



ACT-1B

Panel Tachometer

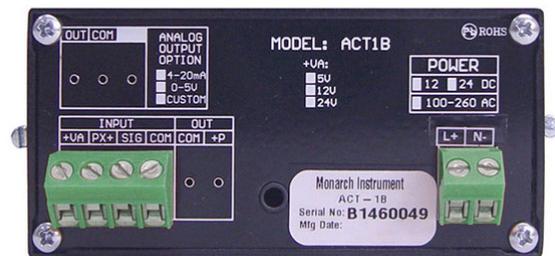
Features:

- Value priced
- 1/8 DIN sized
- 5-digit LED
- 5 to 99,999 RPM range
- Compatible with most speed sensors
- User configurable*
- View real-time data on PC*
- Store data in Excel™ file in real time*
- Universal AC power 100 to 240 V ac, 50/60 Hz or optional 12 or 24 V dc power
- Optional 4-20 mA or 0-5 V dc scalable output
- NIST Traceable Certificate option available

Typical Uses:

- Process monitoring
- Research and development
- Field testing
- Engine performance analysis
- Control panels
- Utilities monitoring
- Manufacturing processes
- Quality control
- Predictive maintenance

*Requires downloadable PM Remote Software (free) and USB Programmable Cable (PN: 6180-031)



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 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 USB programming cable and free downloadable PM Remote Software. Power may be either universal 100 to 240 V ac (50/60 Hz) or optional 12 V dc or 24 V dc 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 4-20 mA or 0-5 V dc proportional to speed, and/or a TTL pulse repeater output.



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PM Remote Software

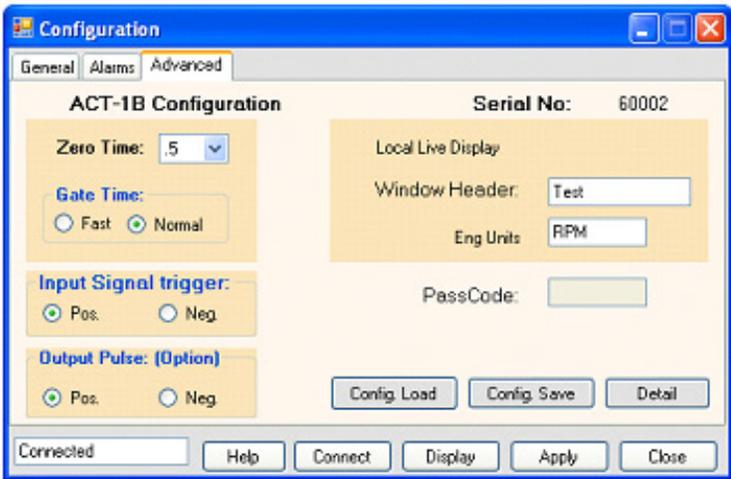
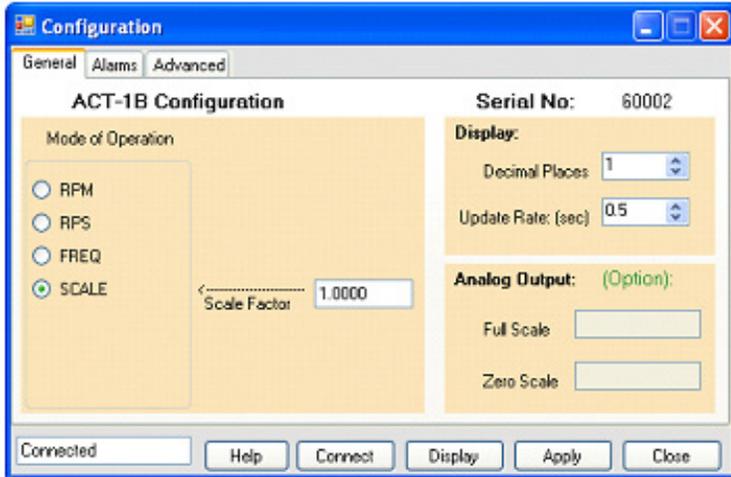
PM (Panel Meter) Remote Software is a free downloadable Windows™-based software application that allows the user to customize the configuration of the ACT-1B. Set the mode of operation to RPM, RPS or Frequency and select the input scale (pulses per revolution). In addition, the decimal places displayed 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 a free application that can be downloaded from [Monarch Instrument's website](http://www.monarchinstrument.com).



USB Programming Cable for Windows is required for ACT-1B and F2A1X.

USB Programming Cable
PN: 6180-031
sold separately

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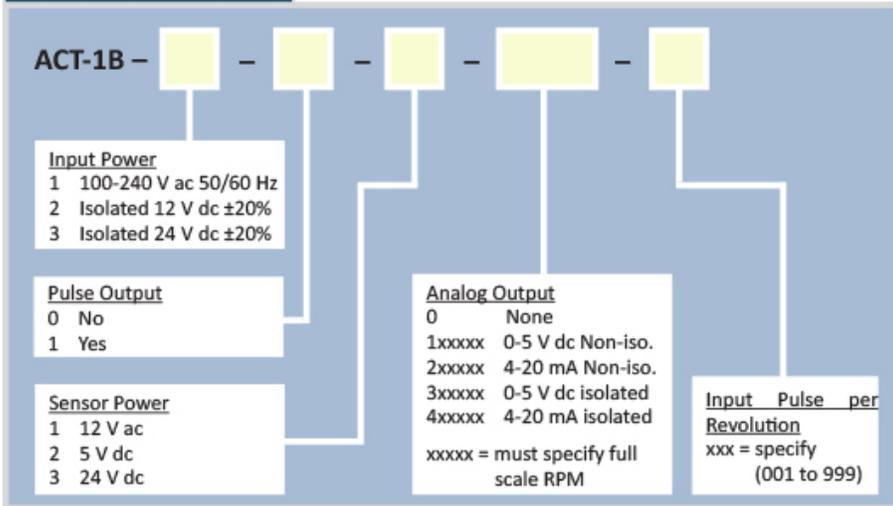
Specifications*	ACT-1B Panel Tachometer
Range	5 to 99,999 RPM
Accuracy	±1 RPM or 0.005% of reading
Resolution	1 RPM (user-programmable to 0.0001†)
Display	5-digit, 0.56" [14 mm] high red LED
Display Update	Twice per second above 120 RPM (user-programmable to 0.5, 1, or 1.5 second†)
Dimensions	1/8 DIN by 4.5" [114 mm] deep
Power Supply	Standard: 100-240 V ac ±10%, 50/60 Hz, 5 VA Optional: 12 or 24 V dc ±10%, Isolated, 5 Watts
Inputs	Universal input for optical, proximity, two-wire or three-wire magnetic, infrared or laser sensors TTL input or 2 V ac to 50 V ac peak to peak input Standard input is 1 pulse per revolution (user-programmable from 1 to 999†)
Sensor Excitation	12 V dc at 20 mA for proximity sensors, 12 V dc at 75 mA for all other sensors; Optional 5 or 24 V dc available Note: When ordering ACT Series, sensor power supply needs to be verified during product configuration. Contact factory for assistance if needed.
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 or RLS-W
IO Option	4 to 20 mA out, 16 bit resolution 12 V dc compliance voltage Full scale RPM settings as specified when ordered (user-programmable†)
AO Option	0 to 5 V dc out, 5 mA 16-bit resolution Full scale RPM settings as specified when ordered (user-programmable†)
PO Option	0 to 5 V TTL pulse, non-inverting, one pulse out for each pulse in (Positive or negative out programmable†)
This product is designed to be safe for indoor use under the following conditions (per IEC61010-1):	
Installation Category II per IEC 664	
Pollution Degree Level II per IEC 664	
Operating Temperature	32 °F - 122 °F (0 °C - 50 °C)
Humidity	Maximum relative humidity 80% for temperature up to 88 °F (31 °C) decreasing linearly to 50% relative humidity at 104 °F (40 °C)

*Specifications are subject to change without notice.

†Requires optional USB Programming Cable and PM Remote Software

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Ordering Information



Sensors

6180-056	ROS-W	Remote Optical Sensor with 8 ft. cable, mounting bracket and 12 inches of reflective tape
6180-056-25	ROS-W-25	Remote Optical Sensor with 25 ft. cable, mounting bracket and 12 inches of reflective tape
6180-080	RLS-W	Rugged Laser Sensor with 3 m cable, mounting bracket and 12 inches of reflective tape
6180-013	P5-11	Proximity Sensor with 6 ft. cable
6180-018	MT-190W	Magnetic Trigger Sensor/Amplifier with 8 ft. cable
6180-012	M-190W	Magnetic Sensor with 8 ft. cable
6180-038	CSLS	Compact Smart Laser, self-contained optical sensor for non-contact measurement up to 65 ft.
6180-019	GE200 HP	Gasoline Engine Electromagnetic Inductive Sensor and amplifier with 23 ft. of cable
6180-021	IRS-W	Infrared Sensor with 8 ft. cable, tinned wires and mounting bracket

Accessories

6180-031	USB Programming Cable	3 ft. Programming Cable, 1/8" (3.5mm plug to USB) 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 and ability to view real-time data in digital format and/or through Excel
6180-070	T-5 Reflective Tape	5 ft. roll, 0.5 inch wide
6180-079	T-5 WP Reflective Tape	Waterproof reflective tape (honeycomb pattern) - 5 ft. roll, 1 inch wide
6180-CAL	Calibration	NIST Traceable Certificate of Calibration for recalibration only (new units include NIST)

ACT-1B 0523



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