

## HIG99

- The HIG99 line of insulation monitoring devices is designed for monitoring DC, AC and combined IT systems.
- The devices monitor the insulation resistance in the range from 1 kΩ to 10 MΩ and are equipped with two output relays, for signaling the failure of two independent levels of insulation resistance.
- The IMDs are powered by an independent low voltage source and have an integrated function of monitoring the correct voltage value of the isolated system.
- The devices are designed for primary supervision of IT systems in industry and traction systems, both on stationary and mobile parts.
- The HIG99 series is designed and tested according to the standards of the EN 50155 series.
- Communication with HIG99 is possible using modern digital buses, using expansion communication modules for the HIG99 KM series.
- The maximum operating voltage of the monitored IT network can be increased by using specific coupling units from the HIG-CD series.

| Type   |          | HIG99  |
|--|----------|--|
| Monitored IT power supply system type according to IEC 61557-8 |          | AC, DC, AC/DC                                      |
| Measuring range of insulation resistance                       | $R_F$    | 1 ÷ 10 000 kΩ                                      |
| Adjustable range of critical insulation resistance             | $R_{an}$ | 1 ÷ 2 500 kΩ                                       |
| Number of insulation resistance fault levels ( $R_{an}$ )      |          | 2  |
| Rated voltage of monitored IT system (DC)                      | $U_n$    | 1 000 V  |
| Rated voltage of monitored IT system (AC)                      | $U_n$    | 710 V  |
| IMD power supply   |          | From independent power source                      |
| Nominal supply voltage DC                                      | $U_s$    | 24 V   |
| Supply voltage range   |          | 9 ÷ 36 V   |
| Power consumption  | P        | 8 VA   |
| Measuring voltage  | $U_m$    | 40 V   |
| Measuring current  | $I_m$    | < 0.5 mA   |
| Measuring input's internal impedance                           | $Z_i$    | > 1 000 kΩ   |
| Internal DC resistance   | $R_i$    | > 1 000 kΩ   |
| System leakage capacitance                                     | $C_e$    | 10 μF  |
| Measuring accuracy   |          | ± 15 %   |
| Electrical strength against internal circuits                  |          | 3 000 V  |
| Supported module of remote monitoring panels (MDS)             |          | None   |
| Communication interface for user                               |          | Using communication modules of the HIG99 KM series |
| Usable with coupling units                                     |          | HIG-CD 1k8   |
| Housing material   |          | Polyamid PA6, UL94 V-0                             |
| Degree of protection of front panel                            |          | IP40   |
| Degree of protection except the front panel                    |          | IP20   |
| Operating temperature  | θ        | -40 ÷ 70 °C  |
| Protection class according to IEC 61140                        |          | II   |

| Type   |   | HIG99                |
|--|---|----------------------|
| Recommended cross-section of connecting wires                              | S | 1 mm <sup>2</sup>    |
| Installation   |   | On DIN rail 35 mm    |
| Modular width  |   | 6 TE                 |
| Width  |   | 105 mm               |
| Height   |   | 90 mm                |
| Depth  |   | 65.8 mm              |
| Use for traction   |   | Yes                  |
| Recommended fuse protection  |   | 6 A/gG               |
| Operating position   |   | Any                  |
| Operation type   |   | Permanent            |
| <b>Designed according to standards</b>                                     |   |                      |
| Insulation monitoring devices for IT systems                               |   | IEC 61557-8:2014     |
| Equipment for testing, measuring or monitoring of protective measures      |   | IEC 61557-1:2007     |
| Insulation coordination for equipment within low-voltage systems           |   | IEC 60664-1:2007     |
| Railway applications – Rolling stock – Electronic equipment                |   | EN 50155:2017        |
| Railway applications – Fire protection on railway vehicles                 |   | EN 45545-2:2013      |
| Railway applications – Electromagnetic compatibility                       |   | EN 50121-3-2:2016    |
| Railway applications – Environmental conditions for equipment              |   | EN 50125-1:2014      |
| Railway applications – Rolling stock equipment – Shock and vibration tests |   | IEC 61373:2010       |
| <b>Application standards</b>   |   |                      |
| Low-voltage electrical installations – Protection against electric shock   |   | HD 60364-4-41:2017   |
| <b>Ordering, packaging and additional data</b>                             |   |                      |
| Mass   | m | 222 g                |
| Mass (including the packaging)   | m | 282 g                |
| Packaging dimensions (H x W x D)   |   | 82 x 228 x 105 mm    |
| Packaging value  | V | 1.96 dm <sup>3</sup> |
| Customs tariff no.   |   | 90303370             |
| EAN code   |   | 8590681163894        |
| <b>Art. number</b>   |   | <b>70 970</b>        |



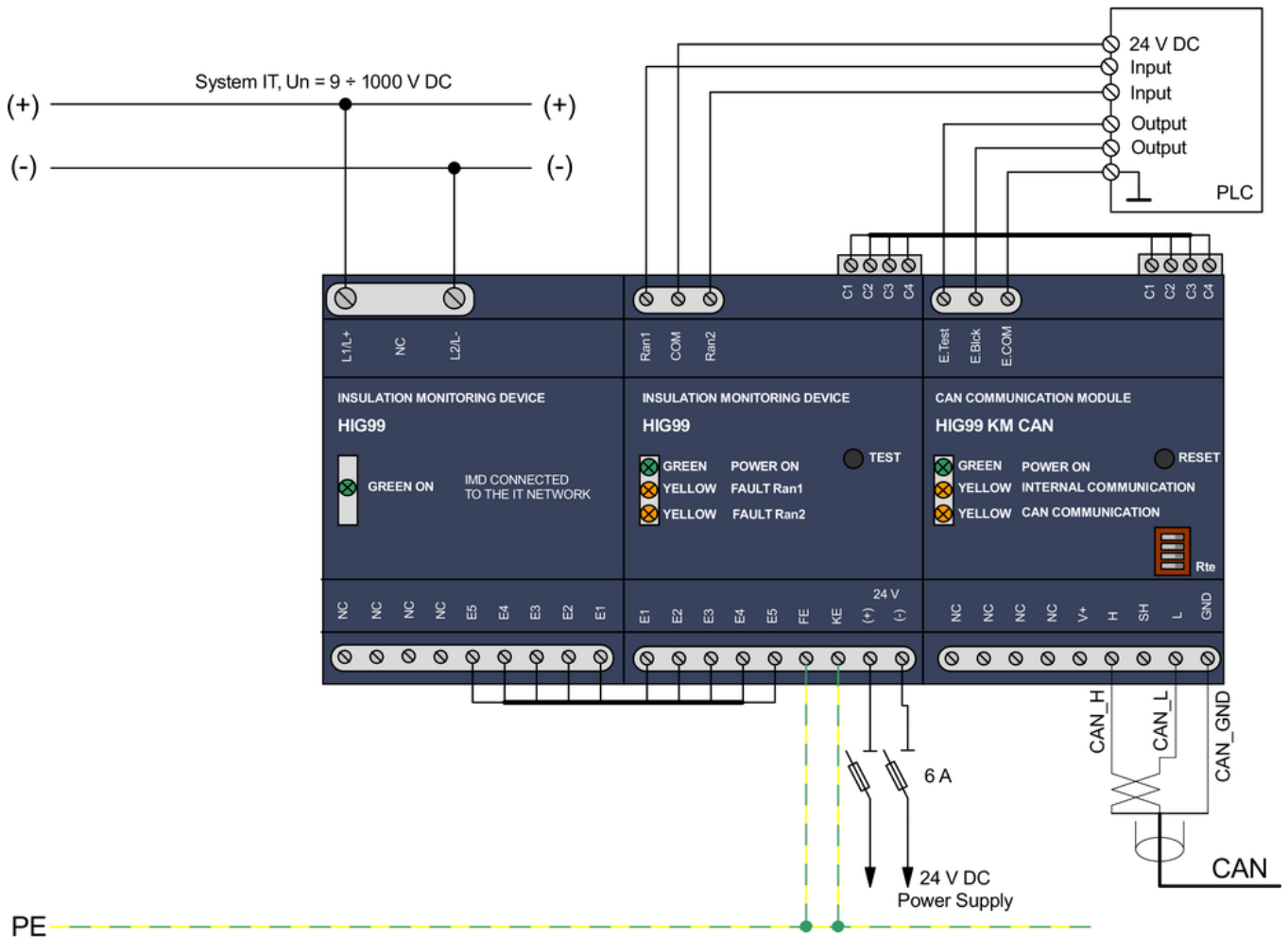
The link in the QR code leads to the online presentation of the HIG99.

There, in addition to the always up-to-date data sheet, you will also find all diagrams and drawings, declarations of conformity, or 2D or 3D models and other necessary materials. For more information, visit [www.hakil.com](http://www.hakil.com)

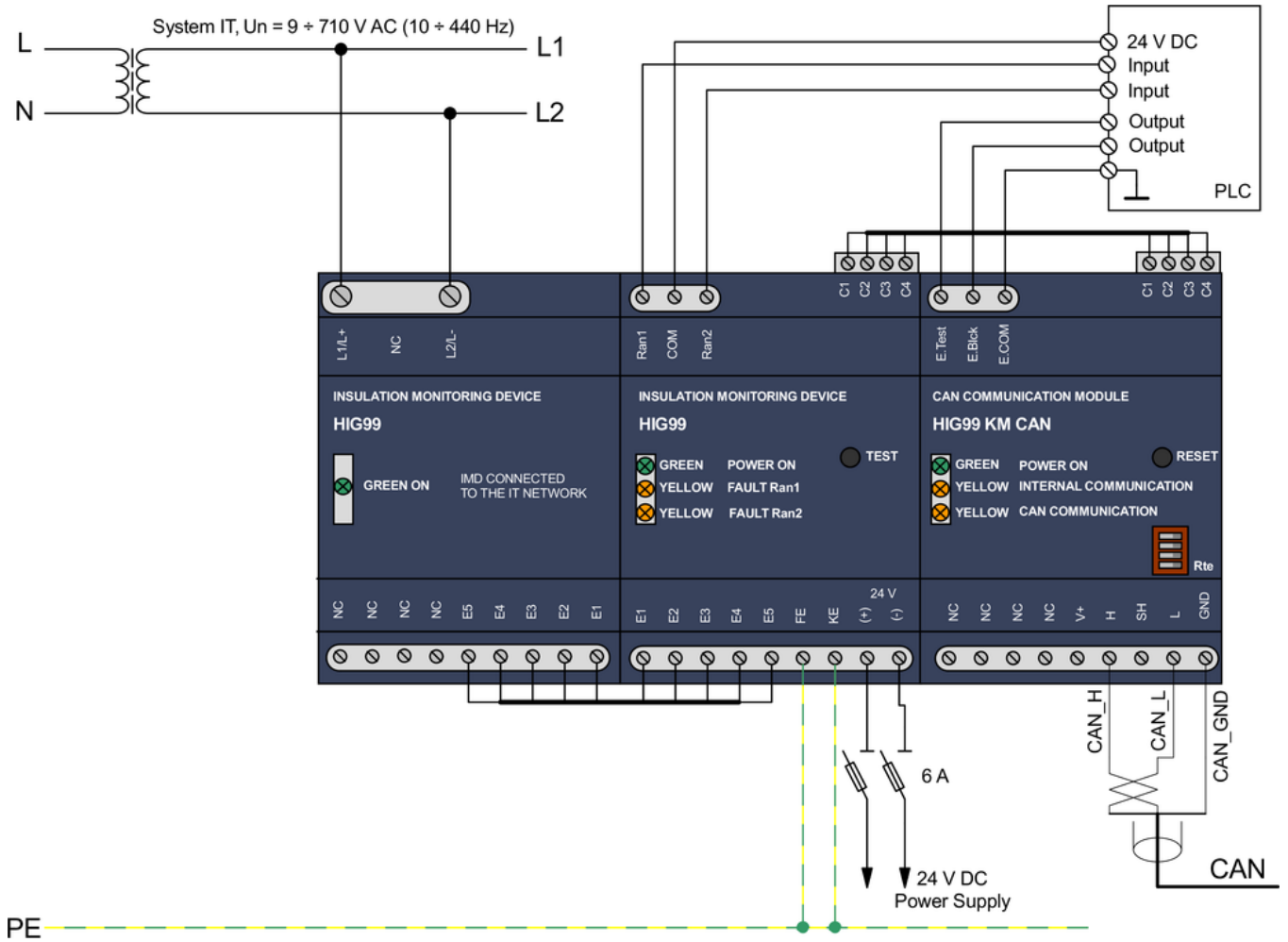


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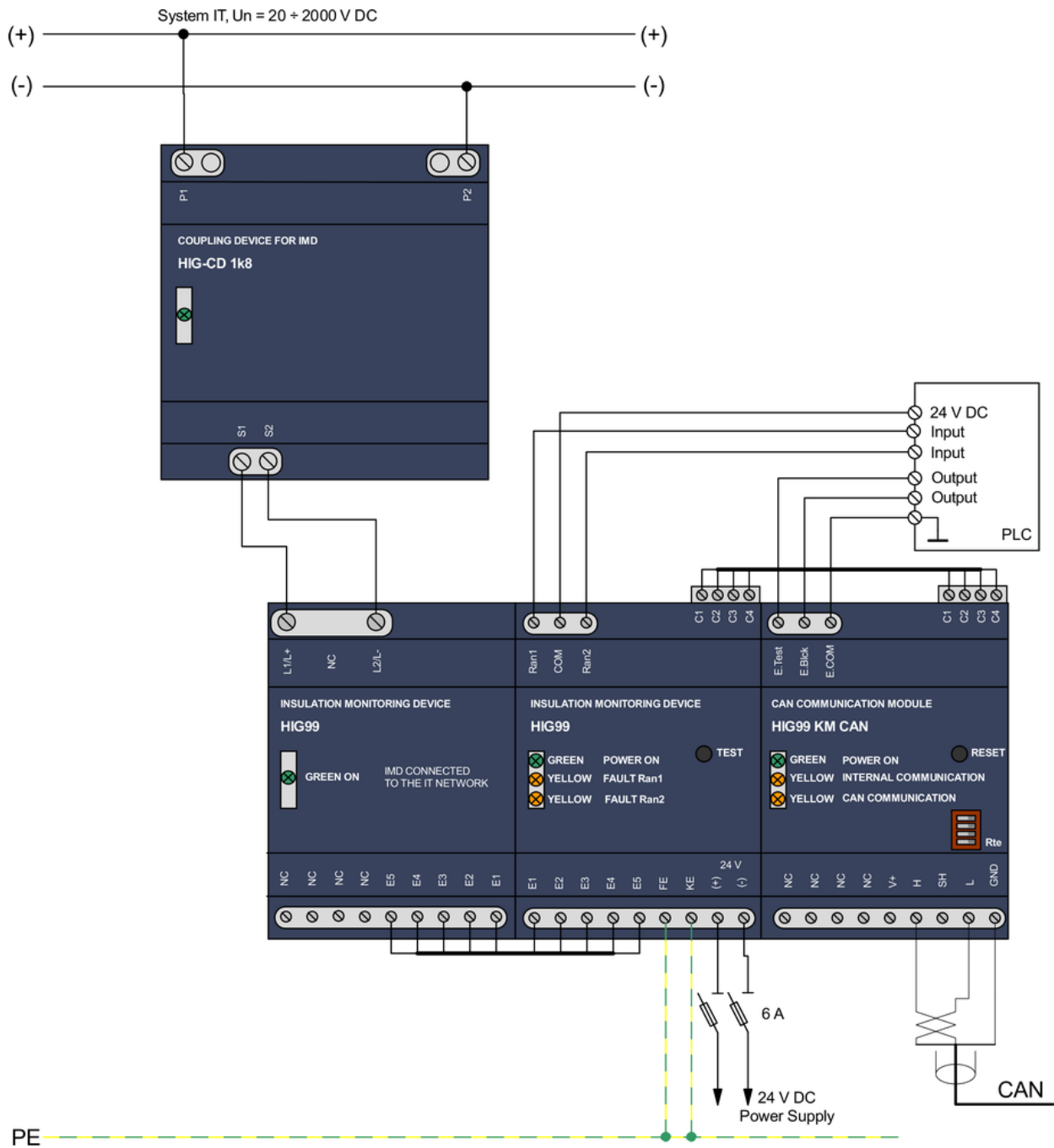
## Application wiring diagram (installation) 1/4



## Application wiring diagram (installation) 2/4



## Application wiring diagram (installation) 3/4



## Application wiring diagram (installation) 4/4

