DEVAR Inc.

- 10 ^{13} OHMS INPUT IMPEDANCE (EXTENDS ELECTRODE LIFE)

- pH, ORP, SELECTIVE ION MEASUREMENT

- 3 1/2 DIGIT INDICATION (CONTINUALLY INDICATES pH)

- NEMA 4X ENCLOSURE

MODEL 4265 I
INDICATING pH SIGNAL TRANSMITTER

Measurement of pH signals directly from standard measuring and reference electrodes is accomplished by DEVAR's Model 4265 I, 2 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. Its 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 4x 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 adjustor 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 4265 I operates as an indicating pH signal transmitter providing a continuous highly visible direct readout of the calibrated signal in pH (engineering) units.

Two wire operation is featured and 4 to 20 mA, proportional to the pH input signal is supplied. As little as 12.0 VDC is required to operate the unit and 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 4265 I 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- .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 VDC +R LOAD X .02)
                       10 TO 50 mA (14 VDC +R LOAD X .05)
                      NOTE: 70 VDC MAX. LIMIT SUPPLY TO 30 VDC
                              FOR INTRINSICALLY SAFE OPERATION
INPUT/OUTPUT ISOLATION: 600VDC
STANDARDIZATION ADJ: ± 25% F.S.

PERFORMANCE:

CALIBRATED ACCURACY: ±0.1% F.S. (.01pH) (INCLUDES EFFECTS
                            OF LINEARITY, HYSTERISIS
                            AND REPEATABILITY)
STABILITY: ±.0017 pH/MONTH, NON-CUMULATIVE
AMBIENT TEMP RANGE: -25 TO +70°C
AMBIENT TEMP EFFECTS: .003 pH/°C

PHYSICAL:

ENCLOSURE: RATED NEMA 4X WEATHER
                PROOF WITH GASKET SEAL
MOUNTING: VIA (4) MOUNTING HOLES
                OPTION: -M36. 2 IN. PIPE MOUNT
CONNECTIONS: #6-32 SCREW TERMINALS
WEIGHT: 2 LBS
DIGITAL DISPLAY: 3 1/2 DIGIT L.C.D.
SENSOR/TRANSMITTER SEPARATION: 50 FT (15M)
HUMIDITY LIMITS: 0/99% NON-CONDENSING

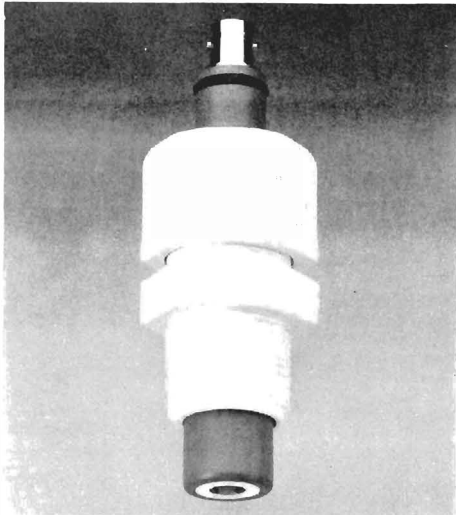### ORDERING INFORMATION:

MODEL 265A - SPECIFY INPUT RANGE (pH)
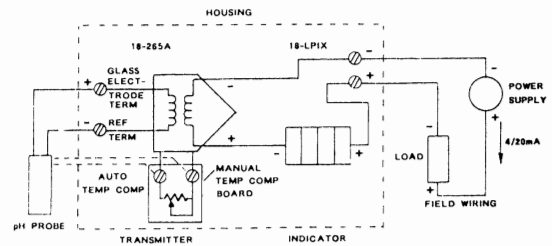   -1   4/20 mA OUTPUT
        -2   10/50 mA OUTPUT
        -M   MANUAL TEMP COMP
        -B   AUTOMATIC TEMP COMP
        -R   ORP, ION SELECTIVE OR OTHER mV SIGNAL (DIRECT)
        -M36   2" PIPE MOUNTING BRACKET
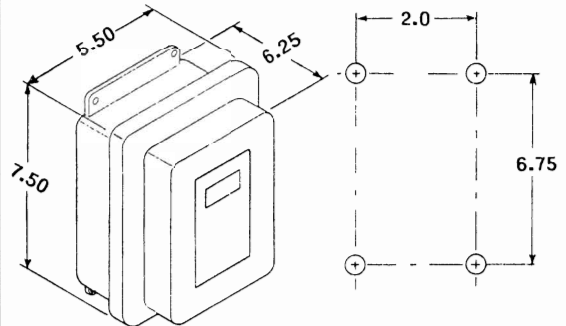   -M14S STAINLESS STEEL TAG

**FEATURING
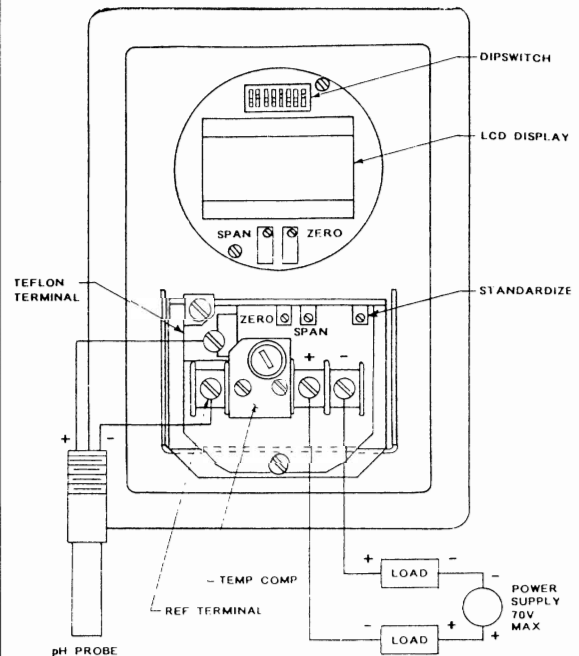ABRASION
FREE
pH
ELECTRODES**

**(SEE
BULLETIN
S600)**

FUNCTIONAL DIAGRAM

GENERAL DIMENSIONS

FIELD WIRING

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