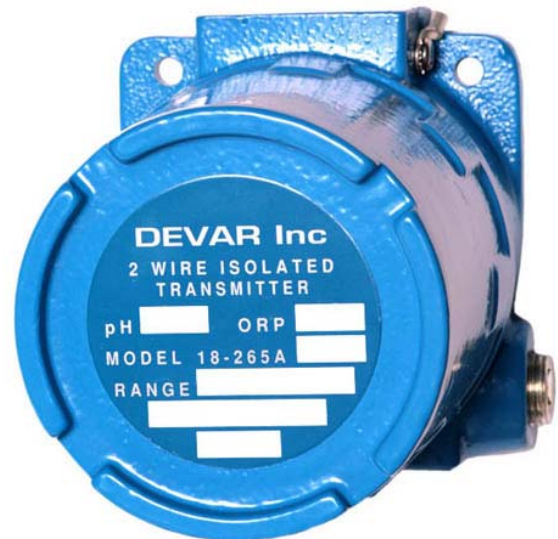


- * 10^{13} OHMS INPUT INPEDANCE
(EXTENDS ELECTRODE LIFE)
- * pH, ORP, SELECTIVE ION
MEASUREMENT
- * 3-1/2 DIGIT INDICATION
(CONTINUALLY INDICATES pH)
- * FIELD MOUNTING
(FACILITATES MAINTENANCE)



GENERAL DESCRIPTION

Measurement of pH signals directly from standard measuring electrodes is accomplished by Devar's Model 18-265A Two-wire pH Signal Transmitter. This instrument is designed to continually measure, indicate, and transmit these signals for use in monitoring and controlling a wide variety of industrial processes. It's intrinsically safe design has found many applications in the chemical, pulp and paper, food and beverage, metals and minerals refining, biotech and environmental control industries. It is also available with automatic or manual temperature compensation (0 to 140°C), and features a NEMA 4/7, CSA Approved explosion proof housing.

Extremely high input impedance of 10^{13} Ohms provides a reduction of current draw from the measuring electrodes. This feature not only extends electrode life but enables trouble free use of various manufacturers' sensors. Input/Output isolation also enables use in grounded or ungrounded solutions. The electrically isolated output signal allows simple calibration via resistor sets and a precise infinite resolution span adjuster ranging from 1.5 to 14 pH span with offsets from 0 to 12.5 pH. To provide further reliability, Conformal coating is applied to all electronic circuit boards.

The 18-265A may also operate as an indicating pH signal transmitter utilizing option -M371. This feature provides a continuous highly visible direct readout of the calibrated signal in pH (engineering) units. Two-wire operation is featured with the choice of 4 to 20 mA or 10 to 50 mA output signals. As little as 12.0 VDC is required to operate the unit. Any power source within the range of 12 to 70 VDC may be utilized. Signals from pH sensors typically operate in the reverse mode, i.e. for increasing pH the output signal decreases. The 18-265A may also receive inputs from ORP (Oxidation Reduction Potentials), Ion Selective Electrodes, or other mV sources that operate in direct mode.

SPECIFICATIONS

FUNCTION:

Input Signal: mVDC from pH Electrodes
 Input Range: 0 to 14 pH (Min. Span 1.5 pH)
 ORP or Ion Selective: 100 mV to 1000 mV Span
 -400 mV to +800 mV Offset
 (1200 mV Max. combined Span and Offset)

Input Impedance: 10^{13} Ohms
 Source Current: 1.0 Pico Amp @ 25°C
 Temp. Compensation: Manual, (0 to 140°C) Specify -M
 Automatic, 3000 Ohms @ 25°C Specify -B
 Temp- Coeff- 0.0045 Ohms/Ohm/°C
 Output Signal: 4 to 20 mA (600 Ohms @ 24 VDC supply)
 2900 Ohms Max.
 10 to 50 mA (200 Ohms @ 24 VDC supply)
 1100 Ohms Max.
 Power Requirements: 4 to 20 mA ($12 \text{ VDC} + R_{\text{Load}} \times 0.02$)
 10 to 50 mA ($14 \text{ VDC} + R_{\text{Load}} \times 0.05$)
 Note: 70 VDC Max. limit supply to 30 VDC
 for intrinsically safe operation
 Input/Output Isolation: 600 VDC
 Standardization Adj: $\pm 25\%$ F.S.

PERFORMANCE:

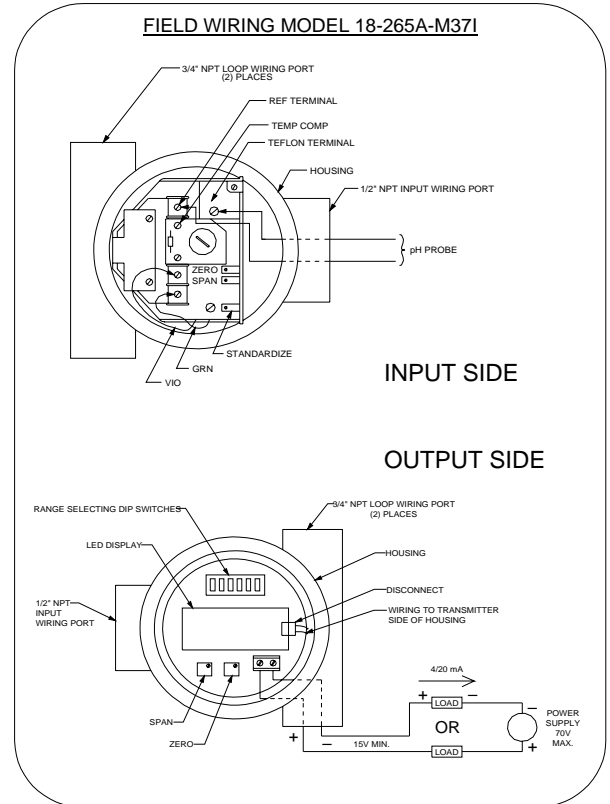
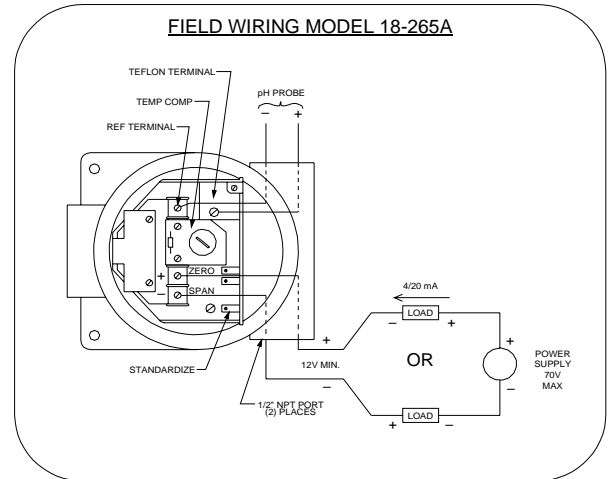
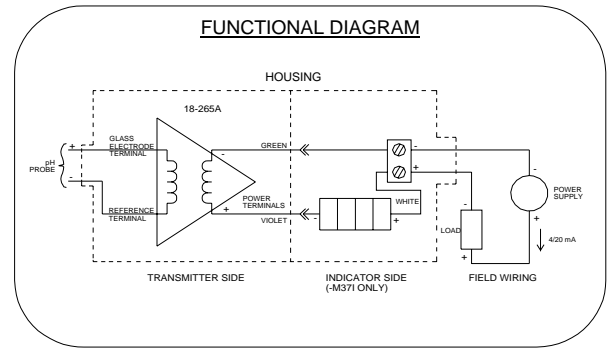
Calibrated Accuracy: $\pm 0.1\%$ F.S. (0.01 pH) (includes effects of
 Linearity, Hysteresis, and
 Repeatability)
 Stability: ± 0.0017 pH/month, non-cumulative
 Ambient Temp. Range: -25 to +70°C
 Ambient Temp. Effects: 0.003 pH/°C

PHYSICAL:

Enclosure: Cast Aluminum, Epoxy paint, Rated NEMA 4 weather
 Proof with "O" rings seal; NEMA 7 Explosion Proof
 Class 1, Groups B, C, and D
 Mounting: Conduit Mounting via (2) 1/2" NPT connections or
 Wall/Surface mount via (2) 5/16" Dia. mounting holes
 Option: -M36, 2" Pipe Mount
 Connections: #6-32 Screw Terminals
 Weight: 3 lbs.
 Digital Display: 3-1/2" Digit LCD
 Sensor/Transmitter Separation: 50 Ft. (15M)
 Humidity Limits: 0/99% non-condensing

ORDERING INFORMATION:

Model 18-265A	-Specify Input Range (pH)
-1	4/20 mA Output
-2	10/50 mA Output
-M	Manual Temp. Comp.
-B	Automatic Temp. Comp.
-R	ORP, Ion Selective or other mV signal (direct)
-M36	2" Pipe Mount Bracket
-M14S	Stainless Steel Tag



DEVAR Inc.

706 BOSTWICK AVE.
 BRIDGEPORT, CT 06605-2396
 TEL: 203-368-6751 FAX: 203-368-3747
 TOLL FREE: (800) 566-6822
 www.devarinc.com