

Integrated circuit piezoelectric (ICP) sensor conditioner - MODICP
Features

- ICP sensor power conditioner.
- Sensor full scale output normalized to 0-5V.
- Rugged epoxy-filled enclosure, small size.
- Watertight mini sure-seal[®] connector.
- BNC jack connector.

Description

The built-in power conditioner converts a 11-18V power supply to a constant current operation. The output power to the ICP sensor is 18VDC, 4.5mA.

The MODICP outputs a 0-5V signal proportional to the full scale output of the ICP sensor.

Installation

- Connect the sensor to the BNC jack connector.
- Connect the module to an analog input of the system: A, B or C. Carefully align indexing rib when mating mini sure-seal[®] connectors.
- Route the sensor cable away from sources of interference, such as ignition coils, plug leads, electronic modules or antennas.
- Verify that the cable is not pinched or stretched by moving parts.
- Do not bend cable with curvature radius smaller than 1.60" [40 mm].
- Do not expose the module to temperatures outside -40°C to 85°C.

Specifications

	Symbol	Min	Typ	Max	Units
Supply Voltage	V _{in}	11		18	V
Supply Current (no load)	I _{in1}		14		mA
Supply Current (with ICP)	I _{in2}		23		mA
Output Voltage swing	V _{Out}	0		5.00	V
Built-in ICP power conditioner	V _{in} ICP current		18.3 4.5		V mA
Built-in high pass filter	F _c	0.088	0.1	0.134	Hz
Cable length	L		635 (25)		mm (in)
Operating temperature	T _{oper}	-40		85	°C
Weight	W		50(1.76)		Grams(oz)


Calibration
Analyzer V8 calibration:

Name	MODICP		
Calibration Units	g		
Output unit	g		
Equation type	1 st order		
P1	$\frac{-5}{\text{Sensitivity}}$	P2	$\frac{2}{\text{Sensitivity}}$

Example:

If ICP accelerometer sensitivity = 0.1V/g

P1 = -5 / sensitivity

$$P1 = -5 / 0.1 = -50$$

P2= 2 / sensitivity

$$P2 = 2 / 0.100 = 20$$