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Axioline E EtherNet/IP[™] device in a plastic housing with 8 IO-Link ports and 4 digital inputs, 24 V DC, M12 fast connection technology

Why buy this product

- [™] Connection to EtherNet/IP[™] network using M12connectors (D-coded)
- ☑ Transmission speed of 10 Mbps and 100 Mbps
- Connection of four IO-Link devices with additional digital input
- ☑ Connection of four IO-Link actuators with additional power supply
- Connection of IO-Link ports using M12connectors (A-coded, 5-pos.)
- ☑ Diagnostic and status indicators
- Short-circuit and overload protection of the sensor supply
- ☑ IP65/IP67 degree of protection

RoHS

EtherNet/IP @ IO-Link

Key Commercial Data

Packing unit	1 STK
Weight per Piece (excluding packing)	640.000 g
Custom tariff number	85176200
Country of origin	Germany

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	30.5 mm



Technical data

Dimensions

Note on dimensions	The height is 212 mm including fixing clips.
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	Pocan [®]
Mounting type	Wall mounting
Net weight	552.8 g
Interfaces	
Fieldbus system	EtherNet/IP™
Designation	EtherNet/IP™
Connection method	M12 fast connection technology
Note on connection method	D-coded
Designation connection point	Copper cable
Transmission speed	10/100 MBit/s (with auto negotiation)
Number of positions	4
System limits of the bus coupler	
Designation	EtherNet/IP™
Equipment type	EtherNet/IP™ slave
System-specific protocols	EtherNet/IP™ protocols ACD
	EtherNet/IP™ protocols DLR
	EtherNet/IP™ protocols IGMP v2
Protocols supported	SNMP v1
	HTTP
	TFTP

 TFTP

 FTP

 BootP

 DHCP

 Specification
 CIP Edition 3.11 EIP adaptation of CIP 1.12



Technical data

Power supply for module electronics

Designation	Module electronics and sensors (U _S)
Connection method	M12 connector (T-coded)
Number of positions	4
Supply voltage	24 V DC
Nominal supply voltage range	18 V DC 31.2 V DC (including all tolerances, including ripple)
Current consumption	max. 12 A
Typical current consumption	180 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
Nominal supply voltage range	18 V DC 31.2 V DC (including all tolerances, including ripple)
Current consumption	max. 12 A
Typical current consumption	28 mA ±15 % (at 24 V DC)

Digital inputs

Description of the input	IO-Link ports in digital input (DI) mode
Connection method	M12 connector, X01 X04 have double occupancy
	3-conductor
Nominal input voltage U _{IN}	24 V DC
Input voltage range "0" signal	-0.3 V DC 5 V DC
Input voltage range "1" signal	15 V DC 30 V DC
Nominal input current	typ. 3 mA
Sensor current per channel	max. 200 mA (from L+/L-)
Total sensor current	max. 1.6 A (from L+/L-)
Input filter time	< 1000 µs
Input frequency	0.5 kHz
Protective circuit	Overload protection Electronic
	Short-circuit protection for the sensor supply Electronic

Digital outputs

Output description	IO-Link ports in digital output (DO) mode	
Connection method	M12 connector, X01 X04 have double occupancy	
	2, 3-wire	
Number of outputs	max. 8	
Nominal output voltage	24 V DC	
Maximum output current per channel	150 mA	
Maximum output current per device	1.6 A (over all 8 IO-Link C/Q and L+ cables)	



Technical data

Digital outputs

Maximum total current consumption	max. 1.6 A (Per device)	
Nominal load, ohmic	3.6 W (160 Ω, at nominal load)	
Nominal load, inductive	3.6 VA (0.8 H, 160 Ω, at nominal load)	
Signal delay	max. 150 μs (when switched on)	
	max. 200 μs (when switched off)	
Switching rate	1 per second, maximum (at nominal inductive load)	
Limitation of the voltage induced on circuit interruption	-15 V DC	
Output voltage when switched off	max. 1 V	
Output current when switched off	max. 300 μA	
Protective circuit	Overload protection	
	Short-circuit protection Electronic	
Behavior with overload	Shutdown with automatic restart	

Electrical isolation

Test section	24 V supply (communications power and sensor supply, IO-Link ports)/bus connection (Ethernet 1) 500 V AC 50 Hz 1 min.
	24 V supply (communications power and sensor supply, IO-Link ports)/bus connection (Ethernet 2) 500 V AC 50 Hz 1 min.
	24 V supply (communications power and sensor supply, IO-Link ports)/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)/24 V supply (communications power and sensor supply, IO-Link ports) 500 V AC 50 Hz 1 min.
	24 V supply (actuator supply)/bus connection (Ethernet 1) 500 V AC 50 Hz 1 min.
	24 V supply (actuator supply)/bus connection (Ethernet 2) 500 V AC 50 Hz 1 min.
	24 V supply (actuator supply)/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

Drawings



Connection diagram

Dimensional drawing



Connection diagram



Classifications

eCl@ss

eCl@ss 4.0	27240404
eCl@ss 4.1	27240404
eCl@ss 5.0	27242204
eCl@ss 5.1	27242604
eCl@ss 6.0	27242604
eCl@ss 7.0	27242604
eCl@ss 8.0	27242604
eCl@ss 9.0	27242604

ETIM

ETIM 2.0 EC001433	
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Classifications

ETIM

ETIM 3.0	EC001599
ETIM 4.0	EC001599
ETIM 5.0	EC001599

UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	39121311
UNSPSC 12.01	39121311
UNSPSC 13.2	39121311

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

UL Listed M http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm FILE E 140324

cUL Listed Whttp://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm FILE E 140324

cULus Listed

Accessories

Accessories



Accessories

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, D-coded, Screw connection, Knurl material: Zinc die-cast, nickel-plated, Cable gland Pg9, External cable diameter 6 mm ... 8 mm

Data cable preassembled

Network cable - NBC-MSD SCO/.../... - 1408713



Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded, Plug straight M12 SPEEDCON / IP67, Coding: D, on free cable end, Cable length: Free input (0.2 ... 40.0 m)

Network cable - NBC-MSD-FSD SCO/.../... - 1408692



Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded, Plug straight M12 SPEEDCON / IP67, Coding: D, on Socket straight M12 SPEEDCON / IP67, Coding: D, Cable length: Free input (0.2 ... 40.0 m)

Network cable - NBC-MSD-MSD SCO/.../... - 1408706



Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded, Plug straight M12 SPEEDCON / IP67, Coding: D, on Plug straight M12 SPEEDCON / IP67, Coding: D, Cable length: Free input (0.2 ... 40.0 m)

Network cable - NBC-MSD-R4AC SCO/.../... - 1408712



Network cable, Ethernet CAT5 (100 Mbps), 4-position, Variable cable type, shielded, Plug straight M12 SPEEDCON / IP67, Coding: D, on Plug straight RJ45 / IP20, Cable length: Free input (0.2 ... 40.0 m)

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Accessories

Device marking

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



Snap-in markers, Sheet, white, unlabeled, can be labeled with: THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, TOPMARK LASER, Mounting type: snapped into marker carrier, Lettering field: 7 x 10 mm

Interface converter

Distributed I/O device - AXL E IOL AI1 U M12 R - 2700273



Axioline E-IO-Link/analog converter for connecting an analog sensor, 0 V ... 10 V, M12 fast connection technology, angled version

Distributed I/O device - AXL E IOL AI1 I M12 R - 2700275



Axioline E-IO-Link/analog converter for connecting an analog sensor, 4 mA ... 20 mA, M12 fast connection technology, angled version

Distributed I/O device - AXL E IOL AO1 U M12 R - 2700278



Axioline E-IO-Link/analog converter for connecting an analog actuator, 0 V ... 10 V, M12 fast connection technology, angled version



Accessories

Distributed I/O device - AXL E IOL AO1 I M12 R - 2700282



Axioline E-IO-Link/analog converter for connecting an analog actuator, 4 mA ... 20 mA, M12 fast connection technology, angled version

Distributed I/O device - AXL E IOL RTD1 M12 R - 2700305



Axioline E-IO-Link/analog converter for connecting a temperature measurement resistor, M12 fast connection technology, angled version

Distributed I/O device - AXL E IOL AI1 U M12 S - 2700336



Axioline E-IO-Link/analog converter for connecting an analog sensor, 0 V ... 10 V, M12 fast connection technology, straight version

Distributed I/O device - AXL E IOL AI1 I M12 S - 2700338



Axioline E-IO-Link/analog converter for connecting an analog sensor, 4 mA ... 20 mA, M12 fast connection technology, straight version

Distributed I/O device - AXL E IOL AO1 U M12 S - 2700350



Axioline E IO-Link/analog converter for connecting an analog actuator, 0 V ... 10 V, M12 fast connection technology, straight version



Accessories

Distributed I/O device - AXL E IOL AO1 I M12 S - 2700351



Axioline E-IO-Link/analog converter for connecting an analog actuator, 4 mA ... 20 mA, M12 fast connection technology, straight version

Distributed I/O device - AXL E IOL RTD1 M12 S - 2700352



Axioline E-IO-Link/analog converter for connecting a temperature measurement resistor, M12 fast connection technology, straight version

Power cable

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



Power cable, 4-position, PUR halogen-free, black RAL 9005, shielded, free cable end, on Socket angled M12 SPEEDCON, T-coded, Cable length: 1.5 m, for direct current up to 12 A/60 V

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



Power cable, 4-position, PUR halogen-free, black RAL 9005, shielded, Plug straight M12 SPEEDCON, T-coded, on free cable end, Cable length: 1.5 m, for direct current up to 12 A/60 V

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12 SPEEDCON, T-coded, on free cable end, Cable length: 1 m, for direct current up to 12 A/60 V

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Accessories

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12 SPEEDCON, T-coded, on free cable end, Cable length: 2 m, for direct current up to 12 A/60 V

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12 SPEEDCON, T-coded, on free cable end, Cable length: 5 m, for direct current up to 12 A/60 V

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12 SPEEDCON, T-coded, on free cable end, Cable length: 10 m, for direct current up to 12 A/60 V

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12 SPEEDCON, T-coded, on free cable end, Cable length: 1 m, for direct current up to 12 A/60 V

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12 SPEEDCON, T-coded, on free cable end, Cable length: 2 m, for direct current up to 12 A/60 V



Accessories

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12 SPEEDCON, T-coded, on free cable end, Cable length: 5 m, for direct current up to 12 A/60 V

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12 SPEEDCON, T-coded, on free cable end, Cable length: 10 m, for direct current up to 12 A/60 V

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12 SPEEDCON, T-coded, Cable length: 1 m, for direct current up to 12 A/60 V

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12 SPEEDCON, T-coded, Cable length: 2 m, for direct current up to 12 A/60 V

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12 SPEEDCON, T-coded, Cable length: 5 m, for direct current up to 12 A/60 V



Accessories

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12 SPEEDCON, T-coded, Cable length: 10 m, for direct current up to 12 A/60 V

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket angled M12 SPEEDCON, T-coded, Cable length: 1 m, for direct current up to 12 A/60 V

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket angled M12 SPEEDCON, T-coded, Cable length: 2 m, for direct current up to 12 A/60 V

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket angled M12 SPEEDCON, T-coded, Cable length: 5 m, for direct current up to 12 A/60 V

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



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket angled M12 SPEEDCON, T-coded, Cable length: 10 m, for direct current up to 12 A/60 V



Accessories

Power cable - SAC-4P-MST/ 0,3-PUR/FST SCO - 1408806



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12 SPEEDCON, T-coded, on Socket straight M12 SPEEDCON, T-coded, Cable length: 0.3 m, for direct current up to 12 A/60 V

Power cable - SAC-4P-MST/ 0,6-PUR/FST SCO - 1408807



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12 SPEEDCON, T-coded, on Socket straight M12 SPEEDCON, T-coded, Cable length: 0.6 m, for direct current up to 12 A/60 V

Power cable - SAC-4P-MST/ 1,0-PUR/FST SCO - 1408808



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12 SPEEDCON, T-coded, on Socket straight M12 SPEEDCON, T-coded, Cable length: 1 m, for direct current up to 12 A/60 V

Power cable - SAC-4P-MST/ 2,0-PUR/FST SCO - 1408809



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12 SPEEDCON, T-coded, on Socket straight M12 SPEEDCON, T-coded, Cable length: 2 m, for direct current up to 12 A/60 V

Power cable - SAC-4P-MST/ 5,0-PUR/FST SCO - 1408810



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12 SPEEDCON, T-coded, on Socket straight M12 SPEEDCON, T-coded, Cable length: 5 m, for direct current up to 12 A/60 V



Accessories

Power cable - SAC-4P-MST/10,0-PUR/FST SCO - 1408811



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12 SPEEDCON, T-coded, on Socket straight M12 SPEEDCON, T-coded, Cable length: 10 m, for direct current up to 12 A/60 V

Protective cap

Screw plug - PROT-M12 - 1680539



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

Sensor/actuator cable

Sensor/Actuator cable - SAC-3P-MS SCO/.../... - 1523515



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

Sensor/Actuator cable - SAC-3P-MR SCO/.../... - 1523531



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

Sensor/Actuator cable - SAC-3P-MS-FS SCO/ ... / ... - 1523544



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

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Accessories

Sensor/Actuator cable - SAC-3P-MR-FS SCO/.../... - 1523557



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

Sensor/Actuator cable - SAC-3P-MR-FR SCO/.../... - 1542020



Sensor/Actuator cable, 3-position, Variable cable type, Plug angled M12 SPEEDCON, A-coded, on Socket angled M12 SPEEDCON, A-coded, 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, A-coded, on free cable end, Cable length: Free input (0.2 ... 40.0 m)

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



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



Accessories

Sensor/Actuator cable - SAC-4P-MR-FS SCO/.../... - 1523599



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

Sensor/Actuator cable - SAC-4P-MR-FR SCO/.../... - 1537828



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

Sensor/Actuator cable - SAC-5P-MS SCO/.../... - 1523609



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

Sensor/Actuator cable - SAC-5P-MR SCO/.../... - 1523612



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



Accessories

Sensor/Actuator cable - SAC-5P-MR-FS SCO/.../... - 1523638



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

Sensor/Actuator cable - SAC-5P-MR-FR SCO/.../... - 1542389



Sensor/Actuator cable, 5-position, Variable cable type, Plug angled M12 SPEEDCON, A-coded, on Socket angled M12 SPEEDCON, A-coded, 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, A-coded, on Socket straight M8, A-coded and Socket straight M8, A-coded

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



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

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



Y distributor, 4-position, Plug straight M12 SPEEDCON, A-coded, on Socket straight M12 SPEEDCON, A-coded, PIN 2+4 bridged and Socket straight M12 SPEEDCON, A-coded, PIN 2+4 bridged



Accessories

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



Y distributor, 5-position, Plug straight M12 SPEEDCON, A-coded, on Socket straight M12 SPEEDCON, A-coded and Socket straight M12 SPEEDCON, A-coded, Parallel distributor

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