

# DREXELBROOK®

## 900 MHz Wireless I/O Extension Module

1 Analog Input, 1 Analog Output, 2 Digital wide-range inputs and outputs

Model RAD-DAIO6-IFS // Part# 2901533-DRX



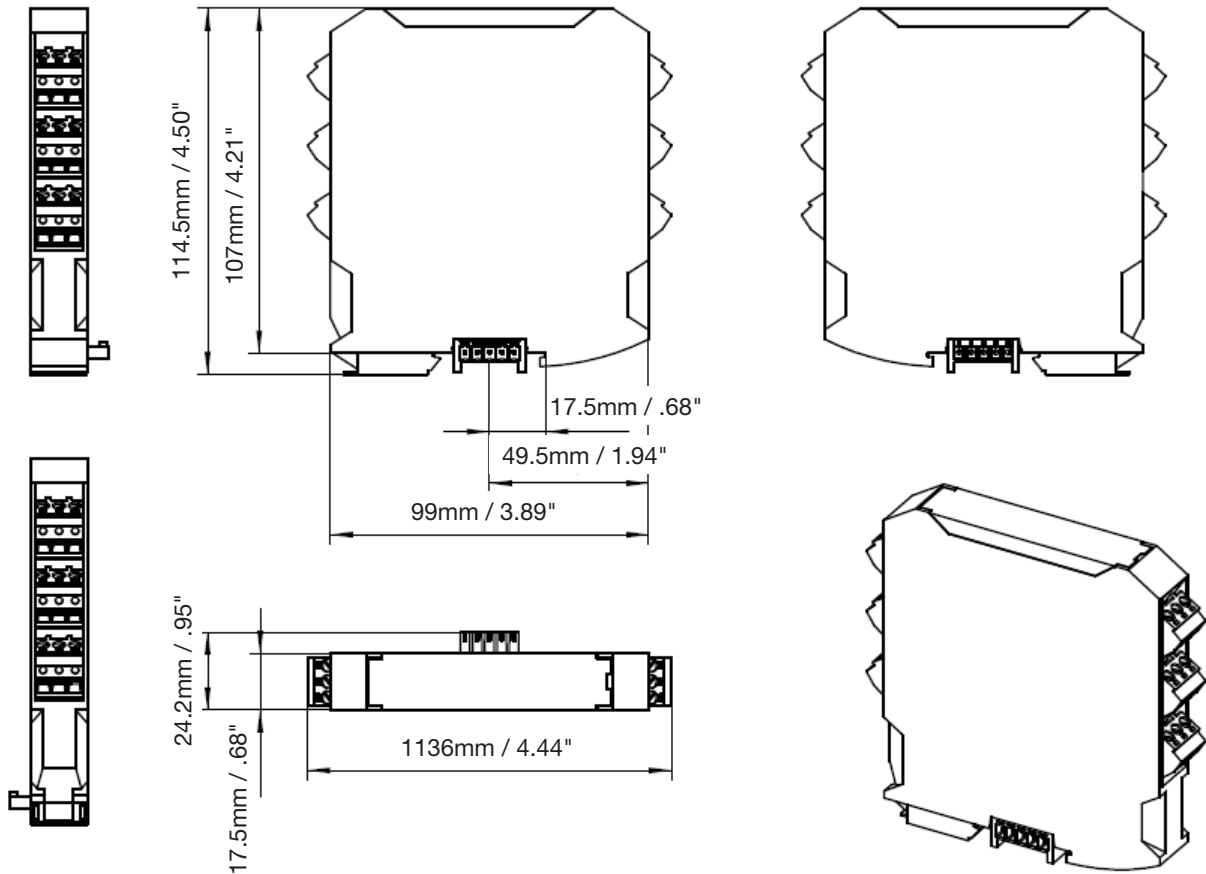
### FEATURES

- Easy and tool-free I/O mapping via thumb wheel on the front
- Modular design via DIN rail connector (hot-swap capable)
- Channel-to-channel electrical isolation
- 2 digital wide-range inputs and outputs (0 ... 250 V AC/DC)
- 1 analog input (alternatively 0/4 ... 20 mA)
- 1 analog output (alternatively 0/4 ... 20 mA, 0 ... 10 V)
- 16-bit resolution of the analog inputs/outputs (accuracy < 0.02%)
- DIP switches for Hold or Reset behavior of outputs
- Loop-power function for passive sensors
- International approvals
- Installation in Ex zone 2

The RAD-DAIO6-IFS I/O extension module can be used in conjunction with Radioline wireless modules and other Interface System (IFS) master devices. In a station structure, you can connect up to 32 I/O extension modules to a wireless module via the DIN rail connector. The RAD-DAIO6-IFS analog/digital I/O extension module is used for processing two digital input/output signals, an analog input signal and an analog output signal.

# 900 MHz Wireless Transceiver

## DIMENSIONS



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## TECHNICAL DATA

DIMENSIONS	
Width	17.5 mm
Height	113 mm
Depth	114.5 mm
GENERAL	
Overvoltage category	II
Mounting position	any, on standard DIN rail NS 35 in accordance with EN 60715
Degree of protection	IP20
Degree of pollution	2
Type of housing	PA 6.6-FR, green
Flammability rating according to UL 94	V0
MTTF (mean time to failure) Telcordia standard 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day)	889 Years
MTTF (mean time to failure) Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day)	391 Years
MTTF (mean time to failure) Telcordia standard, temperature 40 °C, operating cycle 100 % (7 days a week, 24 hours a day)	151 Years
SUPPLY	
Supply voltage range	19.2 V DC ... 30.5 V DC (DIN rail connector)
Max. current consumption	≤ 95 mA (At 24 V DC, at 25°C)
Transient surge protection	Yes
ANALOG INPUT	
Number of inputs	1
Current input signal	0 mA ... 20 mA (can be set via DIP switches)
	4 mA ... 20 mA (can be set via DIP switches)
Max. current input signal	22 mA
Input resistance current input	< 70 Ω
Precision	≤ 0.02 % (at 25 °C)
Temperature coefficient, typical	typ. 0.0025 %/K (at -40 °C ... +70 °C)
Supply voltage	≥ 12 V DC (for passive sensors (via terminal PWR1, +11))
Resolution (bit)	16 bit
Temperature coefficient, typical	typ. 0.0025 %/K (at -40 °C ... +70 °C)
Behavior of the outputs (adjustable via DIP switch)	Hold / Reset
Protective circuit	Transient protection of outputs

RELAY OUTPUT	
Number of outputs	2
Contact type	PDT
Contact material	AgSnO <sub>2</sub>
Maximum switching voltage	250 V AC/DC
Min. switching current	≥ 10 mA
Max. switching current	2 A (per channel)
Mechanical service life	1x 10 <sup>7</sup> cycles
Electrical service life	2x 10 <sup>5</sup> cycles (At 2 A, 250 V AC, cosφ 0.4) 2x 10 <sup>5</sup> cycles (At 1 A, 24 V DC, L/R 48 ms)
Maximum switching frequency	2 Hz
Switching capacity	120 W (24 V DC) 120 W (30 V DC) 20 W (48 V DC) 18 W (60 V DC) 22 W (110 V DC) 40 W (220 V DC) 42 W (250 V DC) 1250 VA
Behavior of the outputs (adjustable via DIP switch)	Hold / Reset
ELECTRICAL ISOLATION	
Digital I/O	300 V (Rated insulation voltage (in each case between the digital inputs // digital outputs // TBUS supply, reinforced insulation according to EN 61010))
Analog I/O	50 V (Rated insulation voltage (in each case between the TBUS analog inputs / analog outputs / supply, reinforced insulation according to EN 61010))
Digital/Analog I/O	300 V (Rated insulation voltage (in each case between the digital inputs and outputs and between the analog inputs and outputs, reinforced insulation according to EN 61010))
TEST VOLTAGE	
Digital I/O	2.5 kV AC (50 Hz, 1 min.)
Analog I/O	1.5 kV AC (50 Hz, 1 min.)
CONNECTION DATA	
Connection method	Screw connection
Conductor cross section, solid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil	24 ... 14
Stripping length	7 mm
Tightening torque	0.6 Nm

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STATUS INDICATION	
Status display	Green LED (supply voltage, PWR) Red LED (periphery error, ERR) Yellow LED (digital input, DI1) Yellow LED (digital input, DI2) Yellow LED (digital output, DO1) Yellow LED (digital output, DO2)
AMBIENT CONDITIONS	
Ambient temperature (operation)	-40 °C ... 70 °C (>55°C derating) -40 °F ... 158 °F (>131°F derating)
Ambient temperature (storage/transport)	-40 °C ... 85 °C -40 °F ... 185 °F
Permissible humidity (operation)	20 % ... 85 %
Altitude	2000 m
Vibration (operation)	in accordance with IEC 60068-2-6: 5g, 10 Hz ... 150 Hz
Shock	16g, 11 ms
OPERATING CONDITIONS FOR THE EXTENDED TEMPERATURE RANGE (+55 °C ... 70 °C)	
<p>No function restrictions for the extended temperature range if you keep a minimum distance of 17.5 mm between the modules. The minimum distance is the width of a DIN rail connector.</p> <p>Otherwise please observe the following restrictions:</p> <ul style="list-style-type: none"> <li>- Do not use the analog loop-powered output (PWR1).</li> <li>- Only use the analog voltage output (U1).</li> <li>- Use two of the four possible digital inputs/outputs, maximum.</li> </ul> <p>Individual operating conditions on request.</p>	

CERTIFICATIONS	
Conformance	CE-compliant EAC
ATEX Please follow the special installation instructions in the documentation!	⚡ II 3 G Ex nA nC IIC T4 Gc (IBExU 15 ATEX B008 X)
IECEX	Ex nA nC IIC T4 Gc (IECEX IBE 13.0019X)
UL, USA/Canada	UL 508 Listed Class I, Div. 2, Groups A, B, C, D T4A Class I, Zone 2, IIC T4
Noxious gas test	ISA-S71.04-1985 G3 Harsh Group A
CONFORMANCE	
EMC directive 2014/30/EU	EN 61000-6-2; EN 61000-6-4
Ex directive (ATEX)	EN 60079-0; EN 60079-15