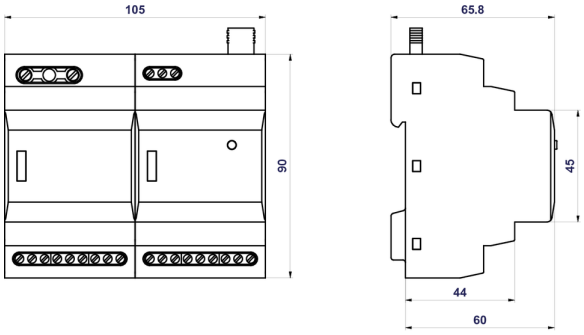
hakel®
Hz in Hearts



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 distant signalisation (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

HAKEL spol. s r.o. | Bratri Stefanu 980, 500 03 Hradec Kralove, Czech Republic
Phone: +420 494 942 314 | e-mail: info@hakel.com | www.hakel.com

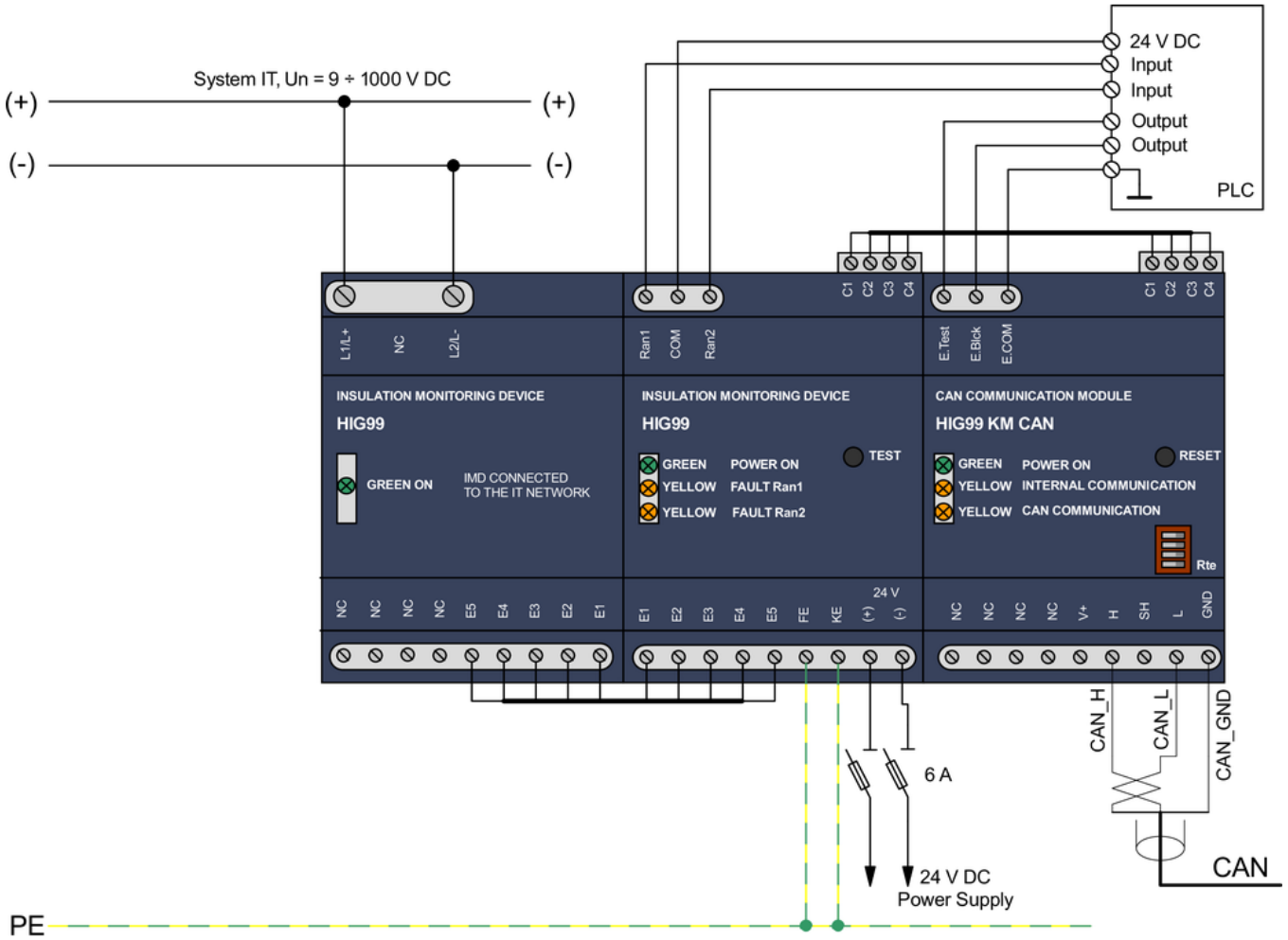
Type		HIG99
Recommended cross-section of connected conductors	S	1 mm^2
Installation		On DIN rail 35 mm
Modular width		6 TE
Use for traction		Yes
Recommended back-up fuse		6 A/gG
Operating position		Any
Operation type		Permanent
Designed according to standards		
Insulation monitoring devices for IT systems		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
Application standards		
Low-voltage electrical installations – Protection against electric shock		HD 60364-4-41:2017
Ordering, packaging and additional data		
Mass	m	222 g
Mass (including the packaging)	m	246 g
Packaging dimensions (H x W x D)		60 x 113 x 73 mm
Packaging value	V	0.5 dm^3
Customs tariff no.		90303370
EAN code		8590681163894
Art. number		**70 970**

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.hakel.com**

8590681163894

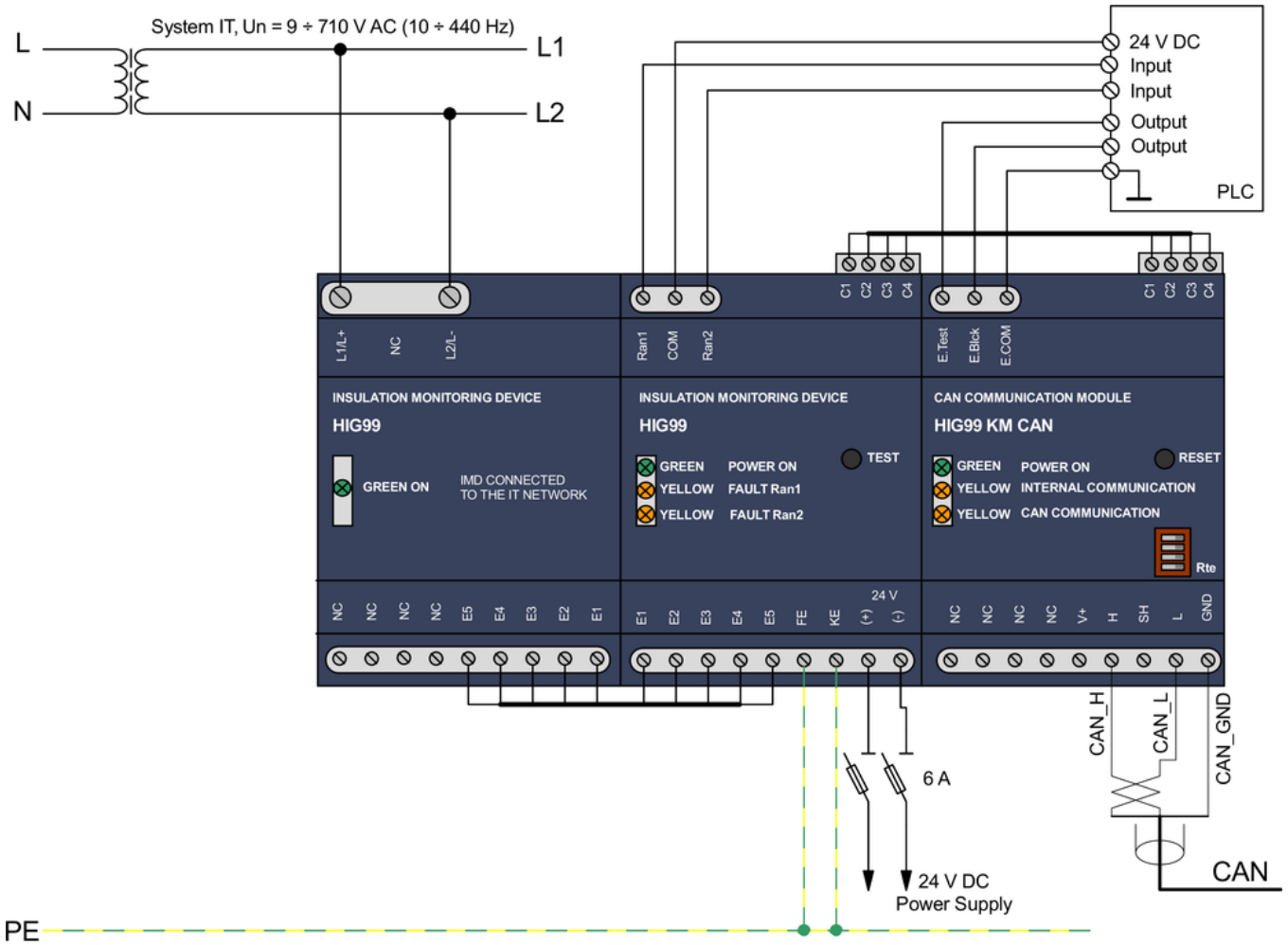
HAKEL spol. s r.o. | Bratri Stefanu 980, 500 03 Hradec Kralove, Czech Republic
Phone: +420 494 942 314 | e-mail: info@hakel.com | www.hakel.com

Application wiring diagram (installation) 1/3



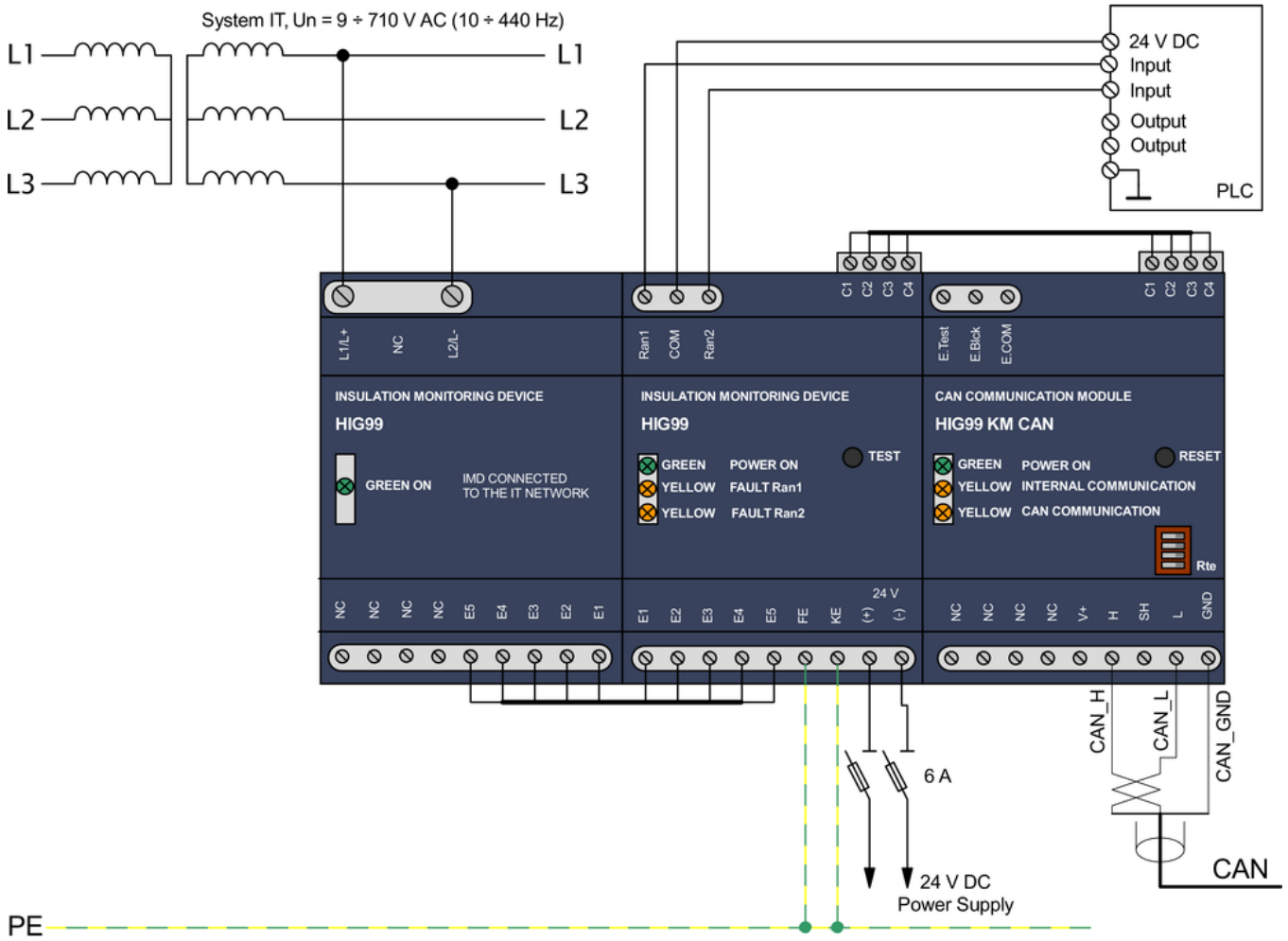
HAKEL spol. s r.o. | Bratri Stefanu 980, 500 03 Hradec Kralove, Czech Republic
Phone: +420 494 942 314 | e-mail: info@hakel.com | www.hakel.com

Application wiring diagram (installation) 2/3



HAKEL spol. s r.o. | Bratri Stefanu 980, 500 03 Hradec Kralove, Czech Republic
Phone: +420 494 942 314 | e-mail: info@hakel.com | www.hakel.com

Application wiring diagram (installation) 3/3



HAKEL spol. s r.o. | Bratri Stefanu 980, 500 03 Hradec Kralove, Czech Republic
Phone: +420 494 942 314 | e-mail: info@hakel.com | www.hakel.com