

## Wireless module - FL EPA 2 RSMA - 1005957

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Combined Ethernet wireless module with Bluetooth and Wi-Fi, exchangeable omni antenna included, Wi-Fi: AP and client, 2.4 and 5 GHz, Bluetooth: 2.1+EDR/4.0, PAN up to 7 connections, IP65, 9 ... 30 V DC, M12 connection, WEB, AT commands and mode button

### Your advantages

- With replaceable RSMA antenna (included)
- Protocol-transparent communication on Layer 2
- IP65 protection class
- Combined wireless module for WLAN and Bluetooth



### Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626477022
Weight per Piece (excluding packing)	176.900 g
Weight per piece (including packing)	176.900 g
Custom tariff number	85176200
Country of origin	Sweden
Sales Key	M2 - Network Techn.

### Technical data

#### Dimensions

Width	67.8 mm
Height	92.7 mm
Depth	33.2 mm
Note on dimensions	excluding M12 connections and antenna connection

#### Ambient conditions

Ambient temperature (operation)	-40 °C ... 65 °C
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## Technical data

### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 93 % (non-condensing)
Permissible humidity (storage/transport)	non-condensing
Degree of protection	IP65

### Ethernet interface

Interface	Ethernet
Number	1
Connection method	M12 connectors (D-coded, female)
Interface	10/100 Mbps Ethernet
Number of interfaces	1
Connection method	M12 connectors (D-coded, female)
Note on the connection method	Auto negotiation and autocrossing
Transmission speed	10/100 Mbps
Transmission physics	Copper
Transmission length	100 m (per segment)

### Wireless interface

Designation	Bluetooth / WLAN
Antenna connection method	RSMA (female)
Wireless standard	Bluetooth 2.1 + EDR
	IEEE 802.11
	b
	g
	a
	n
Frequency range	2.402 GHz ... 2.48 GHz (Bluetooth)
	2.4095 GHz ... 2.4645 GHz (WLAN)
	5.17 GHz ... 5.25 GHz (WLAN-AP)
	5.17 GHz ... 5.71 GHz (WLAN-Client)
Frequency band	2.4 GHz
	5 GHz
Transmission power	max. 16 dBm (Bluetooth: 10 dBm)
Number of wireless interfaces	1 IEEE 802.11 a/b/g/n, Bluetooth 2.1+EDR, Bluetooth LE 4.0
Wireless modules that can be connected	7 (BT 2.1+EDR, NAP-Mode)

### Wireless card

Number	1
Assembly instructions	Permanently installed

### Antenna

Assembly instructions	External OMNI omnidirectional antenna supplied as standard, antennas can be exchanged
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## Technical data

### Antenna

Number	1
Connection method	RSMA (male)
Gain	3 dBi ((2.4 GHz / 5 GHz))
Length	107 mm

### Power supply for module electronics

Connection technology	M12 connector
Connection method	M12 connector (A-coded, male)
Supply voltage	24 V DC
Supply voltage range	9 V DC ... 30 V DC
Supply current	typ. 54 mA (at 24 V DC)
Current consumption	max. 190 mA (at 9 V DC)

### Functions

Operating modes	Access point/client adapter for WLAN and Bluetooth
Configuration	Web interface, MODE button, AT commands (TCP/IP), SSC
Security	802.11i
	WPA PSK (preshared key)
	WPA2
	AES
	TKIP
	PIN
	Non-discoverable

### Digital inputs

Number of inputs	1
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### General

Mounting type	Wall mounting
Net weight	176.9 g
Wireless licenses	Europe, USA, Canada, additional countries in the e-shop
	RED (Radio Equipment Directive)
	FCC 47 CFR part 15, subpart B
Wireless licences	Belgium
	Bulgaria
	Denmark
	Germany
	Estonia
	Finland
	France
	Greece
	Great Britain
	Ireland

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## Technical data

### General

	Iceland
	Italy
	Japan
	Canada
	Latvia
	Liechtenstein
	Lithuania
	Luxembourg
	Malta
	Netherlands
	Norway
	Austria
	Poland
	Portugal
	Romania
	Sweden
	Switzerland
	Slovakia
	Slovenia
	Spain
	South Korea
	Czech Republic
	Hungary
	USA
	Cyprus (rep.)
Mounting type	Wall mounting

### Standards and Regulations

Mechanical tests	Shock in acc. with EN 60068-2-27/IEC 60068-2-27 3g, 11 ms half-sine shock pulse
	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5 - 8.4 Hz= ±3.5 mm; 8.4 - 40.7 Hz = 1g; 40.7 - 57Hz= ±0.15 mm; 57 - 500 Hz= 2g
Standards/regulations	EN 61000-4-2
	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
	EN 55022
	EN 61000-4-6

### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years
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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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## Classifications

### eCl@ss

eCl@ss 10.0.1	19170101
eCl@ss 11.0	19170101
eCl@ss 4.0	27240409
eCl@ss 4.1	27240409
eCl@ss 5.0	27242215
eCl@ss 5.1	27250501
eCl@ss 6.0	19170100
eCl@ss 7.0	19170101
eCl@ss 9.0	19170101

### ETIM

ETIM 2.0	EC001423
ETIM 3.0	EC001423
ETIM 4.0	EC000515
ETIM 6.0	EC000515
ETIM 7.0	EC000515

### UNSPSC

UNSPSC 6.01	20142601
UNSPSC 7.0901	20142601
UNSPSC 11	20142601
UNSPSC 12.01	20142601
UNSPSC 13.2	43201404
UNSPSC 18.0	43201404
UNSPSC 19.0	43201404
UNSPSC 20.0	43201404
UNSPSC 21.0	43201404

## Approvals

### Approvals

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#### Approvals

UL Listed / cUL Listed / UL Listed / cUL Listed

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## Approvals

Ex Approvals

UL Listed / cUL Listed / UL Listed / cUL Listed

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705

## Accessories

### Accessories

#### Antenna

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



Omnidirectional antenna, 2.4 GHz, gain: 2 dBi, polarization: linear, opening angle: h/v 360°/75°, degree of protection: IP65, connection: RSMA (male), incl. 1.5 m / 5 ft. connecting cable and mounting bracket for wall mounting

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



Omnidirectional antenna, 2.4 GHz, gain: 6 dBi, polarization: linear, opening angle: h/v 360°/30°, degree of protection: IP67, seawater-resistant, connection: N (female), incl. mounting bracket and mast clamps, ATEX and IECEx approval

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### Accessories

#### Antenna - ANT-OMNI-5900-01 - 2701347

Omnidirectional antenna, 5 GHz, gain: 5 dBi, polarization: linear, opening angle: h/v 360°/25°, degree of protection: IP64, connection: N (female), incl. mounting bracket and mast clips



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

Directional antenna, 2.4 GHz/5 GHz, gain: 9 dBi, polarization: linear, opening angle: h/v 75°/55°, degree of protection: IP67, seawater-resistant, connection: N (female), incl. mounting bracket and mast clips, ATEX and IECEx approval



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### Assembly adapter

#### 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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### Coaxial cable

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

Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.4 / 0.5 / 0.6 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 0.5 m (1.6 ft.)



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

Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.5 / 0.8 / 1.1 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 1 m (3.3 ft.)



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### Accessories

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



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.9 / 1.3 / 2.0 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 2 m (6.5 ft.)

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



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 1.2 / 2.0 / 3.0 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 3 m (10 ft.)

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### Data cable preassembled

#### Network cable - NBC-MSD/ 5,0-93E/R4AC SCO - 1407362



Network cable, Ethernet CAT5 (100 Mbps), 4-position, PUR, water blue RAL 5021, shielded, Plug straight M12 SPEEDCON / IP67, coding: D, on Plug straight RJ45 / IP20, cable length: 5 m

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#### Network cable - NBC-MSD/ 1,0-93E/R4AC SCO - 1407360



Network cable, Ethernet CAT5 (100 Mbps), 4-position, PUR, water blue RAL 5021, shielded, Plug straight M12 SPEEDCON / IP67, coding: D, on Plug straight RJ45 / IP20, cable length: 1 m

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### Mounting rail adapter

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

Set for mounting devices with EPA design on a DIN rail



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### Sensor/actuator cable



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### Accessories

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, coding: A, cable length: 2 m

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Sensor/actuator cable - SAC-4P- 3,0-PUR/M12FS - 1668111



Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12, coding: A, cable length: 3 m

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Sensor/actuator cable - SAC-4P- 5,0-PUR/M12FS - 1668124



Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12, coding: A, cable length: 5 m

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Sensor/actuator cable - SAC-4P-10,0-PUR/M12FS - 1683002



Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12, coding: A, cable length: 10 m

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