

**LEGEND**

Meg-Ohm Meter  
 Shielded Wires  
 Generator Breaker  
 3 phase transformer  
 Customer Provided Wiring

<p><b>GP500-WG-AS</b> Typical Wiring Diagram</p> <p><b>MEG alert</b> Meg-Alert, Inc. 715-356-1499</p>		DRAWN BY		DATE
		KM Delamater		5/17/2017
CHECKED	SCALE	SHEET NO.		
R. Zelm	None	1		



Tech Support: 800-778-5689

## WindGuard Installation Instructions Model: GP500-WG-AS

*Input power 120 +/- 10% VAC 50/60 Hz @ .05A Max.*

*Test Voltage 500 VDC @ 200uA Max.*

*Unit to be installed in a "clean" and "dry" environment, in a switchgear or a NEMA type enclosure.*

*Ambient Temp. -20° F to 140° F*

*Maximum relative humidity 80% for temperatures up to 31° C decreasing linearly to 50% relative humidity at 40°*

*Pollution degree 2 Altitude up to 2000m*

*Wiring: 16 AWG, 600V switchboard wire*

*MEASUREMENT CATERGORY III*

1. The device is a Class 1 according to IEC 61010-1 for electric safety and chassis must be grounded to the main protective earth in the end application.
2. Mount the GenGuard unit in the generator control cabinet using the din rail mounting bracket on the unit or mounting screws. On packaged units mount the enclosure near the MCC and wire MotorGuard(s) into each contactor.
3. Connect the input terminals (1) and (2) to a constant 120 VAC 50/60 Hz power source.
4. Connect terminals (3) and (4) to the meg-ohm meter. Observe correct polarity. Wire terminal (3) to the positive meter input and wire terminal (4) to the negative meter input.
5. Wire terminal (5) to a common ground buss or directly to the common equipment ground of the motor. NOTE: Terminal (5) must be electrically connected to a good clean motor ground in order to achieve an accurate meg-ohm reading while testing.
6. Wire terminal (6) to the B phase Generator circuit breaker as shown in wiring diagram.
7. Connect terminals (7) and (8) to a normally closed dry auxiliary contact on the generator load contactor.
8. Connect terminals (9), (10), (11), (15) and (16) to the remote LED/Switch plate located on the front door of the starter cabinet. Mount the plate using 4 mounting holes. Connect the green wire to terminal (10), connect both black leads to terminal (9) connect the red wire to terminal (11), connect the yellow wire to terminal (15) and connect the grey wire to terminal (16)
9. Terminals (12), (13) and (14) are dry contacts and can be wired to a PLC input or plant alarm system to indicate a motor alarm condition or can be wired to interrupt the start circuit of the motor when it is in an alarm condition.

### **WARNING:**

Before servicing any equipment being tested with a MOTORGUARD system, one must turn off and lockout the MOTORGUARD power and short the windings to ground in order to remove any possible capacitive charge that may be present in the unit.



Tech Support: 800-778-5689

# WindGuard

## Operation Instructions

### Model: GP500-WG-AS

*Input power 120 +/- 10% VAC 50/60 Hz @ .5A Max.*

*Test Voltage 500 VDC @ 200uA Max.*

*Unit to be installed in a "clean" and "dry" environment, in a switchgear or a NEMA type enclosure.*

*Ambient Temp. -20° F to 140° F*

*Maximum relative humidity 80% for temperatures up to 31° C decreasing linearly to 50% relative humidity at 40°*

*Pollution degree 2 Altitude up to 2000m*

*Wiring: 16 AWG, 600V switchboard wire*

*MEASUREMENT CATEGORY III*

1. Apply input power to terminals (1) and (2) and observe the green (test on) LED. It should be on when the GenGuard is testing and off when the motor is running. Perform the following tests to insure the GENGUARD is operating correctly and has been installed properly.
  2. To test the alarm, ensure the motor is not running. Remove power to the GenGuard. Place a temporary one meg-ohm resistor between terminal (5) and (6) to simulate an alarm condition. Turn power on to the GenGuard, wait for approximately 10 to 15 seconds or until the GenGuard trips on an alarm. The green (test on) LED should turn off and the red flashing (alarm) LED should turn on indicating the generator insulation level is below the set-point.
  3. The alarm/lockout contacts should now have changed state. If the alarm/lockout contacts have been wired into an alarm system, the alarm should now be activated. If the alarm/lockout contacts have been wired to disable the start circuit then the generator will not start when the circuit is activated.
  4. Press the reset button to restore the GenGuard to a test condition. The red flashing (alarm) LED should now turn off and the green (test on) LED should turn on. The alarm/lockout contacts should return to their normal state. Turn off power to GENGUARD and remove the temporary resistor and turn power back on to GenGuard.
- NOTE: The GenGuard unit will remain latched in an alarm condition, after the set point is exceeded, until the reset button is pressed or the power is removed from the unit.*
5. Start the generator being tested and observe that the green (test on) LED turns off. This indicates that the motor starter auxiliary "normally closed" contact is operating correctly. The contact should be open whenever the generator being tested is online.
  6. Stop the motor, the green (test on) LED should turn on again, indicating the GenGuard unit is testing the motor and the insulation reading is good. The system has now been fully tested and is ready for normal operation.

#### **EQUIPMENT MAINTENANCE**

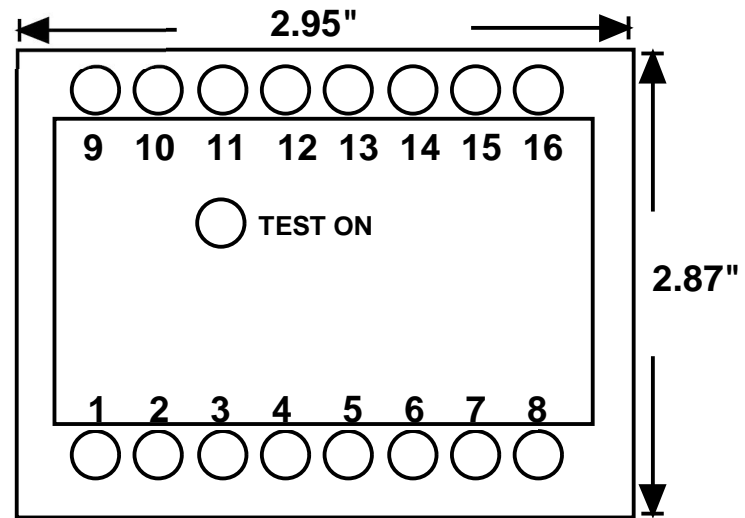
**Only Qualified personnel shall perform maintenance of this device.**

**Before use all cables shall be checked for cracking or damage.**

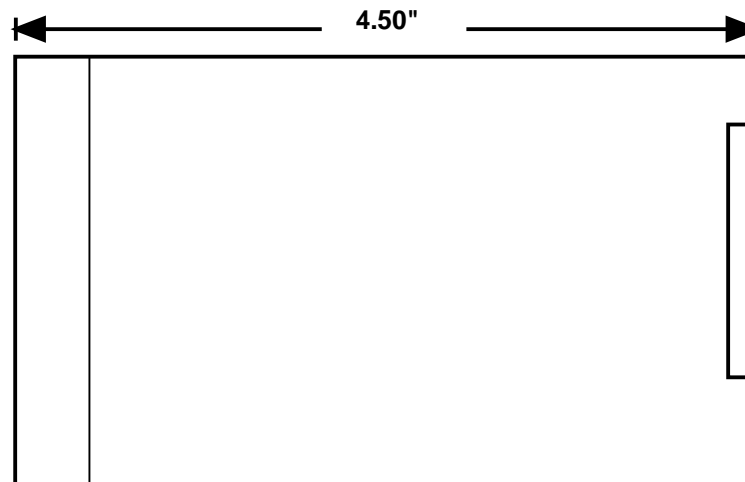
**Only a 1.5A 250V AGC fuse shall be used with this device.**



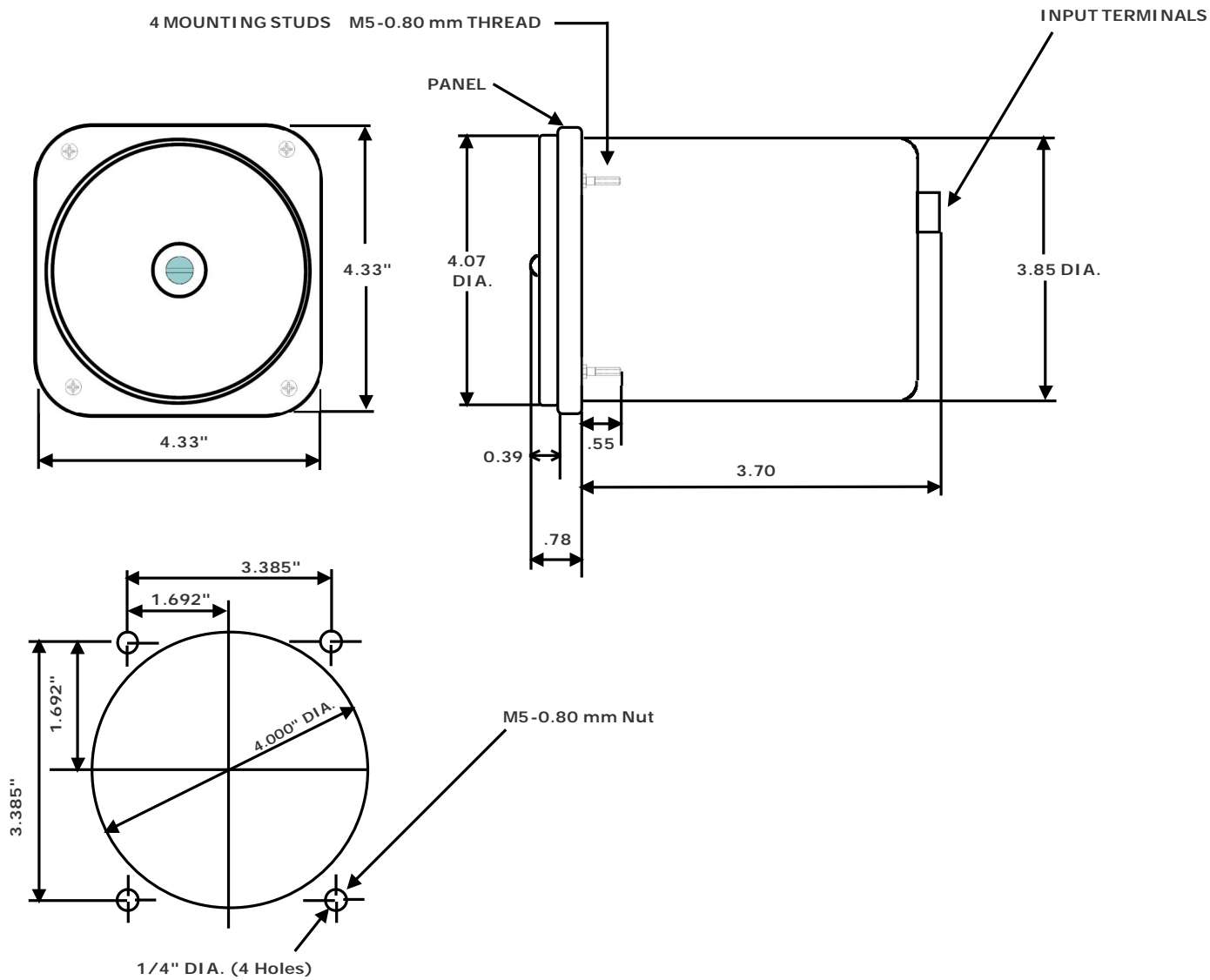
Model: GP500-AS




Front



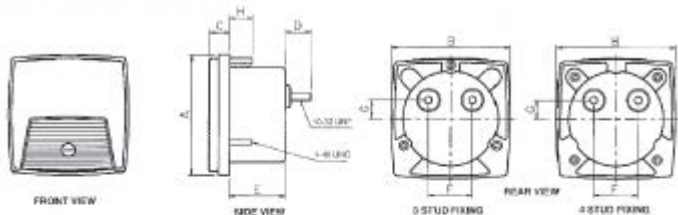
Side View



<b>1 % Switchboard Meter</b> Dimensions GP7000 Series  <b>Meg-Alert, Inc.</b> 715-356-1499	DRAWN BY		DATE
	KM Delamater		2/5/2018
	CHECKED R. Zelm	SCALE None	SHEET NO. 1

## Dimensions

Specify number of fixing studs when ordering 2/1" and 3/1" meters. 4/1" meters are supplied with 4 fixing studs.



	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
2/1mm	68.6	68.6	11.8	14.6	32.0	25.4	10.4	12.7	55.9	31.0	46.5	26.9	23.9	47.8	23.9
inch	2.70	2.70	0.46	0.57	1.26	1.00	0.41	0.50	2.20	1.22	1.83	1.06	0.94	1.88	0.94
3/1mm	88.9	88.9	11.8	14.6	36.0	25.4	10.4	12.7	69.9	40.2	60.3	34.8	28.5	57.0	28.5
inch	3.5	3.5	0.46	0.57	1.42	1.00	0.41	0.50	2.75	1.58	2.37	1.37	1.12	2.24	1.12
4/1mm	112.0	123.2	12.7	16.3	30.5	28.4	0.38	12.7	70.9				51.6	90.4	50.8
inch	4.41	4.85	0.50	0.64	1.20	1.12	0.41	0.50	2.78				2.03	3.56	2.00

## Panel cut-out

