



*Catalog*

**GDB**

**Dual-Voltage Discriminator  
for Catenary**

**Voltage Detectors DC/AC**

## **GDB**

### Dual-Voltage Discrimination Group for DC/AC Catenary

✓ **GDB** detects the presence of **DC** and **AC** voltage in railway systems

✓ For **workshops** or railway installations with **two different voltages**, the Dual-Voltage Discrimination Group (GDB) is installed to signal the voltage present in the catenary

✓ **CCS25 + CBI21** Capacitive Detector for AC voltage measurement:

- Nominal Voltage: **27.5 kV<sub>AC</sub>**
- **4-20 mA Output**
- Sensor **with DC voltage filter**. 4 mA output up to voltages of 50 kV<sub>DC</sub>
- Auxiliary voltage **85-264 V<sub>AC</sub> | 85-370 V<sub>DC</sub> or 24 V<sub>DC</sub>**

✓ **CRS27500 + CBI21FA** Resistive Detector for DC voltage measurement:

- Nominal Voltage: **3.3 kV<sub>DC</sub>**
- **Output 4-20 mA**
- Sensor with **AC voltage filter**. 4 mA output up to voltages of 36 kV<sub>AC</sub>
- Auxiliary voltage **85-264 V<sub>AC</sub> | 85-370 V<sub>DC</sub> or 24 V<sub>DC</sub>**

✓ Voltage **Presence Controller PTC-E2**:

- Reading of **two 4-20 mA signals**
- Independent **LED** indication for AC and DC
- Independent LEDs for power-on and fault indication
- 3 potential-free changeover contacts:
  - **DC** voltage
  - **AC** voltage
  - **Fault**
- Auxiliary Voltage **85-264 V<sub>AC</sub> | 85-370 V<sub>DC</sub> or 24 V<sub>DC</sub>**



## **Applications**

**Detection of AC and DC voltage** presence in railway installations.



## Functional Features

- **3 output relays with potential-free changeover contacts** to indicate DC voltage presence, AC voltage presence and faults
- **TEST button** to simulate system activation and deactivation
- **Green LED** for power-on indication
- **Red LED** for Voltage 1 indication
- **Red LED** for Voltage 2 indication
- **Red LED** for fault indication

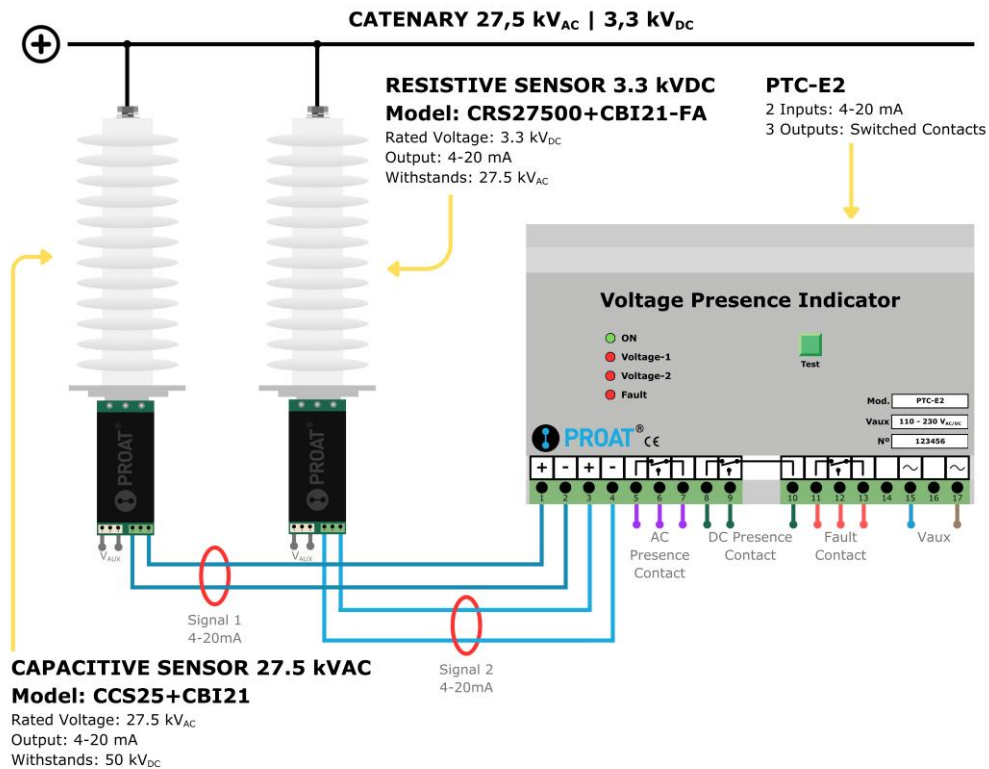
## Models

| Model            | DC Nominal Voltage   | AC Nominal Voltage    | Nominal Frequency | Auxiliary Voltage                               |
|------------------|----------------------|-----------------------|-------------------|-------------------------------------------------|
| <b>GDB</b>       | 3.3 kV <sub>DC</sub> | 27.5 kV <sub>AC</sub> | 50-60 Hz          | 85-264 V <sub>AC</sub>   85-370 V <sub>DC</sub> |
| <b>GDB-24</b>    | 3.3 kV <sub>DC</sub> | 27.5 kV <sub>AC</sub> | 50-60 Hz          | 24 V <sub>DC</sub>                              |
| <b>GDB-HZ</b>    | 3.3 kV <sub>DC</sub> | 27.5 kV <sub>AC</sub> | 16-60 Hz          | 85-264 V <sub>AC</sub>   85-370 V <sub>DC</sub> |
| <b>GDB-HZ-24</b> | 3.3 kV <sub>DC</sub> | 27.5 kV <sub>AC</sub> | 16-60 Hz          | 24 V <sub>DC</sub>                              |

\*Other models can be manufactured upon request

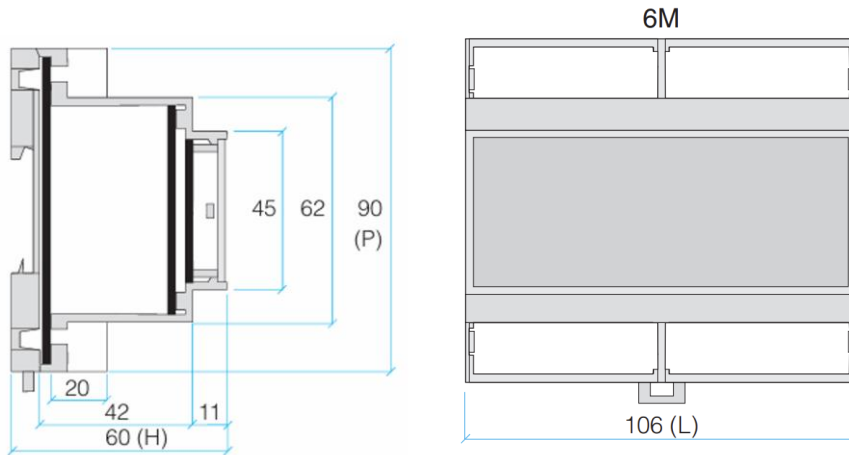
\*Custom electrical panels with GDB equipment can be manufactured upon request

## Wiring - GDB



## Constructional Features – PTC-E2

- DIN rail installation
- Front-accessible connection terminals
- Self-extinguishing plastic enclosure, class V0



## GDB Electrical Panels

