

Features/Benefits



- Loop-powered
- 4-20 mA proportional to velocity
- Loop terminals w/Independent Polarity (IPT™)
- Interfaces with PLC, DCS, 4-20 mA monitors, etc.
- Different mounting studs available
- Available with flying leads, terminal block or MIL style connector
- Highest operating temperature available
- Most stable detection circuit available
- Built-in temperature shock protection
- “Ski slope” problem protected
- Widest frequency range available
- High & low pass filters available
- Built-in base & housing strain protection
- Extremely low cross axis sensitivity
- Dynamic signal available

Applications

**Blowers • Centrifuges • Compressors • Engines • Fans • Generators • Motors
Pumps • Steam Turbines • Turbochargers**

IPT™ (Independent Polarity Terminal) is a registered trademark of Metrix Instrument Co.



ST5484E-XXX-X20-XX
With 2-24” flying leads.



ST5484E-XXX-X32-XX
With two slot terminal block.



ST5484E-XXX-X14-XX
With 2-pin MS style connector.

ST5484E-XXX-X21-XX
With 4-24” flying leads. The dynamic signal leads (black & white) provide a buffered 100 mV/g connection for analysis.

ST5484E-XXX-X33-XX
Four slot terminal block top connection. The dynamic signal terminals (two outside ones) provide a buffered 100 mV/g connection for analysis.

A precision vibration sensor and signal conditioner in a single package built to provide years of reliable service. The 5484E is the ideal solution for sensing vibration on most plant equipment. A simple two-wire loop signal proportional to velocity is generated for transfer to a programmable logic controller (PLC), distributed control system (DCS) or other 4-20 mA input devices. Simply mount the transmitter on the machine case, connect the 2-wire loop and read and/or record the vibration.

Typical Installation



Each transmitter is manufactured the way you want it: one of 3 electrical connections, epoxy or hermetically sealed, dynamic signal or not, mounting stud, frequency range, full scale output and level of certification.

Shown with optional conduit elbow fitting (P/N 8200-00X) and cord grip (P/N 93818-004).



*Connections are not polarity sensitive (IPT®).

Specifications

Vibration Range: 4 to 20 mA output proportional to velocity. Refer to "How to Select A" for ranges. Non-standard ranges available.

Dynamic Signal: Acceleration, 100 mV/g. The dynamic signal has the same frequency range as in "How to Select E/F". 6 dB / oct high pass and 12 dB / oct low pass response.

Frequency Response:
Standard: 2 - 1500 Hz, available up to 2000 Hz
Refer to "How to Select E/F". 12 dB / oct high pass and low pass filters are used.

Axis Orientation: Any

Supply Voltage (Vs): 10 to 30 VDC, Non-polarity sensitive, IPT™

Isolation: 500Vrms, circuit to case

Electrical Connection: Flying leads w/18 AWG wire 457 mm (24 in.) long, terminals (accepts up to 16 AWG wire) or MIL style 2-pin connector

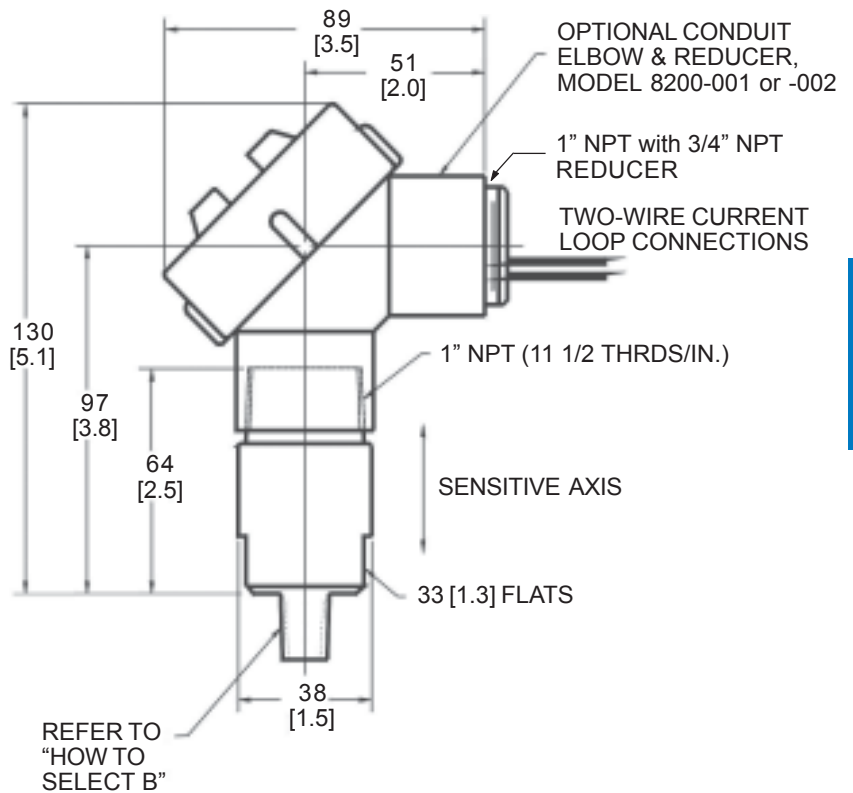
Maximum Load Resistance (RL):
 $R_L = 50 \times (V_{supply} - 11)$ ohms

Service Temp. Rating: -40° to 100°C

Enclosure Materials: 303 SST

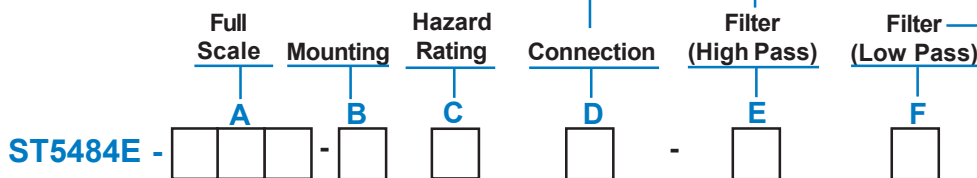
Enclosure Environmental Rating:
NEMA 4X, IP 65, IP 67 for 2 pin style connector

Approvals: Refer to "How to Select C".



How To Select

D	E	F
0 = 4-20 mA: Flying leads (C = 1 or 2)	0 = No Filter (2 Hz)	0 = No Filter (1500 Hz)
1 = 4-20 mA and dynamic signal: Flying leads (C = 1 or 2)	1 = 5 Hz	1 = 500 Hz
2 = 4-20 mA: 2-pin terminal block (C = 1 or 3)	2 = 10 Hz	2 = 1000 Hz
3 = 4-20 mA and dynamic signal: 4-pin terminal block (C = 1 or 3)	3 = 20 Hz	3 = 2000 Hz
4 = 4-20 mA: 2-pin MIL style connector (C = 1 or 3)	4 = 50 Hz	
	5 = 100 Hz	
	6 = 200 Hz	



A		
1	2	1 = 1 ips (25 mm/s), pk
1	2	2 = 0.5 ips (12.7 mm/s), pk
1	2	3 = 2.0 ips (50 mm/s), pk
1	2	4 = 5.0 ips (125 mm/s), pk
1	3	2 = 3.0 ips (75 mm/s), pk
1	5	1 = 1 ips (25 mm/s), rms
1	5	2 = 0.5 ips (12.7 mm/s), rms
1	5	3 = 2.0 ips (50 mm/s), rms
1	5	4 = 5.0 ips (125 mm/s), rms
1	6	2 = 3.0 ips (75 mm/s), rms

B	
0	= Integral 1/4" NPT
1	= Integral 1/2" NPT
2	= 3/8 - 24 UNF X 1/2"
3	= 1/2 - 20 UNF X 1/2"
4	= M8 X 1-6
5	= M10 X 1.25-6

C	
1	= Non-hazardous & CSA/NRTL/C (for all connections) Class I, Div 2, Grps A,B,C & D
2	= Class I, Div 1, Grps B,C & D & Class II, Div 1, Grps E,F & G (available with flying leads ONLY)
3	= CENELEC EEx ia IIC T4 Intrinsically Safe (available with terminal block or 2-pin MS connector)

Accessories

2
Seismic
Products

	<p>8200-001, Conduit Elbow & Reducer Provides access and physical protection for field wiring. Suitable for Class I, Div. 1 (Grps C & D) and Class II, Div. 1 (Grps E, F & G), hazardous areas. 1" to 3/4" NPT reducer for customer connection included. NEMA 4 IP 65. Material: copper free aluminum.</p>
	<p>8200-002, Conduit Elbow & Reducer Conduit Elbow with terminal block</p> <p>8200-005, Stainless Steel Conduit Elbow & Reducer Provides access and physical protection for field wiring. 1/2" NPT suitable for Class I, Div. 1 (Grps B, C & D)*, Class II, Div. 1 (Grps E, F & G)*. Material: stainless steel</p>
	<p>8200-006, Conduit Elbow & Reducer Stainless Steel Conduit Elbow with terminal block</p> <p>8201-001, Conduit Union Fits between transmitter and 8200-001 conduit elbow to facilitate installation and wiring where there is not enough room to rotate the elbow. Suitable for Class I, Div. 1 (Grps A, B, C & D) and Class II, Div. 1 (Grps E, F & G), hazardous areas. Material: zinc plated steel.</p>
	<p>7084-001, Stainless Steel Flange Mount Adaptor Provides a means to surface mount transmitters rather than NPT stud (1/2" NPT center hole). Three equally spaced 6.6 mm (0.26") diameter mounting holes on 38 mm (1.50") diameter circle.</p>
	<p>7084-002, Flange Mount Adaptor Same as 7084-001, except center hole is 1/4" NPT. Material: stainless steel</p> <p>8253-002, Bushing Bushing for 1/2" NPT mount when screwed onto standard 1/4" NPT base. Material: stainless steel.</p>
	<p>8169-75-002-XXX, Two-wire, Cable Assembly 2 conductor (20 AWG) twisted, shielded PVC jacketed cable, with plated steel grip for cable strain relief, male 3/4" NPT end. Specify -XXX for length in feet. Example: 8169-75-002-010 =10 ft (3.1M). Material: zinc plated steel.</p>
	<p>8978-111-XXXX, Splashproof Cable Assembly Two (2) pin socket connector with integral, molded splash proof boot with 6.4 mm (0.25") diameter polyurethane jacketed cable with twisted shielded pair wires. xxx.x = Cable length in meters.</p>
	<p>9334-111-YYYY-XXXX, Splashproof Cable Assembly w/Stainless Steel Armor Two (2) pin socket connector with integral, molded splash proof boot with 7.1 mm (0.28") diameter, SST armored jacket with cable, twisted shielded pair wires. xxx.x = Cable length in meters. yyy.y = Armor length in meters.</p>
	<p>8978-211-XXXX, Cable Assembly Two (2) pin socket connector with cable strain relief with 6.4 mm (0.25") diameter polyurethane jacketed cable with twisted shielded pair wires. xxx.x = Cable length in meters.</p> <p>Note: All 8978 connector/cable assemblies rated to 121°C (250°F) max.</p>
	<p>9334-211-YYYY-XXXX, Cable Assembly, w/Stainless Steel Armor Two (2) pin socket connector with 7.1 mm (0.28") diameter, SST armored jacket with cable, twisted shielded pair wires. xxx.x = Cable length in meters. yyy.y = Armor length in meters.</p>
	<p>8978-200-0000, Connector Assembly Two (2) pin socket connector with cable strain relief, no cable.</p>
	<p>93818-004, Cable Grip Strain Relief Fitting 3/4" NPT male thread to cable grip. Diameter range: .156" to .25". Complete with sealing ring and locknut. Hot dip / mechanically galvanized finish. Suitable for NEMA 4 enclosures.</p>
	<p>93818-018, Armored Cable Grip Strain Relief Fitting 3/4" NPT male thread to cable grip. Armor diameter range: .40" to .50". Complete with sealing ring and locknut. Hot dip / mechanically galvanized finish. Suitable for NEMA 4 enclosures.</p>

* Pending