ACT-1B *Programmable Panel Tachometer*

Description

The ACT-1B is an economical and easy to use digital tachometer that displays rotational speed directly in RPM or RPS on a 5 digit red 0.56" high LED display using a speed sensor providing a single (or multiple) pulse(s) per revolution. The number of pulses per rev is factory set at time of ordering and can be user programmed from 1 to 999 using the optional PM Remote Software and USB programming cable. Power may be either universal 100 to 240Vac (50/60Hz) or optionally 12 Vdc or 24 Vdc isolated. The ACT-1B accepts input signals from optical, proximity, magnetic, infrared or laser sensors, or direct TTL or external ac inputs. The ACT-1B is suitable for panel mounting or bench top use with convenient screw terminal connections on the rear panel of the instrument.

If specified at time of order placement, the ACT-1B may be optionally equipped with either an analog output of 4-20mA or 0-5Vdc proportional to speed, and/or a TTL pulse repeater output.

Features

- Economically priced

- 1/8 DIN sized

- 5 Digit LED display

- 5 to 99,999 RPM range

- Universal sensor inputs

- Compatible with most speed sensors

- User configurable*

- View real-time data on PC*

- Store data in Excel File in real-time*

- Universal A/C power 100 to 240 Vac, 50/60Hz or optional DC input power

- Optional 4-20mA or 0-5Vdc scalable output

*Requires optional USB programming cable and PM Remote Software

Typical Uses

- Process monitoring

- Research and Development

- Field testing

- Engine Performance

- Control Panels

- Marine testing

- Utilities

- Manufacturing

- Quality Control

- Predictive Maintenance

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Made in USA

ACT-1B Programmable Panel Tachometer

PM Remote Software

PM (Panel Meter) Remote Software is a Windows™ based software application that allows the user to customize the configuration of the ACT-1B. Set the mode of operation to RPM, RPS or Frequency and select the input scale (pulses per revolution). In addition, the decimal places displayed can be selected as well as the output scale of the optional analog output module. Configurations can be saved and quickly reloaded.

The user can set the input pulse trigger and optional output pulse to be positive or negative.

Real-time data can be displayed directly on the PC along with Min and Max values.

Data can be streamed directly into Microsoft Excel™ with one simple mouse click.

PM Remote Software is included when purchasing the optional USB programming cable. Complete instructions are included on software CD.
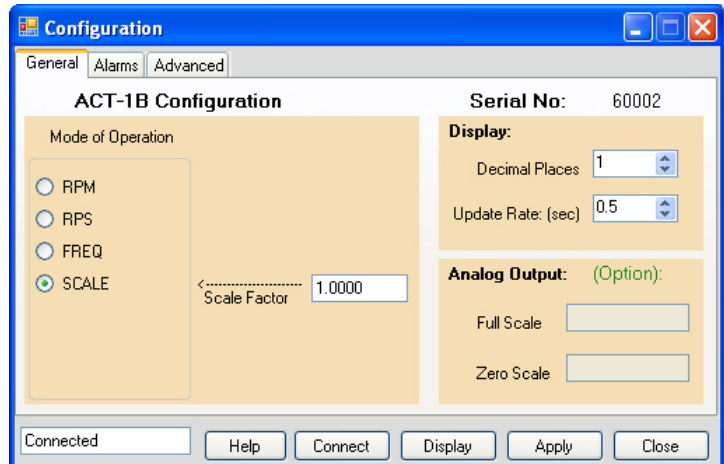
Configuring Basic Features
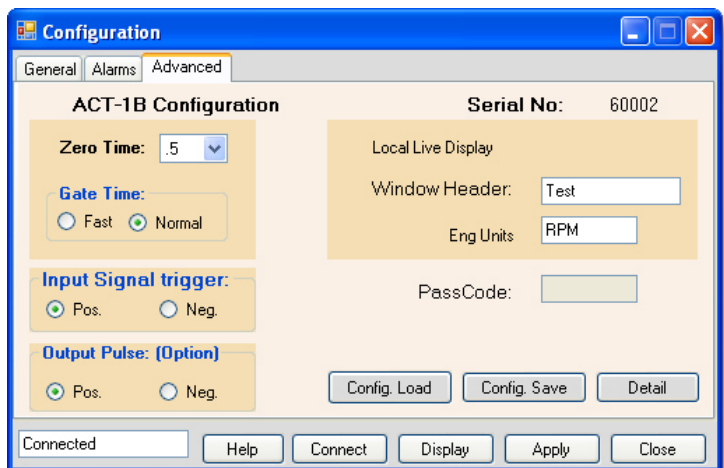

Configuring Advanced Features

Real-time display

Rear Panel

USB Programming Cable connects directly to the rear of the ACT-1B. PM Remote Software is included.

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ACT-1B Programmable Panel Tachometer

Specifications

Range:	5 to 99,999 RPM
Accuracy:	±1 RPM or 0.005% of reading
Resolution:	1 RPM
Display:	5 digit, 0.56" (14 mm) high red LED
Display Update:	Twice per second above 120 RPM. Programmable with PM Remote Software and USB programming cable.
Dimensions:	1/8 DIN by 4.5" (114 mm) deep
Power Supply:	Standard: 100 - 240 Vac ±10%, 50/60 Hz
	Optional: 12 or 24 Vdc ±10%, Isolated, 5.0 Watts
Inputs:	Universal input for optical, proximity, two wire or three wire magnetic, infrared or laser sensors.
	TTL input or 1.5 Vac to 50 Vac input
	Standard input is 1 pulse per revolution. Programmable using PM Remote Software
	and USB programming cable.
Sensor Excitation:	12 Vdc at 5 mA for proximity sensors.
	12 Vdc at 75 mA for all other sensors (Optional 5 or 24Vdc available).

Recommended Sensors:	Optical	-	Monarch ROS-W
	Proximity	-	Monarch P5-11
	Magnetic	-	Monarch M-190W or MT-190W
	Infrared	-	Monarch IRS-W
	Laser	-	Monarch ROLS-W

IO Option:	4 to 20 mA out, 16 bit resolution 12Vdc compliance voltage. Full scale RPM settings as specified when ordered or programmable using PM Remote Software and USB programming cable.
AO Option:	0 to 5 Vdc out, 5 mA 16 bit resolution. Full scale RPM settings as specified when ordered or programmable using PM Remote Software and USB programming cable.
PO Option:	0 to 5 V TTL pulse, non-inverting, one pulse out for each pulse in. Positive or negative out. Programmable using PM Remote Software and USB programming cable.
Environmental:	Indoor use only, Installation category II per IEC 664
	Temperature: -10°C to 50°C operating per IEC 61010-1
	Humidity: Maximum relative humidity 80% for temperatures up to 31°C, decreasing linearly to 50% relative humidity at 40°C.
Electrical Safety:	Meets EN61010-1:2001, EC low voltage directive 72/23/EEC and 89/336/EEC.

RoHS CE
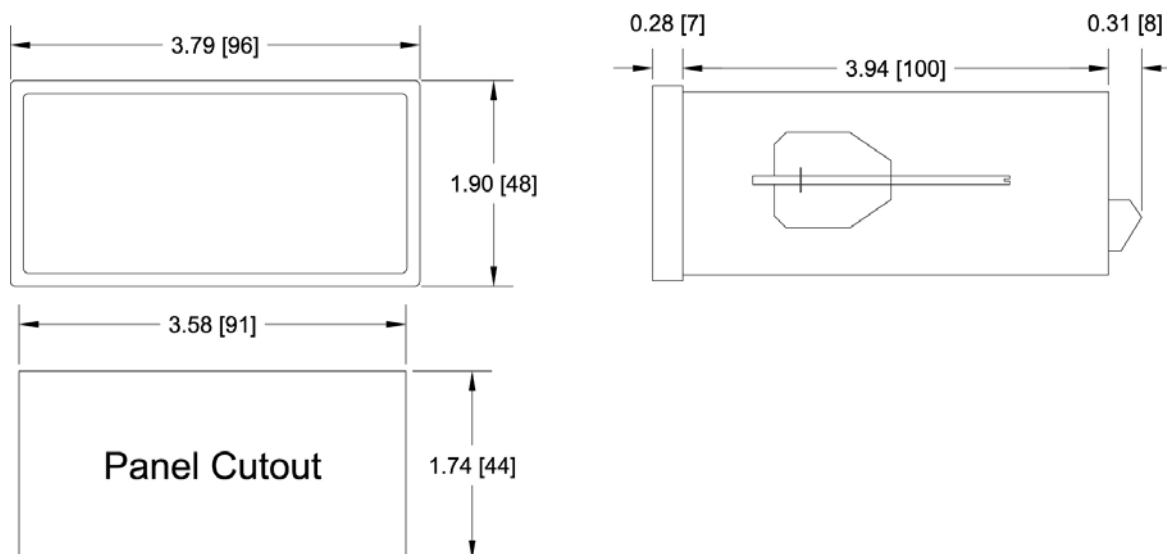
Dimensions

Dimensions are in inches [mm]

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Ordering Information

To specify your ACT-1B, select options from the list below. Insert your selection in the boxes above and the cost of each option in the boxes to the left. Analog output, full scale setting and pulse input ranges selected below must be factory preset or can be user configured with the optional USB programming cable and PM Remote Software (see accessories below).

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Input Power
1	100 to 240 Vac 50/60Hz
2	Isolated 12Vdc +/- 10%
3	Isolated 24Vdc +/- 10%

Pulse Output
0	No
1	Yes

Sensor Power
1	12Vdc
2	5Vdc
3	24Vdc

Analog Output
0	None
1xxxxx	0 to 5Vdc Non-isolated (xxxxx = full scale)
2xxxxx	4 to 20ma Non-isolated (xxxxx = full scale)
3xxxxx	0 to 5Vdc Isolated (xxxxx = full scale)
4xxxxx	4 to 20ma Isolated (xxxxx= full scale)

Pulses per Revolution (input)
xxx	001 to 999

Example Model Number: ACT-1B operating from AC input power with pulse output, sensor supply of 12Vdc, and Non-isolated 4-20mA output with full scale output scale set at 10,000RPM and 60 pulses per revolution would be **Model #: ACT-1B-1-1-1-210000-060**

Accessories

6180-031	USB Programming Cable and Software (supplied on CD)	3 ft. USB Programming Cable and Windows™ compatible PM Remote Software Package. Allows user configuration of operation mode, analog output scaling, decimal places, display update rate and pulses per input. View real time data in digital format and/or through Microsoft® Excel.
1064-2022-001	WIRE PER FOOT	3-wire shielded Sensor Cable, bulk lengths for any sensor. Specify Total Length.
6180-070	T-5	Reflective Tape - 5 foot roll, 0.5 inch wide
6180-079	T-5WP	Waterproof reflective tape (honeycomb pattern) - 5 foot roll, 1 inch wide
6180-CAL	Calibration - N.I.S.T.	N.I.S.T. Traceable Certificate of Calibration / Re-calibration

Sensors

6180-030	ROLS-W	Remote Optical Laser Sensor with 8 foot cable, 4 tinned leads, mounting bracket with jam nuts and 12 inches of T-5 tape.
6180-056	ROS-W	Remote Optical Sensor with 8 foot cable, mounting bracket and 12 inches of reflective tape
6180-057-25	ROS-P-25	Remote Optical Sensor with 25 foot cable, mounting bracket and 12 inches of reflective tape
6180-058-25	ROS-HT-W-25	Same as 6180-056 for high temperature applications to 257°F (125°C) with 25 foot cable
6180-013	P5-11	Proximity Sensor with 6 foot cable
6180-018	MT-190W	Magnetic Trigger Sensor/Amplifier with 8 foot cable
6180-012	M-190W	Magnetic Sensor with 8 foot cable
6180-019	GE-200	Gasoline Engine Electromagnetic Inductive Sensor and amplifier with 23 feet of cable.
6180-021	IRS-W	Infrared Sensor with 8 foot cable, tinned wires and mounting bracket.