

SCU 220

Terminal Enclosure with Integral Loop-Powered Amplifier

- Converts mV to 2-wire, 4–20mA
- Rated NEMA 4X
- Integral desiccant status indicator
- Rugged and lightweight
- Designed for field termination of pressure sensors



The SCU 220 is a compact and rugged enclosure providing signal conditioning of bridge-level strain gauge sensors. The loop-powered amplifier/transmitter converts the strain gauge signal into a 4-20mA standard signal. Excitation voltage to the strain gauge sensor is supplied from the amplifier board. The amplifier derives all of its necessary power from a 14 to 33 Vdc supply. A range selector combined with span and zero potentiometers is available for calibration of the system.

The enclosure provides a simple field termination for vented gauge pressure transducers. An integrated micro filter assembly permits barometric reference while providing an effective barrier against ingress of water and dust. A field-replaceable DRI-CAN desiccant module is attached to the internal face of the enclosure. This module attracts water vapor, condenses it, and retains it through surface absorption and capillary condensation. The module is easily accessible once the cover is removed, and no tools are required for its removal and replacement. A moisture status indicator, which is clearly visible externally, alerts the user when replacement of the desiccant module is necessary.

The NEMA 4X enclosure is custom designed for outdoor installation and protects against corrosion, windblown dust and rain, splashing and hose directed water. The SCU 220 enclosure is manufactured from PVC/Polycarbonate which results in lightweight and high impact resistant construction. The design includes rounded corners for durability and safety, easy access to terminal connections, and options for a 2 inch pipe mounting bracket or lightning arrestors.

The board-mounted signal conditioning accommodates a wide range of sensitivities and is currently installed in more than 15,000 shipboard applications world-wide.

STANDARD SPECIFICATION

Enclosure

Environmental rating: NEMA 4X
Material: PVC base and clear halogen free, self extinguishing polycarbonate cover.
Color: Self colored light gray

Cable Glands

Located at base of enclosure. Will accept cable diameters of 0.23 inch to 0.39 inch.

Desiccant Module

Status colors: Blue-dry; pink saturated.
Heating the DRI-CAN in a vented oven at 300°F for approximately 3 hours, or until the blue color returns, will restore the silica gel absorbent capabilities of the module.

Micro Filter

Located at base of enclosure
Material: Gore-Tex

Weight

2.5 pounds nominal

Options

(A) 2" pipe mounting kit.
Manufactured from zinc plated mild steel.
(B) Din rail-mounted lightning arrester
B1 2 wire MDK-24
B2 3 wire MDK-LV
B3 4 wire MDK-LC

Electrical Characteristics

Excitation Voltage

14 to 33 Vdc

Output

2-wire, 4-20mA
 $(R_{loop\ max} \text{ (Kohm)}) = (V_{loop} - 14) \div 20 \text{ mA}$
32mA max

Zero Adjustability

±20% FS



SCU 220 with cover removed showing desiccant module; shown here with MDK-LC lightning arrester

Span adjustability

3 to 100% FS via span potentiometer and 8 dipswitch settings

Bridge Excitation Voltage

6.2 Vdc

Storage Temperature

-55 to +220°F

Accuracy

With PDCR 1830 or PDCR 35/D
±0.1% FS

Compensated Temperature Range

With PDCR 1830 or PDCR 35/D
±0.5% FS from 22 to 122°F

ORDERING INFORMATION

Please state the following:

Model: SCU-220

OPTION A: (if required): 2 inch pipe

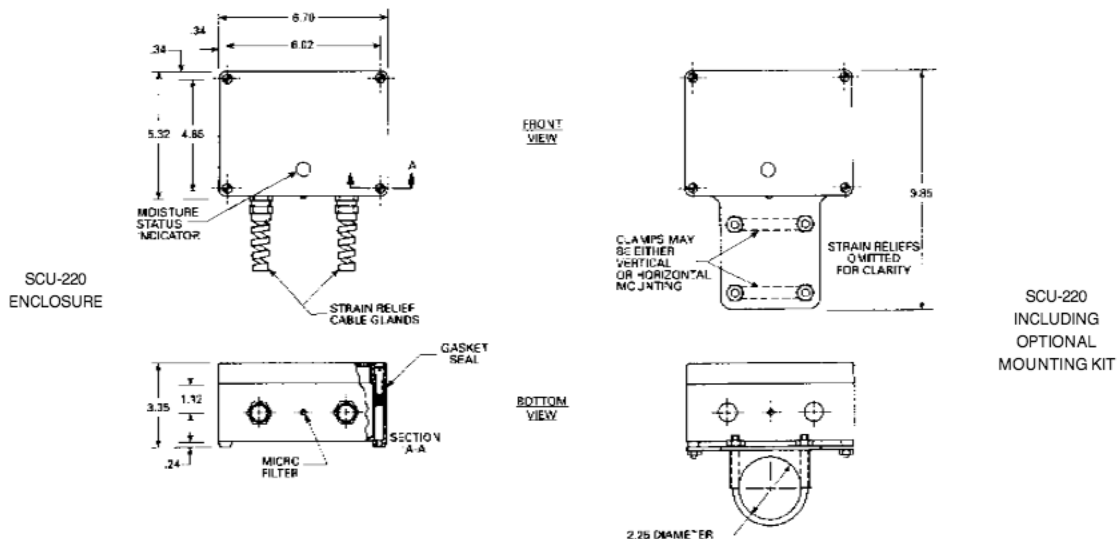
mounting kit

OPTION B: (if required)

Continuing development sometimes necessitates specification changes without notice.

Druck is an ISO 9000 registered company.

INSTALLATION DRAWINGS: Dimensions in inches



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