

Wireless module - RAD-ISM-2400-REP-SET-BD-BUS - 2885650

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Bidirectional, wireless, 2400 MHz transmission system, for overcoming large obstacles and distances, comprises three transceivers (transmitters and receivers)

Product Description

To overcome large obstacles (e.g. mountain peaks), or to increase the range, so-called repeaters can be used. Repeaters are simple transceivers with a special hopkey.

Your advantages

- No parameterization or programming required
- Up to eight I/O extension modules can be connected via bus foot
- License-free 2.4 GHz ISM band
- Trusted Wireless technology with frequency hopping method



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	615.100 g
Custom tariff number	85176200
Country of origin	Canada

Technical data

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Wireless set

Set contents	3 transceivers
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Technical data

Wireless path

Direction	Bi-directional
Frequency range	2.4032 GHz ... 2.4799 GHz
Transmission power	10 mW
Channel distance	500 kHz
Number of channel groups	7
Number of channels per group	22

Analog input

Description of the input	Current input (analog input)
Current input signal	4 mA ... 20 mA
Input resistance current input	< 170 Ω

Digital input

Switching threshold "0" signal, voltage	max. 1.5 V DC
Switching threshold "1" signal voltage	min. 5 V DC

Analog output

Output name	Current output
Current output signal	4 mA ... 20 mA
Load/output load current output	700 Ω (at $U_B = 24$ V, $R_B = [U_B - 10$ V] / 20 mA)

Digital output

Output name	2 x relay output + 1 x RF link
Contact type	3 floating N/O contacts
Contact material	Ag, gold-plated
Maximum switching voltage	30 V DC
	30 V AC
Limiting continuous current	0.5 A

Supply

Supply voltage	24 V DC -50 % / +25 %
Supply voltage range	12 V DC ... 30 V DC
Typical current consumption	75 mA
Max. current consumption	150 mA

General

Mounting position	any
Assembly instructions	on standard DIN rail NS 35 in accordance with EN 60715
Housing material	Polyamide PA non-reinforced

Connection data

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Technical data

Connection data

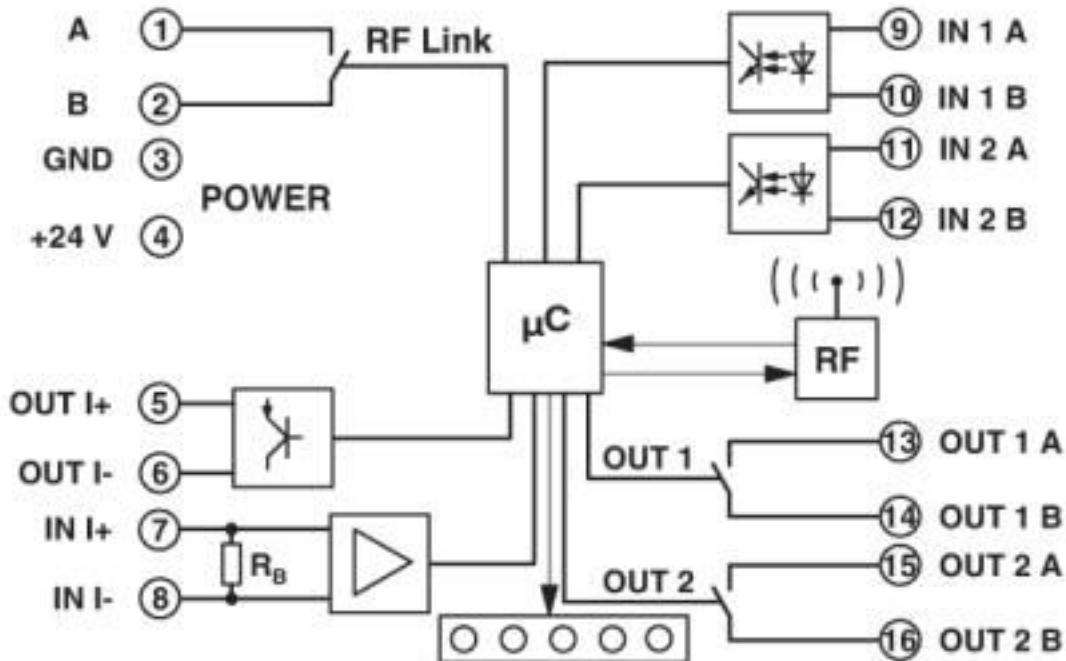
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	4 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3

Standards and Regulations

Electromagnetic compatibility	Conformance with R&TTE directive 1999/5/EC
Channel distance	500 kHz

Drawings

Block diagram



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Classifications

eCl@ss

eCl@ss 4.0	27250312
eCl@ss 4.1	27250312
eCl@ss 5.0	27242208
eCl@ss 5.1	27242208
eCl@ss 6.0	27242208
eCl@ss 7.0	27242208
eCl@ss 8.0	19179290
eCl@ss 9.0	19179290

ETIM

ETIM 2.0	EC000310
ETIM 3.0	EC000310
ETIM 4.0	EC000310
ETIM 5.0	EC000310

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	43223108
UNSPSC 11	39121008
UNSPSC 12.01	43223108
UNSPSC 13.2	43223108

Accessories

Accessories

Antenna

Antenna - RAD-ISM-2400-ANT-OMNI-2-1 - 2867461



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

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Accessories

Antenna - RAD-ISM-2400-ANT-VAN- 3-1-MCX - 2885702



Omnidirectional antenna with protection against vandalism, 2.4 GHz, gain: 3 dBi, polarization: linear, opening angle: h/v 360°/85°, degree of protection: IP55, connection: MCX (male), for control cabinet mounting (optional wall mounting), incl. 1.5 m / 5 ft. connecting cable

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

Antenna - RAD-ISM-2400-ANT-PAN- 8-0 - 2867610



Directional antenna, 2.4 GHz, gain: 8 dBi, polarization: linear, opening angle: h/v 75°/70°, degree of protection: IP55, connection: SMA (female), incl. mounting bracket and mast clips

Antenna - RAD-ISM-2400-ANT-PAR-19-0 - 2867885



Directional antenna, 2.4 GHz, gain: 19 dBi, polarization: linear, opening angle: h/v 17°/11°, degree of protection: IP65, connection: N (female), incl. mounting bracket and mast clips

Coaxial adapter

Adapter - RAD-ADP-N/F-N/F - 2867843



Antenna adapter for control cabinet feed-through, frequency range: 0.3 GHz ... 6 GHz, degree of protection: IP65, connection: 2 x N (female)

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Accessories

Antenna splitter - RAD-ISM-2400-SPL-4-SMA - 2867856



4-way distributor for antenna signals (antenna splitter), connection SMA (female) on the 4 upper ends and SMA (male) on the lower end

Antenna splitter - RAD-ISM-2400-SPL-2-SMA - 2885595



2-way distributor for antenna signals (antenna splitter), connection SMA (female) on the two upper ends and SMA (male) on the lower end

Adapter - RAD-ADP-N/M-SMA/F - 2917036



Antenna adapter, frequency range: 0.3 GHz ... 6 GHz, connection: N (male) -> SMA (female)

Coaxial cable

Antenna cable - RAD-CAB-EF393- 3M - 2867649



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 1.0 / 1.8 / 3.1 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 3 m (10 ft.)

Antenna cable - RAD-CAB-EF393- 5M - 2867652



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 1.6 / 2.9 / 5.0 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 5 m (16 ft.)

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Accessories

Antenna cable - RAD-CAB-EF393-10M - 2867665



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 2.9 / 5.6 / 9.9 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 10 m (32 ft.)

Antenna cable - RAD-CAB-EF393-15M - 2885634



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 4.3 / 8.3 / 14.8 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 15 m (50 ft.)

Antenna cable - RAD-PIG-EF316-MCX-SMA - 2867678



Antenna cable, external diameter: 3.2 mm (0.126 in.), inner conductor: flexible, attenuation: 1.0 / 1.7 / 2.7 dB at 0.9 / 2.4 / 5.8 GHz, connection: MCX (male) -> SMA (male), cable length: 1 m (4 ft.)

Antenna cable - RAD-PIG-EF316-MCX-N - 2867681



Antenna cable, outside diameter: 3.2 mm (0.126 in.), inner conductor: stranded, attenuation: 0.6 / 1.0 / 1.4 dB at 0.9 / 2.4 / 5.8 GHz, connection: MCX (male) -> N (male), cable length: 0.5 m (1.6 ft.)

Antenna cable - RAD-PIG-EF316-N-SMA - 2867694



Antenna cable, outside diameter: 3.2 mm (0.126 in.), inner conductor: stranded, attenuation: 0.5 / 0.7 / 0.9 dB at 0.9 / 2.4 / 5.8 GHz, connection: SMA (male) -> N (female), cable length: 0.3 m (1 ft.)

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Accessories

Antenna cable - RAD-PIG-EF316-N-N - 2867704



Adapter cable, 50 cm pigtail, N (male) -> N (female), 50 Ω impedance

Antenna cable - RAD-PIG-EF316-SMA-SMA - 2885618



Adapter cable, 50 cm pigtail, SMA (male) -> SMA (male), 50 Ω impedance

Configuration memory

Hopkey - RAD-ISM-2400-HOP-EU-10 - 2867898



The HOPKEY contains information such as the transmission frequencies used and the hop sequence. This information is required when installing an additional transceiver/repeater in an existing bidirectional RAD Line IO system, for example.

Extension module

Extension module - RAD-IN-4A-I - 2867115



Analog extension module with 4 analog current inputs 4 mA ... 20 mA

Extension module - RAD-OUT-4A-I - 2867128



Analog extension module with 4 analog current outputs 4 mA ... 20mA

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Accessories

Extension module - RAD-IN-8D - 2867144



Digital extension module with 8 digital inputs

Extension module - RAD-OUT-8D-REL - 2867157



Digital extension module with 8 digital outputs

Extension module - RAD-IN+OUT-2D-1A-I - 2867322



Analog /digital module for 2 digital inputs/outputs and 1 analog input/output

Extension module - RAD-IN-2D-CNT - 2885223



Digital extension module with 2 digital inputs for measuring pulses and frequencies

Extension module - RAD-OUT-2D-CNT - 2885236



Digital extension module with 2 digital outputs for output of pulses and frequencies

Mounting material

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Accessories

Weather protection tape - RAD-TAPE-SV-25-10 - 2885812



Vulcanizing sealing tape for external protection of adapters, antenna splitters, cable connections, etc. against the effects of weather, roll length: 10 m

Solar set

Solar system - RAD-SOL-SET-24-100 - 2885472



24 V / 100 Wp solar system for worldwide use. Consisting of a solar panel, prewired control cabinet with charge controller, solar batteries, fuses, surge protection and assembly material (including mast clips).

Solar system - RAD-SOL-SET-24-200 - 2917722



24 V / 200 Wp solar system for worldwide use. Consisting of a solar panel, prewired control cabinet with charge controller, solar battery, fuses, surge protection and assembly material (including mast clips).

Surge protection for transceiver systems

Surge protection device - CN-LAMBDA/4-5.9-BB - 2838490



Attachment plug with Lambda/4 technology as surge protection for coaxial signal interfaces. Connection: N connectors socket-socket

Surge protection device - CN-LAMBDA/4-5.9-SB - 2800023



Attachment plug with Lambda/4 technology as surge protection for coaxial signal interfaces. Connection: N connectors plug/socket

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Accessories

Surge protection device - CN-LAMBDA/4-2.0-BB - 2818863



Attachment plug with Lambda/4 technology as surge protection for coaxial signal interfaces. Connection: N connectors socket-socket

Surge protection device - CN-LAMBDA/4-2.0-SB - 2818876



Attachment plug with Lambda/4 technology as surge protection for coaxial signal interfaces. Connection: N connectors plug/socket
