

Wireless module - FLM BT BS 3 - 2736770

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Wireless IO base station for up to three Wireless IO devices, Bluetooth V1.2, 2.4 GHz frequency band; 1 wireless interface; WLAN-BlackChannelList; LEM; Fieldline Modular M12 local bus connection

Product Description

The products are offered exclusively for export outside the EU and the European Economic Area.

Your advantages

- ✓ Parallel operation of numerous Bluetooth systems
- ✓ Extremely rugged and reliable
- ✓ Quick and easy startup
- ✓ WLAN coexistence functions AFH, LEM, black channel listing



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 042673
GTIN	4046356042673
Weight per Piece (excluding packing)	316.400 g
Custom tariff number	85176200
Country of origin	Germany

Technical data

Note

Trade restriction	The products are offered exclusively for export outside the EU and the European Economic Area.
Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area

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Technical data

Dimensions

Width	70.5 mm
Height	178.5 mm
Depth	50 mm
Drill hole spacing	168 mm

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Permissible humidity (operation)	95 %
Air pressure (operation)	795 hPa ... 1080 hPa (up to 2000 m above sea level)
Degree of protection	IP65

Interfaces

Designation	Fieldline Modular local bus
Connection method	M12 connector, B-coded
Transmission speed	500 kBaud / 2 MBaud (data rate can be changed via pin 5 (voltage supply ULS))
Transmission physics	Copper
Address area assignment	3 ... 12 words, variable, depending on type and number of wireless modules connected

Wireless interface

Designation	Bluetooth
Wireless standard	Bluetooth 1.2
Antenna connection method	SMA (female)
Frequency range	2.402 GHz ... 2.48 GHz (ISM bandwidth)
Transmission power	8 dBm (can be set between 0 dBm and 14 dBm, in 4 dB increments)
Receiver sensitivity	-88 dBm
Wireless modules that can be connected	up to 3 (2736767 FLM BT DIO 8/8 M12, 2693208 FLM BT DI 16 M12, 2884282 ILB BT ADIO 2/2/16/16)

Antenna

Assembly instructions	OMNI antenna is included
Number	1
Connection method	SMA (male)

Power supply for module electronics

Connection method	M12 circular connector
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including ripple)
Supply current	< 100 mA

General

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Technical data

General

Mounting type	Wall mounting
Color	anthracite
Net weight	264.84 g
MTBF	554 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	185 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
Wireless licenses	Europe, additional countries in the e-shop
Wireless licences	Australia (Special rule: Please contact the Product Manager)
	Canada
	Russia (Special rule: Please contact the Product Manager)
	Switzerland
	Singapore
	Turkey
	USA
Mounting type	Wall mounting, optionally on mounting plate

Standards and Regulations

Mechanical tests	Shock in acc. with EN 60068-2-27/IEC 60068-2-27 25g
	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g
Connection in acc. with standard	CUL
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

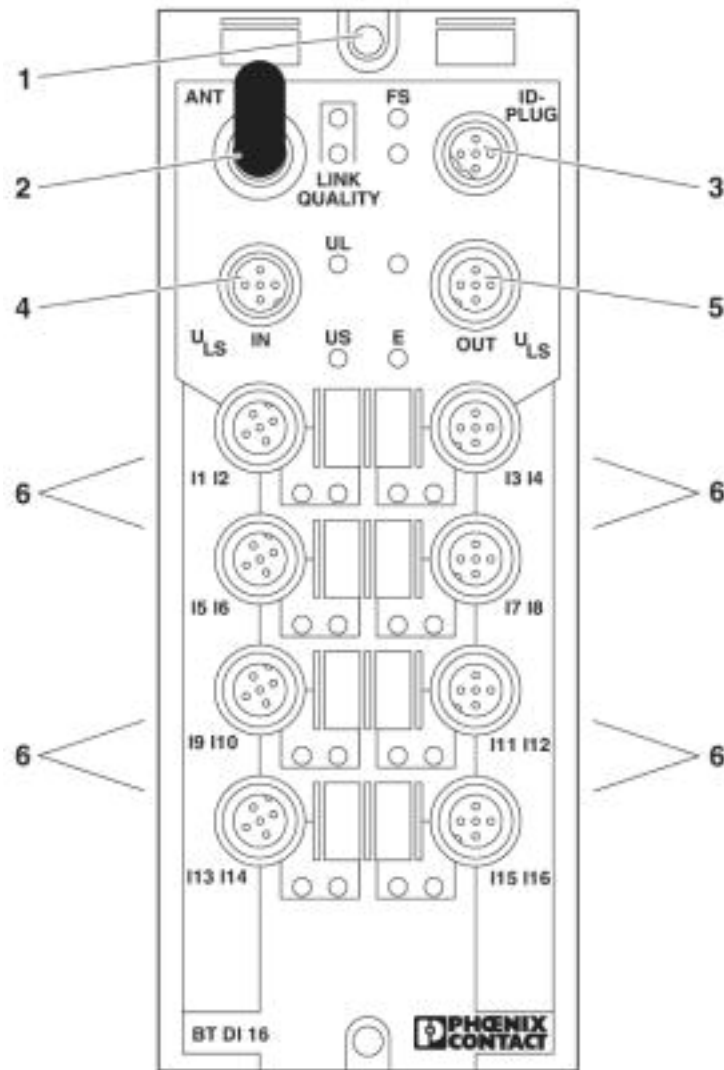
Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

Wireless module - FLM BT BS 3 - 2736770

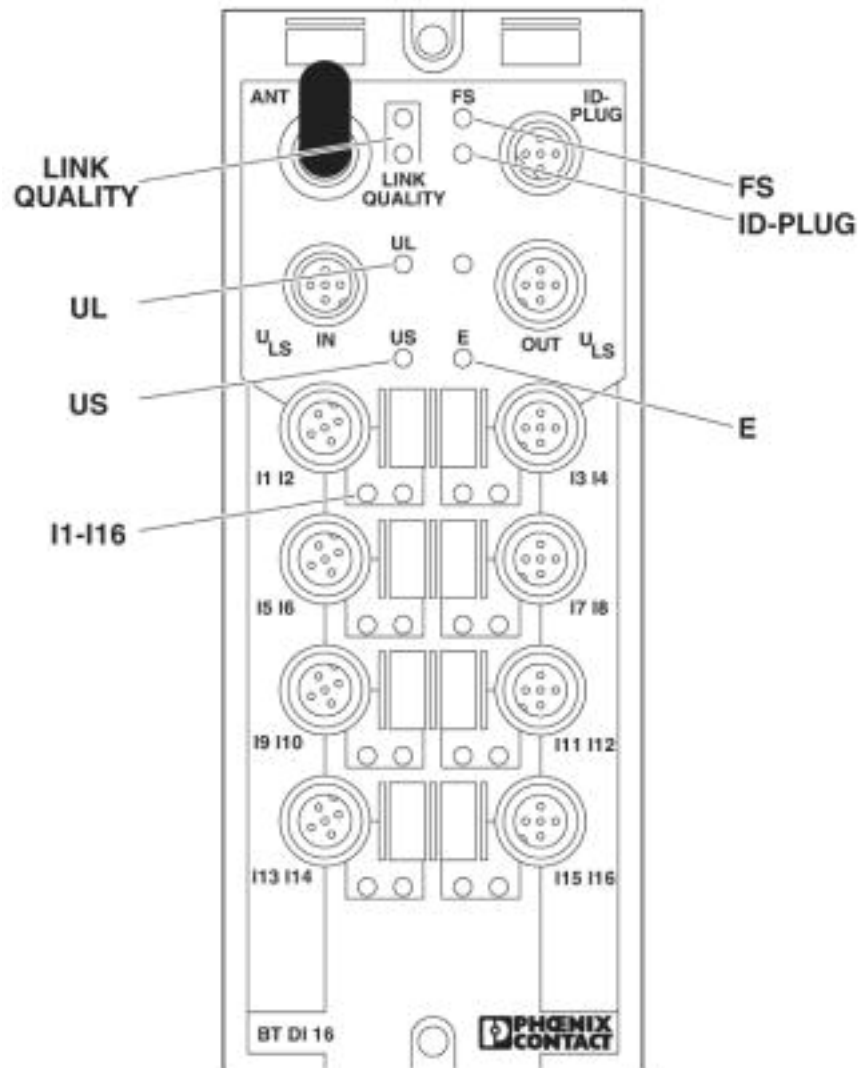
Product drawing



- 1 FE: Functional earth ground
- 2 ANT: Antenna
- 3 ID PLUG: ID PLUG connection
- 4 ULS IN: Voltage supply ULS IN
- 5 ULS OUT: Voltage supply ULS OUT
- 6 IN: Inputs (1 - 16)

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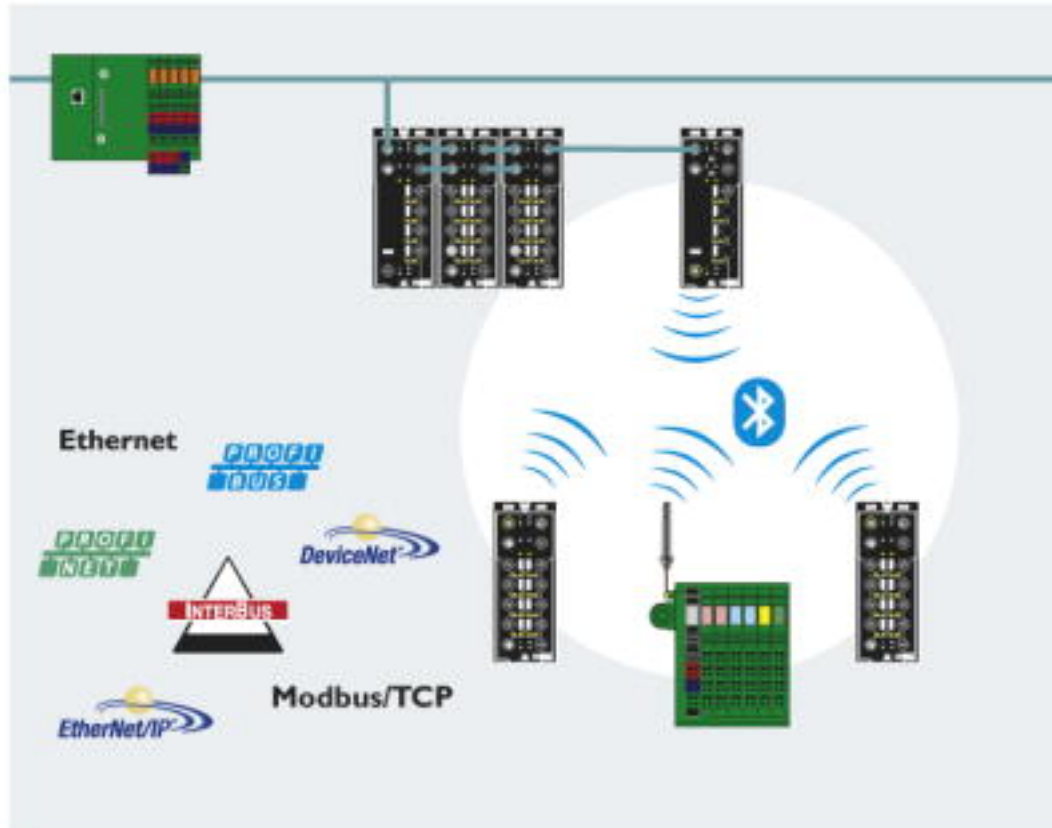
Product drawing



LINK QUALITY: Green/yellow
Quality of Bluetooth
FS connection: Red
Failure state ID-PLUG: Green/yellow/red
ID-PLUG UL status: Green
US communications power: Green
E sensor supply: Red
Short-circuit/overload of sensor supply I1-I16: Yellow
Status of the inputs

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Application drawing



Possible areas of application

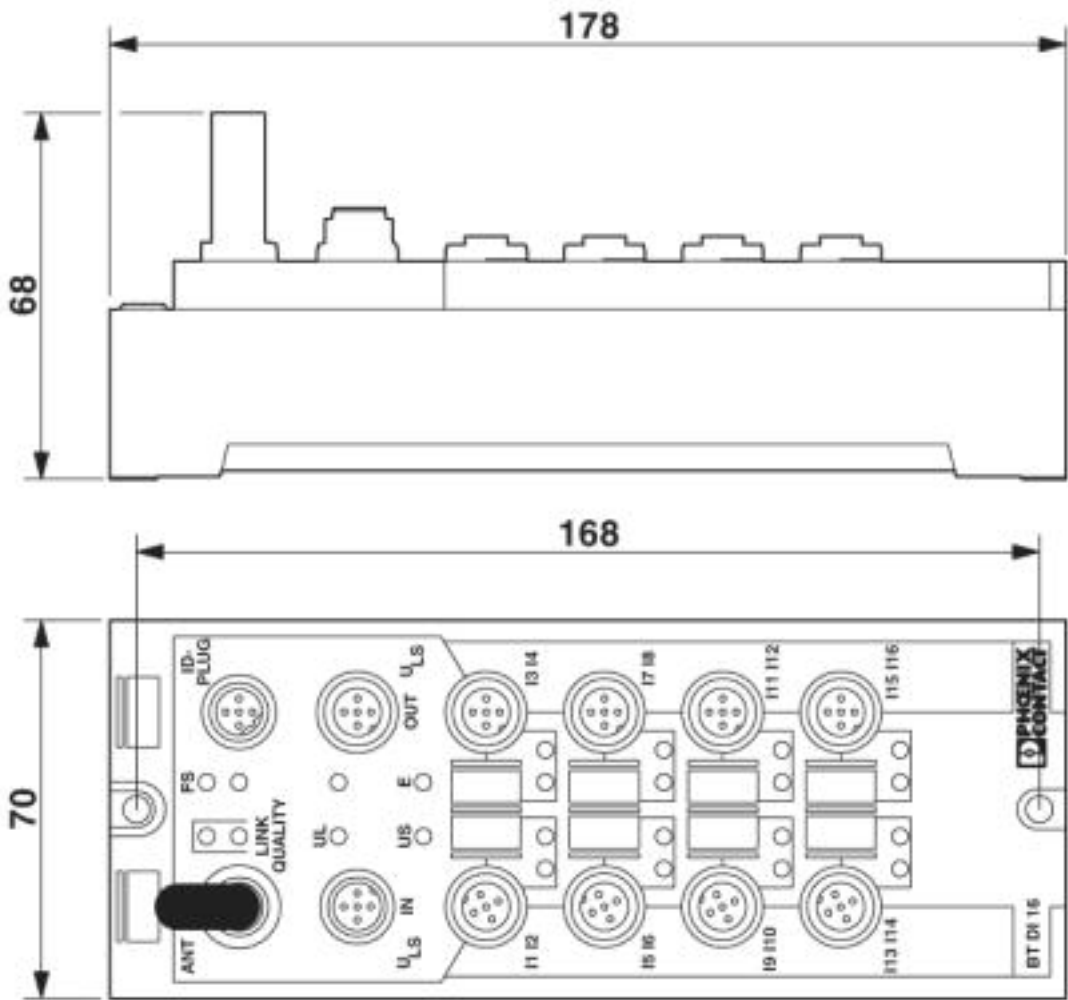
The Fieldline Modular wireless IO system is particularly suitable for use in moving, temporarily installed or inaccessible machine units in all industrial areas, when time-critical process signals are to be transmitted.

- Fast data transmission in typ. 10 ms per module
- Short range* of 20 to 50 m in industrial halls and more than 100 m outdoors.

* The range may be considerably above or below that stated, and depends on the environment, antenna technology and the product used.

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Dimensional drawing



Classifications

eCl@ss

eCl@ss 4.0	27250203
eCl@ss 4.1	27250203
eCl@ss 5.0	27250203
eCl@ss 5.1	27242600
eCl@ss 6.0	27242600
eCl@ss 7.0	27242608
eCl@ss 8.0	27242608
eCl@ss 9.0	27242608

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Classifications

ETIM

ETIM 2.0	EC001434
ETIM 3.0	EC001604
ETIM 4.0	EC001604
ETIM 5.0	EC001604
ETIM 6.0	EC001604

UNSPSC

UNSPSC 6.01	20142601
UNSPSC 7.0901	20142601
UNSPSC 11	20142601
UNSPSC 12.01	20142601
UNSPSC 13.2	32151602
UNSPSC 19.0	32151602

Accessories

Accessories

Circular connector (cable-side)

Bus system connector - SACC-M12MSB-5CON-PG9 SH AU - 1507764



Bus system 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

Bus system connector - SACC-M12FSB-5CON-PG9 SH AU - 1507777



Bus system 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

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Accessories

Connector - SACC-M12MSB-5SC SH - 1513570



Connector, 5-position, shielded, Plug straight M12, Coding: B, Spring-cage connection, knurl material: Nickel-plated brass, external cable diameter 4 mm ... 8 mm

Connector - SACC-M12FSB-5SC SH - 1513596



Connector, 5-position, shielded, Socket straight M12, Coding: B, Spring-cage connection, knurl material: Nickel-plated brass, external cable diameter 4 mm ... 8 mm

Connector - SACC-M12MRB-5SC SH - 1513583



Connector, 5-position, shielded, Plug angled M12, Coding: B, Spring-cage connection, knurl material: Nickel-plated brass, external cable diameter 4 mm ... 8 mm

Connector - SACC-M12FRB-5SC SH - 1513606



Connector, 5-position, shielded, Socket angled M12, Coding: B, Spring-cage connection, knurl material: Nickel-plated brass, external cable diameter 4 mm ... 8 mm

Connector - SACC-M12MS-5SC M - 1508187



Connector, 5-position, Plug straight M12, Coding: A, Spring-cage connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

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Accessories

Connector - SACC-M12FS-5SC M - 1508200



Connector, 5-position, Socket straight M12, Coding: A, Spring-cage connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

Data cable preassembled

Bus system cable - SAC-5P-M12MSB/ 2,0-900 - 1507065



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on free cable end, cable length: 2 m

Bus system cable - SAC-5P-M12MSB/ 5,0-900 - 1507078



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on free cable end, cable length: 5 m

Bus system cable - SAC-5P-M12MSB/10,0-900 - 1507081



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on free cable end, cable length: 10 m

Bus system cable - SAC-5P-M12MSB/15,0-900 - 1507094



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on free cable end, cable length: 15 m

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Bus system cable - SAC-5P- 2,0-900/M12FSB - 1507117



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, free cable end, on Socket straight M12, coding: B, cable length: 2 m

Bus system cable - SAC-5P- 5,0-900/M12FSB - 1507120



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, free cable end, on Socket straight M12, coding: B, cable length: 5 m

Bus system cable - SAC-5P-10,0-900/M12FSB - 1507133



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, free cable end, on Socket straight M12, coding: B, cable length: 10 m

Bus system cable - SAC-5P-15,0-900/M12FSB - 1507146



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, free cable end, on Socket straight M12, coding: B, cable length: 15 m

Bus system cable - SAC-5P-M12MSB/ 0,3-900/M12FSB - 1507162



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: 0.3 m

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Accessories

Bus system cable - SAC-5P-M12MSB/ 0,5-900/M12FSB - 1507175



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: 0.5 m

Bus system cable - SAC-5P-M12MSB/ 1,0-900/M12FSB - 1507188



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: 1 m

Bus system cable - SAC-5P-M12MSB/ 2,0-900/M12FSB - 1507191



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: 2 m

Bus system cable - SAC-5P-M12MSB/ 5,0-900/M12FSB - 1507201



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: 5 m

Bus system cable - SAC-5P-M12MSB/10,0-900/M12FSB - 1507214



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: 10 m

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Accessories

Bus system cable - SAC-5P-M12MSB/15,0-900/M12FSB - 1507227



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: 15 m

Sensor/actuator cable

Sensor/actuator cable - SAC-5P-MS/ 2,0-186 SCO - 1518326



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on free cable end, cable length: 2 m

Sensor/actuator cable - SAC-5P-MS/ 5,0-186 SCO - 1518339



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on free cable end, cable length: 5 m

Sensor/actuator cable - SAC-5P-MS/10,0-186 SCO - 1518342



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on free cable end, cable length: 10 m

Sensor/actuator cable - SAC-5P-MS/15,0-186 SCO - 1518355



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on free cable end, cable length: 15 m

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Accessories

Sensor/actuator cable - SAC-5P- 2,0-186/FS SCO - 1518368



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, free cable end, on Socket straight M12 SPEEDCON, coding: A, cable length: 2 m

Sensor/actuator cable - SAC-5P- 5,0-186/FS SCO - 1518371



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, free cable end, on Socket straight M12 SPEEDCON, coding: A, cable length: 5 m

Sensor/actuator cable - SAC-5P-10,0-186/FS SCO - 1518384



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, free cable end, on Socket straight M12 SPEEDCON, coding: A, cable length: 10 m

Sensor/actuator cable - SAC-5P-15,0-186/FS SCO - 1518397



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, free cable end, on Socket straight M12 SPEEDCON, coding: A, cable length: 15 m

Sensor/actuator cable - SAC-5P-MS/ 0,3-186/FS SCO - 1518407



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length: 0.3 m

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Accessories

Sensor/actuator cable - SAC-5P-MS/ 0,5-186/FS SCO - 1518410



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length: 0.5 m

Sensor/actuator cable - SAC-5P-MS/ 1,0-186/FS SCO - 1518423



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length: 1 m

Sensor/actuator cable - SAC-5P-MS/ 2,0-186/FS SCO - 1518436



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length: 2 m

Sensor/actuator cable - SAC-5P-MS/ 5,0-186/FS SCO - 1518449



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length: 5 m

Sensor/actuator cable - SAC-5P-MS/10,0-186/FS SCO - 1518452



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length: 10 m

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Accessories

Sensor/actuator cable - SAC-5P-MS/15,0-186/FS SCO - 1518465



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length: 15 m

Sensor/actuator cable - SAC-5P-MS/ 0,13-186/FS SCO - 1518481



Sensor/actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length: 0.13 m

Sensor/actuator cable - SAC-5P-MSB/0,13-PUR/FSB SCO SH - 1518478



Sensor/actuator cable, 5-position, PUR halogen-free, black-gray RAL 7021, shielded, Plug straight M12 SPEEDCON, coding: B, on Socket straight M12 SPEEDCON, coding: B, cable length: 0.13 m

Simulation software

Software - FL WST BASIC DEMO - 2692377



Simulation software for supporting the planning of wireless systems in industrial environments. Their functionality is limited with regard to the memory options as compared with the full version FL WST BASIC.

Software - FL WST BASIC - 2692254



Simulation software for supporting the planning of wireless systems in industrial environments. Thus, the later number and position of wireless components can be estimated and the quality of the radio coverage simulated.

Wireless module - FLM BT BS 3 - 2736770

Accessories

Terminal marking

Zack Marker strip, flat - ZBF 12:UNBEDRUCKT - 0809735



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 12 mm, lettering field size: 5.15 x 12.15 mm, Number of individual labels: 5

Wireless IO component

Wireless module - FLM BT DI 16 M12 - 2693208



Wireless IO device, 16 digital inputs, M12, Bluetooth V1.2; frequency band 2.4 GHz; 1 wireless interface; WLAN-BlackChannelList; LEM; transmission power max. 8 dBm

Wireless module - FLM BT DIO 8/8 M12 - 2736767



Wireless IO device, 8 digital inputs, 8 digital outputs, M12, Bluetooth V1.2; frequency band 2.4 GHz; 1 wireless interface; WLAN-BlackChannelList; LEM; transmission power max. 8 dBm

Wireless module - ILB BT ADIO 2/2/16/16 - 2884282



Wireless IO module, 16 digital inputs, 16 digital outputs, 2 analog inputs, 2 analog outputs, Bluetooth V1.2; 2.4 GHz frequency band; 1 wireless interface; WLAN-BlackChannelList; LEM

Y-distributor

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Accessories

Y distributor - SAC-3P-M12Y/2XM12FS PE - 1683455



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

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