

Distributed I/O device - AXL E PB DIO16 M12 6P - 2701499

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Axioline E, Digital I/O device, PROFIBUS DP, M12 fast connection technology, Digital inputs: 16, 24 V DC, connection method: 4-conductor, Digital outputs: 16, 24 V DC, 500 mA, connection method: 3-conductor, Plastic housing, degree of protection: IP65/IP67

Product Description


The Axioline E device is designed for use within a PROFINET network. It is used to acquire and output digital signals.

Your advantages

- ✓ Connection to PROFIBUS DP using M12connectors (B-coded)
- ✓ Baud rate of up to 12 Mbaud (automatic baud rate detection)
- ✓ 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



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 763530
GTIN	4046356763530
Weight per Piece (excluding packing)	640.000 g
Custom tariff number	85176200
Country of origin	Germany

Technical data

Note

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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	30.5 mm
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
Color	anthracite
Net weight	480 g

Interfaces

Designation	PROFIBUS DP
Number	2
Connection method	M12 fast connection technology
Note on the connection method	B-coded
Designation connection point	Copper cable
Transmission speed	9.6 kbps ... 12 Mbps (Automatic baud rate detection)
Transmission physics	PROFIBUS-DP-compliant copper cable
Address area assignment	1 ... 126, adjustable
Number of positions	5

Network/bus system

Designation	PROFIBUS DP
Equipment type	PROFIBUS slave
System-specific protocols	PROFIBUS protocols DP V1

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Supply

Designation	Actuators (U_A) for additional devices
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. 3 mA \pm 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-conductor
Number of inputs	16
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 μ s
Cable length	max. 30 m (To the sensor)
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-conductor
Number of outputs	16
Protective circuit	Overload protection, short-circuit protection of outputs yes
Output voltage	24 V DC
Nominal output voltage	24 V DC (from voltage U_S)
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

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Electrical isolation

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

Standards and Regulations

Immunity to ESD	Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion B, 6 kV contact discharge, 8 kV air discharge
Immunity to EF	Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A, Field intensity: 10 V/m
Immunity to burst	Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion B, 2 kV
Immunity to surge	Noise immunity test in accordance with EN 61000-6-2 Transient overvoltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B, DC supply lines: ± 0.5 kV/ ± 0.5 kV (symmetrical/asymmetrical)
Immunity to conducted interference	Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A, Test voltage 10 V
Interference emission	Noise emission test as per EN 61000-6-4 Class A
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)

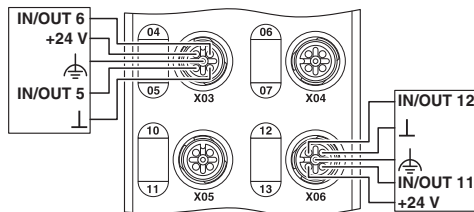
Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25;
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

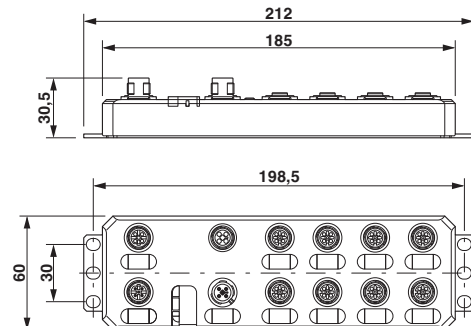
Drawings

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Connection diagram



Dimensional drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27242604
eCl@ss 11.0	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 9.0	27242604

ETIM

ETIM 2.0	EC001433
ETIM 3.0	EC001599
ETIM 4.0	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

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Approvals

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Approvals

UL Listed / cUL Listed / PROFIBUS / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
PROFIBUS			Z01809
cULus Listed			

Accessories

Accessories

Circular connector (cable-side)

Connector - SACC-M12FSB-5PL SH - 1424664



Connector, Universal, 5-position, shielded, Socket straight M12, Coding: B, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

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Accessories

Data connector - SACC-M12FSB-5CON-PG9 SH AU - 1507777



Data connector, PROFIBUS, INTERBUS, 5-position, shielded, Socket straight M12, Coding: B, Screw connection, knurl material: Zinc die-cast, nickel-plated, cable gland Pg9, external cable diameter 6.5 mm ... 8.5 mm

Data connector - SACC-M12MSB-5CON-PG9 SH AU - 1507764



Data connector, PROFIBUS, INTERBUS, 5-position, shielded, Plug straight M12, Coding: B, Screw connection, knurl material: Zinc die-cast, nickel-plated, cable gland Pg9, external cable diameter 6.5 mm ... 8.5 mm

Data cable preassembled

Bus system cable - SAC-2P-MSB SCO/910/... - 1538050



Bus system cable, PROFIBUS (12 Mbps), 2-position, PUR halogen-free, violet RAL 4001, shielded, Plug straight M12 SPEEDCON, coding: B, on free cable end, cable length: Free input (0.2 ... 40.0 m)

Bus system cable - SAC-2P-FSB SCO/910/... - 1538076



Bus system cable, PROFIBUS (12 Mbps), 2-position, PUR halogen-free, violet RAL 4001, shielded, free cable end, on Socket straight M12 SPEEDCON, coding: B, cable length: Free input (0.2 ... 40.0 m)

Bus system cable - SAC-2P-MSB-FSB SCO/910/... - 1538092



Bus system cable, PROFIBUS (12 Mbps), 2-position, PUR halogen-free, violet RAL 4001, shielded, Plug straight M12 SPEEDCON, coding: B, on Socket straight M12 SPEEDCON, coding: B, cable length: Free input (0.2 ... 40.0 m)

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Accessories

Bus system cable - SAC-2P-MSB-FRB SCO/910/... - 1433252



Bus system cable, PROFIBUS (12 Mbps), 2-position, PUR halogen-free, violet RAL 4001, shielded, Plug straight M12 SPEEDCON, coding: B, on Socket angled M12 SPEEDCON, coding: B, cable length: Free input (0.2 ... 40.0 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

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

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Accessories

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

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

Distributed I/O device - AXL E PB DIO16 M12 6P - 2701499

Accessories

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

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

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Accessories

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

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

Distributed I/O device - AXL E PB DIO16 M12 6P - 2701499

Accessories

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

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

Distributed I/O device - AXL E PB DIO16 M12 6P - 2701499

Accessories

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)

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)

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Accessories

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)

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)

Distributed I/O device - AXL E PB DIO16 M12 6P - 2701499

Accessories

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-MS SCO/.../... - 1523609



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

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)

Distributed I/O device - AXL E PB DIO16 M12 6P - 2701499

Accessories

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)

T-distributor

T distributor - SAC-M12T/2XM12 PBDP - 1458884



T distributor, PROFIBUS DP (12 Mbps), 4-position, shielded, Plug straight M12, coding: B, on Plug straight M12, coding: B and Socket straight M12, coding: B

Terminal resistor

Termination resistor - SAC-5P-M12MS PB TR - 1507803



Terminating resistor PROFIBUS M12

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Accessories

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

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
