

Resource  
Data Management

# RDM Pressure Transducer

User Guide  
Revision 1.5d



PR0160-PR0164

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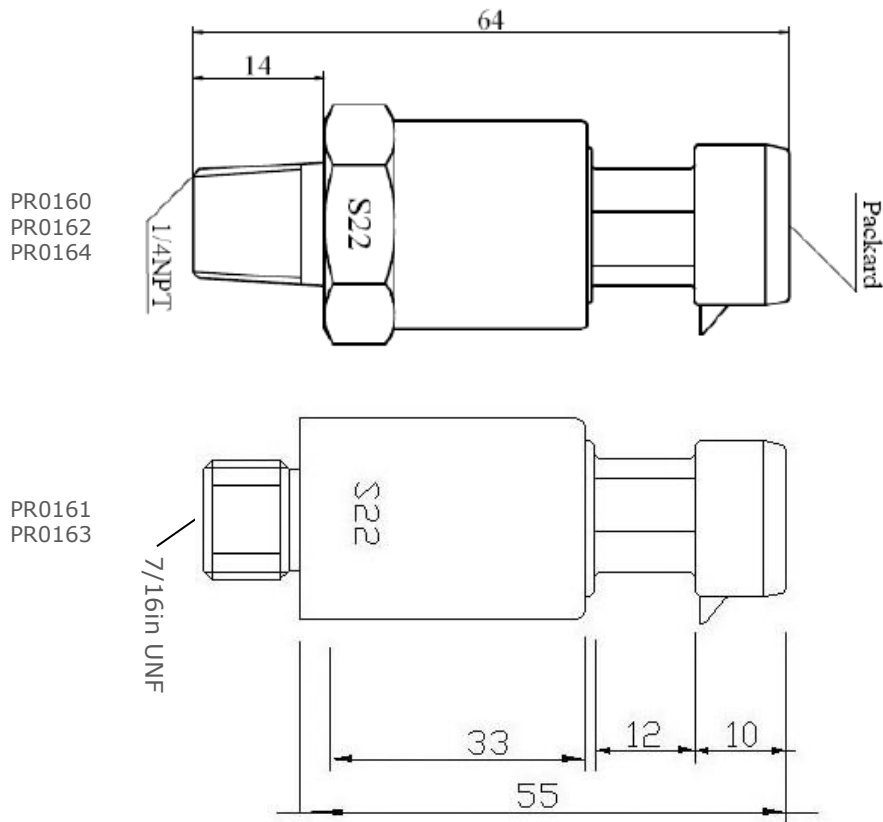
Please ensure all power is switched off before installing or maintaining this product.

## Pressure Transducers

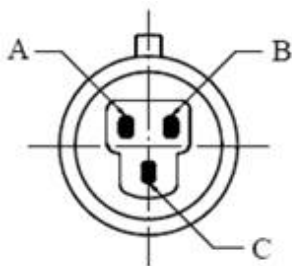
RDM have a range of pressure transducers with varying specifications allowing measurements of different environments. All transducers operate with the variable output 4~20mA with a 2m cable as standard. The variants are listed below.

Description	Part Number
Transducer -1 to 20 BAR (-14.5 to 290 PSI) with 1/4in NTP male fitting	PR0160
Transducer -1 to 20 BAR (-14.5 to 290 PSI) with 7/16in 20UNF(F)	PR0161
Transducer -1 to 65 BAR (-14.5 to 940 PSI) with 1/4in NTP male fitting	PR0162
Transducer -1 to 65 BAR (-14.5 to 940 PSI) with 7/16in 20UNF(F)	PR0163
Transducer 0 to 125 BAR (0 to 1810 PSI) with 1/4in NTP male fitting	PR0164

## Dimensions



## Electrical Connections



### Transducer connections

- Pin A: Separate 12v feed (not required with RDM devices)      Black
- Pin B: 12v DC loop      Red
- Pin C: 4~20mA return signal      Green



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## Specifications

Description	Specification
Pressure Range	-1-20 bar, -1-65 bar, 0-125 bar
Pressure Type	Gauge pressure, Absolute pressure
Overload	200% F.S
Burst Pressure	300% F.S
Accuracy (Linearity Hysteresis Repeatability)	$\leq \pm 0.5\%F.S$ $\leq \pm 1\%F.S$ Optional
Stability	$0.5\%F.S \pm 0.05\%$
Working Temperature	$-40^{\circ}C \sim 95^{\circ}C$
Storage Temperature	$-40^{\circ}C \sim 125^{\circ}C$
Temperature Compensation	$-10^{\circ}C \sim 60^{\circ}C$ (standard)
Thermal effect on zero	+/- 0.05%
Thermal effect on span	+/- 0.005%
Medium compatible	Compatible with 304/316 Stainless steel
Electronic wire	2/ 3 Wires
Output	4~20mA
Power supply	12~36V DC
Short Circuit protected	Yes
Overvoltage protection	45 V DC
Insulate resistance	$>100M \Omega @50V$
Electronic connection	Packard 3 pin connector with 2.0m cable
Pressure connect port	1/4" NPT male, 7/16in 20UNF(F)
Response time	$\leq 10ms$
Certificate approving	CE Certificate
EMC standard	Electromagnetic radiation: EN50081-1/-2 Electromagnetic susceptibility: EN50082-2
Water proof	IP65
Weight	Net weight 0.2Kg Full packaging weight 0.35Kg (includes 2.0m cable)
Compatible Refrigerants	R12, R125, R21, R22, R31, R32, R113, R114, R134a, R142b, R154a, R227, R401a, R401b, R401c, R402a, R402b, R404a, R407a, R407c, R407f, R410a, R449a, R502, R503, R507, R744, R454C and R455A (A2L Refrigerant).
Recommended Torque	12 - 15 Nm

## Important Installation Notes

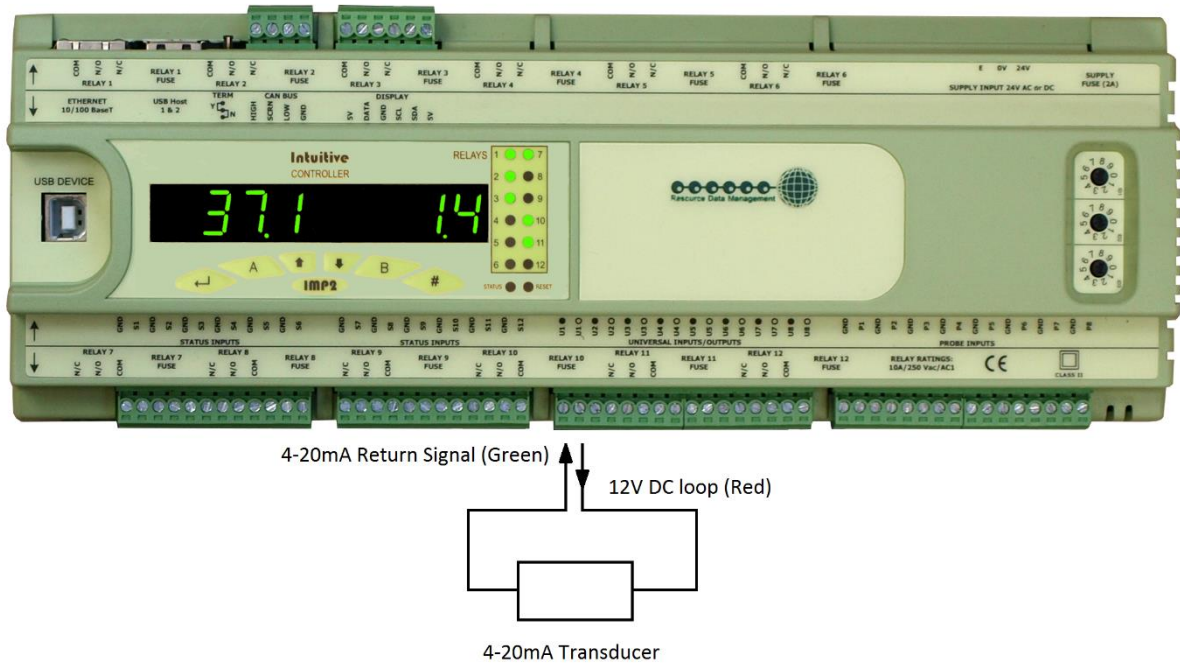
If using a pressure sensor installed directly in contact with the evaporating medium, and the temperature is going to be less than the dew point relative to the local temperature-humidity conditions, it is recommended to have at least 30 cm between the pressure sensor and the pipe, as an example using a suitable capillary/flexible line.

Depending on the installation location you might need to also insulate the transducer body. In order to maintain the IP integrity of the plug and socket connector on the pressure sensor it is important not install the transducer plug lead too tightly to adjacent pipework etc so as to deform the seal between the plug and socket on the pressure sensor electrical connection.



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## Typical Transducer Connection



## Disclaimer

The specifications of the product detailed in this document may change without notice. RDM Ltd shall not be liable for errors or omissions, for incidental or consequential damages, directly or indirectly, in connection with the furnishing, performance or misuse of this product or document.

## Revision History

Revision	Date	Changes
1.0	16/01/2014	First Release
1.1	05/03/2014	US address details updated
1.2	01/10/2014	Compatible Refrigerant list added
1.3	10/08/2015	Image added of male fitting transducer
1.3a	05/07/2017	Torque setting added
1.4	24/07/2017	Gas Type R407f added, new look format.
1.5	19/09/2017	Updated image of female fitting transducer.
1.5a	01/04/2020	Compatible Refrigerant list updated, Group offices details updated.
1.5b	07/09/2021	IP Rating updated.
1.5c	08/09/2021	Important installation notes added.
1.5d	08/08/2023	Gas table updated



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