

AUTOMOTIVE CERAMIC PIEZORESISTIVE PRESSURE TRANSMITTER



FEATURES

- ±0.5% Full Scale accuracy
- ±1 % Full Scale annual stability
- 1/8-27 NPT male pressure fitting ideal for automotive oil pressure measurement
- 0 to 100 psi pressure range
- 4.5 VDC input power
- Packard® connector allows custom wire length
- IP65 environmental rating
- -40° to 85°C (-40° to 185°F) operating temperature
- High shock resistance
- 0.5 to 4.5 VDC output
- Optional Binder® Series 712 connector termination compatible with AIM MyChron® data loggers
- Ceramic sensing element provides high burst and overpressure protection
- All stainless steel construction
- Fast response time
- Solid state reliability and stability

APPLICATIONS

- Automotive engine oil pressure measurement
- Air compressors
- Hydraulic control
- Diesel engines
- General hydraulics
- General automotive
- Braking systems
- Air and water applications

DESCRIPTION

IRQ-100A is a ceramic piezoresistive pressure transmitter specially designed for automotive applications. Its wide operating temperature range, IP65 environmental rating and its 1/8-27 NPT male pressure fitting make it ideal for automotive oil pressure measurement. Moreover, IRQ-100A offers mechanical and functional characteristics suitable for a wide range of additional applications, including industrial and hydraulic equipment, HVAC/R equipment and braking systems.

The transmitter is light, small and has a Packard® connector that allows custom length of wire harness according to customer needs. The output voltage signal is transmitted via 3 terminals on the Packard® connector (See Figure 1).

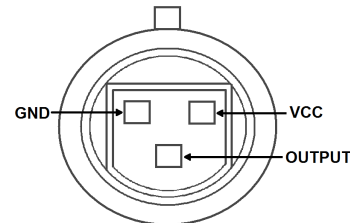


Figure 1: Packard® Connector Pinout

MECHANICAL DIMENSIONS

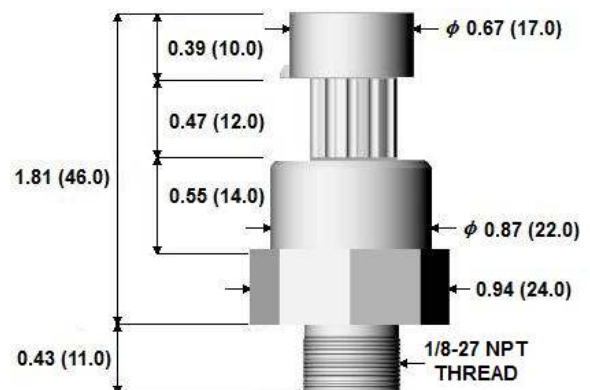


Figure 2: Mechanical Dimensions

TECHNICAL SPECIFICATIONS

Parameter	Rating	Unit
Pressure Range	0 to 100	psi
Accuracy	± 0.5	%
Pressure fitting	1/8-27 NPT male	-
Maximum overload pressure	150	psi
Long-term stability	±1	%FS/year
Power supply range	5	VDC
Current Sink	15	mA
Output signal range	0.5 to 4.5	VDC
Zero point error	±2	%FS
Span error	±2	%FS
Operating temperature	-40 to 85	°C
Compensating temperature range	0 to 70	°C
Storage temperature	-40 to 100	°C
Maximum temperature effect on zero point error	±1.5	%FS
Maximum temperature effect on span error	±1.5	%FS
Housing material	Stainless steel	-
Environmental rating	IP65	-

TYPICAL PERFORMANCE

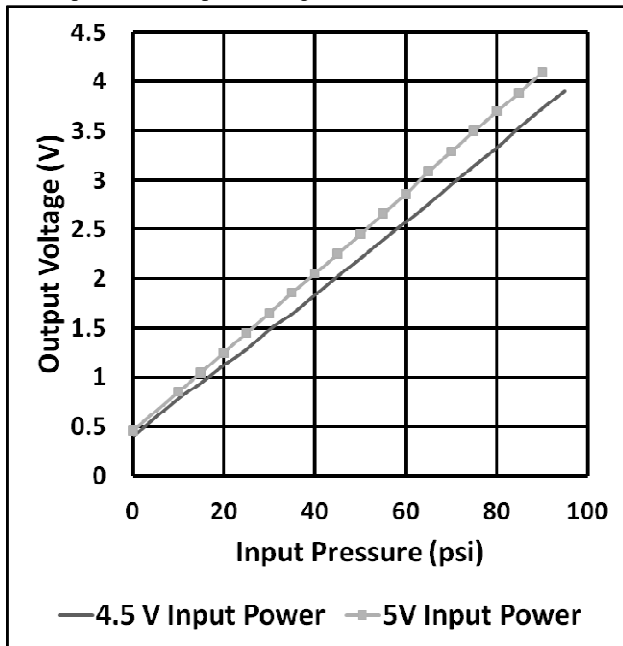


Figure 3: Output Voltage (V) VS. Input Pressure (psi)

MATING CONNECTOR

Each assembly can ship with a male 4-pin Binder® Series 712 connector compatible with AIM MyChron® data loggers upon request.

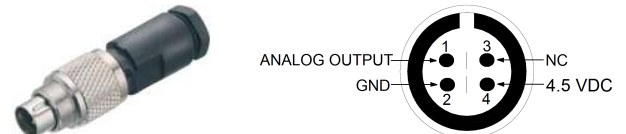


Figure 4: Binder® Series 712 connector pinout (front view)

ORDERING INFORMATION

IRQ-100A ⁽¹⁾ ⁽²⁾

Notes:

- (1) Harness length from 1 to 13 ft can be specified with the order. Default order is approximately 13ft (4 meters).
- (2) Optional Binder® 712, 4-pin connector must be specified at time of purchase

IMPORTANT NOTICE

IRQ ENGINEERING, LLC MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH REGARDS TO THIS DOCUMENT, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION).

IRQ Engineering, LLC reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to this document and any product described herein. IRQ Engineering, LLC does not assume any liability arising out of the application or use of this document or any product described herein. Any Customer or user of this document or products described herein in such applications shall assume all risks of such use and will agree to hold IRQ Engineering harmless against all damages.

IRQ Engineering, LLC does not warrant or accept any liability whatsoever in respect of any products purchased through unauthorized sales channel.

Should Customers purchase or use IRQ Engineering, LLC products for any unintended or unauthorized application, Customers shall indemnify and hold IRQ Engineering, LLC and its representatives harmless against all claims, damages, expenses, and attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized application.

© 2012, IRQ Engineering, LLC, U.S.A
www.irqengineering.com
sales@irqengineering.com

All Rights Reserved.
Printed in the U.S.A.