# DIGITAL PROCESS INDICATOR

**PM5650-HH**
## INSTRUCTION MANUAL
99A



123 230V
456 +24V-
789 REL1
101112 REL2

~ ~

mA input - +

no nc

no nc

ON 1 2 3 4 5 6   **S2**

**S1**
1 2 3 4

**S3**

ZE SP H1 H2

**B**
**P2**

**P1**
**A**

**INTRODUCTION**

The model PM5650-HH is a high quality, free to scale, digital read-out with two independent relay contacts which can be set as alarm to any required value. Depending on the option the unit accepts linear 4 - 20 mA or 0 - 20 mA signals. It provides a 24V DC power supply for a transmitter at the same time.

**CALIBRATION INSTRUCTIONS**

In order to calibrate the Model PM5650-HH, a current (0/4-20 mA DC) simulator is required.
(Model **TL245** is recommended as a fast, simple calibration tool.)

Remove the front bezel and the two cover plates. Place the cover plates on a soft, non-scratching surface. Gently pull the meter assembly out of its housing.

1.  Connect the simulator to the input (refer to Fig.2;  - to 5 and + to 6)
2.  Connect the power supply 230 or 115V (check instrument label!) (Fig.2; no.1 and 2)

**WARNING:  BEWARE OF SHOCK WHEN POWER-SUPPLY IS CONNECTED !!**

3.  Use switch S2 to determine the Offset or Zero. Only switches # 1, 2 and 3 are used for this function. Set the Zero to obtain the correct range using the following table:

| readout | switch position |
|---------|-----------------|
| 0 - 500 | #1, #2, #3  'OFF' |
| 500 - 1000 | #3 'ON'  -  #1 & #2 'OFF' |
| 1000 - 1500 | #2 'ON'  -  #1 & #3 'OFF' |
| 1500 - 1999 | #1 'ON'  -  #2 & #3 'OFF' |

Simulate a 4 mA input.
Adjust the ZERO potentiometer "ZE" to obtain the exact reading desired.

4.  To select the Zero or Offset POSITIVE (+) or NEGATIVE (-) sign, use S3. The 'A' position will give a positive (+) sign; the '1' position will display a negative (-) sign.

5.  Adjust the simulator to an output of 20 mA. Use S1 to determine the Span Range.  Set the Span to the desired range using the following table:

| span range | switch position |
|------------|-----------------|
| 0 - 500 | #4 |
| 500 - 1000 | #3 |
| 1000 - 1500 | #2 |
| 1500 - 1999 | #1 |

Adjust the SPAN potentiometer "SP" to obtain the exact reading desired.

Note that decimal point is not shown is this table. For a range of  0 - 120.0  you must put S1 in position #2.

6.  Use S2 to select the position of the Decimal Point. Only switches #4, 5 and 6 are used.

| decimal location | switch position |
|------------------|-----------------|
| 000.0 | #4 'ON'  -  #5 & #6 'OFF' |
| 00.00 | #5 'ON'  -  #4 & #6 'OFF' |
| 0.000 | #6 'ON'  -  #4 & #5 'OFF' |

**SETTING THE ALARM POINT(S)**

7.  Push the button A on the front left side and adjust the read-out to the first required setpoint with P1.
8.  Use potentiometer H1 to set the hysteresis. Turn counter clockwise for the smallest hysteresis.
9.  Push the button B on the front right side and adjust the read-out to the second required setpoint with P2.
10. Use potentiometer H2 to set the hysteresis. Turn counter clockwise for the smallest hysteresis.

**NOTE: THE RELAY CONTACTS ARE ALARM CONTACTS ONLY AND NOT SUITABLE TO SWITCH HIGH RATINGS. (MAXIMUM 100W NON-INDUCTIVE LOAD)**

11. Adjust the simulator to provide an input of 0 mA or 4 mA. If the displayed value is incorrect, repeat the calibration procedure. Repeat for a simulator value of 20 mA.

The Model PM5650-HH is now calibrated. Replace the front cover plates and bezel.

FIG.2   Connection