



ACT-1B Series Panel Tachometer

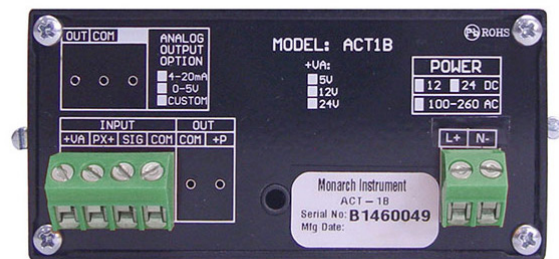
Features:

- 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 Vac, 50/60 Hz or optional 12 or 24 Vdc power
- Optional 4-20 mA or 0-5 Vdc 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 Vac (50/60 Hz) or optional 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 4-20 mA or 0-5 Vdc proportional to speed, and/or a TTL pulse repeater output.



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PM Remote Software

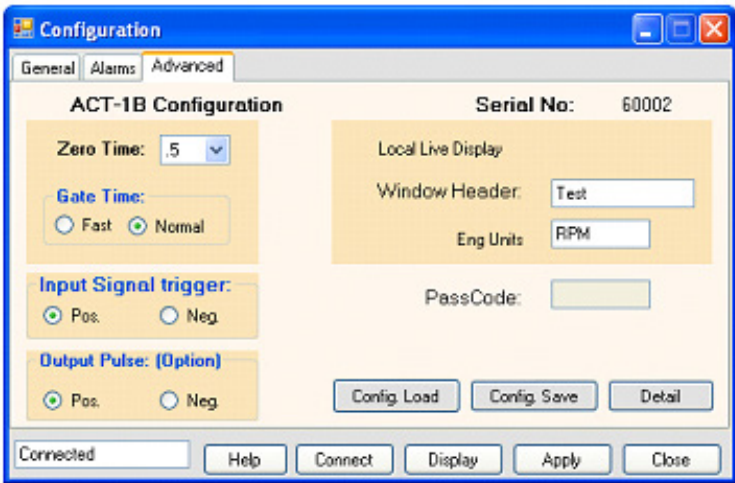
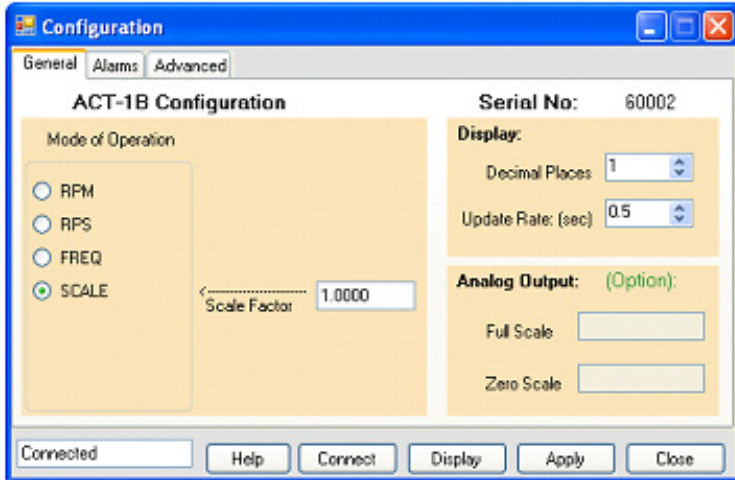
PM (Panel Meter) Remote Software is a free downloadable Windows™-based software application that allows the user to customize the configuration of the ACT-1B. Set the mode of operation to RPM, RPS or Frequency and select the input scale (pulses per revolution). In addition, the decimal places displayed 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
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 Vac ±10%, 50/60 Hz, 5 VA Optional: 12 or 24 Vdc ±10%, Isolated, 5 Watts
Inputs	Universal input for optical, proximity, two-wire or three-wire magnetic, infrared or laser sensors TTL input or 2 Vac to 50 Vac peak to peak input Standard input is 1 pulse per revolution (user-programmable from 1 to 999†)
Sensor Excitation	12 Vdc at 20 mA for proximity sensors, 12 Vdc at 75 mA for all other sensors; Optional 5 or 24 Vdc 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, 15-bit resolution 12 Vdc compliance voltage Full scale RPM settings as specified when ordered (user-programmable†)
AO Option	0 to 5 Vdc out, 5 mA 15-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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Sensors

Remote Optical Laser Sensors**:

ROLS-W: 3.3 to 15 Vdc Power Requirement, 8-ft cable	PN: 6180-030
ROLS24-W: 24 Vdc Power Requirement, 8-ft cable	PN: 6180-035
ROLS24-W-25: 24 Vdc Power Requirement, 25-ft cable	PN: 6180-035-25

Remote Optical LED Sensors:

ROS-W: 8-ft cable	PN: 6180-056
ROS-W-25: 25-ft cable	PN: 6180-056-25

Remote Optical High Temp Sensor:

ROS-HT-W-25: 25-ft cable	PN: 6180-058-25
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Rugged Laser Sensors**:

RLS-W: 4 to 15 Vdc Power Requirement Detachable 10-ft cable	PN: 6180-080
RLS24-W: 10 to 24 Vdc Power Requirement Detachable 10-ft cable	PN: 6180-082

Proximity Sensors:

P5-11: 2-wire inductive NAMUR output with 10 ft. cable	PN: 6180-013
PS-12: 3-wire open collector PNP pulse output w/ 6-ft cable	PN: 6180-032

Infrared Sensors:

IRS-W Sensor: Infrared Sensor with 8 ft. cable	PN: 6180-021
M-190W Sensor: Magnetic Sensor with 10 ft. cable	PN: 6180-012
MT-190W Sensor: Magnetic Trigger Sensor with amplifier	PN: 6180-037
GE200 HP Sensor: Inductive Sensor with 15 ft. cable Requires an amplifier with a wire connection	PN: 6180-014
Amplifier for GE200 HP or Magnetic Sensor	PN: 4180-406

Accessories

USB Programming Cable with PM Remote Software

Download the PM Remote Software from www.monarchinstrument.com. Use the USB Programming Cable and software to change the settings or remotely monitor the RPM.
PN: 6180-031

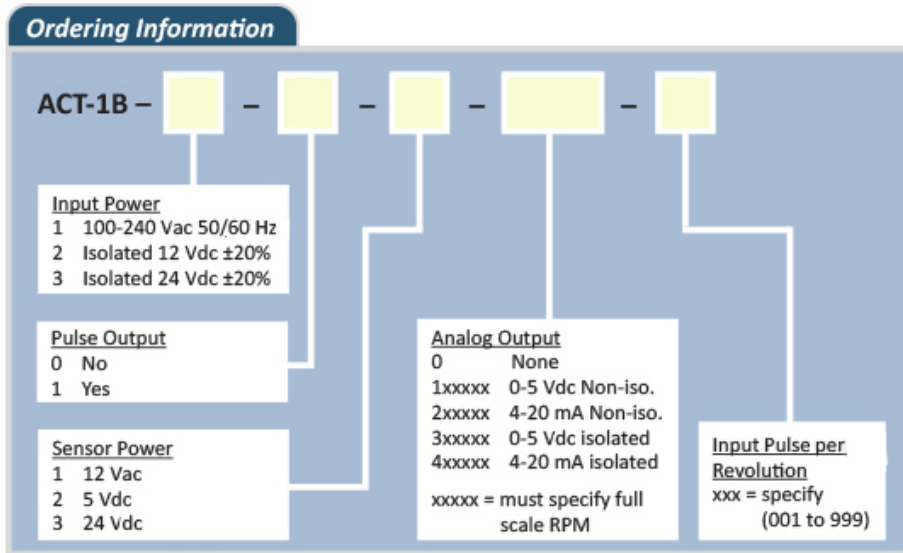


Reflective Tape:

T-5 (single pack), 5 feet - PN: 6180-070
T-5 (2-pack), 5 feet each - PN: 6180-069
T-50, 50 feet - PN: 6180-072
T-5WP (waterproof), 5 feet - PN: 6180-079



**Pay close attention to Power Requirement when ordering! Confirm Sensor Power option of ACT configuration matches requirement. Contact Monarch Instrument with any questions.



ACT-1B 0425



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