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Wireless module - RAD-900-DAIO6 - 2702877

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Radioline - 900 MHz wireless transceiver with six integrated I/O channels, NEMA 4X enclosure, N (female) antenna connection, omnidirectional antenna, point-to-point, star, and mesh networks up to 250 stations, range of up to 32 km (line of sight), for use in North America

Your advantages

- ☑ Completely compatible with existing Radioline installations
- ☑ Power using AC mains or DC control voltages
- ☑ Range of several kilometers thanks to adjustable data rates for the wireless interface
- ☑ NEMA 4X housing reduces time and complexity of installation

RoHS

Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626428888
Weight per Piece (excluding packing)	2,075.300 g
Custom tariff number	85176200
Country of origin	United States
Sales Key	DNC611

Technical data

Note

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

Dimensions

Width	220 mm
Height	90 mm
Depth	120 mm

Ambient conditions

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Ambient conditions

Degree of protection	NEMA 4
Ambient temperature (operation)	-40 °C ... 70 °C (DC)
	-40 °C ... 65 °C (AC)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
	-40 °F ... 185 °F
Permissible humidity (operation)	20 % ... 85 %
Permissible humidity (storage/transport)	20 % ... 85 %
Altitude	2000 m
Vibration (operation)	in accordance with IEC 60068-2-6: 5g, 10 Hz ... 150 Hz
Shock	in accordance with DIN EN 60068-2-27: 30g, 18 ms

General

Overvoltage category	II
Degree of pollution	2
Housing material	Glass-reinforced plastic (GRP)
Flammability rating according to UL 94	V0
Wireless licences	USA (FCC, Part 15.247, ID: SGV-SHR-900)
	Canada (IC, RSS210, ID: 4720C-SHR900)
Weight	2075.3 g

Supply

Supply voltage range	10.8 V DC ... 30.5 V DC
	100 V AC ... 240 V AC
Max. current consumption	368 mA (10.8 V DC)
	135 mA (30.5 V DC)
	116 mA (100 V AC)
	60 mA (240 V AC)
Nominal power consumption	3.9 W (30 dBm)
Power consumption	7.4 W (peak; 30 dBm)
Transient surge protection	Yes

Wireless interface

Antenna connection	N (female)
Direction	Bi-directional
Frequency	900 MHz
Frequency range	902 MHz ... 928 MHz
Data rate	16 kbps (adjustable)
	125 kbps (adjustable)
	250 kbps (adjustable)
	500 kbps (adjustable)
Receiver sensitivity	-112 dBm (16 kbps)
	-105 dBm (125 kbps)

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Wireless interface

	-102 dBm (250 kbps)
	-95 dBm (500 kbps)
Transmission power	max. 1 W (adjustable)
Range	± 32 km (The range may be considerably above or below that stated, and depends on the environment, antenna technology, and the product used)
Security	128-bit data encryption

RSSI output

Number of outputs	1
Voltage output signal	0 V ... 3 V

Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.14 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.14 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	26
Conductor cross section AWG max.	14
Stripping length	11 mm
Screw thread	M3

Status indicator

Status display	Green LED (supply voltage, PWR)
	Green LED (bus communication, DAT)
	Red LED (periphery error, ERR)
	3x green, 1x yellow LED (LED bar graph receive quality, RSSI)
	Yellow LED (digital input, DI1)
	Yellow LED (digtial input, DI2)
	Yellow LED (digtial output, DO1)
	Yellow LED (digtial output, DO2)

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Flammability rating according to UL 94	V0
Interface description	Trusted Wireless
Security	128-bit data encryption
Shock	in accordance with DIN EN 60068-2-27: 30g, 18 ms
Vibration (operation)	in accordance with IEC 60068-2-6: 5g, 10 Hz ... 150 Hz
Conformance	FCC Directive, Part 15.247
	ISC Directive RSS 210
UL, USA/Canada	ANSI/ISA/CSA 22.2 61010-2-201, UL 50E Type 4
	Class I, Div. 2, Groups A, B, C, D T4

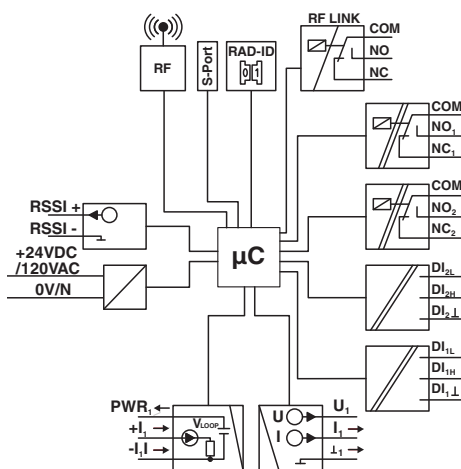# Wireless module - RAD-900-DAIO6 - 2702877

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Standards and Regulations

	Class I, Zone 2, IIC T4

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1

Drawings

Block diagram

Classifications

eCl@ss

eCl@ss 10.0.1	19179290
eCl@ss 11.0	19179090
eCl@ss 6.0	19179200
eCl@ss 7.0	19179290
eCl@ss 9.0	19179290

ETIM

ETIM 5.0	EC000310
ETIM 6.0	EC000310
ETIM 7.0	EC000310

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

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Approvals

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 238705

cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705

cULus Listed			

Accessories

Accessories

Antenna

Antenna - RAD-ISM-900-ANT-YAGI-3-N - 2867801

Directional antenna, 868 MHz / 900 MHz, gain: 5 dBi, polarization: linear, opening angle: h/v 168°/78°, degree of protection: IP65, connection: N (female), incl. mounting bracket and mast clips

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Antenna - RAD-ISM-900-ANT-OMNI-FG-3-N - 2867791

Omnidirectional antenna, 900 MHz, gain: 5 dBi, polarization: linear, opening angle: h/v 360°/28°, degree of protection: IP65, connection: N (female), incl. mounting bracket and mast clips

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Antenna - RAD-ISM-900-ANT-YAGI-6.5-N - 2867814

Directional antenna, 868 MHz / 900 MHz, gain: 8.5 dBi, polarization: linear, opening angle: h/v 100°/62°, degree of protection: IP65, connection: N (female), incl. mounting bracket and mast clips

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Accessories

Coaxial cable

Antenna cable - RAD-CAB-PFP240-10 - 5606124

Antenna cable, outside diameter: 6 mm (0.24 in.), inner conductor: solid, attenuation: 1.0 / 1.5 / 2.1 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2x N (male), cable length: 3 m (10 ft.)

Antenna cable - RAD-CAB-PFP400-20 - 5606125

Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: solid, attenuation: 1.0 / 1.5 / 2.2 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2x N (male), cable length: 6 m (20 ft.)

Antenna cable - RAD-CAB-PFP500-25 - 5606126

Antenna cable, outside diameter: 13 mm (0.51 in.), inner conductor: solid, attenuation: 1.0 / 1.6 / 2.3 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2x N (male), cable length: 7.5 m (25 ft.)

Configuration memory

Configuration memory - RAD-900-CONF-RF1 - 2702122

Radioline - configuration stick for easy and safe network addressing for the 900 MHz wireless module (RAD-900-...), unique network ID, RF band 1

Programming cable

Cable for programming - RAD-CABLE-USB - 2903447

Radioline - USB data cable for communication between the PC and Radioline devices, energy supply for diagnostics and configuration via the USB port of the PC, cable length: 2 m / 6.5 ft

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Accessories

Surge protection for transceiver systems

Surge protection device - CN-UB-70DC-6-SB - 2803153

Attachment plug with surge protection for coaxial signal interfaces. Connection: N connector, male/female

Surge protection device - CN-LAMBDA/4-2.25-SB - 2801056

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