

Distributed I/O device - AXL E S3 DI8 DO8 M12 6M - 2701548

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Axioline E, Digital I/O device, Sercos, M12 fast connection technology, Digital inputs: 8, 24 V DC, connection method: 4-wire, Digital outputs: 8, 24 V DC, 500 mA, connection method: 3-wire, Metal housing, degree of protection: IP65/IP67

Product Description

The Axioline E device is designed for use within a Sercos® network.

It is used to acquire and output digital signals.

The device is designed for use in systems manufacturing.

It is suitable for use without a control cabinet under harsh industrial conditions.

The Axioline E device can be used on tool platforms, directly on welding robots or in conveying technology, for example.

Your advantages

- ✓ Connection to Sercos network using M12connectors (D-coded)
- ✓ Transmission speed of 100 Mbps with a minimum cycle time of 250 µs
- ✓ Connection of digital sensors and actuators using M12connectors (A-coded)
- ✓ Diagnostic and status indicators
- ✓ Short-circuit and overload protection of the sensor supply
- ✓ IP65/IP67 degree of protection



sercos
the automation link

Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 763950
GTIN	4046356763950
Weight per Piece (excluding packing)	700.000 g
Custom tariff number	85176200
Country of origin	Germany

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Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	60 mm
Height	185 mm
Depth	38 mm
Note on dimensions	The height is 194.5 mm including the mounting plate. With fixing clips pulled out, the height is 212 mm. The depth is 38 mm including the mounting plate (30.5 mm without the mounting plate).
Drill hole spacing	198.5 mm

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 %
Permissible humidity (storage/transport)	5 % ... 95 %
Air pressure (operation)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Degree of protection	IP65/IP67

General

Housing material	Zinc die-cast
Mounting type	Wall mounting or DIN rail mounting; both with mounting plate.
Net weight	709.4 g

Interfaces

Designation	Sercos
No. of channels	2
Connection method	M12 fast connection technology
Note on the connection method	D-coded
Designation connection point	Copper cable
Transmission speed	100 Mbps (with auto negotiation)
Number of positions	4

Network/bus system

Designation	Sercos
Equipment type	Sercos slave
Device profile	FSP_IO
System-specific protocols	Sercos protocols Sercos

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Technical data

Network/bus system

	Sercos protocols S/IP
Protocols supported	HTTP
	TFTP
	FTP
Specification	Sercos specification 1.1.2

Supply

Designation	Module electronics and sensors (U _S)
Connection method	M12 connector (T-coded)
Number of positions	4
Supply voltage	24 V DC
Supply voltage range	18 V DC ... 31.2 V DC (including all tolerances, including ripple)
Current consumption	typ. 190 mA ±15 % (at 24 V DC)
Designation	Actuators (U _A)
Connection method	M12 connector (T-coded)
Number of positions	4
Supply voltage	24 V DC
Supply voltage range	18 V DC ... 31.2 V DC (including all tolerances, including ripple)
Current consumption	typ. 30 mA ±15 % (at 24 V DC)

Digital inputs

Input name	Digital inputs
Description of the input	EN 61131-2 types 1 and 3
Connection method	M12 connector, double occupancy
Connection technology	4-wire
Number of inputs	8
Protective circuit	Overload protection, short-circuit protection of sensor supply
Nominal input voltage U _{IN}	24 V DC
Nominal input current at U _{IN}	typ. 3 mA
Input filter time	< 1000 μs
Input voltage range "0" signal	0 V ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30 V DC

Digital outputs

Output name	Digital outputs
Connection method	M12 connector, double occupancy
Connection technology	3-wire
Number of outputs	8
Protective circuit	Overload protection, short-circuit protection of outputs yes

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Digital outputs

Output voltage	24 V DC
Nominal output voltage	24 V DC (from voltage U_A)
Maximum output current per channel	500 mA
Nominal load, inductive	12 VA (1.2 H, 48 Ω , with nominal voltage)
Nominal load, ohmic	12 W (48 Ω , with nominal voltage)
Switching frequency	max. 5500 per second (with at least 50 mA load current)
Output voltage when switched off	max. 1 V
Output current when switched off	max. 20 μ A
Behavior with overload	Auto restart
Reverse voltage resistance to short pulses	Reverse voltage proof

Electrical isolation

Test section	24 V supply (communications power and sensor supply, digital inputs)/bus connection (Ethernet 1) 500 V AC 50 Hz 1 min.
	24 V supply (communications power and sensor supply, digital inputs)/bus connection (Ethernet 2) 500 V AC 50 Hz 1 min.
	24 V supply (communications power and sensor supply, digital inputs)/FE 500 V AC 50 Hz 1 min.
	Bus connection (Ethernet 1)/FE 500 V AC 50 Hz 1 min.
	Bus connection (Ethernet 2)/FE 500 V AC 50 Hz 1 min.
	Bus connection (Ethernet 1)/bus connection (Ethernet 2) 500 V AC 50 Hz 1 min.
	24 V supply (actuator supply, digital outputs)/24 V supply (communications power and sensor supply, digital inputs) 500 V AC 50 Hz 1 min.
	24 V supply (actuator supply, digital outputs)/bus connection (Ethernet 1) 500 V AC 50 Hz 1 min.
	24 V supply (actuator supply, digital outputs)/bus connection (Ethernet 2) 500 V AC 50 Hz 1 min.
	24 V supply (actuator supply, digital outputs)/FE 500 V AC 50 Hz 1 min.

Standards and Regulations

Mechanical tests	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g
	Shock in acc. with EN 60068-2-27/IEC 60068-2-27 30g, 11 ms period, half-sine shock pulse
	Continuous shock according to EN 60068-2-27/IEC 60068-2-27 10g
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25;

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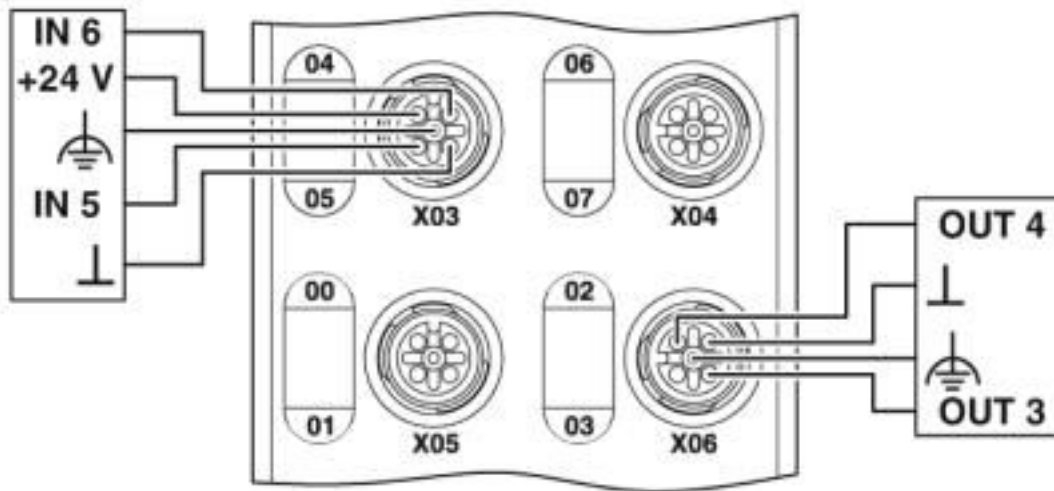
Technical data

Environmental Product Compliance

	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"
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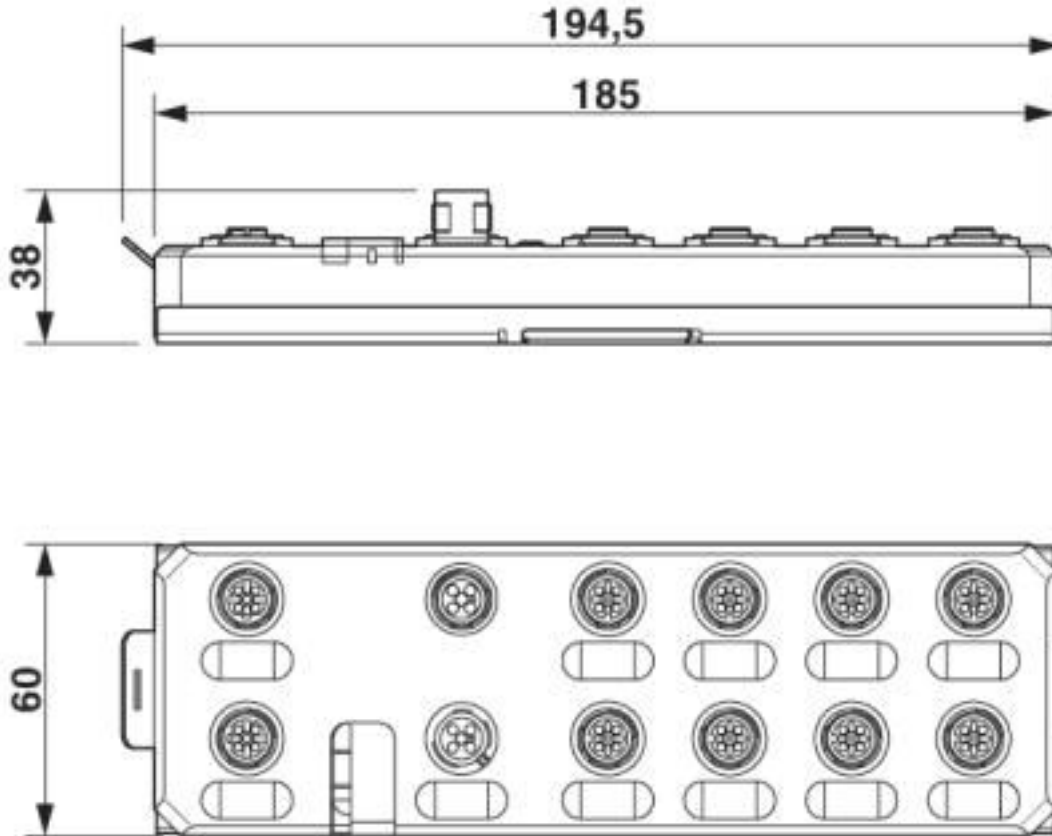
Drawings

Connection diagram



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Dimensional drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27242604
eCl@ss 4.0	27240400
eCl@ss 4.1	27240400
eCl@ss 5.0	27242200
eCl@ss 5.1	27242600
eCl@ss 6.0	27242600
eCl@ss 7.0	27242604
eCl@ss 8.0	27242604
eCl@ss 9.0	27242604

ETIM

ETIM 2.0	EC001433
ETIM 3.0	EC001599

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Classifications

ETIM

ETIM 4.0	EC001599
ETIM 5.0	EC001599
ETIM 6.0	EC001599
ETIM 7.0	EC001599

UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	39121311
UNSPSC 12.01	39121311
UNSPSC 13.2	32151602
UNSPSC 18.0	32151602
UNSPSC 19.0	32151602
UNSPSC 20.0	32151602
UNSPSC 21.0	32151602

Approvals

Approvals

Approvals


sercos / UL Listed / cUL Listed / cULus Listed


Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

sercos	C-S3-1.0037
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UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
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Approvals

cULus Listed



Accessories

Accessories

Assembly element

Mounting plate - AXL E MP 60 - 2701761



Mounting plate for Axioline E metal devices

Circular connector (cable-side)

Bus system connector - SACC-M12MSD-4CON-PG 9-SH - 1521261



Bus system connector, Ethernet/PROFINET CAT5 (100 Mbps), 4-position, shielded, Plug straight M12, Coding: D, Screw connection, knurl material: Zinc die-cast, nickel-plated, cable gland Pg9, external cable diameter 6 mm ... 8 mm

Data cable preassembled

Bus system cable - VS-MSDS-OE-93K-LI/2,0 - 1419172



Bus system cable, Sercos CAT5 (100 Mbps), 4-position, PVC, Red RAL 3020, Plug straight M12 / IP67, coding: D, on free cable end, cable length: 2 m

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Accessories

Bus system cable - VS-MSDS-MSDS-93K-LI/2,0 - 1419169



Bus system cable, Sercos CAT5 (100 Mbps), 4-position, PVC, Red RAL 3020, Plug straight M12 / IP67, coding: D, on Plug straight M12 / IP67, coding: D, cable length: 2 m

Bus system cable - VS-MSDS-IP20-93K-LI/2,0 - 1419168



Bus system cable, Sercos CAT5 (100 Mbps), 4-position, PVC, Red RAL 3020, Plug straight M12 SPEEDCON / IP67, coding: D, on Plug straight RJ45 / IP20, cable length: 2 m

Device marking

Snap-in markers - UCT-EM (7X10) - 0830765



Snap-in markers, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped into marker carrier, lettering field size: 7 x 10 mm, Number of individual labels: 30

Plug for cable screw gland

Screw plug - PROT-M12 - 1680539



An M12 screw plug for the unoccupied M12 sockets of the sensor/actuator cable, boxes and flush-type connectors

Power cable

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Accessories

Power cable - SAC-4P- 1,5-PUR/M12FRT SH - 1424116



Power cable, 4-position, PUR halogen-free, black RAL 9005, shielded (Advanced Shielding Technology), free cable end, on Socket angled M12, coding: T, cable length: 1.5 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-M12MST/ 1,5-PUR SH - 1424120



Power cable, 4-position, PUR halogen-free, black RAL 9005, shielded (Advanced Shielding Technology), Plug straight M12, coding: T, on free cable end, cable length: 1.5 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-M12MST/ 1,0-PUR - 1408812



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: T, on free cable end, cable length: 1 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-M12MST/ 2,0-PUR - 1408813



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: T, on free cable end, cable length: 2 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-M12MST/ 5,0-PUR - 1408814



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: T, on free cable end, cable length: 5 m, For direct current up to 12 A/63 V

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Power cable - SAC-4P-M12MST/10,0-PUR - 1408815



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: T, on free cable end, cable length: 10 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-M12MRT/ 1,0-PUR - 1408816



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12, coding: T, on free cable end, cable length: 1 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-M12MRT/ 2,0-PUR - 1408819



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12, coding: T, on free cable end, cable length: 2 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-M12MRT/ 5,0-PUR - 1408820



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12, coding: T, on free cable end, cable length: 5 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-M12MRT/10,0-PUR - 1408822



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12, coding: T, on free cable end, cable length: 10 m, For direct current up to 12 A/63 V

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Power cable - SAC-4P- 1,0-PUR/M12FST - 1408823



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12, coding: T, cable length: 1 m, For direct current up to 12 A/63 V

Power cable - SAC-4P- 2,0-PUR/M12FST - 1408824



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12, coding: T, cable length: 2 m, For direct current up to 12 A/63 V

Power cable - SAC-4P- 5,0-PUR/M12FST - 1408825



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12, coding: T, cable length: 5 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-10,0-PUR/M12FST - 1408826



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12, coding: T, cable length: 10 m, For direct current up to 12 A/63 V

Power cable - SAC-4P- 1,0-PUR/M12FRT - 1408827



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket angled M12, coding: T, cable length: 1 m, For direct current up to 12 A/63 V

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Power cable - SAC-4P- 2,0-PUR/M12FRT - 1408828



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket angled M12, coding: T, cable length: 2 m, For direct current up to 12 A/63 V

Power cable - SAC-4P- 5,0-PUR/M12FRT - 1408829



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket angled M12, coding: T, cable length: 5 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-10,0-PUR/M12FRT - 1408830



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket angled M12, coding: T, cable length: 10 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-M12MST/ 0,3-PUR/M12FST - 1408806



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: T, on Socket straight M12, coding: T, cable length: 0.3 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-M12MST/ 0,6-PUR/M12FST - 1408807



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: T, on Socket straight M12, coding: T, cable length: 0.6 m, For direct current up to 12 A/63 V

Distributed I/O device - AXL E S3 DI8 DO8 M12 6M - 2701548

Accessories

Power cable - SAC-4P-M12MST/ 1,0-PUR/M12FST - 1408808



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: T, on Socket straight M12, coding: T, cable length: 1 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-M12MST/ 2,0-PUR/M12FST - 1408809



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: T, on Socket straight M12, coding: T, cable length: 2 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-M12MST/ 5,0-PUR/M12FST - 1408810



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: T, on Socket straight M12, coding: T, cable length: 5 m, For direct current up to 12 A/63 V

Power cable - SAC-4P-M12MST/10,0-PUR/M12FST - 1408811



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: T, on Socket straight M12, coding: T, cable length: 10 m, For direct current up to 12 A/63 V

Sensor/actuator cable

Sensor/actuator cable - SAC-3P-M12MS/.../... - 1696662



Sensor/actuator cable, 3-position, Variable cable type, Plug straight M12, coding: A, on free cable end, cable length: Free input (0.2 ... 40.0 m)

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Sensor/actuator cable - SAC-3P-M12MR/.../... - 1696675



Sensor/actuator cable, 3-position, Variable cable type, Plug angled M12, coding: A, on free cable end, cable length: Free input (0.2 ... 40.0 m)

Sensor/actuator cable - SAC-3P-M12MS-M12FS/.../... - 1696756



Sensor/actuator cable, 3-position, Variable cable type, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: Free input (0.2 ... 40.0 m)

Sensor/actuator cable - SAC-3P-M12MR-M12FS/.../... - 1513428



Sensor/actuator cable, 3-position, Variable cable type, Plug angled M12, coding: A, on Socket straight M12, coding: A, cable length: Free input (0.2 ... 40.0 m)

Sensor/actuator cable - SAC-3P-M12MR-M12FR/.../... - 1513318



Sensor/actuator cable, 3-position, Variable cable type, Plug angled M12, coding: A, on Socket angled M12, coding: A, cable length: Free input (0.2 ... 40.0 m)

Sensor/actuator cable - SAC-4P-MS SCO/.../... - 1523560



Sensor/actuator cable, 4-position, Variable cable type, Plug straight M12 SPEEDCON, coding: A, on free cable end, cable length: Free input (0.2 ... 40.0 m)

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Sensor/actuator cable - SAC-4P-MR SCO/.../... - 1523573



Sensor/actuator cable, 4-position, Variable cable type, Plug angled M12 SPEEDCON, coding: A, on free cable end, cable length: Free input (0.2 ... 40.0 m)

Sensor/actuator cable - SAC-4P-MS-FS SCO/.../... - 1523586



Sensor/actuator cable, 4-position, Variable cable type, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length: Free input (0.2 ... 40.0 m)

Sensor/actuator cable - SAC-4P-M12MR-M12FS/.../... - 1697030



Sensor/actuator cable, 4-position, Variable cable type, Plug angled M12, coding: A, on Socket straight M12, coding: A, cable length: Free input (0.2 ... 40.0 m)

Sensor/actuator cable - SAC-4P-M12MR-M12FR/.../... - 1697043



Sensor/actuator cable, 4-position, Variable cable type, Plug angled M12, coding: A, on Socket angled M12, coding: A, cable length: Free input (0.2 ... 40.0 m)

Sensor/actuator cable - SAC-5P-M12MS/.../... - 1697098



Sensor/actuator cable, 5-position, Variable cable type, Plug straight M12, coding: A, on free cable end, cable length: Free input (0.2 ... 40.0 m)

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Sensor/actuator cable - SAC-5P-M12MR/.../... - 1697108



Sensor/actuator cable, 5-position, Variable cable type, Plug angled M12, coding: A, on free cable end, cable length: Free input (0.2 ... 40.0 m)

Sensor/actuator cable - SAC-5P-MS-FS SCO/.../... - 1523625



Sensor/actuator cable, 5-position, Variable cable type, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length: Free input (0.2 ... 40.0 m)

Sensor/actuator cable - SAC-5P-M12MR-M12FS/.../... - 1508734



Sensor/actuator cable, 5-position, Variable cable type, Plug angled M12, coding: A, on Socket straight M12, coding: A, cable length: Free input (0.2 ... 40.0 m)

Sensor/actuator cable - SAC-5P-M12MR-M12FR/.../... - 1529506



Sensor/actuator cable, 5-position, Variable cable type, Plug angled M12, coding: A, on Socket angled M12, coding: A, cable length: Free input (0.2 ... 40.0 m)

Y-distributor

Y distributor - SAC-3P-Y/2XM 8FS SCO - 1523984



Y distributor, 4-position, Plug straight M12 SPEEDCON, coding: A, on Socket straight M8, coding: A and Socket straight M8, coding: A

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Y distributor - SAC-3P-Y/2XFS PE SCO - 1523971



Y distributor, 4-position, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A and Socket straight M12 SPEEDCON, coding: A

Y distributor - SAC-3P-Y/2XFS B PE SCO - 1523968



Y distributor, 4-position, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, PIN 2+4 bridged and Socket straight M12 SPEEDCON, coding: A, PIN 2+4 bridged, Thread M12 socket not rotatable

Y distributor - SAC-5P-Y/2XFS VP SCO - 1546068



Y distributor, 5-position, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A and Socket straight M12 SPEEDCON, coding: A, Parallel distributor, Thread M12 socket not rotatable
