6850-001 IMPACT METER

Datasheet

OVERVIEW

The 6850 Impact Meter enables quick check out or adjustment of Metrix Impact transmitters, either on an operating machine, or with the transmitter removed.

Simply connect the Meter to an Impact transmitter, toggle the Power switch, and select *Pulse-Time*, *4-20mA*, or *Peak Detect* mode. In Pulse-Time mode, the device displays the transmitter's Threshold level (millivolts), and Sample Time (seconds), and these settings may be adjusted while observing the changes. Switching to 4-20mA mode displays the current output directly, while Peak Detect mode shows the peak vibration level, in millivolts, detected by the transmitter.

The Peak Detect mode is provided for measuring and displaying the amplitude of Impact peaks present at the measurement location. Peak Detect mode is most useful when "fine tuning" a transmitter for a particular machine. An Impact Threshold Level two to three times the base line Peak Detect level has proven to provide good machinery protection monitoring. The Pulse Time is a function of machine operating speed, calculated as: 960 divided by machine RPM = Pulse Time (in seconds).



FEATURES

- Display peak amplitude of Impacts within machine
- Display transmitter's Impact "Threshold level", "Pulse Time" and 4-20mA output
- Waveform access through BNC connector
- Powers IT6810, IT6811 and IT6812 during setup and check-out
- Battery powered, digital display

APPLICATIONS

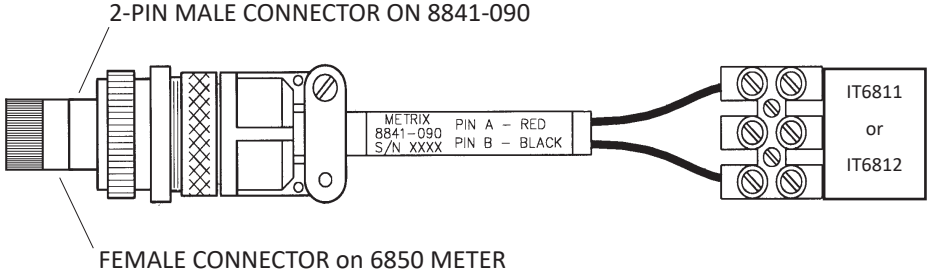
- One device for transmitter checkout and setup
- Eliminates need for oscilloscope and voltmeters
- Portable and Simple to operate for task efficiency

SPECIFICATIONS

Functions	Setup, Operation, or Measurement
Display	Digital readout, 2 lines x 16 characters
Measurement Ranges	• Threshold level: 50mV to 1200 mV • Pulse time: 0.8 to 4.2 seconds • Peak detect: 0 to 2100 mV • Loop current: 4 to 20 mA
Measurement Accuracy	± 5% of full scale
Connection	Integral cable, 2-pin MS connector
Power	Uses three standard 9V batteries
Enclosure	High-impact, polycarbonate body
Environmental Rating	Water resistant

ACCESSORIES

P/N 8841-090, ADAPTER KIT FOR 6811, 6812 LEAD OPTION



ORDERING INFORMATION

IT6810 - A A A □□□				
A				**Machine RPM Range**
	0	0	1	Low, <500 RPM
	0	0	2	Medium, 500-1000 RPM
	0	0	3	High, > 1000 RPM

IT6811 - A A A - B B B □□□-□□□				
A				**Machine RPM Range**
	0	0	1	Low, <500 RPM
	0	0	2	Medium, 500-1000 RPM
	0	0	3	High, > 1000 RPM
B				**Cable Length**
				Order in 1 meter increments 003 = 0.3 m (1 ft) minimum 200 = 20 m (66 ft) maximum

IT6812 - A A A - B B B * □□□-003				
A				**Machine RPM Range**
	0	0	1	Low, <500 RPM
	0	0	2	Medium, 500-1000 RPM
	0	0	3	High, > 1000 RPM

* Use 9061-XXX cable for IT6812

OPTIONAL ACCESSORIES

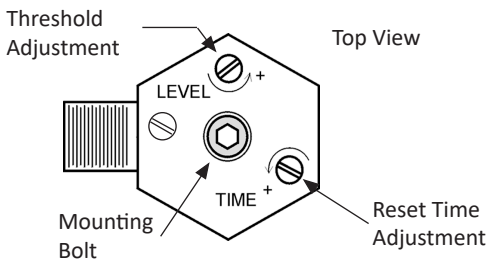
- **8978-211-XXXX, Cable Assembly**
  Two (2) pin socket connector with cable strain relief with 6.4 mm (0.25”) diameter polyurethane jacketed cable with twisted shielded pair wires. xxx.x = Cable length in meters.
  Note: All 8978 connector/cable assemblies rated to 121°C (250°F) max.



- **9334-211-XXXX-YYYY, Cable Assembly, w/Stainless Steel Armor**
  Two (2) pin socket connector with 7.1 mm (0.28”) diameter, ss armored jacket with cable, twisted shielded pair wires.
  xxx.x = Armor length in meters. yyy.y = Cable length in meters.



FIELD ADJUSTMENTS



Note: Remove sealing screws to gain access to adjustment potentiometers

THEORY OF OPERATION

The output of the Impact Transmitter is a 4-20 mA signal proportional to the number of impact events over the threshold in a set time period. The relationship between the mA signal and the number of impact events remains the same. The time frame over which the events are measured can be changed. This will allow you to match the measuring time frame with the RPM range of your equipment. Chart 1 indicates mA output vs impact events over the set threshold.

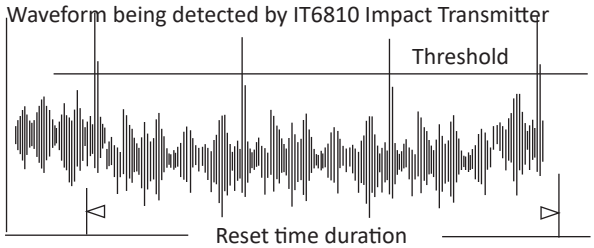


CHART 1	
Severity Level	**Output**
16 impacts > threshold	20 mA
14 impacts > threshold	18 mA
12 impacts > threshold	16 mA
10 impacts > threshold	14 mA
8 impacts > threshold	12 mA
6 impacts > threshold	10 mA
4 impacts > threshold	8 mA
2 impacts > threshold	6 mA
No impacts > threshold	4 mA
Loss of Power	

Translates number of impact events into 4-20 mA signal

Option for Class 1, Div 1 area
Specify IT6812 and 9288-series EP housing and mounting kit. Area classification met by using housing.

