

## Wireless module - FL BT EPA MP - 2701416

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Bluetooth Ethernet port adapter with external antenna connection for the wireless connection of Ethernet devices, BT access point and client mode, omnidirectional antenna supplied as standard

### Product description

Our Bluetooth modules can be used to easily, reliably, and cost-effectively integrate mobile or difficult to access automation devices or I/O modules into your Ethernet automation network.


With "black channel listing" and "low emission mode", Industrial Bluetooth can also be operated parallel to WLAN networks without any interference. Quick and straightforward startup with configuration via MODE button, web interface or directly from a controller is yet another feature of this solution.

### Product Features

- ✓ External RSMA antenna connection
- ✓ Range\* of up to 200 m
- ✓ Protocol-transparent communication on Layer 2
- ✓ IP65 protection class
- ✓ WLAN coexistence functions AFH, LEM, black channel listing



### Key commercial data

Packing unit	1 PCE
GTIN	 4 046356 749725
Custom tariff number	85176200
Country of origin	SWEDEN

### Technical data

#### Dimensions

Width	66 mm
Height	91 mm
Depth	34 mm
Note on dimensions	Without connections

#### Ethernet interface

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### Technical data

#### Ethernet interface

Interface	Ethernet
Number	1
Connection method	M 12 plug-in connectors (D-coded, female)

#### Wireless interface

Name	Bluetooth
Wireless standard	Bluetooth 2.1 + EDR
Antenna connection method	RSMA (female)
Frequency range	2.402 GHz ... 2.48 GHz (ISM bandwidth)
Frequency band	2.4 GHz
Transmission power	max. 12 dBm (EIRP)
Number of wireless interfaces	1
Wireless modules that can be connected	7
Profiles supported	PAN

#### Wireless card

Number	1
Assembly instructions	Permanently installed

#### Antenna

Assembly instructions	External OMNI omnidirectional antenna supplied as standard, antennas can be exchanged
Number	1
Connection method	RSMA (male)
Gain	3 dBi ((2.4 GHz))

#### Power supply for module electronics

Connection method	M12 plug-in connector (A-coded, male)
Supply voltage	24 V DC
Supply voltage range	9 V DC ... 30 V DC
Supply current	46 mA (at 24 V DC)
Current consumption	46 mA (at 24 V DC)
Current consumption	46 mA ((at 24 V DC, typical))

#### Functions

Operating modes	BT access point
Configuration	Web interface, MODE button, AT commands (TCP/IP), SSC
Automatic channel selection	FHSS, AFH
Quality of service (QoS)	Yes
Security	128-bit data encryption

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## Technical data

### Functions

Security	Authentication
Security	PIN
Security	Non-discoverable

### Digital inputs

Number of inputs	1
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### General

Weight	120 g
Mounting type	Wall mounting
Ambient temperature (operation)	-40 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 90 % (no condensation)
Permissible humidity (storage/transport)	5 % ... 90 % (no condensation)
Air pressure (operation)	795 hPa ... 1080 hPa (up to 2000 m above mean sea level)
Degree of protection	IP65
Protection class	III, IEC 61140, EN 61140, VDE 0140-1
Conformance with EMC directives	Noise immunity test in accordance with EN 61000-6-2 EN 61000-6-4
Wireless licences	Belgium
Wireless licences	Bulgaria
Wireless licences	Denmark
Wireless licences	Germany
Wireless licences	Estonia
Wireless licences	Finland
Wireless licences	France
Wireless licences	Greece
Wireless licences	Great Britain
Wireless licences	Ireland
Wireless licences	Iceland
Wireless licences	Italy
Wireless licences	Canada
Wireless licences	Latvia
Wireless licences	Liechtenstein
Wireless licences	Lithuania
Wireless licences	Luxembourg
Wireless licences	Malta
Wireless licences	The Netherlands
Wireless licences	Norway

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### Technical data

#### General

Wireless licences	Austria
Wireless licences	Poland
Wireless licences	Portugal
Wireless licences	Romania
Wireless licences	Sweden
Wireless licences	Switzerland
Wireless licences	Slovakia
Wireless licences	Slovenia
Wireless licences	Spain
Wireless licences	Czech Republic
Wireless licences	Hungary
Wireless licences	USA
Wireless licences	Cyprus (rep.)

### Classifications

#### eCl@ss

eCl@ss 4.0	27240409
eCl@ss 4.1	27240409
eCl@ss 5.0	27242215
eCl@ss 5.1	27250501
eCl@ss 6.0	27242208
eCl@ss 7.0	27242208

#### ETIM

ETIM 3.0	EC001423
ETIM 4.0	EC000515
ETIM 5.0	EC000515

#### UNSPSC

UNSPSC 6.01	20142601
UNSPSC 7.0901	20142601
UNSPSC 11	20142601
UNSPSC 12.01	20142601
UNSPSC 13.2	20142601

### Approvals

#### Approvals

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### Approvals

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Approvals

UL Listed / cUL Listed / cULus Listed

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Ex Approvals

UL Recognized / cUL Recognized / cULus Recognized

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Approvals submitted

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### Approval details

UL Listed 

cUL Listed 

cULus Listed 

### Accessories

Accessories

Antennas

Antenna - RAD-ISM-2400-ANT-OMNI-2-1-RSMA - 2701362



Omnidirectional antenna, 2.4 GHz, 2 dBi, linear vertical, 1.5 m cable, RSMA (male), IP65, 50  $\Omega$  impedance

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### Accessories

#### Antenna - RAD-ISM-2400-ANT-VAN-3-0-RSMA - 2701358



Omnidirectional antenna with protection against vandalism, 2.4 GHz, 3 dBi gain, IP55 degree of protection, 1.5 m cable length, RSMA connection (male), h/v 360°/85° apex angle. Appropriate mounting material is available for wall mounting.

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#### Antenna - RAD-ISM-2400-ANT-OMNI-6-0 - 2885919



Omnidirectional antenna, 2.4 GHz, 6 dBi, linear vertical, N (female), IP55, 50 Ohm impedance

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#### Antenna - ANT-DIR-2459-01 - 2701186



Panel antenna, 2.4 / 5 GHz, 9 dBi, linear vertical, N (female), IP67

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### Assembly

#### DIN rail adapter - FL EPA RMS - 2701133



Set for mounting devices with EPA design on a DIN rail

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#### Assembly adapters - FL EPA WMS - 2701134



Set for mounting devices with EPA design to wall or mast, including mast clips for a diameter of 25 - 85 mm, can be moved on two axes for optimum alignment, stainless steel

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### Accessories

#### Cable/conductor

Antenna cable - RAD-PIG-RSMA/N-0.5 - 2903263



Antenna cable, 0.5 m in length; N (male) -> RSMA (male), impedance 50 ohms

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Antenna cable - RAD-PIG-RSMA/N-1 - 2903264



Antenna cable, 1 m in length; N (male) -> RSMA (male), impedance 50 ohms

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Antenna cable - RAD-PIG-RSMA/N-2 - 2903265



Antenna cable, 2 m in length; N (male) -> RSMA (male), impedance 50 ohms

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Antenna cable - RAD-PIG-RSMA/N-3 - 2903266



Antenna cable, 3 m in length; N (male) -> RSMA (male), impedance 50 ohms

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Bus system cable - SAC-4P-M12MSD/ 2,0-931 - 1569391



Bus system cable, Ethernet, 4-position, PUR halogen-free, water blue RAL 5021, shielded, Plug straight M12, D-coded, on Free cable end, Cable length: 2 m

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### Accessories

Network cable - VS-MSD-IP20-93E/1,0 - 1403498



Assembled Ethernet cable, CAT5e, shielded, 2-pair, AWG 26, stranded (7-wire), RAL 5021 (aqua blue), M12 plug to RJ45 plug/IP20, line, length 1 m

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Sensor/Actuator cable - SAC-4P- 2,0-PUR/M12FS - 1533576



Sensor/Actuator cable, 4-position, PUR halogen-free, Black-gray RAL 7021, Free cable end, on Socket straight M12, A-coded, Cable length: 2 m

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### Plug/Adapter

RJ45 plug-in connector - VS-08-RJ45-5-Q/IP20 - 1656725



RJ45 plug-in connector, IP20, CAT5e, 8-pos., with QUICKON fast connection technology, for 26 ... 23 AWG 1-wire and 7-wire conductors, for 4.5 mm ... 8.0 mm cable diameter, labeling: TIA 568 B, color: gray