

# Digital Hour Meter & Counter

- Suitable for Hour meter & Counter (Up / Down) application
- Wide Hour meter range from 1 sec to 9999999 hrs
- Wide counter range from 1 to 9999999 counts
- Prescaling facility for Counter
- Alarm facility for both Hour meter & Counter
- Relay & MOSFET Output with Over Load detection
- Retentive & Non-Retentive modes
- 7 Digit LCD with luxurious green backlight
- Compact size
- Suitable for panel mounting



## Ordering Information

Cat. No.	Description
Z2301N0G1FT00	9-30 V DC (with dual MOSFET output)
Z2221N0G2FT00	85-265 V AC/DC (with Relay output)

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Cat. No.		Z2301N0G1FT00	Z2221N0G2FT00
<b>Parameters</b>			
Supply Voltage (≡)		9 - 30 VDC	85 - 265 VAC/DC
Power Consumption (W)		2 W max.	2 VA / 1W
Supply Frequency		50 / 60 Hz	
<b>I/P Signal Characteristics</b>			
Signal Voltage Range		9 - 30 VDC	85 - 265 VAC & 100 - 265 VDC
Signal Isolation		2kV	
<b>Output Characteristics</b>			
Output type		2 MOSFET: 30 VDC/60 mA (Max.) Note: Use isolated input supply	Relay: 1 C/O, Contact Rating: 5 A(Res.) @ 250 VAC/30 VDC Contact Material: Ag Alloy
<b>Functional Characteristics</b>			
Display		7 digit LCD , 6.5 mm Height, 12 O' Clock, Transmissive	
Number of keys		2 (SET key & RST key)	
Reset function	Reset type	Terminal	Front
	Time (min.)	80 ms	3 Sec
Hour Meter Functions	Accuracy	± 2sec per Day	
	Ranges	Hrs : Min : Sec (999:59:59), Hrs : Min (99999:59), Hrs (9999999), Min (9999999), Sec (9999999)	
Counter Functions	Input Signal	For Hour counting detection, Signal has to be present for min. 3msec & signal has to be absent for min 20msec.	
	Accuracy	100%	
	Range	1 to 9999999.999	
	Decimal Point Position(max.)	3	
	Pre-scaler	4 Digit	
	Input	Switching Freq.(max.)	10 Hz for AC and 40 Hz for DC
Signal	Pulse Width min.	50ms ON/50ms OFF for AC, 12.5ms ON/12.5ms OFF for DC	
<b>Environmental Characteristics</b>			
Operating Temperature		-5° C to +55° C	
Storage Temperature		-10° C to +60° C	
Humidity		5 to 95% Rh (Without condensation)	
Maximum Operating Altitude		2000 m	
Pollution Degree		II	
Degree of Protection		Front side: IP40; Terminals: IP20, Housing : IP30	
Enclosure material		UL 94 V0 Plastic	
Casing color		Black	
<b>Other Characteristics</b>			
Mounting		Flush mounting on panel cut-out	
Panel Cut-out		22mm X 44.8mm	
Weight (Un-packed)		52 gm	
Operating position		Horizontal	
Termination wire Sizes		Wire size : 22-14 AWG, 0.3-2.5 mm	

## EMI / EMC

Harmonic Current Emissions	IEC 61000-3-2
Voltage Flicker & Fluctuation	IEC 61000-3-3
ESD	IEC 61000-4-2
Radiated Susceptibility	IEC 61000-4-3
Electrical Fast Transients (Supply)	IEC 61000-4-4
Electrical Fast Transients (Signal)	IEC 61000-4-4
Surge	IEC 61000-4-5
Conducted Susceptibility	IEC 61000-4-6
Power Frequency Magnetic Field	IEC 61000-4-8
Voltage Dips	IEC 61000-4-29
Conducted Emission	CISPR 11
Radiated Emission	CISPR 11

## Safety Compliance:

Test Voltage (All terminal to housing)	IEC 60947-5-1
Single fault	IEC 61010-1
Leakage Current	UL 508

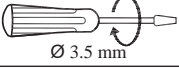

## Environmental

Cold Heat	IEC 60068-2-1
Dry Heat	IEC 60068-2-2
Vibration	IEC 60068-2-6
Repetitive Shock	IEC 60068-2-27
Non-Repetitive Shock	IEC 60068-2-27

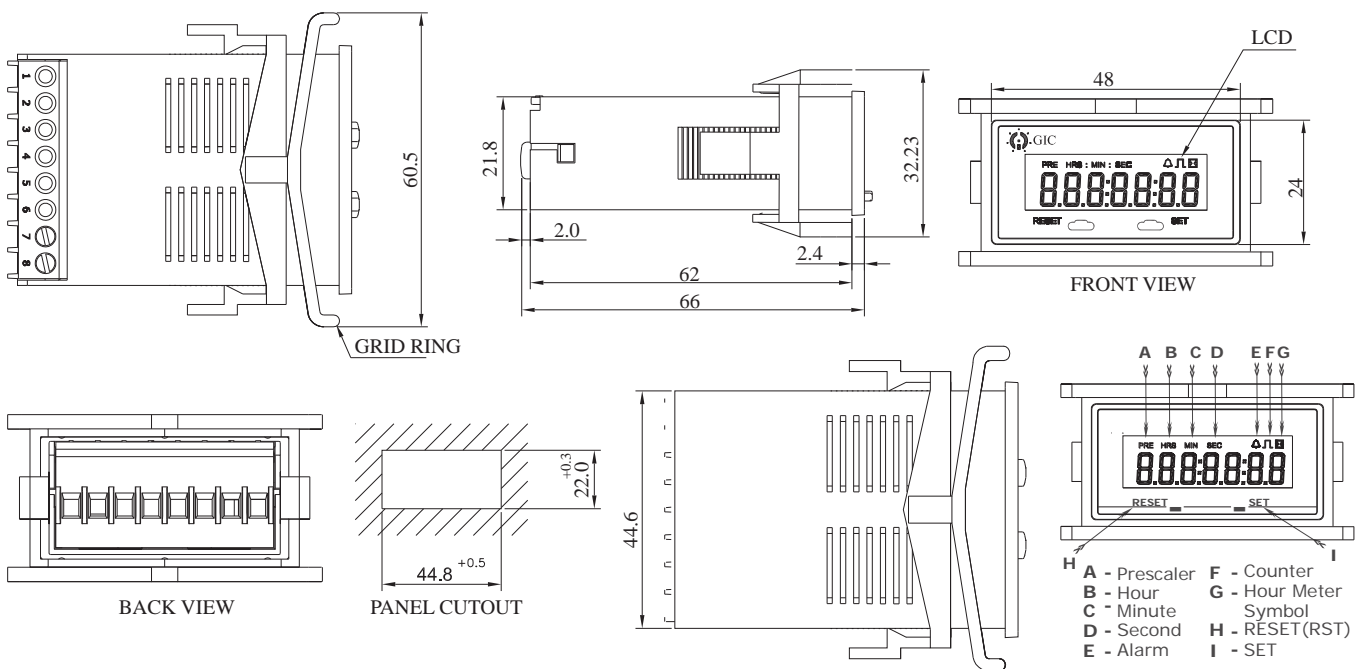
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## TERMINAL TORQUE & CAPACITY

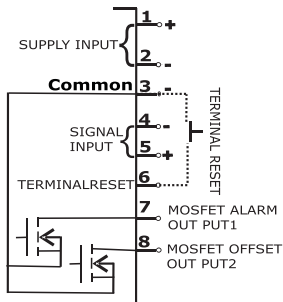
 Ø 3.5 mm	Torque - 0.40 N.m (3.5 Lb.in) Terminal screw - M2.5
	Solid Wire - 1 X 0.3...2.5 mm <sup>2</sup>
AWG	22 to 14

## MOUNTING DIMENSIONS (mm)

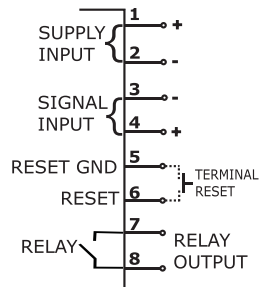


## CONNECTION DIAGRAM

### For Z2301N0G1FT00



### For Z2221N0G2FT00



### Proximity Switch Connection Diagram:

