/A cable: M12 connector on M12 socket

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 4-pos. connector

- Plug design with M12 thread on socket with M12 thread
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 4 x 0.34 mm² (42 x 0.1 mm)
- Conductor colors brown, white, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection
IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40 °C up to +80 °C

Cable, flexible installation

-5 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

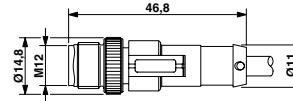
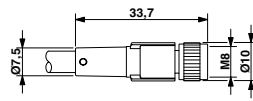
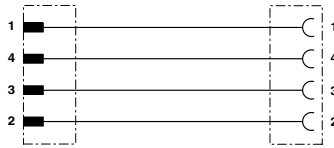
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight connector on straight socket						
22260328	AB-C4-M12MS-0,3PUR-M12FS	0.3	250	4	No	1
22260329	AB-C4-M12MS-0,6PUR-M12FS	0.6	250	4	No	1
22260330	AB-C4-M12MS-1,0PUR-M12FS	1	250	4	No	1
22260331	AB-C4-M12MS-2,0PUR-M12FS	2	250	4	No	1
Straight connector on angled socket						
22260332	AB-C4-M12MS-0,3PUR-M12FA	0.3	250	4	No	1
22260333	AB-C4-M12MS-0,6PUR-M12FA	0.6	250	4	No	1
22260334	AB-C4-M12MS-1,0PUR-M12FA	1	250	4	No	1
22260335	AB-C4-M12MS-2,0PUR-M12FA	2	250	4	No	1
Angled connector on straight socket						
22260304	AB-C4-M12MA-0,3PUR-M12FS	0.3	250	4	No	1
22260305	AB-C4-M12MA-0,6PUR-M12FS	0.6	250	4	No	1
22260306	AB-C4-M12MA-1,0PUR-M12FS	1	250	4	No	1
22260307	AB-C4-M12MA-2,0PUR-M12FS	2	250	4	No	1
Straight connector on angled socket with LEDs						
22260336	AB-C4-M12MS-0,3PUR-M12FA-3L	0.3	24	4	3 LEDs	1
22260337	AB-C4-M12MS-0,6PUR-M12FA-3L	0.6	24	4	3 LEDs	1
22260338	AB-C4-M12MS-1,0PUR-M12FA-3L	1	24	4	3 LEDs	1
22260339	AB-C4-M12MS-2,0PUR-M12FA-3L	2	24	4	3 LEDs	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M12 connector on M8 socket



S/A cable: M12 connector on M8 socket

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 4-pos. connector

- Plug design with M12 thread on socket with M8 thread
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 4 x 0.34 mm² (42 x 0.1 mm)
- Conductor colors brown, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection

IP65/IP68/IP69K

Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40 °C up to +80 °C

Cable, flexible installation

-5 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

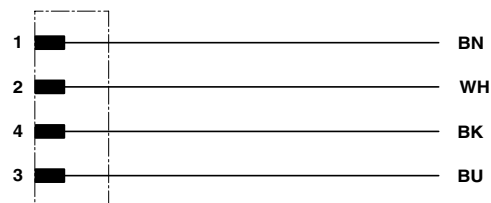
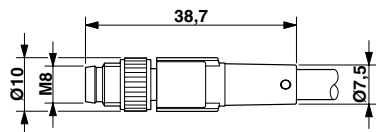
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight connector on straight socket						
22260347	AB-C4-M12MS-0,3PUR-M8FS	0.3	30	3	No	1
22260349	AB-C4-M12MS-0,6PUR-M8FS	0.6	30	3	No	1
22260350	AB-C4-M12MS-1,0PUR-M8FS	1	30	3	No	1
22260348	AB-C4-M12MS-2,0PUR-M8FS	2	30	3	No	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M8 connector on free conductor end



S/A cable: M8 connector on free conductor end

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 4-pos. connector

- Plug design with M8 thread on free conductor end
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 4 x 0.25 mm² (42 x 0.1 mm)
- Conductor colors brown, white, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection

IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40°C up to +80°C

Cable, flexible installation

-5°C up to +80°C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

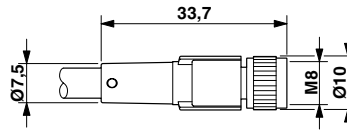
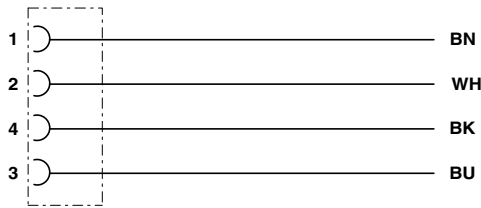
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	PU
Straight connector					
22260300	AB-C4-M8MS-2,0PUR	2	30	3	1
22260308	AB-C4-M8MS-5,0PUR	5	30	3	1
22260318	AB-C4-M8MS-10,0PUR	10	30	3	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M8 socket on free conductor end



S/A cable: M8 socket on free conductor end

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 4-pos. connector

- Socket design with M8 thread on free conductor end
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 4 x 0.25 mm² (42 x 0.1 mm)
- Conductor colors brown, white, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection

IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40 °C up to +80 °C

Cable, flexible installation

-5 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

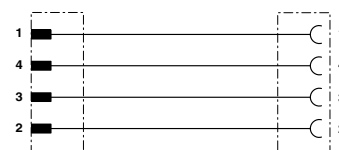
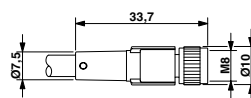
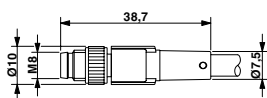
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight socket						
22260309	AB-C4- 2,0PUR-M8FS	2	30	3	No	1
22260310	AB-C4- 5,0PUR-M8FS	5	30	3	No	1
22260317	AB-C4-10,0PUR-M8FS	10	30	3	No	1
Angled socket						
22260311	AB-C4- 2,0PUR-M8FA	2	30	3	No	1
22260312	AB-C4- 5,0PUR-M8FA	5	30	3	No	1
22260319	AB-C4-10,0PUR-M8FA	10	30	3	No	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M8 connector on M8 socket



S/A cable: M8 connector on M8 socket

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 4-pos. connector

- Plug design with M8 thread on socket with M8 thread
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 4 x 0.25 mm² (42 x 0.1 mm)
- Conductor colors brown, white, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection
IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket
-25 °C to +90 °C
Cable, fixed installation
-40 °C up to +80 °C
Cable, flexible installation
-5 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

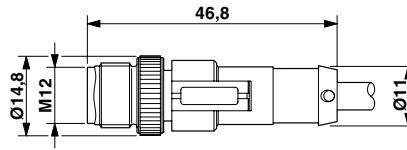
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight connector on straight socket						
22260313	AB-C4-M8MS-0,3PUR-M8FS	0.3	30	3	No	1
22260314	AB-C4-M8MS-0,6PUR-M8FS	0.6	30	3	No	1
22260315	AB-C4-M8MS-1,0PUR-M8FS	1	30	3	No	1
22260316	AB-C4-M8MS-2,0PUR-M8FS	2	30	3	No	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: M12 connector on free conductor end



S/A cable: M12 connector on free conductor end

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 5-pos. connector

- Plug design with M12 thread on free conductor end
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 5 x 0.34 mm² (42 x 0.1 mm)
- Conductor colors brown, white, blue, black, green/yellow
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection

IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40 °C up to +80 °C

Cable, flexible installation

-5 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

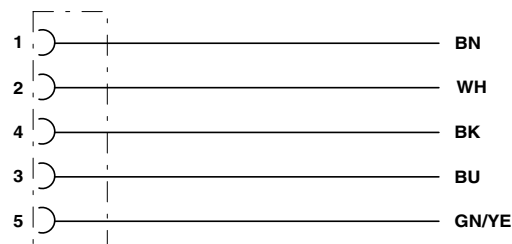
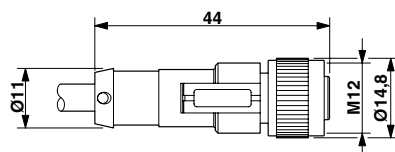
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U _n in V	Nominal current I _n in A	PU
Straight connector					
22260400	AB-C5-M12MS-2,0PUR	2	60	4	1
22260401	AB-C5-M12MS-5,0PUR	5	60	4	1
22260414	AB-C5-M12MS-10,0PUR	10	60	4	1
Angled connector					
22260402	AB-C5-M12MA-2,0PUR	2	60	4	1
22260403	AB-C5-M12MA-5,0PUR	5	60	4	1
22260417	AB-C5-M12MA-10,0PUR	10	60	4	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable:, M 12 socket on free conductor end



S/A cable:, M 12 socket on free conductor end

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 5-pos. connector

- Socket design with M12 thread on free conductor end
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 5 x 0.34 mm² (42 x 0.1 mm)
- Conductor colors brown, white, blue, black, green/yellow
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection

IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40°C up to +80°C

Cable, flexible installation

-5°C up to +80°C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

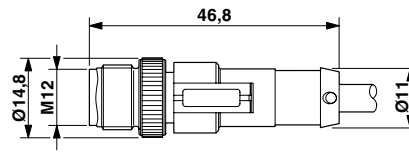
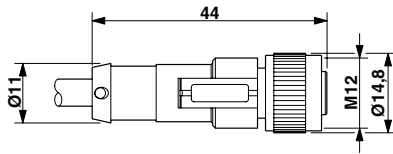
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight socket						
22260404	AB-C5- 2,0PUR-M12FS	2	60	4	No	1
22260405	AB-C5- 5,0PUR-M12FS	5	60	4	No	1
22260415	AB-C5-10,0PUR-M12FS	10	60	4	No	1
Angled socket						
22260406	AB-C5- 2,0PUR-M12FA	2	60	4	No	1
22260407	AB-C5- 5,0PUR-M12FA	5	60	4	No	1
22260418	AB-C5-10,0PUR-M12FA	10	60	4	No	1
Angled socket with LEDs						
22260408	AB-C5- 2,0PUR-M12FA-3L	2	24	4	3 LEDs	1
22260409	AB-C5- 5,0PUR-M12FA-3L	5	24	4	3 LEDs	1
22260416	AB-C5-10,0PUR-M12FA-3L	10	24	4	3 LEDs	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

Sensor/actuator cable: M 12 connector on M 12 socket



Sensor/actuator cable: M 12 connector on M 12 socket

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 5-pos. connector

- Plug design with M12 thread on socket with M12 thread
- Drag chain suitable
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 5 x 0.34 mm² (42 x 0.1 mm)
- Conductor colors brown, white, blue, black, green/yellow
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data

IP	Degree of protection
	IP65/IP68/IP69K
0-1	Ambient temperature (operation)
	Plug / socket
	-25 °C to +90 °C
	Cable, fixed installation
	-40 °C up to +80 °C
	Cable, flexible installation
	-5 °C up to +80 °C
	Contact material
	CuSn
	Contact surface material
	Ni/Au
	Coding
	A - Standard
	Material, knurls
	Zinc die-cast, (nickel-plated)
	Material of grip body
	TPU, hardly inflammable, self-extinguishing

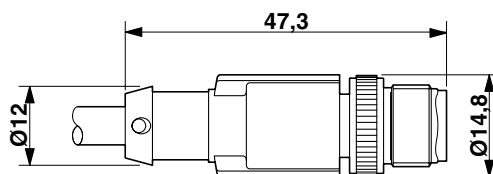
Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight connector on straight socket						
22260410	AB-C5-M12MS-0,3PUR-M12FS	0.3	60	4	No	1
22260411	AB-C5-M12MS-0,6PUR-M12FS	0.6	60	4	No	1
22260412	AB-C5-M12MS-1,0PUR-M12FS	1	60	4	No	1
22260413	AB-C5-M12MS-2,0PUR-M12FS	2	60	4	No	1

Copper price basis: including

Special cable lengths, other outer sheath materials (e.g. PVC) and individual connector types on request

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: shielded, M12 connector on free conductor end



Info

- Drag chain suitable

S/A cable: shielded, M12 connector on free conductor end

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 3, 4 and 5-position version

- Plug design with M12 thread on free conductor end
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 3 x 0.34 mm² (42 x 0.1 mm)
4 x 0.34 mm² (42 x 0.1 mm)
5 x 0.34 mm² (42 x 0.1 mm)
- Outer sheath: PUR, halogen-free, shielded
- Sheath color black

■ Technical data



Degree of protection

IP65/IP67/IP69K



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-25 °C up to +80 °C

Cable, flexible installation

-5 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	PU
3 pole straight connector					
22260453	AB-C3-M12MS- 2,0PUR-SH	2	250	4	1
22260454	AB-C3-M12MS- 5,0PUR-SH	5	250	4	1
22260455	AB-C3-M12MS-10,0PUR-SH	10	250	4	1
4 pole straight connector					
22260459	AB-C4-M12MS- 2,0PUR-SH	2	250	4	1
22260460	AB-C4-M12MS- 5,0PUR-SH	5	250	4	1
22260461	AB-C4-M12MS-10,0PUR-SH	10	250	4	1
5 pole straight connector					
22260465	AB-C5-M12MS- 2,0PUR-SH	2	60	4	1
22260466	AB-C5-M12MS- 5,0PUR-SH	5	60	4	1
22260467	AB-C5-M12MS-10,0PUR-SH	10	60	4	1

Copper price basis: including

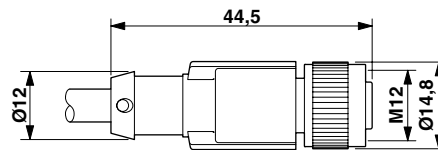
For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: shielded, M 12 socket on free conductor end



Info

- Drag chain suitable



S/A cable: shielded, M 12 socket on free conductor end

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 3, 4 and 5-position version

- Socket design with M12 thread on free conductor end
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 3 x 0.34 mm² (42 x 0.1 mm)
4 x 0.34 mm² (42 x 0.1 mm)
5 x 0.34 mm² (42 x 0.1 mm)
- Outer sheath: PUR, halogen-free, shielded
- Sheath color black

■ Technical data



Degree of protection

IP65/IP67/IP69K



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-25 °C up to +80 °C

Cable, flexible installation

-5 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

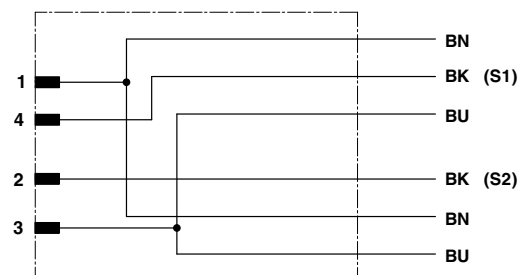
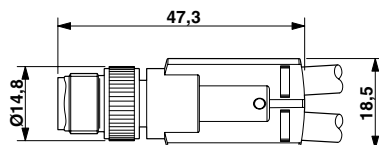
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
3 pole straight socket						
22260450	AB-C3- 2,0PUR-M12FS-SH	2	250	4	No	1
22260451	AB-C3- 5,0PUR-M12FS-SH	5	250	4	No	1
22260452	AB-C3-10,0PUR-M12FS-SH	10	250	4	No	1
4 pole straight socket						
22260456	AB-C4- 2,0PUR-M12FS-SH	2	250	4	No	1
22260457	AB-C4- 5,0PUR-M12FS-SH	5	250	4	No	1
22260458	AB-C4-10,0PUR-M12FS-SH	10	250	4	No	1
5 pole straight socket						
22260462	AB-C5- 2,0PUR-M12FS-SH	2	60	4	No	1
22260463	AB-C5- 5,0PUR-M12FS-SH	5	60	4	No	1
22260464	AB-C5-10,0PUR-M12FS-SH	10	60	4	No	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: straight M 12 Y plug on 2x free conductor end



S/A cable: straight M 12 Y plug on 2x free conductor end

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 4-pos. Y connector M 12

- Design as straight M 12 Y plug with 2 conductor exits
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 3 x 0.34 mm² (42 x 0.1 mm)
- Conductor colors brown, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection

IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40 °C up to +80 °C

Cable, flexible installation

-5 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal current I _N in A	PU
Y plug on 2x free conductor end				
22260500	AB-C3-M12Y-2,0PUR	2	4	1
22260513	AB-C3-M12Y-5,0PUR	5	4	1
22260526	AB-C3-M12Y-10,0PUR	10	4	1

Copper price basis: including

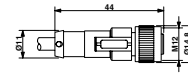
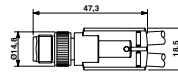
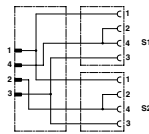
For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: straight M 12 Y plug on 2x M 12 socket



Info

- PIN 2+4 are bridged on M 12 sockets



S/A cable: straight M 12 Y plug on 2x M 12 socket

Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 4-pos. Y connector M 12 on 2 x M 12 socket (4-pos.)

- Design as straight M 12 Y plug with 2 conductor exits
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

Approvals (Norm references)



Design

- Permanently flexible control cable
- Design: 3 x 0.34 mm² (42 x 0.1 mm)
- Conductor colors brown, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

Technical data

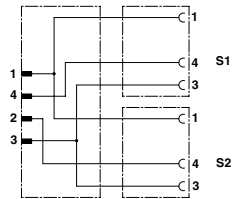
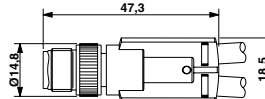
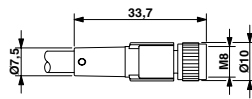
IP	Degree of protection IP65/IP68/IP69K
0+T	Ambient temperature (operation) Plug / socket -25 °C to +90 °C Cable, fixed installation -40 °C up to +80 °C Cable, flexible installation -5 °C up to +80 °C
	Contact material CuSn
	Contact surface material Ni/Au
	Coding A - Standard
	Material, knurls Zinc die-cast, (nickel-plated)
	Material of grip body TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal current I _N in A	Status display	PU
Y plug on straight socket					
22260501	AB-C3-M12Y-0,3PUR-M12FS-B	0.3	4	No	1
22260502	AB-C3-M12Y-0,6PUR-M12FS-B	0.6	4	No	1
22260503	AB-C3-M12Y-1,0PUR-M12FS-B	1	4	No	1
22260504	AB-C3-M12Y-2,0PUR-M12FS-B	2	4	No	1
Y plug on angled socket					
22260505	AB-C3-M12Y-0,3PUR-M12FA-B	0.3	4	No	1
22260506	AB-C3-M12Y-0,6PUR-M12FA-B	0.6	4	No	1
22260507	AB-C3-M12Y-1,0PUR-M12FA-B	1	4	No	1
22260508	AB-C3-M12Y-2,0PUR-M12FA-B	2	4	No	1
Y plug on angled socket with LEDs					
22260509	AB-C3-M12Y-0,3PUR-M12FA-2L-B	0.3	4	2 LEDs	1
22260510	AB-C3-M12Y-0,6PUR-M12FA-2L-B	0.6	4	2 LEDs	1
22260511	AB-C3-M12Y-1,0PUR-M12FA-2L-B	1	4	2 LEDs	1
22260512	AB-C3-M12Y-2,0PUR-M12FA-2L-B	2	4	2 LEDs	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: straight M 12 Y plug on 2x M8 socket



S/A cable: straight M 12 Y plug on 2x M8 socket

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 4-pos. Y connector M 12 on 2 x M8 socket (3-pos.)

- Design as straight M 12 Y plug with 2 conductor exits
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- Permanently flexible control cable
- Design: 3 x 0.25 mm² (42 x 0.1 mm)
- Conductor colors brown, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Technical data



Degree of protection
IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket
-25 °C to +90 °C
Cable, fixed installation
-40°C up to +80°C
Cable, flexible installation
-5°C up to +80°C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

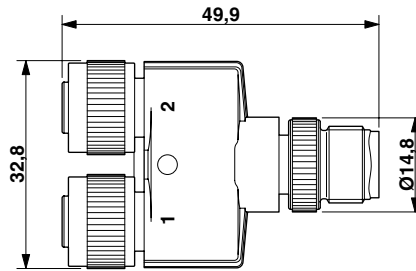
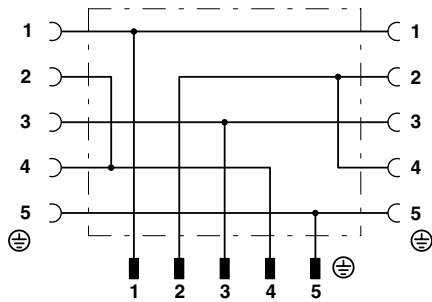
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal current I _N in A	Status display	PU
Y plug on straight socket					
22260514	AB-C3-M12Y-0,3PUR-M8FS	0.3	3	No	1
22260515	AB-C3-M12Y-0,6PUR-M8FS	0.6	3	No	1
22260516	AB-C3-M12Y-1,0PUR-M8FS	1	3	No	1
22260517	AB-C3-M12Y-2,0PUR-M8FS	2	3	No	1
Y plug on angled socket					
22260518	AB-C3-M12Y-0,3PUR-M8FA	0.3	3	No	1
22260519	AB-C3-M12Y-0,6PUR-M8FA	0.6	3	No	1
22260520	AB-C3-M12Y-1,0PUR-M8FA	1	3	No	1
22260521	AB-C3-M12Y-2,0PUR-M8FA	2	3	No	1
Y plug on angled socket with LEDs					
22260522	AB-C3-M12Y-0,3PUR-M8FA-2L	0.3	3	2 LEDs	1
22260523	AB-C3-M12Y-0,6PUR-M8FA-2L	0.6	3	2 LEDs	1
22260524	AB-C3-M12Y-1,0PUR-M8FA-2L	1	3	2 LEDs	1
22260525	AB-C3-M12Y-2,0PUR-M8FA-2L	2	3	2 LEDs	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

Y distributor



Part no.: 22260600

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering

- Tool shop
- Automotive industry

■ Product features

- Design as M12 and M8
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Technical data



Degree of protection
IP65/IP67



Ambient temperature (operation)

Plug / socket
-25 °C to +90 °C

Contact material
CuZn

Contact surface material
Ni/Au

Coding
A - Standard

Material, knurls
Zinc die-cast, (nickel-plated)

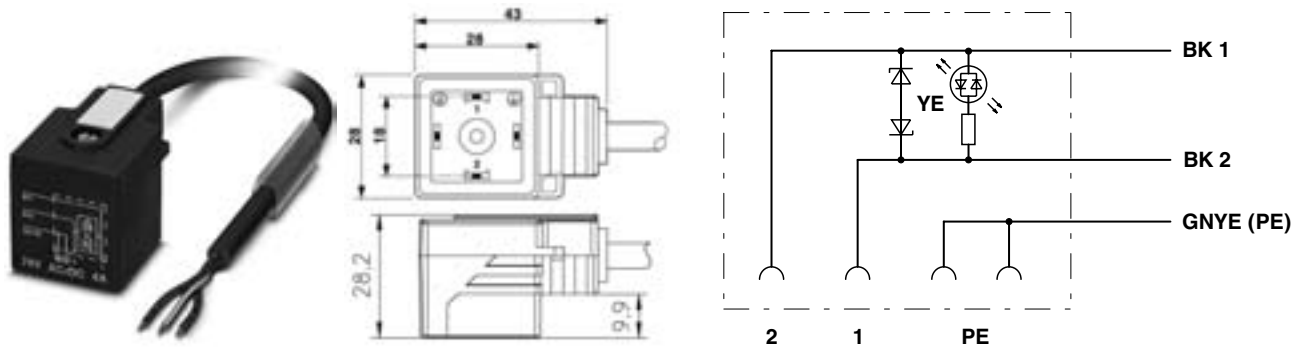
Material of grip body
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Nominal voltage U_N in V	Nominal current I_N in A	Number of poles	PU
M12 connector Y distributor on 2x bridged M12 socket					
22260600	AB-C3-M12Y-2XM12FS B E	60	4	5	1
M12 connector Y distributor on 2x M12 socket					
22260601	AB-C3-M12Y-2XM12FS E	60	4	4	1
M12 connector Y distributor on 2x parallel M12 socket					
22260602	AB-C5-M12Y-2XM12FS V	60	4	5	1
M8 connector Y distributor on 2x M8 socket					
22260603	AB-C3-M8Y-2XM8FS	30	3	3	1
M8 connector Y distributor 2x parallel M8 socket					
22260604	AB-C3-M8Y-2XM8FS V	60	3	3	1

Note: Tabular value 'Number of poles' is valid for sockets

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: 3-pos., valve connector on free conductor end



Part no.: 22260584

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 3-pos. valve plug

- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Design

- Cable design: 3 x 0.5 mm² (28 x 0.15 mm)
- Conductor colors: black 1, black 2, green/yellow
- Outer sheath: PUR, halogen-free
- Sheath color: black (RAL 7021)
- Outer diameter: 4,5 mm
- Can be used in drag chain

■ Technical data



Degree of protection
IP 67



Ambient temperature (operation)

Valve plug
-20°C up to +85°C
Cable, fixed installation
-40°C up to +80°C
Cable, flexible installation
-15°C up to +80°C

Contact material

CuSn

Contact surface material

Ag

Coding

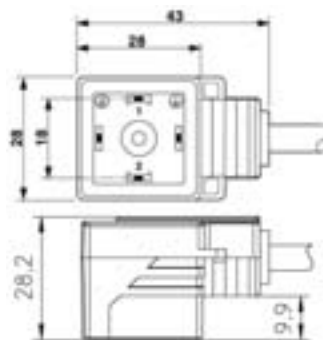
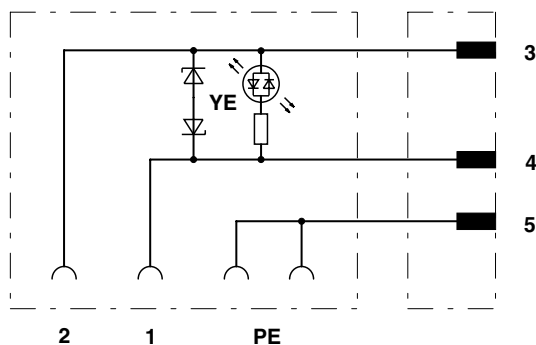
A - Standard

Part number	Article designation	Length in m	Nominal voltage U_N in V	Nominal current I_N in A	Status display	PU
Valve connector Type A (18 mm)						
22260584	AB-C3- 2,0PUR-A-1L-S	2	24	4	1 LED	1
22260576	AB-C3- 5,0PUR-A-1L-S	5	24	4	1 LED	1
22260577	AB-C3-10,0PUR-A-1L-S	10	24	4	1 LED	1
Valve connector Type B (10 mm)						
22260585	AB-C3- 2,0PUR-B-1L-S	2	24	4	1 LED	1
22260578	AB-C3- 5,0PUR-B-1L-S	5	24	4	1 LED	1
22260579	AB-C3-10,0PUR-B-1L-S	10	24	4	1 LED	1
Valve connector Type BI (11 mm)						
22260586	AB-C3- 2,0PUR-BI-1L-S	2	24	4	1 LED	1
22260580	AB-C3- 5,0PUR-BI-1L-S	5	24	4	1 LED	1
22260581	AB-C3-10,0PUR-BI-1L-S	10	24	4	1 LED	1
Valve connector Type C (8 mm)						
22260587	AB-C3- 2,0PUR-C-1L-S	2	24	4	1 LED	1
22260582	AB-C3- 5,0PUR-C-1L-S	5	24	4	1 LED	1
22260583	AB-C3-10,0PUR-C-1L-S	10	24	4	1 LED	1
Valve connector Type CI (9.4 mm)						
22260588	AB-C3- 2,0PUR-CI-1L-S	2	24	4	1 LED	1
22260574	AB-C3- 5,0PUR-CI-1L-S	5	24	4	1 LED	1
22260575	AB-C3-10,0PUR-CI-1L-S	10	24	4	1 LED	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: 3-pos., valve connector on straight M12 plug



Part no.: 22260550

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 3-pos. valve plug

- Protection type: IP67
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Design

- Cable design: 3 x 0.5 mm² (28 x 0.15 mm)
- Conductor colors: black 1, black 2, green/yellow
- Outer sheath: PUR, halogen-free
- Sheath color: black (RAL 7021)
- Outer diameter: 4,5 mm
- Can be used in drag chain

■ Technical data



Degree of protection

IP 67



Ambient temperature (operation)

Valve plug

-20°C up to +85°C

Plug / Socket

-25°C to +90°C

Cable, fixed installation

-40°C up to +80°C

Cable, flexible installation

-15°C up to +80°C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

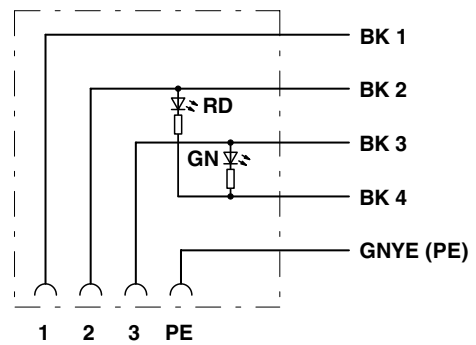
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight connector on valve connector type A (18 mm)						
22260550	AB-C3-M12MS-0,3PUR-A-1L-S	0.3	24	4	1 LED	1
22260551	AB-C3-M12MS-0,6PUR-A-1L-S	0.6	24	4	1 LED	1
22260552	AB-C3-M12MS-1,0PUR-A-1L-S	1	24	4	1 LED	1
22260553	AB-C3-M12MS-2,0PUR-A-1L-S	2	24	4	1 LED	1
Straight connector on valve connector type B (10 mm)						
22260558	AB-C3-M12MS-0,3PUR-B-1L-S	0.3	24	4	1 LED	1
22260559	AB-C3-M12MS-0,6PUR-B-1L-S	0.6	24	4	1 LED	1
22260560	AB-C3-M12MS-1,0PUR-B-1L-S	1	24	4	1 LED	1
22260561	AB-C3-M12MS-2,0PUR-B-1L-S	2	24	4	1 LED	1
Straight connector on valve connector type BI (11 mm)						
22260554	AB-C3-M12MS-0,3PUR-BI-1L-S	0.3	24	4	1 LED	1
22260555	AB-C3-M12MS-0,6PUR-BI-1L-S	0.6	24	4	1 LED	1
22260556	AB-C3-M12MS-1,0PUR-BI-1L-S	1	24	4	1 LED	1
22260557	AB-C3-M12MS-2,0PUR-BI-1L-S	2	24	4	1 LED	1
Straight connector on valve connector type C (8 mm)						
22260566	AB-C3-M12MS-0,3PUR-C-1L-S	0.3	24	4	1 LED	1
22260567	AB-C3-M12MS-0,6PUR-C-1L-S	0.6	24	4	1 LED	1
22260568	AB-C3-M12MS-1,0PUR-C-1L-S	1	24	4	1 LED	1
22260569	AB-C3-M12MS-2,0PUR-C-1L-S	2	24	4	1 LED	1
Straight connector on valve connector type CI (9.4 mm)						
22260562	AB-C3-M12MS-0,3PUR-CI-1L-S	0.3	24	4	1 LED	1
22260563	AB-C3-M12MS-0,6PUR-CI-1L-S	0.6	24	4	1 LED	1
22260564	AB-C3-M12MS-1,0PUR-CI-1L-S	1	24	4	1 LED	1
22260565	AB-C3-M12MS-2,0PUR-CI-1L-S	2	24	4	1 LED	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: 5-pos., valve connector on free conductor end, for pressure switch



S/A cable: 5-pos., valve connector on free conductor end, for pressure switch

■ Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 5-pos. valve plug

- Valve plug for pressure switch, PE bridged, 18 mm contact spacing
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Design

- Cable design: 5 x 0.5 mm² (28 x 0.15 mm)
- Conductor colors: black 1, black 2, black 3, black 4, green/yellow
- Outer sheath: PUR, halogen-free
- Sheath color: black (RAL 7021)
- Outer diameter: 5,3 mm
- Can be used in drag chain

■ Technical data



Degree of protection
IP 67



Ambient temperature (operation)

Valve plug
-20°C up to +85°C
Cable, fixed installation
-40°C up to +80°C
Cable, flexible installation
-15°C up to +80°C

Contact material

CuSn

Contact surface material

Ag

Coding

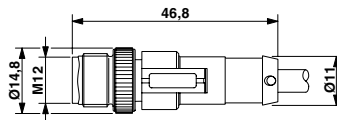
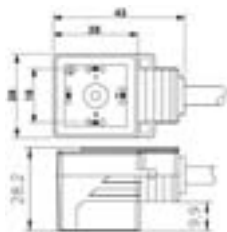
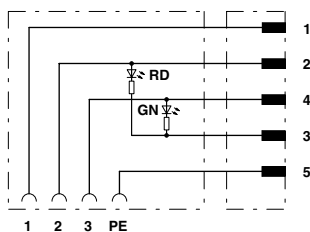
A - Standard

Part number	Article designation	Length in m	Nominal voltage U _n in V	Nominal current I _n in A	Status display	PU
Valve connector for pressure switch (18 mm)						
22260589	AB-C5-2,0PUR-AD-2L	2	24	4	2 LEDs	1
22260590	AB-C5-5,0PUR-AD-2L	5	24	4	2 LEDs	1
22260591	AB-C5-10,0PUR-AD-2L	10	24	4	2 LEDs	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A cable: 5-pos., valve connector on straight M12 plug, for pressure switch



S/A cable: 5-pos., valve connector on straight M12 plug, for pressure switch

Benefits

- Cost saving because of quick and easy installation
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 5-pos. valve plug

- Valve plug for pressure switch, PE bridged, 18 mm contact spacing
- The cables have marker carriers
- Free of substances which would hinder coating with paint or varnish

Approvals (Norm references)



Design

- Cable design: 5 x 0.5 mm² (28 x 0.15 mm)
- Conductor colors: black 1, black 2, black 3, black 4, green/yellow
- Outer sheath: PUR, halogen-free
- Sheath color: black (RAL 7021)
- Outer diameter: 5,3 mm
- Can be used in drag chain

Technical data



Degree of protection
IP 67



Ambient temperature (operation)

Valve plug
-20°C up to +85°C
Plug / Socket
-25°C to +90°C
Cable, fixed installation
-40°C up to +80°C
Cable, flexible installation
-15°C up to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Material, knurls
Zinc die-cast, (nickel-plated)

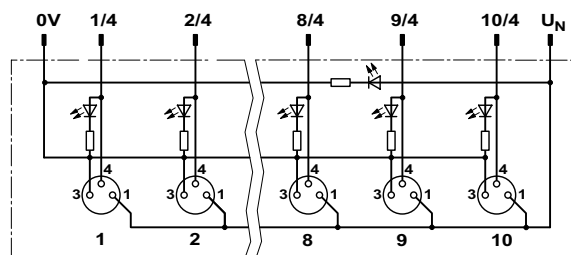
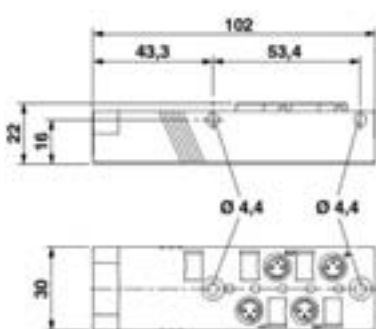
Material of grip body
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U _N in V	Nominal current I _N in A	Status display	PU
Straight connector on valve connector for pressure switch						
22260573	AB-C5-M12MS-0,3PUR-AD-2L	0.3	24	4	2 LEDs	1
22260572	AB-C5-M12MS-0,6PUR-AD-2L	0.6	24	4	2 LEDs	1
22260571	AB-C5-M12MS-1,0PUR-AD-2L	1	24	4	2 LEDs	1
22260570	AB-C5-M12MS-2,0PUR-AD-2L	2	24	4	2 LEDs	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A box with M8 slots and master cable



Part no.: 22260026

■ Benefits

- Inexpensive and efficient wiring of sensors and actuators
- Instead of numerous individual conductors, one master cable is laid to the control unit
- The master cable is designed as a hybrid cable carrying signals and power
- There are no assembly costs because the master cable is pre-assembled

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- With permanently connected master cable
- Single-occupied sensor/actuator box
- LEDs indicate the operating mode of the distributor and the status of the sensors
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Design

- PUR/PVC cable
- Permanently flexible control cable
- Sheath color black

■ Technical data

IP	Degree of protection IP65/IP67
0-80°C	Ambient temperature (operation) -30°C bis 80°C Cable, fixed installation -40°C up to 90°C Cable, flexible installation -5°C up to 80°C
Amp.	Current carrying capacity per slot 2 A

Part number	Article designation	Length in m	Number of slots	Nominal voltage U_N in V	SACB total current in A	Status display	PU
with M 8 master cable connection							
22260026	AB-B4-M8L-4-5,0PUR	5.0	4	24	6	LEDs	1
22260027	AB-B4-M8L-4-10,0PUR	10.0	4	24	6	LEDs	1
22260028	AB-B6-M8L-6-5,0PUR	5.0	6	24	6	LEDs	1
22260029	AB-B6-M8L-6-10,0PUR	10.0	6	24	6	LEDs	1
22260030	AB-B8-M8L-8-5,0PUR	5.0	8	24	6	LEDs	1
22260031	AB-B8-M8L-8-10,0PUR	10.0	8	24	6	LEDs	1
22260032	AB-B10-M8L-10-5,0PUR	5.0	10	24	6	LEDs	1
22260033	AB-B10-M8L-10-10,0PUR	10.0	10	24	6	LEDs	1

Copper price basis: including

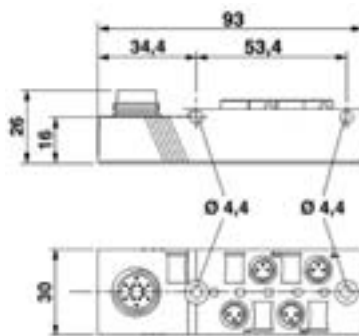
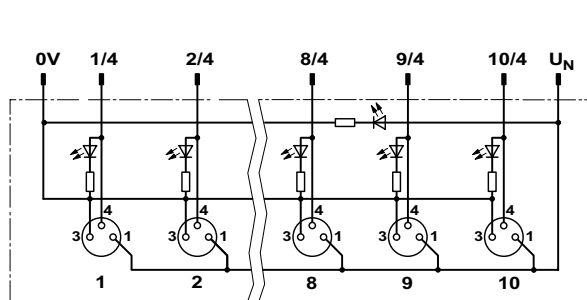
Unused female connectors must be covered with protective caps (see accessories) to ensure IP65/67

For detailed information please see the data sheet (www.lappautomation.com)

■ Accessories

- Screw plug for unoccupied sockets see page 41

S/A box, M8 slots and master cable connection M 16/M 12



Part no.: 22260034

■ Benefits

- Inexpensive and efficient wiring of sensors and actuators
- Instead of numerous individual conductors, one master cable is laid to the control unit
- The pluggable connection ensures universal pluggability as well as simple on-site assembly

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- With M12/M16 plug-in connection
- Single-occupied sensor/actuator box
- LEDs indicate the operating mode of the distributor and the status of the sensors
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Suitable cables

- M16 socket with connected master cable see page 39
- M12 socket with connected master cable see page 40

■ Technical data

IP	Degree of protection IP65/IP67
0	Ambient temperature (operation) -30°C bis 80°C
Amp.	Current carrying capacity per slot 2 A

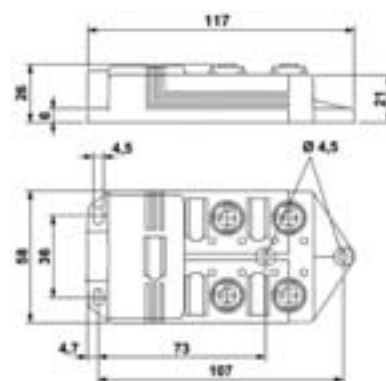
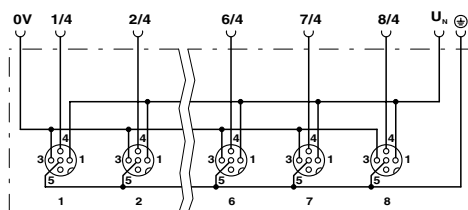
Part number	Article designation	Number of slots	Nominal voltage U_N in V	SACB total current in A	Status display	PU
With M16, 8-pos. Master cable connection						
22260034	AB-B4-M8L-4-M16	4	24	6	LEDs	1
With M16, 10-pos. Master cable connection						
22260035	AB-B6-M8L-6-M16	6	24	6	LEDs	1
With M16, 12-pos. Master cable connection						
22260036	AB-B8-M8L-8-M16	8	24	6	LEDs	1
With M16, 14-pos. Master cable connection						
22260037	AB-B10-M8L-10-M16	10	24	6	LEDs	1
With M12, 8-pos. Master cable connection						
22260038	AB-B4-M8L-4-M12	4	24	4	LEDs	1
22260039	AB-B6-M8L-6-M12	6	24	4	LEDs	1

Unused female connectors must be covered with protective caps (see accessories) to ensure IP65/67
For detailed information please see the data sheet (www.lappautomation.com)

■ Accessories

- Screw plug for unoccupied sockets see page 41

S/A box with M12 slots and master cable



Part no.: 22260010

■ Benefits

- Inexpensive and efficient wiring of sensors and actuators
- Instead of numerous individual conductors, one master cable is laid to the control unit
- The master cable is designed as a hybrid cable carrying signals and power
- There are no assembly costs because the master cable is pre-assembled

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- With permanently connected master cable
- Single or double-occupied sensor/actuator box
- With LEDs for sensor status display without LEDs for analog signals
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Design

- PUR/PVC cable
- Permanently flexible control cable
- Sheath color black

■ Technical data

IP	Degree of protection
	IP65/IP67/IP69K
Amp.	Max. current carrying capacity per path
	2 A
Amp.	Current carrying capacity per slot
	4 A

Part number	Article designation	Length in m	Number of slots	Nominal voltage U _N in V	SACB total current in A	Status display	PU
Single occupied boxes, without LEDs							
22260010	AB-B4-M12-4-5,0PUR	5.0	4	120	12	No	1
22260011	AB-B4-M12-4-10,0PUR	10.0	4	120	12	No	1
22260014	AB-B8-M12-8-5,0PUR	5.0	8	120	12	No	1
22260015	AB-B8-M12-8-10,0PUR	10.0	8	120	12	No	1
Single occupied boxes, with LEDs							
22260018	AB-B4-M12L-4-5,0PUR	5.0	4	24	12	LEDs	1
22260019	AB-B4-M12L-4-10,0PUR	10.0	4	24	12	LEDs	1
22260022	AB-B8-M12L-8-5,0PUR	5.0	8	24	12	LEDs	1
22260023	AB-B8-M12L-8-10,0PUR	10.0	8	24	12	LEDs	1
Double occupied boxes, without LEDs							
22260012	AB-B4-M12-8-5,0PUR	5.0	4	120	12	No	1
22260013	AB-B4-M12-8-10,0PUR	10.0	4	120	12	No	1
22260016	AB-B8-M12-16-5,0PUR	5.0	8	120	12	No	1
22260017	AB-B8-M12-16-10,0PUR	10.0	8	120	12	No	1
Double occupied boxes, with LEDs							
22260020	AB-B4-M12L-8-5,0PUR	5.0	4	24	12	LEDs	1
22260021	AB-B4-M12L-8-10,0PUR	10.0	4	24	12	LEDs	1
22260024	AB-B8-M12L-16-5,0PUR	5.0	8	24	12	LEDs	1
22260025	AB-B8-M12L-16-10,0PUR	10.0	8	24	12	LEDs	1

Copper price basis: including

Unused female connectors must be covered with protective caps (see accessories) to ensure IP65/67

For detailed information please see the data sheet (www.lappautomation.com)

■ Accessories

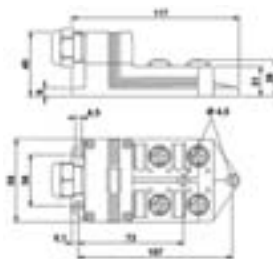
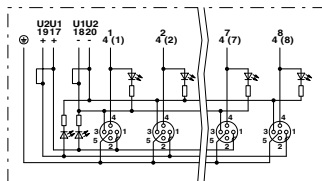
- Screw plug for unoccupied sockets see page 41

S/A box with M12 slots and master cable connection



Info

- For individual mastercable assembly



Part no.: 22260005

Benefits

- Inexpensive and efficient wiring of sensors and actuators
- Instead of numerous individual conductors, one master cable is laid to the control unit
- The pluggable connection ensures universal pluggability as well as simple on-site assembly

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- With pluggable screw connection

- Single or double-occupied sensor/actuator box
- With LEDs for sensor status display without LEDs for analog signals
- Free of substances which would hinder coating with paint or varnish

Approvals (Norm references)



Suitable cables

- UNITRONIC® SENSOR master cable bulk stock see page 38

Suitable tools

- Kraftform® adjustable torque screwdriver/ Kraftform Kompakt® Set see page 72

Technical data

IP	Degree of protection IP65/IP67/IP69K
0	Ambient temperature (operation) -30°C bis 80°C
Amp.	Max. current carrying capacity per path 2 A
Amp.	Current carrying capacity per slot 4 A

Part number	Article designation	Number of slots	Nominal voltage U_N in V	SACB total current in A	Status display	PU
Single occupied boxes, without LEDs						
22260005	AB-B4-M12-4-C	4	120	10	No	1
22260007	AB-B8-M12-8-C	8	120	10	No	1
Single occupied boxes, with LEDs						
22260001	AB-B4-M12L-4-C	4	24	10	LEDs	1
22260003	AB-B8-M12L-8-C	8	24	10	LEDs	1
Double occupied boxes, without LEDs						
22260006	AB-B4-M12-8-C	4	120	10	No	1
22260008	AB-B8-M12-16-C	8	120	10	No	1
Double occupied boxes, with LEDs						
22260002	AB-B4-M12L-8-C	4	24	10	LEDs	1
22260004	AB-B8-M12L-16-C	8	24	10	LEDs	1

Unused female connectors must be covered with protective caps (see accessories) to ensure IP65/67

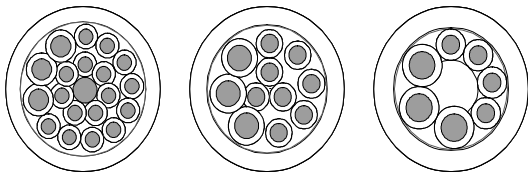
For detailed information please see the data sheet (www.lappautomation.com)

Accessories

- Screw plug for unoccupied sockets see page 41

New

UNITRONIC® SENSOR master cable bulk stock



Info

- Customised construction supported

■ Benefits

- Inexpensive and efficient wiring for S/A boxes with pluggable master cable connection
- Universally useable for S/A installations

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering

- Tool shop
- Automotive industry

■ Product features

- Cores for Power Supply: 3x0,75 mm² and 3x1,0 mm²
- Cores for Signalling cable: 4x0,34 mm², 8x0,5 mm, 16x0,5 mm²
- Can be used in drag chain
- Halogen-free

■ Design

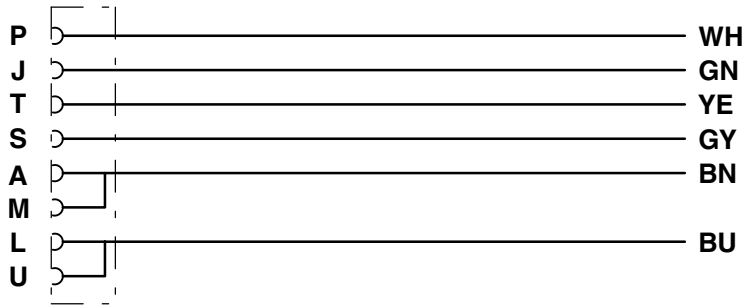
- UNITRONIC® SENSOR Li9Y11 COMBI
Conductor: bare copper strand, single wire diameter: 0,1 mm for 0,34 mm², 0,18 mm for 0,5 mm², 0,205 for 0,75 mm², 0,15 for 1,0 mm². Core insulation PP halogenfree, outer sheath PUR acc. DIN VDE 0250 part 818 halogenfree.
- Sheath color: black (similar RAL 9005)
Core colors: see datasheet

Part number	Article designation	Dimension in mm²	Outer diameter in mm approx.	Core / sheath material	Colour	Copper index kg/km
UNITRONIC® SENSOR COMBI						
7038880	Li9Y11Y	3x0,75+4x0,34	6.6	PP/PUR	black	34.5
7038881	Li9Y11Y	3x1,0+8x0,5	8.4	PP/PUR	black	67.2
7038882	Li9Y11Y	3x1,0+16x0,5	9.8	PP/PUR	black	105.6

■ Accessories

- S/A box with M12 slots and master cable connection see page 37

M 16 socket with connected master cable



Part no.: 22260607

■ Benefits

- Connecting cable for M8 boxes with 4 to 10 slots
- M16 connection

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- Design as socket variant with M16 thread
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Design

- PUR/PVC cable
- Permanently flexible control cable
- Sheath color black

■ Technical data



Degree of protection
IP 67



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40 °C up to 90 °C

Cable, flexible installation

-5 °C up to 80 °C

Contact material

CuZn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Nickel-plated brass

Material of grip body

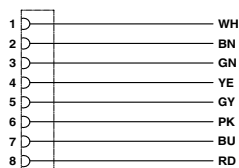
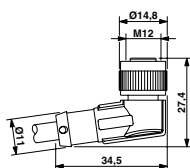
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U_N in V	Nominal current I_N in A	PU
8 pole angled socket					
22260607	AB-C8- 5,0PUR-M16FA	5	125	4	1
22260608	AB-C8-10,0PUR-M16FA	10	125	4	1
10 pole angled socket					
22260609	AB-C10- 5,0PUR-M16FA	5	125	4	1
22260610	AB-C10-10,0PUR-M16FA	10	125	4	1
12 pole angled socket					
22260611	AB-C12- 5,0PUR-M16FA	5	125	4	1
22260612	AB-C12-10,0PUR-M16FA	10	125	4	1
14 pole angled socket					
22260613	AB-C14- 5,0PUR-M16FA	5	125	4	1
22260614	AB-C14-10,0PUR-M16FA	10	125	4	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

M 12 socket with connected master cable



M 12 socket with connected master cable

**Info**

- Drag chain suitable

■ Benefits

- Connecting cable for M8 boxes with 4 to 6 slots
- M 12 connection

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- Design as socket variant with M 12 thread
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- PUR/PVC cable
- Permanently flexible control cable
- Sheath color black

■ Technical data



Degree of protection
IP65/IP68/IP69K



Ambient temperature (operation)

Plug / socket
-25 °C to +90 °C
Cable, fixed installation
-40 °C up to +80 °C
Cable, flexible installation
-5 °C up to +80 °C

Contact material
CuZn

Contact surface material
Ni/Au

Coding
A - Standard

Material, knurls
Zinc die-cast, (nickel-plated)

Material of grip body
TPU, hardly inflammable, self-extinguishing

Part number	Article designation	Length in m	Nominal voltage U_N in V	Nominal current I_N in A	PU
8 pole angled connector					
22260615	AB-C8-5,0PUR-M12FA	5	30	2	1
22260616	AB-C8-10,0PUR-M12FA	10	30	2	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

Screw plug for unoccupied sockets



Screw plug for unoccupied sockets

■ Benefits

- Protective cap for unoccupied M8/M12 slots

■ Application range

- Automation technology
- Mechanical engineering

- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Suitable tools

- Kraftform® adjustable torque screwdriver/
Kraftform Kompakt® Set see page 72

Part number	Article designation	PU
M8		
22260606	AB-B-M8-PC	1
M12		
22260605	AB-B-M12-PC	1

For detailed information please see the data sheet (www.lappautomation.com)

Complete connection hood with 4, 6 or 8 slots



Complete connection hood with 4, 6 or 8 slots

■ Benefits

- Pluggable screw connection as accessory for S/A-Box with pluggable master cable connection
- The pluggable connection ensures universal pluggability as well as simple on-site assembly

■ Application range

- Automation technology

- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- Accessory for SA-Box with pluggable master cable connection
- With pluggable screw connection

■ Approvals (Norm references)



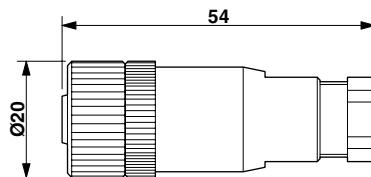
■ Suitable tools

- Kraftform® adjustable torque screwdriver/ Kraftform Kompakt® Set see page 72

Part number	Article designation	PU
Accessories		
22260009	AB-B-HC	1

For detailed information please see the data sheet (www.lappautomation.com)

S/A M12 connectors that can be assembled



Part no.: 22260127

■ Benefits

- Quick and easy on-site assembly
- Creating individual cable lengths
- Standardized interfaces
- No special tools required for connecting the cables (quick connection designs)

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 4 and 5-position version
- Shielded and unshielded version
- Fast connection and screw connection design
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Suitable cables

- Cable for sensor / actuator components see page 45

■ Technical data

IP	Degree of protection
IP 67	
0+T	Ambient temperature (operation)
	Plug / socket
	-40°C to +85°C
	Contact material
	CuZn
	Contact surface material
	CuSnZn
	Coding
	A - Standard

Part number	Article designation	Number of poles	Conductor cross section stranded min. in mm ²	Conductor cross section stranded max. in mm ²	Cable Diameter min in mm	Cable Diameter max in mm	Nominal voltage U _N in V	Nominal current I _N in A	PU
Straight connector, fast connection (Insulation-displacement)									
22260132	AB-C4-M12MS-F0,34	4	0.14	0.34	3.5	6	125	4	1
22260134	AB-C4-M12MS-F0,75	4	0.34	0.75	4	8	250	4	1
Straight connector, screw connection									
22260129	AB-C5-M12MS-PG 7	5	0.25	0.75	4	6	60	4	1
Straight socket, fast connection (Insulation-displacement)									
22260131	AB-C4-M12FS-F0,34	4	0.14	0.34	3.5	6	125	4	1
22260133	AB-C4-M12FS-F0,75	4	0.34	0.75	4	8	250	4	1
Straight socket, screw connection									
22260127	AB-C5-M12FS-PG 7	5	0.25	0.75	4	6	60	4	1
Angled connector, screw connection									
22260130	AB-C5-M12MA-PG 7	5	0.25	0.75	4	6	60	4	1
Angled socket, screw connection									
22260128	AB-C5-M12FA-PG 7	5	0.25	0.75	4	6	60	4	1
Straight connector, shielded, screw connection									
22260135	AB-C5-M12MS-PG9-SH	5	0.25	0.75	6	8	60	4	1
Straight socket, shielded, screw connection									
22260136	AB-C5-M12FS-PG9-SH	5	0.25	0.75	6	8	60	4	1

For detailed information please see the data sheet (www.lappautomation.com)

S/A M8 connectors that can be assembled



Part no.: 22260124



Part no.: 22260120

■ Benefits

- Quick and easy on-site assembly
- Creating individual cable lengths
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 3 and 4-position version
- Fast connection and screw connection design
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Suitable cables

- Cable for sensor / actuator components
see page 45

■ Technical data



Degree of protection
IP 68



Ambient temperature (operation)
Plug / socket
-25 °C to +90 °C

Contact material
CuZn

Contact surface material
Au

Coding
A - Standard

Part number	Article designation	Number of poles	Conductor cross section stranded min. in mm ²	Conductor cross section stranded max. in mm ²	Cable Diameter min in mm	Cable Diameter max in mm	Nominal voltage U _N in V	Nominal current I _N in A	PU
Straight connector, screw connection									
22260120	AB-C3-M8MS	3	0.14	0.5	3.5	5	60	4	1
22260121	AB-C4-M8MS	4	0.14	0.5	3.5	5	30	4	1
Straight connector, fast connection (Piercing)									
22260122	AB-C3-M8MS-P	3	0.14	0.38	3	5	60	4	1
22260123	AB-C4-M8MS-P	4	0.14	0.38	3	5	30	4	1
Straight socket, screw connection									
22260125	AB-C3-M8FS	3	0.14	0.5	3.5	5	60	4	1
22260126	AB-C4-M8FS	4	0.14	0.5	3.5	5	30	4	1
Straight socket, fast connection (Piercing)									
22260124	AB-C3-M8FS-P	3	0.14	0.38	3	5	60	4	1
22260119	AB-C4-M8FS-P	4	0.14	0.38	3	5	30	4	1

For detailed information please see the data sheet (www.lappautomation.com)

UNITRONIC® SENSOR

LAPP KABEL STUTTGART UNITRONIC SENSOR

■ Application range

- Cables for UNITRONIC® Fieldbus sensor-/actuator wiring requirements
- Data transmission cables to connect to M8, M12 connectors
- Automation technology
- Mechanical engineering
- Plant engineering

■ Product features

- Core colour in accordance with DIN EN 50044
- 3x 0.34 mm²
1= brown, 2= blue, 3= black
- 4x 0.34 mm²
1= brown, 2= white, 3= blue, 4= black

- 5x 0.25 mm² or 0.34 mm²
1= brown, 2= white, 3= blue, 4= black, 5=grey
- 8x 0.25 mm²
1= white, 2=brown, 3= green, 4= yellow, 5= grey, 6= pink, 7=blue, 8= red

■ Approvals (Norm references)



■ Design

- UNITRONIC® SENSOR LifYY
Conductor: Superfine bare copper strand in accordance with DIN VDE 0295 Class 6; Core insulation PCV, Outer sheath PVC vinyl

- UNITRONIC® SENSOR DESINA® LifY11Y
Stranded bare copper conductor, superfine. In accordance with VDE 0295 Class 6, special PVC insulation, cores twisted in layers, core ident code in accordance with DESINA® (brown, white, blue, black). Outer sheath of special polyurethane based compound; colour yellow in acc. to RAL 1021; flame retardant acc. to IEC 60332-1-2. Operating voltage= 48 V, Peak working voltage= 300 V.
- UNITRONIC® SENSOR FD UL/CSA - LifY11Y
Approved AWM UL-style 20549, 80°C / 300 V. Conductor: Cu wire, bare, super-fine strands in accordance with DIN VDE 0295 class 6. Core insulation: modified polypropylene (PP), outer sheath: halogen-free polyurethane (PUR), matt, adhesion free
- UNITRONIC® SENSOR FD series cables are especially suited for power chain use

Part number	Article designation	Dimension in mm ²	Outer diameter in mm approx.	Core / sheath material	Colour	Copper index kg/km
UNITRONIC® SENSOR						
7038859	S-LifYY **	3x0,34	4.8	PVC/PVC	black	9.8
7038860	S-LifYY **	4x0,34	4.8	PVC/PVC	black	13.1
0040434	DESINA **	4x0,34	5.2	PVC/PVC	yellow RAL 1021	13.5
7038861	S-LifY11Y **	4x0,34	4.8	PVC/PUR	black	13.1
7038862	S-LifY11Y **	5x0,25	4.9	PVC/PUR	black	12.0
UNITRONIC® SENSOR FD UL/CSA						
7038864	Li9Y11Y **	3x0,34	4.6	PP/PUR	black	9.8
7038865	Li9Y11Y **	4x0,34	4.7	PP/PUR	black	13.0
7038866	Li9Y11Y **	5x0,34	5.1	PP/PUR	black	16.0
7038867	Li9Y11Y **	5x0,25	4.7	PP/PUR	black	12.0
7038868	Li9Y11Y **	8x0,25	5.9	PP/PUR	black	19.0

Copper price basis: EUR 150 / 100 kg

Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths

Cables are printed

Further types on request

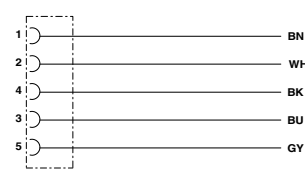
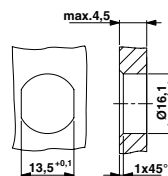
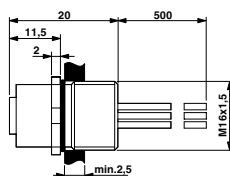
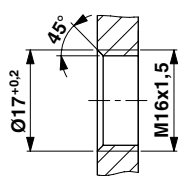
■ Accessories

- S/A M12 connectors that can be assembled see page 43
- S/A M8 connectors that can be assembled see page 44
- STAR STRIP stripping tool see main catalogue 2008/09 page 824
- SMARTSTRIP stripping tool see main catalogue 2008/09 page 825

S/A M12 flush-type connectors with M16 fastening thread



Part no.: 22260107



■ Benefits

- Flexible connection solutions for individual device concepts
- Simple installation in devices
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- M12 panel feed-through with punched on single litz wires
- Panel feed-through with M16 fastening thread
- Front mounting
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Design

- PUR halogen-free single litz wires, l = 0.5 m
- 0,34 mm²

■ Technical data



Degree of protection
IP 67



Ambient temperature (operation)
Plug / socket
-25°C to +85°C

Contact material
CuZn

Contact surface material
Au

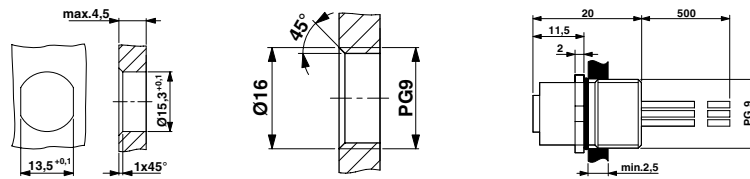
Coding
A - Standard

Part number	Article designation	Number of poles	Conductor cross section in mm ²	Nominal voltage U _N in V	Nominal current I _N in A	PU
M12 flush-type connector pin for front mounting						
22260108	AB-C4-M12MS-M16-0,5	4	0.34	250	4	1
22260106	AB-C5-M12MS-M16-0,5	5	0.34	60	4	1
M12 flush-type connector socket for front mounting						
22260107	AB-C4-M12FS-M16-0,5	4	0.34	250	4	1
22260105	AB-C5-M12FS-M16-0,5	5	0.34	60	4	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A M 12 flush-type connectors with PG9 fastening thread



Part no.: 22260114

■ Benefits

- Flexible connection solutions for individual device concepts
- Simple installation in devices
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- M 12 panel feed-through with punched on single litz wires
- Panel feed-through with PG9 fastening thread
- Models for front and rear mounting
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Design

- PUR halogen-free single litz wires, l = 0.5 m
- 0,34 mm²

■ Technical data

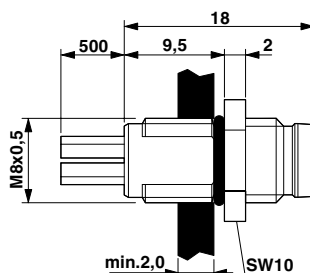
IP	Degree of protection
IP 67	
0-1	Ambient temperature (operation)
	Plug / socket
	-25°C to +85°C
	Contact material
	CuZn
	Contact surface material
	Au
	Coding
	A - Standard

Part number	Article designation	Number of poles	Conductor cross section in mm ²	Nominal voltage U _N in V	Nominal current I _N in A	PU
M 12 flush-type connector pin for rear mounting						
22260117	AB-C4-DSI-M12MS-PG9-0,5	4	0.34	250	4	1
22260115	AB-C5-DSI-M12MS-PG9-0,5	5	0.34	60	4	1
M 12 flush-type connector socket for rear mounting						
22260118	AB-C4-DSI-M12FS-PG9-0,5	4	0.34	250	4	1
22260116	AB-C5-DSI-M12FS-PG9-0,5	5	0.34	60	4	1
M 12 flush-type connector pin for front mounting						
22260113	AB-C4-M12MS-PG9-0,5	4	0.34	250	4	1
22260112	AB-C5-M12MS-PG9-0,5	5	0.34	60	4	1
M 12 flush-type connector socket for front mounting						
22260114	AB-C4-M12FS-PG9-0,5	4	0.34	250	4	1
22260111	AB-C5-M12FS-PG9-0,5	5	0.34	60	4	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

S/A M8 flush-type connectors



Part no.: 22260101

■ Benefits

- Flexible connection solutions for individual device concepts
- Simple installation in devices
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- M8 panel feed-through with punched on single litz wires

- Panel feed-through with M8 fastening thread
- Front mounting
- IP65/IP67 protection
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)



■ Design

- PUR halogen-free single litz wires, l = 0.5 m
- 0,25 mm²

■ Technical data



Degree of protection

IP 67



Ambient temperature (operation)

Plug / socket

-25°C to +85°C

Contact material

Copper alloy

Contact surface material

Au

Coding

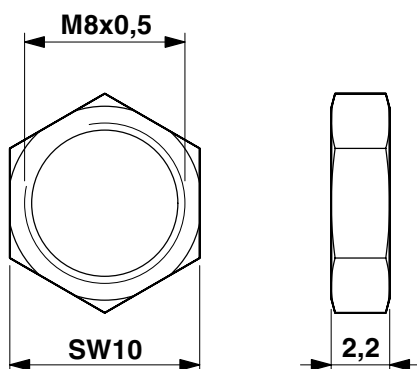
A - Standard

Part number	Article designation	Number of poles	Conductor cross section in mm ²	Nominal voltage U _N in V	Nominal current I _N in A	PU
M8 flush-type connector pin for front mounting						
22260100	AB-C3-M8MS-0,5	3	0.25	60	4	1
22260101	AB-C4-M8MS-0,5	4	0.25	30	4	1
M8 flush-type connector socket for front mounting						
22260102	AB-C3-M8FS-0,5	3	0.25	60	4	1
22260103	AB-C4-M8FS-0,5	4	0.25	30	4	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

Fitting nut for flush-type connectors



Fitting nut for flush-type connectors

■ Benefits

- Fitting nut as accessory for flush-type connectors

■ Product features

- Material: Nickel-plated brass

■ Approvals (Norm references)



Part number	Article designation	PU
M8 thread (M8x0,5 - SW10), h = 2.2 mm		
22260104	AB-C-M8-CN	1
PG9 thread (PG9 - SW18), h = 2.8 mm		
22260109	AB-C-PG9-CN	1
M16 thread (M16x1,5 - SW19), h = 2.8 mm		
22260110	AB-C-M16-CN	1

For detailed information please see the data sheet (www.lappautomation.com)

■ Comparable products

- SKINDICHT® SM

New**AS-Interface Modules (IP67)**

Part no.: 22260758



Part no.: 22260755

**Info**

- Fully industrialised

Benefits

- Standardized interfaces
- For decentralized automatization
- Space saving because of compact dimensions
- Easy installation
- Fast and easy error tracking

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- AS-Interface module slave
- Integration of field bus activation and input/output-level

- Connection type of digital Input/output as M12 or M8 for sensors/actuators
- Flat-ribbon cable cable penetration technique as connection type for module M12
- M12 connection type for M8 module
- LED diagnostic and status indication
- Short circuit-/overload protection

Approvals (Norm references)**Suitable cables**

- UNITRONIC® BUS ASI see main catalogue 2008/09 page 291
- UNITRONIC® BUS FD ASI see main catalogue 2008/09 page 291

Technical data**Fieldbus system**

AS-Interface

Connection type

Flat-ribbon cable penetration technique / M12 connection type

Installation

Panel mounting / DIN rail adapter

Number of poles

2

**Degree of protection**

IP67

Protection class

III

**Ambient temperature (operation)**

-25 °C bis +70 °C

Ambient temperature (storage/transport)

-25 °C up to +85 °C

Voltage consumption

26.5 V DC PELV to 31.6 V DC PELV

Part number	Article designation	Connection method	Number of inputs	Number of outputs	Slave type	Master specification	PU
With digital in-/outputs, M8							
22260759	AB-ASI-M12-DI4DO4-M8-1A	2, 3-wire	4	4	Single-Slave	>= 2.0	1
With digital in-/outputs, M12							
22260755	AB-ASI-DI2DO2-M12-2A	2, 3-wire	2	2	A/B-Slave	>= 2.0	1
22260756	AB-ASI-DI4DO3-M12-2A	2, 3-wire	4	3	A/B-Slave	>= 2.0	1
22260757	AB-ASI-DI4DO4-M12-2A	2, 3-wire	4	4	A/B-Slave	>= 3.0	1
With digital inputs, M8							
22260758	AB-ASI-M12-DI4-M8	2, 3-wire	4		Single-Slave	>= 2.0	1
With digital inputs, M12							
22260753	AB-ASI-DI4-M12	2, 3-wire	4		A/B-Slave	>= 2.0	1
With digital outputs, M12							
22260754	AB-ASI-DO4-M12-2A	2-wire		4	Single-Slave	>= 2.0	1

Unused female connectors must be covered with protective caps (see accessories) to ensure IP65/67

For detailed information please see the data sheet or installation procedure (www.lappautomation.com)**Accessories**

- AS-Interface power supply see page 59
- Screw plug for unoccupied sockets see page 41
- AS-Interface Distributor see page 56
- Powerkabel M12 see page 70 – 71

New

AS-Interface Modules (IP30)



AS-Interface Modules (IP30)



Info

- Fully industrialised

■ Benefits

- Standardized interfaces
- For decentralized automatization
- Space saving because of compact dimensions
- Easy installation
- Fast and easy error tracking

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- AS-Interface module slave
- Integration of field bus activation and input/output-level

- Metal housing
- Connection by screw-plug terminals or spring-plug terminals
- Digital Inputs/outputs for connection of sensors/actuators
- LED diagnostic and status indication
- Short circuit-/overload protection

■ Approvals (Norm references)



■ Suitable cables

- UNITRONIC® BUS ASI see main catalogue 2008/09 page 291
- UNITRONIC® BUS FD ASI see main catalogue 2008/09 page 291

■ Technical data

Fieldbus system

AS-Interface



Dimensions W x H x D in mm

105 mm x 85 mm x 22,5 mm

Connection type

Connector for screw-plug terminals or spring-plug terminals

Installation

DIN rail adapter (35 mm)



Degree of protection

IP30

Protection class

II



Ambient temperature (operation)

-25 °C up to +60 °C

Ambient temperature (storage/transport)

-40 °C up to +85 °C

Permissible humidity (storage/transport)

max. 95 %, not condensing

Voltage consumption

26.5 V DC to 31.6 V DC

Part number	Article designation	Connection method	Number of inputs	Number of outputs	Slave type	AS-i specification	Master specification	PU
4 Outputs Relay 3A								
22260807	AB-ASI-DI4DOR4-3A	2, 3-wire	4	4	Single-Slave	3.01	>= 3.0	1
4 Outputs 2A								
22260808	AB-ASI-DI4DO4-2A	2, 3-wire	4	4	Single-Slave	3.01	>= 3.0	1
8 Outputs 2A								
22260809	AB-ASI-DI8DO8-2A	2, 3-wire	8	8	Single-Slave	3.01	>= 3.0	1

Plug terminals are not included, may be obtained as accessory

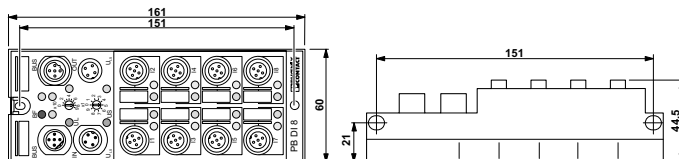
For detailed information please see the data sheet or installation procedure (www.lappautomation.com)

■ Accessories

- AS-Interface counter module see page 57
- AS-Interface long distance repeater see page 58
- AS-Interface power supply see page 59
- AS-Interface network extension see page 60
- AS-Interface plug terminals see page 61
- AS-Interface Distributor see page 56
- Powerkabel M12 see page 70 – 71

New

PROFIBUS Modules



PROFIBUS Modules

**Info**

- Fully industrialised

Benefits

- Standardized interfaces
- For decentralized automatization
- Space saving because of compact dimensions
- Easy installation
- Fast and easy error tracking

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- PROFIBUS Interface

- Integration of field bus activation and input/output-level
- Connection to PROFIBUS DP using M 12 connectors (B-coded)
- Connection type of digital Input/output as M 12 for sensors/actuators
- LED diagnostic and status indication
- Flexible power supply concept
- Short circuit-/overload protection

Approvals (Norm references)**Suitable cables**

- PROFIBUS cable: M 12 connector on free conductor end see page 62
- PROFIBUS Cable: straight M 12 connector M 12 on straight M 12 socket see page 63

Technical data**Fieldbus system**

PROFIBUS-DP

Transmission speed

12 MBit/s

Automatic baud rate detection

Transmission physics

PROFIBUS-DP-compliant copper cable

Address space assignment

1 ... 99, can be set from front side

Connection type

2 M 12 plug connectors, B-coded

Installation

Panel mounting

Number of poles

5

**Degree of protection**

IP65/IP67 acc. IEC 60529

Protection class

Class 3 as per VDE 0106, IEC 61440

**Ambient temperature (operation)**

-25°C up to +60°C

Ambient temperature (storage/transport)

-25°C up to +85°C

Permissible humidity (storage/transport)

95 %

Transmission rate

9.64 Kbaud to 12 Mbaud automatic detection

Voltage consumption

24V DC

Part number	Article designation	Connection method	Number of inputs	Number of outputs	Maximum output current per channel [A]	PU
With digital in-/outputs						
22260740	AB-PB-DI4DO4-M12-2A	2, 3, 4-wire	4	4	2	1
22260762	AB-PB-DI8DO8-M12-0,5A	2, 3, 4-wire	8	8	0.5	1
With digital inputs						
22260738	AB-PB-DI8-M12	2, 3, 4-wire	8			1
22260739	AB-PB-DI16-M12	2, 3, 4-wire	16			1
With digital outputs						
22260742	AB-PB-DO8-M12-2A	2, 3-wire		8	2	1

Unused female connectors must be covered with protective caps (see accessories) to ensure IP65/67

For detailed information please see the data sheet or installation procedure (www.lappautomation.com)**Accessories**

- ETHERLINE® PROFIBUS DP Ethernet-Gateways see page 53
- Screw plug for unoccupied sockets see page 41
- PROFIBUS M 12 connectors that can be assembled see page 66
- Terminating resistor M 12 for DeviceNet/CANopen/PROFIBUS see page 67
- M 12 T distributor for PROFIBUS see page 68
- Powerkabel M 12 see page 70

New

ETHERLINE® PROFIBUS DP Ethernet-Gateways



■ Benefits

- Allows the spatial separation of control system and PROFIBUS® network
- Access data simultaneously to existing control systems
- De facto standard for device parameterization with FDT/DTM, regardless of manufacturer or device class
- Rapid integration through simple user interface and OPC server
- Select the number of PROFIBUS channels that fits your needs

■ Application range

- Industrial use
- Different kind of communication via BUS systems and/or Ethernet based systems
- UNITRONIC® Fieldbus sensor-/actuator wiring requirements

■ Product features

- Supported protocols: PROFIBUS® DP (can be configured as master or slave), DP-V1 Master, FMS, FDL, MPI
- Transfer rates: 9.6; 19.2; 45.45; 93.75; 187.5; 500; 1500; 3000; 6000; 12000 kBit/s
- Data collection for SCADA systems
- Connector: 9-pin D-sub
- Integrated Web-server

■ Approvals (Norm references)



- Mechanical stability
 - IEC 60068-2-27 Shock
 - IEC 60068-2-6 Vibration
- Interference proof
 - EN 61000-4-2 Discharge of static electricity
 - EN 61000-4-3 Electromagnetic fields
 - EN 61000-4-4 Fast transients (bursts)
 - EN 61000-4-5 Surge voltage symmetrical
 - EN 61000-4-6 Cable based RF faults

■ Suitable cables

- UNITRONIC® LAN PATCH COLOR see main catalogue 2008/09 page 320
- Patchcable RJ45 CAT.5e see main catalogue 2008/09 page 321
- PROFIBUS cable: M12 connector on free conductor end see page 62

■ Technical data



Dimensions W x H x D in mm

A-GW-P1E: 47x131x111

A-GW-P3E: 110x131x111



Weight in g

A-GW-P1E: 400 g

A-GW-P3E: 1250 g

LED

Power, Connection, Data, Faults

Air humidity

Rel.: max. 90% at +25°C (non-condensing)

Installation

35mm DIN top-hat rail (EN50022)



Rated voltage

18 up to 30V DC / 1A



Degree of protection

IP 20 (EN 60529)



Range of temperature

Operating temperature: 0°C up to +55°C

Storage temperature: -20°C to +70°C

Part number	Article designation	Port type	Connection type	PU
PROFIBUS 1 channel				
21700002	ETHERLINE® A-GW-P1E	1 x 10/100BaseTX, 1 x PROFIBUS	RJ45, 9-pos. SUB-D socket	1
PROFIBUS 3 channel				
21700012	ETHERLINE® A-GW-P3E	1 x 10/100BaseTX, 3 x PROFIBUS	RJ45, 9-pos. SUB-D socket	1

For detailed information please see the data sheet or installation procedure (www.lappautomation.com)

New

DeviceNet Modules



DeviceNet Modules



Info

- Fully industrialised

■ Benefits

- Standardized interfaces
- For decentralized automatization
- Space saving because of compact dimensions
- Easy installation
- Fast and easy error tracking

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- DeviceNet Interface

- Integration of field bus activation and input/output-level
- Connection to DeviceNet™ using M12 connectors (A-coded)
- Connection type of digital Input/output as M12 for sensors/actuators
- LED diagnostic and status indication
- Flexible power supply concept
- Short circuit-/overload protection

■ Approvals (Norm references)

RoHS ✓ **DeviceNet™**

■ Suitable cables

- DeviceNet/CANopen Cable, M12 connector on free conductor end see page 64
- S/A DeviceNet/CANOpen cable, M12 connector on M12 socket see page 65

■ Technical data

Fieldbus system

DeviceNet™

Transmission speed

125 kBit/s, 250 kBit/s, 500 kBit/s
Automatic baud rate detection

Transmission physics

Copper cable in acc. with 176524 specification

Address space assignment

1 ... 63, can be set

Connection type

2 M12 plug connectors, A-coded

Installation

Panel mounting

Number of poles

5



Degree of protection

IP65/IP67

Protection class

Class 3 as per VDE 0106, IEC 61440



Ambient temperature (operation)

-25°C up to +60°C

Ambient temperature (storage/transport)

-25°C up to +85°C

Permissible humidity (storage/transport)

95 %

Transmission rate

125 kBaud, 250 kBaud, 500 kBaud automatic detection

Voltage consumption

24V DC

Part number	Article designation	Connection method	Number of inputs	Number of outputs	Maximum output current per channel [A]	PU
With digital in-/outputs						
22260745	AB-DN-DI4DO4-M12-2A	2, 3, 4-wire	4	4	2.0	1
22260763	AB-DN-DI8DO8-M12-0,5A	2, 3, 4-wire	8	8	0.5	1
With digital inputs						
22260743	AB-DN-DI8-M12	2, 3, 4-wire	8			1
22260744	AB-DN-DI16-M12	2, 3, 4-wire	16			1
With digital outputs						
22260747	AB-DN-DO8-M12-2A	2, 3-wire		8	2.0	1

Unused female connectors must be covered with protective caps (see accessories) to ensure IP65/67
For detailed information please see the data sheet or installation procedure (www.lappautomation.com)

■ Accessories

- Screw plug for unoccupied sockets see page 41
- Terminating resistor M12 for DeviceNet/CANopen/PROFIBUS see page 67
- S/A T-connector M12 as parallel distributor see page 69

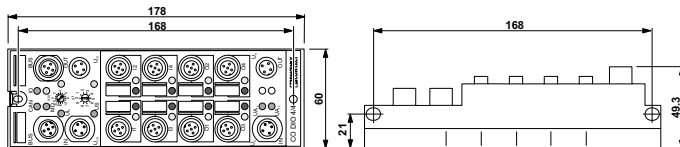
New

CANopen Modules



Info

- Fully industrialised



CANopen Modules

Benefits

- Standardized interfaces
- For decentralized automatization
- Space saving because of compact dimensions
- Easy installation
- Fast and easy error tracking

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- CANOpen Interface

- Integration of field bus activation and input/output-level
- Connection to CANopen using M12 connectors (A-coded)
- Connection type of digital Input/output as M12 for sensors/actuators
- LED diagnostic and status indication
- Flexible power supply concept
- Short circuit-/overload protection

Approvals (Norm references)



Suitable cables

- DeviceNet/CANopen Cable, M12 connector on free conductor end see page 64
- S/A DeviceNet/CANopen cable, M12 connector on M12 socket see page 65

Technical data

Fieldbus system

CANopen

Transmission speed

10, 20, 50, 125, 250, 500, 1000 kBit/s
Automatic baud rate detection

Transmission physics

Copper cable with optional power supply in acc. with CAN standard

Address space assignment

1 ... 126, can be set

Connection type

2 M12 plug connectors, A-coded

Installation

Panel mounting

Number of poles

5



Degree of protection

IP65/IP67

Protection class

Class 3 as per VDE 0106, IEC 61440



Ambient temperature (operation)

-25°C up to +60°C

Ambient temperature (storage/transport)

-25°C up to +85°C

Permissible humidity (storage/transport)

95 %

Transmission rate

Maximum 1 Mbaud automatic detection

Voltage consumption

24V DC

Part number	Article designation	Connection method	Number of inputs	Number of outputs	PU
With digital in-/outputs					
22260750	AB-CAN-DI4DO4-M12-2A	2, 3, 4-wire	4	4	1
22260764	AB-CAN-DI8DO8-M12-0,5A	2, 3, 4-wire	8	8	1
With digital inputs					
22260748	AB-CAN-DI8-M12	2, 3, 4-wire	8		1
22260749	AB-CAN-DI16-M12	2, 3, 4-wire	16		1
With digital outputs					
22260752	AB-CAN-DO8-M12-2A	2, 3-wire		8	1

Unused female connectors must be covered with protective caps (see accessories) to ensure IP65/67
For detailed information please see the data sheet or installation procedure (www.lappautomation.com)

Accessories

- Screw plug for unoccupied sockets see page 41
- Terminating resistor M12 for DeviceNet/CANopen/PROFIBUS see page 67
- S/A T-connector M12 as parallel distributor see page 69

New

AS-Interface Distributor



Part no.: 22260802



Part no.: 22260800



Part no.: 22260805

**Info**

- For data- and power supply

■ Benefits

- Inexpensive and efficient wiring for AS-Interface installations
- Space saving because of compact dimensions
- Easy installation
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- Passive AS-Interface distributor for 1 or 2 AS-Interface flat-ribbon conductors
- Distributor with integrated M12 socket (A-coded)
- H Distributor for distribution from 1 to 2 flat-ribbon conductors

- Distributor with round conductor connected on M12 socket (A-coded)
- Colour: black
- Rated current ≤ 4 A
(H-distributor: ≤ 8 A)

■ Approvals (Norm references)**■ Design**

- Permanently flexible control cable
- Design: 4 x 0.34 mm² (42 x 0.1 mm)
- Conductor colours brown, white, blue, black
- Outer sheath: PUR, halogen-free
- Sheath color black

■ Suitable cables

- UNITRONIC® BUS ASI see main catalogue 2008/09 page 291
- UNITRONIC® BUS FD ASI see main catalogue 2008/09 page 291

■ Technical data**Fieldbus system**

AS-Interface

Connection type

Flat-ribbon cable penetration technique

Installation

Panel mounting

**Degree of protection**

IP 67

(H-distributor: IP69k)

**Ambient temperature (operation)**

-25°C up to +75°C

Part number	Article designation	PU
Distributor for 1 flat-ribbon conductor on integrated 2-pos. M12 socket		
22260800	AB-ASI-J-Y-N-M12FS	1
Distributor for 2 flat-ribbon conductors on integrated 4-pos. M12 socket		
22260801	AB-ASI-J-Y-B-M12FS	1
H Distributor for distribution from 1 to 2 flat-ribbon conductors		
22260802	AB-ASI-J-Y-Y-N	1
Distributor for 1 flat-ribbon conductor, 1m PUR round conductor on straight 2-pos. M12 socket		
22260803	AB-ASI-J-Y-N-PUR-1,0-M12FS	1
Distributor for 1 flat-ribbon conductor, 2m PUR round conductor on straight 2-pos. M12 socket		
22260804	AB-ASI-J-Y-N-PUR-2,0-M12FS	1
Distributor for 2 flat-ribbon conductors, 1m PUR round conductor on straight 4-pos. M12 socket		
22260805	AB-ASI-J-Y-B-PUR-1,0-M12FS	1
Distributor for 2 flat-ribbon conductors, 2m PUR round conductor on straight 4-pos. M12 socket		
22260806	AB-ASI-J-Y-B-PUR-2,0-M12FS	1

Copper price basis: including

For detailed information please see the data sheet (www.lappautomation.com)

New

AS-Interface counter module



Info

- Universal AS-Interface counter module

■ Benefits

- Standardized interfaces
- Easy installation
- Fast and easy assembly
- Compact AS-Interface counter module for counting events, distance and speed measurement

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- Two count, distance or speed values presettable via AS-Interface
- Output switching action selectable if preset value is reached
- Detection of goods to be counted or measured with any industrial 2-wire or 3-wire binary sensor
- AS-Interface Version 3.0
- Connection by screw-plug terminals or spring-plug terminals

■ Approvals (Norm references)



■ Technical data

Fieldbus system

AS-Interface

Connection type

Connector for screw-plug terminals or spring-plug terminals

Installation

DIN rail adapter



Degree of protection

IP 20

Protection class

II



Ambient temperature (operation)

-25°C up to +60°C

Part number	Article designation	PU
22260810	AB-ASI-C	1

Plug terminals are not included, may be obtained as accessory

For detailed information please see the data sheet or installation procedure (www.lappautomation.com)

■ Accessories

- AS-Interface power supply see page 59
- AS-Interface plug terminals see page 61

New**AS-Interface long distance repeater****Info**

- Extensions up to 2000 m

■ Benefits

- Standardized interfaces
- Easy installation
- Fast and easy assembly
- AS-Interface Repeater for extensions of networks from 200 m up to 2000 m

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- Full data transfer rate as standard AS-Interface
- LEDs show communication activity for easy setup
- AS-Interface Version 3.0
- Connection by screw-plug terminals or spring-plug terminals

■ Approvals (Norm references)**■ Technical data****Fieldbus system**

AS-Interface

Connection type

Connector for screw-plug terminals or spring-plug terminals

Installation

DIN rail adapter

**Degree of protection**

IP 20

Protection class

II

**Ambient temperature (operation)**

-25°C up to +70°C

Part number	Article designation	PU
22260811	AB-ASI-LDR2000	1

Plug terminals are not included, may be obtained as accessory

Note: At least two long distance repeater required for network extension

For detailed information please see the data sheet or installation procedure (www.lappautomation.com)**■ Accessories**

- AS-Interface plug terminals see page 61

New

AS-Interface power supply



Info

- Fully industrialised



■ Benefits

- Compact AS-Interface power supply for mounting on DIN rail
- Easy installation
- Space saving because of compact dimensions
- For small AS-Interface networks

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- Supplies a nominal output current of $I_N = 1.0 \text{ A}$
- Primary voltage range: 85 ...265 V AC (50/60 Hz)
- AS-Interface Voltage: 29.5 ...31.6 V DC PELV (acc. IEC61640)
- AS-Interface Specification 3.01
- Short circuit-/overload protection

■ Approvals (Norm references)



■ Technical data

Fieldbus system

AS-Interface

Connection type

Cage clamp termination: 0.3 - 3.5 mm²

Installation

DIN rail adapter



Degree of protection

IP 20

Protection class

II



Ambient temperature (operation)

-10°C to +60°C

Ambient temperature (storage/transport)

-25°C up to +85°C

Part number	Article designation	PU
22260812	AB-ASI-PS-1A	1

PELV ("protective extra low voltage" according to IEC61640)

For detailed information please see the data sheet or installation procedure (www.lappautomation.com)

New**AS-Interface network extension****Info**

- Undervoltage limit detection integrated

■ Benefits

- Extension of AS-Interface network lengths without additional repeaters
- Every topology possible
- Standardized interfaces
- Easy installation

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- AS-Interface network lengths of up to 200m
- Undervoltage limit detection (threshold: app. 26.5 V), green LED flashes if supply voltage too low and sends information to the master respectively
- AS-Interface Specification 3.01
- Housing diameter: 20 mm / Height: 45 mm
- Provided with thread to AS-Interface distributor (see accessories)

■ Approvals (Norm references)**■ Design**

- Compact design (Z plug)

■ Technical data

Fieldbus system
AS-Interface

Connection type
M 12 A-coded
connectors

Installation
Screw connection

Number of poles
4



Degree of protection
IP 67



Ambient temperature (operation)
-25°C up to +70°C

Part number	Article designation	PU
With optical voltage indication by green LED		
22260813	AB-ASI-NE200LED	1
With voltage control by reply to the master (without LED)		
22260814	AB-ASI-NE200	1

For detailed information please see the data sheet or installation procedure (www.lappautomation.com)

■ Accessories

- AS-Interface Distributor see page 56

New

AS-Interface plug terminals



Info

- Accessories for AS-Interface Module IP20/IP30



■ Benefits

- Easy assembly
- Fast connect adapter terminals
- Enables the individual usage as tension or screw plug terminals
- Flexible connection solutions

■ Application range

- Automation technology
- Mechanical engineering

- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- Optional plug terminals for AS-Interface module IP20/IP30
- Fast-connect connection type
- Versions for 16 or 32 contacts
- Black

■ Approvals (Norm references)



■ Suitable tools

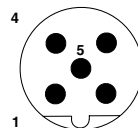
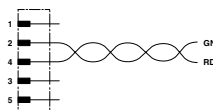
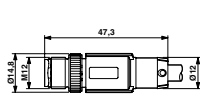
- Kraftform® adjustable torque screwdriver/ Kraftform Kompakt® Set see page 72

Part number	Article designation	PU
AS-Interface screw plug terminals, 2x16 pos, 0.14-2.5 mm		
22260815	AB-ASI-XS16	1
AS-Interface screw plug terminals, 4x4 pos, 0.14-2.5 mm		
22260817	AB-ASI-XS4	1
AS-Interface tension plug terminals, 8x4 pos, 0.2-2.5 mm		
22260816	AB-ASI-XT16	1
AS-Interface tension plug terminals, 4x4 pos, 0.2-2.5 mm		
22260818	AB-ASI-XT4	1

For detailed information please see www.lappautomation.com

New

PROFIBUS cable: M 12 connector on free conductor end



PROFIBUS cable: M 12 connector on free conductor end



Info

- Pre-assembled PROFIBUS signal cable

■ Benefits

- Inexpensive and efficient wiring for PROFIBUS installations
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 2-pos. PROFIBUS cable shielded

- 5-pos. connector, M12 B-coded (inverse)
- Design with straight socket or straight plug on free conductor end
- The cables have marker carries
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- PUR halogen-free shielded cable
- Permanently flexible control cable
- Structure: 19 x 0,13 mm
- Conductors colors red, grün
- Sheath violet

■ Technical data

Number of poles

2



Degree of protection

IP65/IP67/IP69K



Ambient temperature (operation)

Plug / socket

-25°C to +90°C

Cable, fixed installation

-40°C up to +80°C

Cable, flexible installation

-20°C up to +80°C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

B - inverse

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

TPU, hardly inflammable, self-extinguishing

Core colour

red, green

External cable diameter

7,8 mm



Conductor cross section

0,25 mm²

External sheath, color

violett RAL 4001

Outer sheath, material

PUR

Part number	Article designation	Length in m	Nominal current I_N in A	Nominal voltage U_N in V	Number of poles	PU
Straight connector						
22260767	AB-PB-M12MS-2,0PUR	2	4	250	2	1
22260768	AB-PB-M12MS-5,0PUR	5	4	250	2	1
22260769	AB-PB-M12MS-10,0PUR	10	4	250	2	1
Straight socket						
22260770	AB-PB-2,0PUR-M12FS	2	4	250	2	1
22260771	AB-PB-5,0PUR-M12FS	5	4	250	2	1
22260772	AB-PB-10,0PUR-M12FS	10	4	250	2	1

Copper price basis: including

Special cable length on request

For detailed information please see the data sheet (www.lappautomation.com)

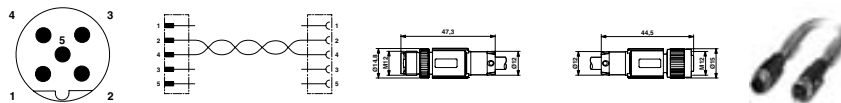
New

PROFIBUS Cable: straight M 12 connector M 12 on straight M 12 socket



Info

- PROFIBUS signal cable ready for connection



PROFIBUS Cable: straight M 12 connector M 12 on straight M 12 socket

Benefits

- Inexpensive and efficient wiring for PROFIBUS installations
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 2-pos. PROFIBUS cable shielded

- M 12 B-coded (inverse)
- Design with straight connector on straight socket
- The cables have marker carries
- Drag chain suitable

Approvals (Norm references)



Design

- PUR halogen-free shielded cable
- Permanently flexible control cable
- Structure: 19 x 0,13 mm
- Conductors colors red, grün
- Sheath violet

Technical data

Number of poles
5



Degree of protection
IP65 / IP67 / IP69K



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Cable, fixed installation

-40 °C up to +80 °C

Cable, flexible installation

-20 °C up to +80 °C

Contact material

CuSn

Contact surface material

Ni / Au

Coding

B - inverse

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

TPU, hardly inflammable, self-extinguishing

Core colour

red, green

External cable diameter

7,8 mm



Conductor cross section

0,25 mm²

External sheath, color

violett RAL 4001

Outer sheath, material

PUR

Part number	Article designation	Length in m	Nominal current I _N in A	Nominal voltage U _N in V	Number of poles	PU
22260773	AB-PB-M 12MS-0,3PUR-M 12FS	0.3	4	250	2	1
22260774	AB-PB-M 12MS-1,0PUR-M 12FS	1	4	250	2	1
22260775	AB-PB-M 12MS-2,0PUR-M 12FS	2	4	250	2	1
22260776	AB-PB-M 12MS-5,0PUR-M 12FS	5	4	250	2	1
22260777	AB-PB-M 12MS-10,0PUR-M 12FS	10	4	250	2	1

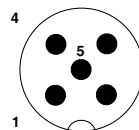
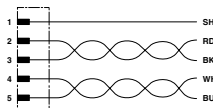
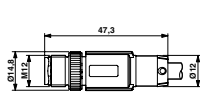
Copper price basis: including

Special cable length on request

For detailed information please see the data sheet (www.lappautomation.com)

New

DeviceNet/CANopen Cable, M 12 connector on free conductor end



DeviceNet/CANopen Cable, M 12 connector on free conductor end

■ Benefits

- Inexpensive and efficient wiring for BUS installations, sensors and actuators
- Space saving because of compact dimensions
- Robust design
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 5-pos. DeviceNet/CANOpen cable, shielded

- M 12 A-coded
- Design with straight socket or straight plug on free conductor end
- The cables have marker carries
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- PUR halogen-free shielded cable
- Permanently flexible control cable
- Structure (signal line): 19 x 0,12 mm
- Conductors colors red-black, blue-white



Info

- Pre-assembled DeviceNet/CANopen signal cable

■ Technical data



Degree of protection
IP65/IP67/IP69K



Ambient temperature (operation)

Plug / socket
-25°C to +90°C
Cable, fixed installation
-40°C up to +80°C
Cable, flexible installation
-20°C up to +80°C

Contact surface material
Ni/Au

Coding
A - Standard

Material, knurls
Zinc die-cast, (nickel-plated)

Material of grip body
TPU, hardly inflammable, self-extinguishing

External cable diameter
6,7 mm



Conductor cross section
0,2 mm²

External sheath, color
violett RAL 4001

Outer sheath, material
PUR

Part number	Article designation	Length in m	Nominal voltage U_N in V	Nominal current I_N in A	Number of poles	PU
5 pole straight connector						
22260789	AB-DN-M12MS-2,0PUR	2	60	4	5	1
22260790	AB-DN-M12MS-5,0PUR	5	60	4	5	1
22260791	AB-DN-M12MS-10,0PUR	10	60	4	5	1
5 pole straight socket						
22260792	AB-DN-2,0PUR-M12FS	2	60	4	5	1
22260793	AB-DN-5,0PUR-M12FS	5	60	4	5	1
22260794	AB-DN-10,0PUR-M12FS	10	60	4	5	1

Copper price basis: including

Special cable length on request

For detailed information please see the data sheet (www.lappautomation.com)

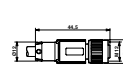
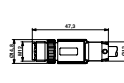
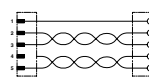
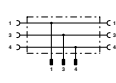
New

S/A DeviceNet/CANopen cable, M 12 connector on M 12 socket



Info

- DeviceNet/CANopen signal cable ready for connection



S/A DeviceNet/CANopen cable, M 12 connector on M 12 socket

■ Benefits

- Inexpensive and efficient wiring for BUS installations, sensors and actuators
- Space saving because of compact dimensions
- Fast and easy error tracking
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 5-pos. DeviceNet/CANopen cable, shielded

- M12 A-coded
- Design with straight connector on straight socket
- The cables have marker carries
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- PUR halogen-free shielded cable
- Permanently flexible control cable
- Structure (signal line): 19 x 0,12 mm
- Structure (voltage line): 19 x 0,15 mm
- Conductors colors red-black, blue-white

■ Technical data



Degree of protection

IP65/IP67/IP69K



Ambient temperature (operation)

Plug / socket

-25°C to +90°C

Cable, fixed installation

-40°C up to +80°C

Cable, flexible installation

-20°C up to +75°C

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

TPU, hardly inflammable, self-extinguishing

External cable diameter

6,7 mm



Conductor cross section

0,2 mm²

External sheath, color

violett RAL 4001

Outer sheath, material

PUR

Part number	Article designation	Length in m	Nominal voltage U_N in V	Nominal current I_N in A	Number of poles	PU
Straight connector on straight socket						
22260795	AB-DN-M12MS-0,3PUR-M12FS	0,3	60	4	5	1
22260796	AB-DN-M12MS-1,0PUR-M12FS	1	60	4	5	1
22260797	AB-DN-M12MS-2,0PUR-M12FS	2	60	4	5	1
22260798	AB-DN-M12MS-5,0PUR-M12FS	5	60	4	5	1
22260799	AB-DN-M12MS-10,0PUR-M12FS	10	60	4	5	1

Special cable length on request

For detailed information please see the data sheet (www.lappautomation.com)

New

PROFIBUS M 12 connectors that can be assembled



PROFIBUS M12 connectors that can be assembled



Info

- Fully shielded version

■ Benefits

- Quick and easy on-site assembly
- Creating individual cable lengths
- Inexpensive and efficient wiring for PROFIBUS installations
- Space saving because of compact dimensions
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 5-pos. shielded version
- M12 B-coded (inverse)
- Free of substances which would hinder coating with paint or varnish
- Screw connection

■ Approvals (Norm references)



■ Suitable cables

- PROFIBUS cable: M12 connector on free conductor end see page 62
- Cables for BUS-Systems PROFIBUS-DP/FMS/FIP see main catalogue 2008/09 page 279

■ Technical data

Number of poles
5



Degree of protection
IP67



Ambient temperature (operation)
Plug / socket
-40°C to +85°C

Contact material
CuSn

Contact surface material
Au

Coding
B - inverse

Material, knurls
Nickel-plated brass

Material of grip body
Zinc die-cast, (nickel-plated)

Sealing material
NBR

Contact carrier material
PA 66

Nominal voltage U_N
60 V

Nominal current I_N
4 A

PG Verschraubung
PG 9

Part number	Article designation	Conductor cross section stranded min. in mm ²	Conductor cross section stranded max. in mm ²	Conductor cross section AWG/kcmil min.	Conductor cross section AWG/kcmil max.	Cable Diameter min in mm	Cable Diameter max in mm	PU
5 pole straight connector								
22260653	AB-C5-M12MSB-PG9-SH-AU	0.25	0.75	24	18	6	8.5	1
5 pole straight socket								
22260646	AB-C5-M12FSB-PG9-SH-AU	0.25	0.75	24	18	6	8.5	1

For detailed information please see the data sheet (www.lappautomation.com)

New

Terminating resistor M 12 for DeviceNet/CANopen/PROFIBUS



Info

- Fully industrialised



Terminating resistor M 12 for DeviceNet/CANopen/PROFIBUS

■ Benefits

- Inexpensive termination of BUS cables
- Space saving because of compact dimensions
- Robust design
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- Free of substances which would hinder coating with paint or varnish
- For DeviceNet und CANopen applications (A-Standard coded)
- For PROFIBUS applications (B-inverse coded)

■ Approvals (Norm references)



■ Design

- Straight connector M12 and integrated termination resistor

■ Technical data



Degree of protection

IP65/IP67/IP69K



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Contact material

CuSn

Contact surface material

Ni/Au

Coding

B - inverse (PROFIBUS)

A - Standard (DeviceNet/CANopen)

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

TPU, hardly inflammable, self-extinguishing

Contact carrier material

TPU GF

Nominal voltage U_N

60 V

Nominal current I_N

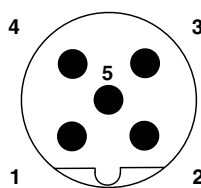
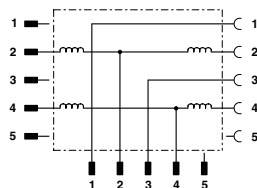
4 A

Part number	Article designation	Nominal current I_N in A	Nominal voltage U_N in V	Coding	Number of poles	PU
For PROFIBUS applications (B-inverse coded)						
22260722	AB-C4-M12MS-PB-TR	4	60	B - inverse	4	1
For DeviceNet und CANopen applications (A-Standard coded)						
22260766	AB-C5-M12MS-DN-TR	4	60	A - Standard	5	1

For detailed information please see the data sheet (www.lappautomation.com)

■ Accessories

- M12 T distributor for PROFIBUS see page 68
- S/A T-connector M12 as parallel distributor see page 69

New**M 12 T distributor for PROFIBUS**

M 12 T distributor for PROFIBUS

**Info**

- Fully industrialised

■ Benefits

- Inexpensive and efficient wiring for PROFIBUS installations
- Space saving because of compact dimensions
- Robust design
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 5-pos. PROFIBUS T-Connector
- M 12 B-coded (inverse)
- Design with M 12 plug to M 12 plug and M 12 socket
- Free of substances which would hinder coating with paint or varnish

■ Approvals (Norm references)**■ Technical data**

Degree of protection
IP68



Ambient temperature (operation)
8Plug / socket
-25°C to +80°C

Contact material
Cu alloy

Contact surface material
Ni/Au

Coding
B - inverse

Material, knurls
Nickel-plated brass

Material of grip body
PUR

Sealing material
Viton

Contact carrier material
PUR

Nominal voltage U_N
60 V

Nominal current I_N
4 A

Part number	Article designation	Nominal current I_N in A	Nominal voltage U_N in V	Number of poles	PU
22260761	AB-C2-M12T-2XM12FS PB	4	60	5	1

For detailed information please see the data sheet (www.lappautomation.com)

■ Accessories

- Terminating resistor M12 for DeviceNet/CANopen/PROFIBUS see page 67

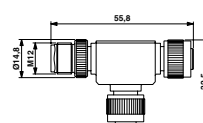
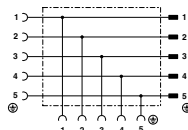
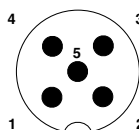
New

S/A T-connector M12 as parallel distributor



Info

- For DeviceNet and CANopen!



S/A T-connector M12 as parallel distributor

Benefits

- Inexpensive and efficient wiring for BUS installations, sensors and actuators
- Space saving because of compact dimensions
- Robust design
- Standardized interfaces

Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

Product features

- 5-pos. T-Connector DeviceNet/CANopen
- M12 A-coded
- Design as parallel distributor with M12 socket to M12 plug and M12 socket
- Free of substances which would hinder coating with paint or varnish

Approvals (Norm references)



Technical data

Number of poles

5



Degree of protection

IP65 / IP67



Ambient temperature (operation)

Plug / socket

-25 °C to +90 °C

Contact material

CuZn

Contact surface material

Ni/Au

Coding

A - Standard

Material, knurls

Zinc die-cast, (nickel-plated)

Material of grip body

TPU, hardly inflammable, self-extinguishing

Sealing material

NBR

Contact carrier material

TPU GF

Nominal voltage U_N

60 V

Nominal current I_N

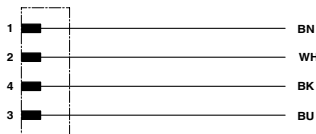
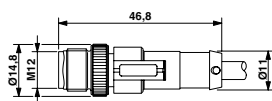
4 A

Part number	Article designation	Nominal voltage U_N in V	Nominal current I_N in A	Number of poles	PU
22260765	AB-C5-M12T-2XM12FS DN	60	4	5	1

For detailed information please see the data sheet (www.lappautomation.com)

Accessories

- Terminating resistor M12 for DeviceNet/CANopen/PROFIBUS see page 67

New**Power cable: M12 connector or M12 socket on free conductor****Info**

- Power cable, universally useable

Power cable: M12 connector or M12 socket on free conductor

■ Benefits

- Power connecting cable for aktive fieldbus modules
- Inexpensive and efficient wiring of sensors and actuators
- Space saving because of compact dimensions
- Customised construction of free conductor end
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 4-pos. Power cable
- M12 A-coded
- Design with straight connector or straight socket on free conductor end
- The cables have marker carries
- Drag chain suitable

■ Approvals (Norm references)**■ Design**

- PUR/PVC cable
- Permanently flexible control cable
- Structure: 42 x 0,15 mm

■ Technical data

Degree of protection
IP65/IP67/IP69K



Ambient temperature (operation)
Plug / socket

-25°C to +90°C
Cable, fixed installation
-25°C up to +80°C
Cable, flexible installation
-5°C up to +80°C

Contact material
CuSn

Contact surface material
Ni/Au

Coding
A - Standard

Material, knurls
Zinc die-cast, (nickel-plated)

Material of grip body
TPU, hardly inflammable, self-extinguishing

Core colour
brown, white, blue, black

External cable diameter
5,9 mm



Conductor cross section
0,75 mm²

External sheath, color
black RAL 9005

Outer sheath, material
PUR

Part number	Article designation	Length in mm	Nominal current I_N in A	Nominal voltage U_N in V	Number of poles	PU
4 pole straight connector						
22260778	AB-PC4-M12MS-2,0PUR	2	4	250	4	1
22260779	AB-PC4-M12MS-5,0PUR	5	4	250	4	1
22260780	AB-PC4-M12MS-10,0PUR	10	4	250	4	1
4 pole straight socket						
22260781	AB-PC4-2,0PUR-M12FS	2	4	250	4	1
22260782	AB-PC4-5,0PUR-M12FS	5	4	250	4	1
22260783	AB-PC4-10,0PUR-M12FS	10	4	250	4	1

Copper price basis: including

Special cable lengths, other outer sheath materials (e.g. PVC) and individual connector types on request

For detailed information please see www.lappautomation.com

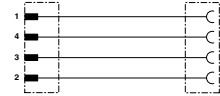
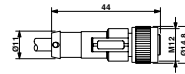
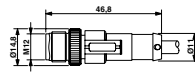
New

Power cable: straight M12 connector on straight M12 socket



Info

- Powercable M12 ready for connection



S/A Power cable: straight M12 connector on straight M12 socket

■ Benefits

- Power connecting cable for active fieldbus modules
- Inexpensive and efficient wiring for BUS installations, sensors and actuators
- Space saving because of compact dimensions
- Fast and easy assembly
- Standardized interfaces

■ Application range

- Automation technology
- Mechanical engineering
- Plant engineering
- Tool shop
- Automotive industry

■ Product features

- 4-pos. Power cable
- M12 A-coded
- Design with straight connector on straight socket
- Free of substances which would hinder coating with paint or varnish
- Drag chain suitable

■ Approvals (Norm references)



■ Design

- PUR/PVC cable
- Permanently flexible control cable
- Structure: 42 x 0,15 mm
- Conductor colors brown, white, blue, black

■ Technical data

IP	Degree of protection IP65/IP67/IP69K
0-90°C	Ambient temperature (operation) Plug / socket -25°C to +90°C Cable, fixed installation -25°C up to +80°C Cable, flexible installation -5°C up to +80°C
	Contact material CuSn
	Contact surface material Ni/Au
	Coding A - Standard
	Material, knurls Zinc die-cast, (nickel-plated)
	Material of grip body TPU, hardly inflammable, self-extinguishing
	External cable diameter 5,9 mm
	Conductor cross section 0,75 mm²
	External sheath, color black RAL 9005
	Outer sheath, material PUR

Part number	Article designation	Length in mm	Nominal current I_n in A	Nominal voltage U_n in V	Number of poles	PU
22260784	AB-PC4-M12MS-0,3PUR-M12FS	0.3	4	250	4	1
22260785	AB-PC4-M12MS-1,0PUR-M12FS	1	4	250	4	1
22260786	AB-PC4-M12MS-2,0PUR-M12FS	2	4	250	4	1
22260787	AB-PC4-M12MS-5,0PUR-M12FS	5	4	250	4	1
22260788	AB-PC4-M12MS-10,0PUR-M12FS	10	4	250	4	1

Copper price basis: including

Special cable lengths, other outer sheath materials (e.g. PVC) and individual connector types on request

New

Kraftform® adjustable torque screwdriver/Kraftform Kompakt® Set



Kraftform® adjustable torque screwdriver/Kraftform Kompakt® Set

■ Benefits

- Fatigue free due to ergonomic grip design
- Suitable for many EPIC® connector systems and in network/automation branche (Sensor-/Actuator wiring requirements)
- Simple, free assembly in any position
- Safety close at hand

■ Application range

- When screwing smaller screws, the user often relies on his specialist sense.
- In practice, this can often lead to significantly higher extracting values.
- The consequences are ripped-off screw heads and over-twisted screw threads.
- Solution is offered by this practical torque screwdriver for 0.3 - 1.2 Nm.

■ Product features

- Quick and easy tool change thanks to the quick-change chuck

■ Design

- Torque screw driver Kraftform® for 0,3- 1,2Nm
- Screw driver set Kraftform Kompakt® 10-pieces
(Bit included: 1xR, 1xTZ, 1xTZ PH, 1xTZ PZ, 1xTZ TORX® in several versions incl.1 hand screw driver without torque system)

■ Scope of delivery

- Traceable calibration certificate contained in the scope of delivery

■ Technical data

	Caution Can be used without hesitation in areas requiring ESD protection ESD version in acc. with EN 100-015 Part 1
	General Phillips screwdriver PH (Phillips recess)
	Approvals Robust industrial design with excellent accuracy in accordance with ISO 6789 / EN 26789
	Info Controlled torque of 0.3-1.2Nm possible
	Colour delivered Black

Part number	Article designation	Measuring range	Length in mm	Pieces / PU
61813958	Torque screwdriver Kraftform®	0.3 - 1.2	180	1
61813990	Kraftform Kompakt® 10			1

Kraftform® is a registered trademark of Wera (Hermann Werner GmbH & Co.KG)

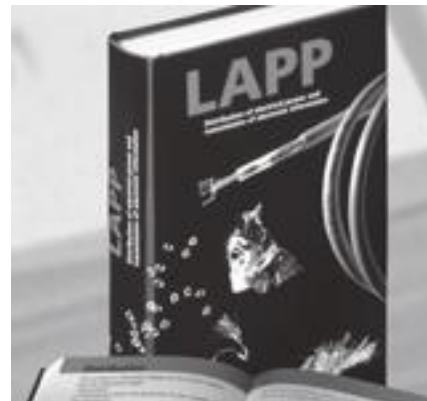
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Guide, advisor, reference book

In this book, you will find all that is worth knowing about the generation, use, and distribution of electricity, as well as the technology of data communication, cables, control cables, and optic fibres. All of these topics are illustratively described and sup-

plemented with articles, tables and specialist terminology.

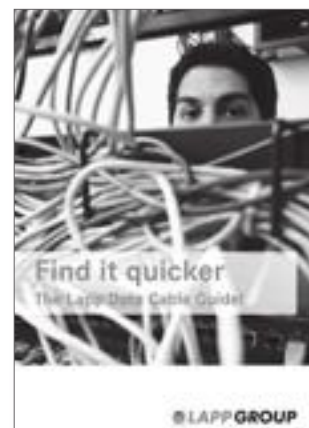
This is a book both for trainees and experienced practitioners. It is available in German, English or Russian.



Lapp Data Cable Guide

Modern data communication now offers almost unlimited possibilities to interlink hardware components. A range of products to make all of these connections must be just as versatile: plugs, leads, cables,

interfaces. Lapp Kabel offers you a complete range – and the Lapp Data Cable Guide is the tool to enable you to find the right solution quickly and with confidence.



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 the main catalogue. 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

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