



## HIG91/QL

- The HIG91, HIG92, HIG93, and HIG94 series are a series of insulation monitoring devices for industrial isolated systems (IT systems).
- The maximum operating voltage of the IT system is 275 V AC. This voltage can be increased up to 6 kV when using coupling devices from the TL series.
- IMD with one  $R_{an}$  error level (HIG91, HIG92 series) or monitors with two error levels (HIG93, HIG94 series) are available.
- As standard, the IMD measure  $R_f$  in the range of 5 k $\Omega$  to 900 k $\Omega$  (HIG91, HIG93 series), alternatively in the range of 200 k $\Omega$  to 5 M $\Omega$  (HIG92, HIG94). Special IMDs are also available for different measuring ranges of insulation resistance.
- IMDs are equipped with digital processing of the measured signal, which offers the user numerical information about the measured insulation resistance.
- IMDs are designed with independent power supply. That means that these insulation monitors can be powered from a different system than the one they measure. This has the significant effect that the IMDs are able to measure even de-energized system.
- The power supply of the device is AC as standard, for a nominal voltage of 230 V to 110 V / 50 Hz. However, versions with a 24 V DC supply are also available.
- All IMDs are equipped with a digital bus, which allows information to be transmitted to the master system. For signaling of the IMD status, panels from the MDS-D series can also be used (variant with RS485).

Type		HIG91/QL
Monitored IT power supply system type according to IEC 61557-8		AC
Measuring range of insulation resistance	$R_f$	0.1 ÷ 90 k $\Omega$
Adjustable range of critical insulation resistance	$R_{an}$	0.1 ÷ 90 k $\Omega$
Number of insulation resistance fault levels ( $R_{an}$ )		1
Rated voltage of monitored IT system (AC)	$U_n$	275 V
IMD power supply		From measured IT system, From independent power source
Nominal supply voltage AC	$U_s$	90 ÷ 265 V
Nominal supply voltage DC	$U_s$	90 ÷ 370 V
Power consumption	P	5 VA
Measuring voltage	$U_m$	12 V
Measuring current	$I_m$	< 0.6 mA
Measuring input's internal impedance	$Z_i$	> 2 000 k $\Omega$
Measuring accuracy		± 10 %
Electrical strength against internal circuits		3 750 V
Equipped with display		Yes (OLED technology)
Supported module of distant signalisation (MDS)		MDS-D, MDS-DELTA, MDS10
Communication interface for user		RS485 bus
Communication protocol		ISOLGUARD, PROFIBUS
External control inputs		Test start, Deblocking function
Housing material		Polyamid PA6, UL94 V-0
Degree of protection of front panel		IP40
Degree of protection except the front panel		IP20

Type		HIG91/QL
Operating temperature	θ	-10 ÷ 60 °C
Protection class according to IEC 61140		II
Recommended cross-section of connected conductors	S	1 mm <sup>2</sup>
Installation		On DIN rail 35 mm
Modular width		2 TE
Use for traction		No
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
<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	149 g
Mass (including the packaging)	m	163 g
Packaging dimensions (H x W x D)		45 x 102 x 74 mm
Packaging value	V	0.34 dm <sup>3</sup>
Customs tariff no.		90303370
EAN code		8590681419298
<b>Art. number</b>		<b>70 911QL</b>



The link in the QR code leads to the online presentation of the HIG91/QL. 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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