

# ToughMeters

## Series 270



The ToughMeter series of analog panel meters is designed to operate in harsh environments. The 2 1/2" and 3 1/2" size meters have all metal cases and polycarbonate windows. The ToughMeters have gasket sealed bezels, terminals and zero regulators to ensure dust and moisture protection. The meter mechanisms have a long history of lasting durability and performance within specifications. Either pivot & jewel or taut band suspension is available.

SPECIFICATION	DC	AC (Rectified)
ACCURACY	± 2%	± 3%
BALANCE	± 1%	± 1%
REPEATABILITY	± 2%	± 2%
OVERLOAD	120% Continuous	120% Continuous
OVERSHOOT	10% Max	10% Max
RESPONSE TIME	2 sec max	2 sec max
VIBRATION SIN	3 Gs 10 - 80 Hz	3 Gs 10 - 80 Hz
VIBRATION RANDOM (P&J)	10-1000 Hz 5 Gs RMS	10-1000 Hz 5 Gs RMS
VIBRATION RANDOM (TB)	10-1000 Hz 3 Gs RMS	10-1000 Hz 3 Gs RMS
SHOCK	50 Gs 10 shocks per axis (30 total)	50 Gs 10 shocks per axis (30 total)
ENVIRONMENTAL	IP66	IP66 4
TEMPERATURE	-45° - +70° C	-45° - +70° C

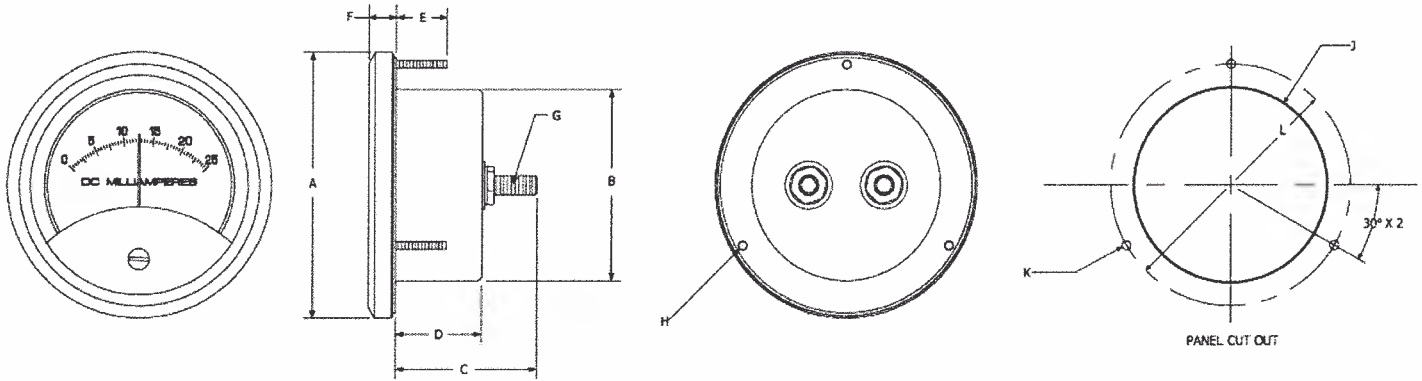
*Vibration, temperature, and environmental specifications all exceed ANSI C39.1*

**Made in USA**

**YOKOGAWA** 

# Mechanical Dimensions

Dimension	2½" ToughMeter	3½" ToughMeter
A	ø 2.70	ø 3.50
B	ø 2.18	ø 2.50
C	1.88	1.88
D	1.18	1.18
E	0.50	0.50
F	0.37	0.37
G	¼ - 28 terminal x 2	¼ - 28 terminal x 2
H	4 - 40 on 2.44 BCD x 3	4 - 40 on 3.16 BCD x 3
J	ø 2.230	ø 2.550
K	ø 0.140 x 3	ø 0.140 x 3
L	ø 2.440	ø 3.160



# Model and Suffix Codes

Digits 1, 2, 3	Digit 4	Digits 5 & 6	Digits 7 & 8	Digits 9 & 10	Digit 11	Digits 12, 13, 14
Model	Size	Elec. & Mechanical Variables	Rating Code	Scale Code	Factory use	Special Features code
270: Taut Band ToughMeter	2 - 2½"	00 - DC Amps Zero-Left	As set by factory	As set by factory	7	When used indicate unique models models
271: Pivot & Jewel ToughMeter	3 - 3½"	01 - DC Amps Zero-Center				
		10 - AC Amps Rectified				
		20 - DC Volts Zero-Left				
		21: DC Volts Zero-Center				
		24 - DC Millivolts Zero-Left				
		25 - DC Millivolts Zero-Center				
		30 - AC Volts Rectified				



Yokogawa Corporation of America  
 2 Dart Road, Newnan, Georgia U.S.A. 30265  
 Tel: 1-800-258-2552 Fax: 1-770-251-2088  
 www.yokogawa-usa.com

FL 61A270-01E-A 1st Edition  
 Copyright © October 2008, Yokogawa Corporation of America. Subject to change without notice.