Series 560/570

Analog Display
by Data Industrial

Owner's Manual

Data
Industrial

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Introduction

The Model 560-00/570-00 is a 4-20mA loop-powered display for use with all Data Industrial and other manufactures analog transmitters.

The Model 560-00 is contained in a weatherproof box. It can be used in conjunction with all Data Industrial analog transmitters.

Models

Model 560-00
This unit is a 4-20mA loop powered 3½ digit LCD display in a NEMA 4X enclosure.

Model 570-00
This unit is a panel mounted 4-20mA loop powered 3½ digit LCD display

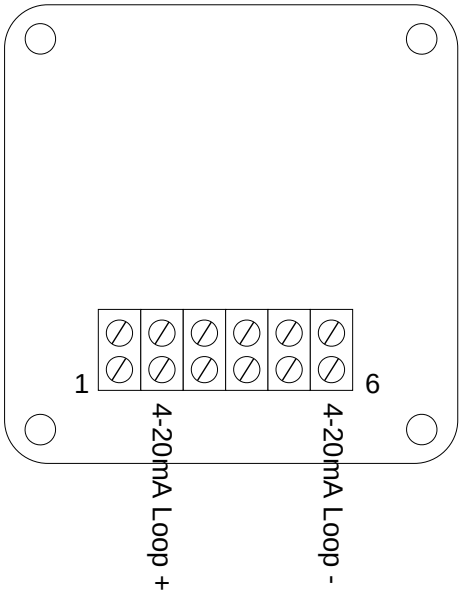
Installation

Mechanical

The enclosure may be mounted as follows:

1. Remove cover by turning the four captive fasteners ¼ turn counterclockwise.
2. Mount the enclosure, using four number 6 pan head or number 8 round head machine, sheet metal, or wood screws.
3. Attach 1/2” conduit connectors through the hole provided.

Figure 1 : Analog input terminal strip



Wiring Model 560-00

1. Disconnect power from Analog loop
2. Locate the **Analog Input Barrier strip** on the Model 560/570. Reference figure 1 above.
3. Connect positive analog current terminal of analog output device to Model 560/570 terminal 3.
4. Connect negative analog current terminal of analog output device to Model 560/570 terminal 6.
5. Reconnect power to analog loop and proceed to calibration section of this manual if unit is not calibrated.

560-00/570-00 Display Board Calibration

The 560-00/570-00 display has four range selections (Jumper locations and ranges listed in figure 5). If the flow rate is greater than 1999 multipliers must be used. The display board calibration should be done **after** the 4-20mA span has been set on the analog board.

1. Remove power from loop then reference Figure 2 to select jumper location and multiplier for the desired span.

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2. Apply power to loop and with the loop current at 4mA adjust display board offset pot until display reads 0. If minimum flow rate of analog transmitter higher than 0 then adjust display board offset pot until display reads desired flow rate.

3. Slide the transmitter board CAL switch to “ON”.

4. With the loop current at 20mA adjust display board span pot to desired full scale flow.

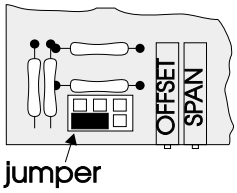
5. Slide the transmitter board CAL switch to “OFF” and check offset display. Repeat steps 2-4 as necessary.

6. Attach Multiplier label to front cover of unit (If applicable).

7. Once output is satisfactory, turn off loop power and disconnect calibrator or frequency counter from sensor input terminals and remove ammeter from the 4-20mA loop. Reconnect the sensor according to electrical installation instructions.

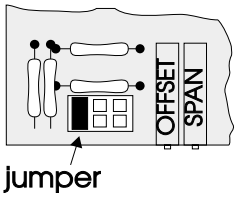
8. Replace the cover. The unit is now ready for automatic operation.

Figure 2



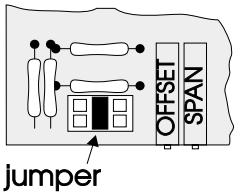
Range 1000 - 1999

Example #1
If analog transmitter is calibrated for 0-1750 GPM the jumper would be moved to the 1000-1999 range and there would be no multiplier used.



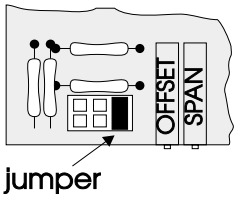
Range 500 - 1000

Example #2
If analog transmitter is calibrated for 0-750 GPM the jumper would be moved to the 500-1000 range and there would be no multiplier used.



Range 250 - 500

Example #3
If analog transmitter is calibrated for 0-2500 GPM the jumper would be moved to the 100-250 range or 250-500 range and there would be a X10 multiplier used.



Range 100 - 250

Example #4
If analog transmitter is calibrated for 0-22000 GPM the jumper would be moved to the 100-250 range and there would be a X100 multiplier used.

Specifications

The Series 500/550 meets the requirements of ISA Type 2, Classes L, H and U. Non-isolated.

Maximum load resistance
- 650 ohms at 23 V

Operating temperature range
- 32 to 122°F (0 to 50°C) Model 510-10
- 32 to 131°F (0 to 55°C) Model 500/550

Storage temperature range
- 14 to 140°F (-10 to 60°C) Model 510-10
- -40 to 158°F (-40 to 70°C) Model 500/550

Power requirements
- 4-20mA loop voltage
- 10 VDC minimum, 35 VDC maximum

Linearity
- Better than 1%

Output response time
- Six seconds (typical), 10 to 90% step response

Device output ripple
- Less than 0.25% of full scale for a fully stable sensor input

Dimensions
- 4.7” x 3.15” x 2.15”

Enclosure
- Glass filled polyester. UL 94 VO (self extinguishing) burn rating. Watertight to NEMA 1, 2, 3, 3R, 4, 4X, 5, 12, and 13

Weight
- .48 pounds

Warranty

Data Industrial Corporation (“Seller”) of 11 Industrial Drive, Mattapoisett, Massachusetts 02739, U.S.A., warrants to the original purchaser of its product that such product manufactured by Data Industrial Corporation shall be free from defects in materials or workmanship when installed, serviced and operated according to Data Industrial corporation instructions or in other such normal use. This warranty is effective for a period of 12 months from the date of installation by the Purchaser or 18 months from the date of shipment by the “Seller” whichever occurs or terminates first. This limited warranty does not cover damage or loss resulting from corrosion or erosion cased by acids or other chemicals or negligent installation improper operation, misuse, accident, unauthorized repair or substitution of components other than those provided by the “Seller”, and does not cover limited life components such as bearings, shafts, impellers where wear rate is a function of application. Any component not manufactured by the “Seller” but included in its products shall not be covered by this warranty and is sold only under such warranty as the manufacturer may provide.

If Buyer or Purchaser wishes to make a claim hereunder, he shall send written notice of any defect within the warranty period, to “Seller” at the above address. “Seller” may at its sole option instruct Buyer to ship subject part, postage prepaid, to the “Seller” at above address or authorize a representative to inspect the part on site. “Seller” will at its sole option repair or replace any effective product covered by this warranty. If Buyer makes repairs or alterations to any product or part covered by this warranty without “Sellers” prior written approval, this warranty shall be null and void.

The foregoing shall constitute Buyers or Purchasers sole and exclusive remedy against “Seller”, and no other remedy, including but not limited to, incidental or consequential damages for personal injury, loss of fluids, gases or other substances or for loss of profits or injury to property or person shall be available to the Buyer or Purchaser. The warranty extended herein shall be in lieu of any other implied warranty of merchantability or fitness for a particular purpose, and seller shall bear no liability for representatives or retail sellers. In no event shall Data Industrial Corporation be liable for any contingent, incidental, or consequential damage or expenses due to partial or complete inoperability of its product.