

Type 202B

Electronic Drum Level Indicator



SYSTEM SPECIFICATION

Inputs - From Conductivity types probes 2-wire connection. 48 Channels numbered in ascending order.

Enclosure - Wall mounted glass-fiber reinforced polyester enclosure, IP65 / NEMA 4X protection for location in harsh environments. Dimensions (mm): 500 H x 400 W x 200D)

Temperature Rating: Ambient: - 10 C to 65 C Storage: 50 C to 100 C
No of Channels: Maximum 48 Channels. Configurable from 6 to 48 Channels through handheld programmer.

Power Supply - Two independent AC sources 90 to 270 Volts AC @ 36VA, 48-63Hz.

Display - Two vertical columns of LED (BAR Graph) are provided on the front of the enclosure. 10 x 10 Sq. mm each LED for 16 Channels. 5 x 10 Sq. mm each LED for above 16 channels to 48 Channels. For any other combination of channels the bottom redundant LED will be blank i.e for 40 Channels, bottom 8 rows will be blank. Left column is GREEN LED and Right column is RED LED. Two 10 x 10 Sq. mm. Yellow LED at top for System fault indication always in 2 Hz blinking during any system fault. Left yellow LED for ODD channel and Right yellow LED for EVEN channel.

Probe Cable - Special PTFE high temperature cable maximum 30 meters length. For longer cable length use 4 meters special PTFE high temperature cable and balance 26 meters ordinary instrumentation cable through junction Box.

System Measurement - Microprocessor / Microcontroller Based fully integrated electronics unit. Separate controller are used for ODD and EVEN channel to scan the probe signal and do necessary discrimination for Water, Steam, Open Circuit and Short Circuit. System based on 8/16bit processor and having RS485 serial communication with the peripherals and Remotes. Total 10 Cards, either Remote Display or Remote Relay card with additional power supply, can be connected in daisy chain configuration with RS485. Programmer interface used to program the field parameters through handheld programmer and diagnosis the system.

System Fault - System fault occurs during following conditions. Any of the power supply / power pack failure, Probe cable short circuit / open circuit in each channel, Contamination or short circuit in probe, Ground failure in the probe column. RL8 DPDT sealed relay is used as system fault relay in Relay output card and activates in any other above system fault conditions. Contact rating: DPCO - 8 Amps, 250VAC / 30 VDC Switching Power: 2000 VA / 240W

4-20mA Signal - Two 4-20 mA DC analogue output signal whereby each probe channel contributes a step change of '16 / no of channel' mA. Selection of 4 mA to represent the all water or all steam state can be configured through the handheld programmer. Galvanic isolation is also available as option with both the 4-20mA outputs. Load impedance: 300-Ohm maximum for non-isolated output and 600-Ohm maximum for isolated output.

Output Alarm / Trip relays - 7 DPDT sealed relays are used for alarm and trip signaling and this can be extended to 15 relays by an add-on relay card. Relays can be configured to any channel as per plant requirement in the field through handheld programmer. On the configured channels any abnormalities will be indicated by 10 Hz blinking of that particular channel along with the activation/ deactivation of the relay. Spurious Alarm / trip action is prevented while fault occurs on respective alarm / trip configured channel. Trip logic ensures positive trip on plant fault as well as eliminates spurious trips through its voting logic. Each relay can be configured for normally energised or de-energised with time delay action for 1 to 10 secs.

Contact rating: DPCO - 8 Amps, 250VAC / 30 VDC Switching Power: 2000 VA / 240W

REMOTE DISPLAY OPTIONS

Remote display unit indication is identical with the main display unit. Remote display will be connected through 2 nos. (one for ODD channels and one for EVEN channels) 8 core twisted pair cables. Total two remote display unit can be connected in cascade with main power supply. However, more remote display unit can be connected with local power supply unit as additional. Maximum cable length from main to last remote should not be more than 600 meters. Number of terminals: 2 nos. 6 way terminal (one for ODD and other for EVEN)

Panel Mounting Size: 238mm x 96 mm for 16 Channels.

Panel Cutout Dimension: 233mm x 91 mm for 16 Channels.

Enclosure protection class - IP20 OR IP65 (optional).

KEY FEATURES

Upto 48 independent probe channels

System Fault feature for power supply failure or probe channel malfunction

Conductivity Settings for different water purity conditions

Dual Power Supply with 100% redundancy

Local Indication using Red & Green high visibility LEDs

Remote Display units for control room and plant use

Probe Validation for tripping logic

IP65 Rating of enclosure for external use

Upto 15 (7 standard) Relay outputs for alarms, trips and system fault

Handheld Programmer

RS485 Serial communication Port

RELATED PRODUCTS

The 202B electronic unit is used in conjunction with the following:

- Water column
- Probes
- Probe Cable
- Remote Display