



**NEWPORT®
BRAND**



\$150

BASIC UNIT

**BASEEFA
CENELEC**

Intrinsically Safe Models

STANDARD FEATURES

- ✓ Powered by 1-5 mA, 4-20 mA or 10-50 mA Signal
- ✓ 2.5 V Max Voltage Drop
- ✓ Display to ±1,999, ±19,990 or ±199,900
- ✓ 0.5 inch (12.7 mm) Liquid-Crystal Display
- ✓ 100 to 2,000 Count Span Adjust
- ✓ 2,000-Count Zero Suppression or Elevation
- ✓ Short ½ DIN Case
- ✓ Simple 2-Wire Hook Up
- ✓ Safe Plug-in Screw-Clamp Connector

OPTIONS

- ✓ Intrinsic Safety Certification
- ✓ -40 to +85°C Operating Temperature
- ✓ NEMA-4 Splash-Proof Lens Cover

For Sales and Service
In U.S.A. and Canada

**1-800-872-3963SM
1-800-USA-DYNE**

International Customers Dial
(614) 965-9340
24-Hour FAX (614) 965-9438

OMEGADYNESM FAX

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**1-800-344-3963SM
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THI T-HYDRONICS, INC.

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Two-Wire, Loop-Powered Process Indicator



DESCRIPTION

Model 558B is a ½ DIN-sized two-wire current-loop indicator that is powered directly by 1-5 mA, 4-20 mA or 10-50 mA process signals, with no need for external power connections. This reduces field wiring costs and provides immunity from most electrical noise encountered in process-control environments. The two-wire electrical hookup is easy via a plug-in screw-clamp connector, which is standard.

READOUT OF PROCESS VARIABLES

The 558B provides extensive zero and span adjustment capability for direct readout in percent or in engineering units for process variables such as pressure, flow, temperature, or level. A 0.50 in (12.7 mm) high LCD display provides 3 ½ active digits for readout to ±1,999, two jumper-selectable dummy right-hand zeros for display to ±19,990 or ±199,900, and five jumper-selectable decimal points. With the dummy zeros, the 558B can thus be used to display the weight of heavy trucks in pounds or the volume of large tanks in gallons.

EASY TO CONFIGURE AND CALIBRATE

Both span and zero are fine-tuned with precision 15-turn potentiometers accessible behind the lens. Coarse zero and span steps as well as the dummy right-hand zero are selected by opening the case and changing push-on jumpers.

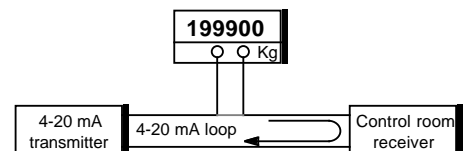
INTRINSIC SAFETY CERTIFICATION

For use in hazardous environments, the 558B is available with

BASEEFA intrinsic safety certification to level EEx ia IIC T4 in accordance with European CENELEC standards EN 50 014 (1977) + A1 to 4 and EN 50 020 (1977) + A1. The BASEEFA certification number is EX 86B2378. EEx ia intrinsic safety certification allows the 558B to be used in Zone 0 (worst case) hazardous environments with no need for an explosion-proof housing, provided that an intrinsic safety barrier is used to limit the voltage and current that may be introduced in the hazardous environment.

BUILT FOR INDUSTRIAL ENVIRONMENTS

Model 558B is housed in NEWPORT's DIN 4896-100 case, which is splash resistant and requires a depth of less than 3.9 in (100 mm) behind the panel. A splash-proof lens cover which meets NEMA-4 requirements is optional. Electrical connections are via a three-pole male header connector on the circuit board and a mating plug-in socket connector with screw clamps, which accommodate wire sizes of 0.5-2.5 mm² (26-16 AWG). These supplied connectors provide easy and reliable electrical connections and meet UL and IEC-348 safety requirements.



A 558A process-loop indicator may be added to an existing 1-5 mA, 4-20 mA or 10-50 mA installation to provide a local readout scaled in percent or engineering units. No power wiring is required, since the meter is powered directly by the current loop.

SPECIFICATIONS

SIGNAL INPUT

Signal: 1-5 mA, 4-20 mA or 10-50 mA (jumper-selectable)

Linear Range: 0.3 to 50 mA

Protection: Up to 200 mA forward, 1000 mA reverse
Forward voltage drop, max 2.5 V

Input Resistance: 50 Ω at 1-5 mA, 12.5Ω at 4-20 mA, 5 Ω at 10-50 mA

Zero Adjust: -2,000 to +2,000 counts in 4 jumper- selectable ranges plus fine adjustment or Span adjust 100 to 2,000 counts with fine adjustment

NMR: 46 dB, 50/60 Hz

CMR: (meter to case) 120 dB, DC to 60 Hz

CMV: (meter to case) 300 V ac

ACCURACY AT 25°C

Maximum Error: ±0.1% of reading ±1 count

Zero Tempco: ±0.1 count/°C typ, ±0.3 count/°C max

Span Tempco: ±0.005% of span/°C typ, ±0.015% of span/°C max

ANALOG-TO-DIGITAL CONVERSION

Technique: Dual-slope, average-value

Polarity: Automatic

Integration Period: 100 ms

Read Rate: 2.5/s

DISPLAY

Type: 7-segment LCD

Height: 0.50 in (12.7 mm)

Symbols: -1.8.8.8.0.0 (3½ active digits plus two jumper-selectable dummy right-hand zeros)

Decimal Points: Five positions, jumper-selectable

Overrange Indication: Three least-significant active digits blank

ENVIRONMENTAL

Operating Temperature, Standard: 0 to 55°C (32 to 122°F)

Operating Temperature, Optional: -40 to +85°C (-40 to +185°F)

Relative Humidity: 95% at 40°C (non-condensing)

MECHANICAL

Case: NEWPORT DIN 4896-100

Panel Cutout: 1.77 x 3.62 in (45 x 92 mm)

Bezel Dimensions: 1.89 x 3.79 x 0.31 in (48 x 96 x 8 mm)

Depth Behind Bezel: 3.94 in (100 mm)

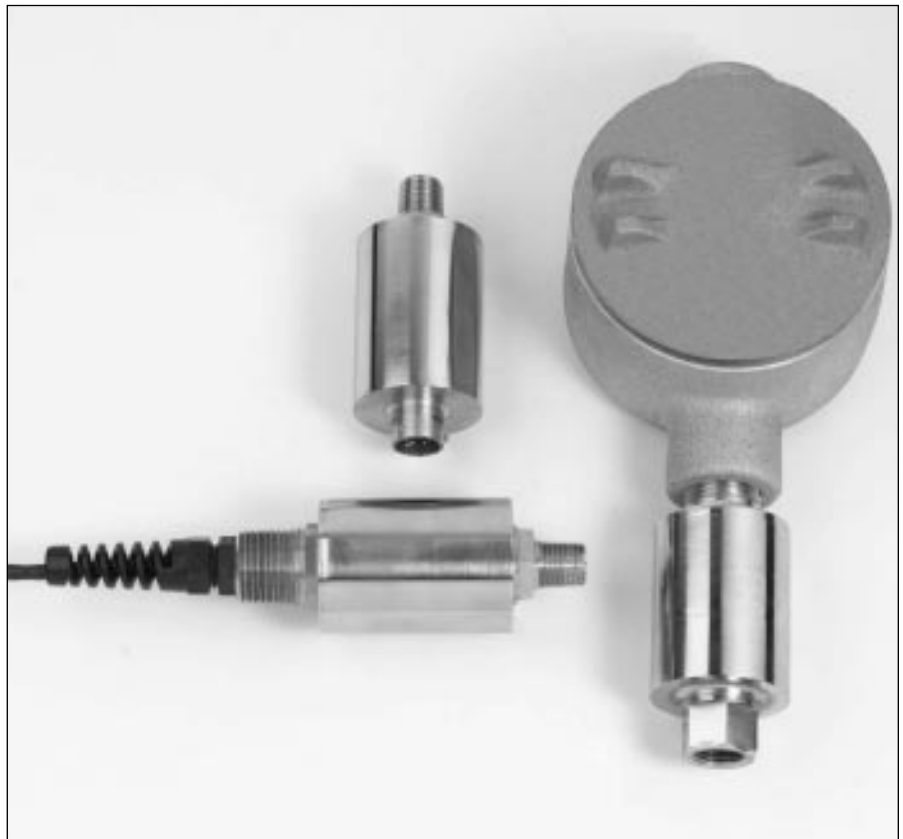
Case Material: 94V-0 UL-rated polycarbonate

Weight: 4.5 oz (128 g)

Circuit Board Connector: Three-pole male header

Cable Connector (Standard): Mating plug-in socket with screw-clamps for wire sizes 0.5 - 2.5 mm² (26-16 AWG)

Connector Safety Ratings: UL and IEC-348



OMEGADYNE Pressure Transmitters Series **PX01/PX02**.
For complete details request Document #3605 & #3606

➔ **Most Popular Models Indicated** Prices shown in U.S. Dollars

To Order (Specify Model Number)		
Model	Price	Description
558B	\$150	Current Loop Indicator
558B-ET	185	Current Loop Indicator with extended ambient range (-40 to 85°C)

➔ **Options**

Order Suffix	Add'l. Price	Description
-BL	\$15	Blank lens without Newport logo
-FS	25	Custom configuration and calibration
-IS1	25	Intrinsic Safety certification, with CENELEC EEx ia certification label

Accessories

Model No.	Price	Description
SPC18	\$30	NEMA 4 splash proof cover lens
RP18	45	19" rack panel for 1 meter
RP28	50	19" rack panel for 2 meters
RP38	55	19" rack panel for 3 meters

Comes with complete operator's manual.

Ordering Examples: 1.) 558B current loop indicator, \$150.
2.) 558B-IS1 current loop indicator with Intrinsic Safety Certification, \$150 + 25 = \$175.