Honeywell

INDUSTRIAL MEASUREMENT & CONTROL

Field Instrument Solutions

Engineering Unit Display Meter

Digital Display of Measurements in Real Engineering Units

Historically an analog moving coil meter was used for local measurement or control loop displays, but the preference now in many applications is for digital display of temperature, pressure, level, flow, or other measurements in real engineering units. Honeywell's Engineering Unit (EU) Display Meter provides a universal solution for 4-20mA measurement displays by converting any 4-20mA signal into an LCD digital display in the preferred engineering units.

The EU Display Meter is available for remote-mount field use or can be integrally mounted in the STT150 or STT250 Temperature Transmitters or in the SMV 3000 Multivariable Transmitter. In the SMV 3000, it enables display of the flow PV4 when this is the 4-20mA output. In the STT250 Model STT25H with the HART* protocol or in the PC-configurable STT150 models, the transmitter LRV/URV range settings should be duplicated in the EU Display Meter to obtain the preferred temperature unit display.

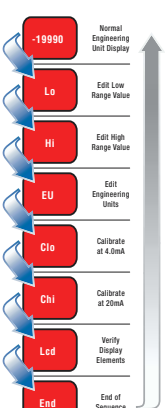
The EU Display Meter is connected in series with the 4-20mA loop and is powered by the loop power. It operates by processing the 4-20mA signal via an analog-to-digital converter and scaling the digital measurement linearly into the desired operating range, which the user configures into the meter. The LCD display includes a selection of integral engineering units for temperature and pressure applications (e.g., °C, °F, in H_2O, psi, etc. and a "K" multiplier that can be included when larger ranges require it).

The EU Display Meter also includes a bar-graph display of measured signal as a percentage of the 16mA signal span. This enables confirmation from some distance away that the measurement loop is operating satisfactorily or that attention is required.

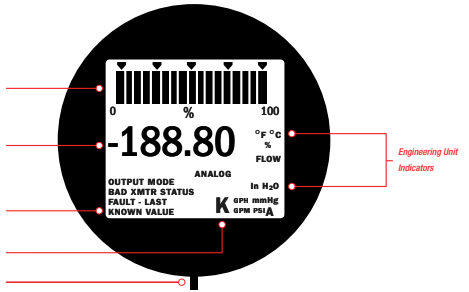
The meter is configured by an integral selection switch, which enables setting the Low (4mA) and High (20mA) display range limits.

Configuration Features

- **Calibration of the low and high display ranges to 4 and 20mA**
- **Engineering unit selection**
- **Display diagnostic check to ensure that all display segments are operating correctly**



Configuration Display Flow Chart



Condensed Specifications

Specification Summary

Digital Display Accuracy	+/-0.5% of Full Range	
Digital Display Resolution		Shown as:
	+/-0.05 for +/-199.9 reading range	199.9
	+/- 0.5 for +/-1999 reading range	1999
	+/-5 for +/-19990 reading range	19990
	+/-50 for +/-199900 reading range	199.9 K
	+/-500 for +/-1999000 reading range	1999 K
	+/-5000 for +/-19990000 reading range	19990 K
Bar graph % Display Resolution	+/-3% of reading on 17-segment scale	
Minimum loop current	3.6mA	
Power supply Volts drop across meter	2.3V max with reverse polarity protection	
Connection polarity	Yellow = Positive (+ve); Blue = Negative (-ve)	
	Rated	**Extreme, Transportation, & Storage**
Ambient Temperature	-40 to +185°F -40 to +85°C	-58 to +194°F -50 to +90°C
Relative Humidity (%RH)	10 to 90%, non condensing	0 to 100%
Available Engineering Units		
—Integral LCD indicator	°F, °C, %, in H_2O, GPH, GPM, mmHg PSI, PSIA	
—As stick-on label	Wide selection of printed units for temperature, pressure, and flow	

Honeywell Authorized Representative:

U.S.A.: Honeywell Industrial Measurement and Control, 16404 North Black Canyon Hwy., Phoenix, AZ 85053 • **Canada:** The Honeywell Centre, 155 Gordon Baker Rd., North York, Ontario M2H 3N7

Latin America: Honeywell Inc., 480 Sawgrass Corporate Parkway, Suite 200, Sunrise, Florida 33325 • **Japan:** Honeywell K.K., 14-6 Shibaura 1-chome, Minato-ku, Tokyo, Japan 105-0023

Asia: Honeywell Pte Ltd., Honeywell Building, 17 Changi Business Park Central 1, Singapore 486073, Republic of Singapore • **Pacific Division:** Honeywell Pty Ltd., 5 Thomas Holt Drive, North Ryde NSW Australia 2113 • **Europe and Africa:** Honeywell S. A., Avenue du Bourget 3, 1140 Brussels, Belgium • **Eastern Europe:** Honeywell Praha, s.r.o. Budejovicka 1, 140 21 Prague 4, Czech Republic

Middle East: Honeywell Middle East Ltd., Technology Park, Cert Complex, Block Q, Muroor Rd., Abu Dhabi, U.A.E.

Honeywell

Industrial Measurement and Control

www.honeywell.com/imc

SL-53-923 (2-M) Rev. 6/02 Printed in U.S.A