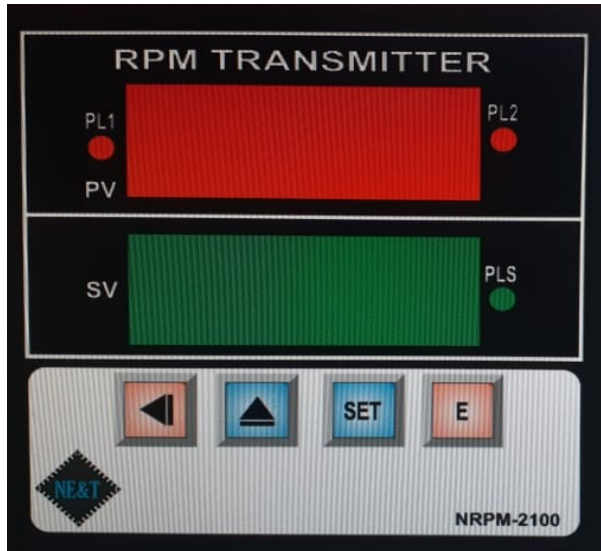


RPM INDICATOR- TRANSMITTER Model: NRPM-2100



Introduction

This is micro-controller based RPM Transmitter with 2 Relay control output. In this instrument user can use PNP/NPN type photo sensor or proximity sensor input. As per input desired user can adjust teeth or pulse input (1-99) . The User can adjust range parameter for required retransmission output (4-20mA) otherwise o/p can be higher than 20mA. The instrument can be display over (over range) message when rpm greater than 9999 or set range in Range parameter.

The manual covers all aspects of operation of the instrument. Please read instructions carefully before operating it.

Operation

Before connecting power supply insure that you are connecting I/P voltage to the right terminals. On application of proper power supply & input sensor. The instrument will display set (range) value in lower display and actual RPM in upper display.

Key Operation

- By pressing SET key, Digit flashing ON upper display. The flashing can be shift to next digit by pressing Shift key (<).
- By pressing UP key(^) flashing digit value can be change from 0 to 9, and again press SET key for store modified value.

Relay Operation

- Relay OFF when RPM is less than Set value & ON when RPM is more than Set value and Vice-versa.

Terminal details

1. +12VDC (+ v of Proximity sensor)

2. -12 V (-V of proximity Sensor)
3. pulse input (o/p of Proximity Sensor)
4. NC2 (Relay RL2 , NC terminal)
5. C2 (Common Terminal of RL2)
6. NO2(Relay RL2, NO Terminal Of Relay 2)
7. NC1 (Relay RL1 , NC terminal)
8. C1 (Common Terminal of RL1)
9. NO1(Relay RL1, NO Terminal Of Relay 1)
10. P (phase) 220VAC @50HZ
11. E (Earth)
12. N (Neutral) -
13. D+ (RS485 COMMUNICATION : Optional)
14. D- (Rs485 COMMUNICATION : Optional)
15. - mA (Isolated 4-20mA)
16. + mA(Isolated 4-20mA , Positive)

Indication

- PLS: I/P LED start blinking as the sensor sense the pulse.
- RL1/RL2: O/P LED get ON when relay goes ON.

Specification

- Main (auxiliary supply): 220vAC @50Hz / 24 VDC/15V DC
- RPM Range: 0000-9999
- Heat or cool function: Settable for relay
- Output (Analog): 4-20mA isolated (optical)
- Control Relay: One pair normally open potential free contact : @ 5A at 240v AC
- Sensor: PNP-NO or NPN-NO proximity switch or Photo sensor etc.
- Operating temp.: 0 dec. – 50 dec
- Overall size: 96x96x85 mm (HWD)
- *Panel cutout: 92X92mm(WXH)

Parameters

- By using Set key following parameters can be scroll.
- RL1: 0000 - 9999
- Range: 0000 - 9999 (set higher range of 4-20mA)
- RL2: 0000 - 9999
- Scale: 0000 - 4.999 (multi/div. factor parameter)
- Hc1: 1 - 2 (Heat / cool) parameter for relay RL1
- Hc2: 1 - 2 (Heat/ cool) parameter for Relay RL2
- Teeth: .1-.99 settable(1 teeth – 99 teeth)
- Over: Over message display when RPM over than 9999 RPM
- RL 1&2: Set value of RPM. If actual RPM Lower than Set value Relay will be ON and if actual Values cross the Set value. Relay goes to change its control.
- Range: This is setting value for retransmission output of 4-20mA.
- Scale: This parameter is selectable for multiplier and divider factor for RPM display
- Actual rpm x scale value =result (manipulated RPM)
- Example1: 1800(actual rpm) x .834=1501 rpm (result)
- Example 2: if actual RPM 3000 but you want display 1535 RPM then
- Actual rpm/ required rpm= result(it is multiplier value or it is scale parameter value)
- Hc 1&2: In this parameter user can be select relay position N/O, N/C, If value 1 set then N/O, if value 2 set then N/C.
- Teeth: in this parameter user can be set input teeth or pulse .1-.99=1-99

Configuration

Press set key for 5 seconds ,display rl1 again press set key now display last load value , if change then use shift key for digit selection and up key use for 0 – 9 value again press set key now modified value store and display rl2 same process apply for all parameters. If user not touch any for some time then system automatically exit from configuration mode. The system can be exit from configuration mode if user press shift key at the time when display rl1.