



TEL-TRU MANUFACTURING COMPANY

MODEL 530

4-20 mA LOOP CALIBRATOR

► FEATURES:

4 to 20 mA Loop Functions

- Source and Read 0.000-24.000 mA
- Simulate 2-Wire Transmitters 0.000-24.000mA
- Power 2-Wire Transmitters and Read 0.000-24.000 mA
- Display current in mA or -25.00-125.00% of 4-20 mA

Read Voltage Function

- Read 0.00 to ± 30.00 VDC with 4X over range ability

Full 5 Digit Display

- True $\pm 0.012\%$ of reading accuracy
- Bar graph for quick reference of input and output levels
- High contrast graphic display viewable in all lighting conditions and angles

EZ-Dial™ Knob

- Easily adjust output by 0.001 mA (0.01%) or 0.100 mA (1.00%)

EZ-Check™ Switch with EZ-Step™ Button

- 3-position tactile switch with push button for true one-handed calibrations
- Push button for stepping through calibration points
- 6 different step sizes
- Hands-free auto step and auto ramp modes

Uses a standard 9V Alkaline Battery

- Superior battery life up to 40 hours under typical continuous usage
- Easy access to battery compartment

240 VAC Tolerant

- Fuse-less protection from accidental misuse

Lightweight and rugged with a solid feel

- Convenient Velcro® hand strap allows for a firm confident grip or attachment to pipes and ladders.

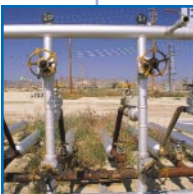
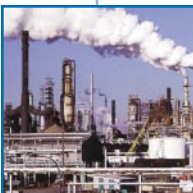
► DESCRIPTION:

The Model 530, designed for use in the process control industry, has simple, easy to use controls featuring a large high contrast display with easy visibility without the need for contrast adjustments. The Model 530 is designed to be a tool with all the practical functions required to get the job done easily without the confusing extras or reading through a complicated manual. The Model 530 can source and read current in the process loop and simulate, power and measure 2-wire transmitters. It can read voltage to 30.00 VDC with over 4X over range ability.



HART® protocol compatibility mode
User selectable 250Ω resistor in series with the output for compatibility with HART protocol enabled devices.

CE APPROVED!



*EZ-Dial, EZ-Check, and EZ-Step are trademarks of Practical Instrument Electronics, Inc.
Velcro is a registered trademark of Velcro Industries B.V.
Hart is a registered trademark of Rosemount Inc.*

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▶ GENERAL SPECIFICATIONS:

(Unless otherwise indicated all specifications are rated from a nominal 23 °C, 70 % RH for 1 year from calibration)

| | |
|----------------------------------|--|
| Operating Temperature | -20 to 60 °C (-5 to 140 °F) |
| Storage Temperature Range | -30 to 60 °C (-22 to 140 °F) |
| Relative Humidity | 10% ≤RH ≤90% (0 to 35 °C), Non-condensing 10% ≤RH ≤70% (35 to 60 °C), Non-condensing |
| Size | 7.00 X 3.30 X 2.21" (177.8 X 83.8 X 56.1mm) |
| Weight | 12.0 oz (340 grams) |
| Battery | 9V Alkaline Optional 120 VAC 50/60 Hz AC adaptor available |
| Miscellaneous | Low battery indication with nominal 1 hour of operation left Over-voltage protection to 120 Vrms (rated for 30 seconds) or 240 Vrms (rated for 15 seconds) Bar graph display with 1% resolution of 4-20 mA signal scale High contrast graphic liquid crystal display with 0.45" (11.4 mm) high digits |

▶ COMMON SPECIFICATIONS FOR ALL CURRENT MODES:

| | |
|---------------------------|--|
| Ranges | 0.000 to 24.000 mA, -25.00 to 125.00% of 4-20 mA |
| Accuracy | ≤ ± (0.012% of Reading + 0.004 mA) |
| Temperature Affect | ≤ ± 50 ppm/°C of Range |
| Resolution(s) | 0.001 mA and 0.01% |

▶ SOURCE/POWER AND MEASURE 2-WIRE TRANSMITTER SPECIFICATIONS:

| | |
|--------------------------------|---|
| Loop compliance voltage | ≥ 24 Volts |
| Loop drive capability | 1200 Ω at 20 mA for entire battery life |
| Miscellaneous | Open loop or out of compliance conditions are indicated by appropriate error display Battery life in: Source mode ≥ 18 hrs at 12 mA typical (HART disabled) Power measure ≥ 10 hrs at 12 mA typical HART protocol mode is a selectable option at turn on. HART protocol mode places a 250Ω resistor in series with the output Selectable EZ-Step(s) for Source Mode/2-Wire Transmitter Simulation: In mA mode: 0.001, 0.010, 0.100, 1.000, 4.000 (default), 8.000 mA % of 4-20 mA mode: 0.01, 0.10, 1.00, 10.00, 25.00 (default), 50.00% |

▶ WARRANTY:

Our equipment is guaranteed against defective material and workmanship (excluding batteries) for a period of three years from the date of shipment. Claims under guarantee can be made by returning the equipment prepaid to our factory. The equipment will be repaired, replaced or adjusted at our option. The liability of Tel-Tru Manufacturing Co. is restricted to that given under our guarantee. No responsibility is accepted for damage, loss or other expense incurred through sale or use of our equipment. Under no condition shall Tel-Tru Manufacturing Co. be liable for any special, incidental or consequential damage.



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▶ READ mA SPECIFICATIONS:

| | |
|--|--------------------|
| Voltage burden | ≤ 2V at 20 mA |
| Overload/Current limit protection | 24 mA nominal |
| Battery life | Typical ≥ 40 hours |

▶ 2-WIRE TRANSMITTER SIMULATION SPECIFICATIONS:

| | |
|--|---|
| Voltage burden | ≤ 2V at 20 mA |
| Overload/Current limit protection | 24 mA nominal |
| Loop voltage limits | 2-60 VDC |
| Miscellaneous | Open loop or out of compliance conditions are indicated by appropriate error display Battery life ≥ 40 hour typical Selectable EZ-Step(s) for Source Mode/ 2-Wire Transmitter Simulation: In mA mode: 0.001, 0.010, 0.100, 1.000, 4.000 (default), 8.000 mA % of 4-20 mA mode: 0.01, 0.10, 1.00, 10.00, 25.00 (default), 50.00% |

▶ VOLTAGE READ SPECIFICATIONS:

| | |
|---------------------------|---|
| Range | 0.00 to 30.00 VDC (with 4X over range) |
| Accuracy | ≤ ± (0.1% of Reading ± 0.1 V) |
| Temperature effect | ≤ ± 200 ppm/°C of Reading |
| Resolution | 0.01 V |
| Input resistance | ≥ 1 MΩ Battery life > 40 hour typical Flashing indicator for over range |

▶ ORDERING INFORMATION/OPTIONS:

| | |
|---------------------------|---------------------------------|
| MODEL 530 | - 4-20 milliamp loop calibrator |
| Order Code: | Model 530 |
| Available Options: | |
| AC adaptor | 020-0100 |
| Carrying Case | 020-0200 |

