



ISOM Digiware L-60h

Insulation control system
for medical premises

Insulation monitoring



ISOM Digiware L-60h

The solution for

- > Operating rooms
- > Anaesthesia rooms
- > Recovery rooms
- > Invasive imaging rooms



Key points

- > Signal injection
- > Plug & Play
- > Temperature monitoring
- > Configurable inputs/outputs

Conformity to standards

- > IEC 61557-8 Appendix A
- > IEC 61557-9 Appendix A
- > HD 60364-7-710
- > ISO 14025



Create your project

- > Find the best Digiware configuration:
www.meter-selector.com



Configuration
with Easy Config System.

Function

The insulation monitoring device **ISOM Digiware L-60h** is a combined device for monitoring:

- The insulation level of a medical IT neutral arrangement.
- The charging current of medical IT single-phase insulation transformers (up to 50 A with the use of ISOM Digiware F-60).
- The temperature of the medical IT transformer.

It also integrates an additional signal injection for detecting insulation faults and synchronises with ISOM Digiware F-60 fault locators.

You can connect it to the multipoint ISOM Digiware D-55h or single-circuit ISOM D-15h alarm indicators.

Advantages

Locating signal booster

Having a locating booster means you can quickly and easily integrate a fixed fault locating system, if necessary.

Temperature monitoring

The device has a temperature monitoring function (emits an alert if the preset threshold is exceeded).

Plug & Play

Used together with Digiware voltage and current modules, this gives you a full measurement and insulation monitoring system.

Configurable inputs/outputs

The fully configurable inputs/outputs relay alarm states of the external equipment (e.g. inverter), as well as remote monitoring (e.g. TEST or RESET).

Functions

Insulation monitoring

Measures the insulation level of single-phase or three-phase medical IT arrangement networks in operating rooms that may contain DC voltage-powered parts, galvanically connected to the AC network (e.g. electronic devices, monitors, etc.).

Adapts automatically to leakage capacities (maximum 10 µF).

Measurement of current

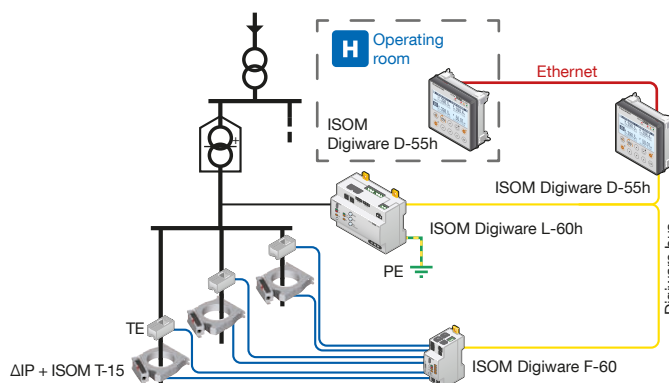
Done with ISOM Digiware F-60 and current sensors (order separately).

Temperature measurement

Done with a PTC temperature sensor (order separately) or integrated into the insulation transformer of the medical facility.

Locating signal injection

Limited to 1 mA and synchronised with the ISOM Digiware F-60 locating unit via Digiware bus.



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General characteristics

IMD (insulation monitoring device)

- Automatically filters problems on the network.
- Digiware bus communication with ISOM Digiware D screen.
- Self-monitors the connection.
- Timestamped log.

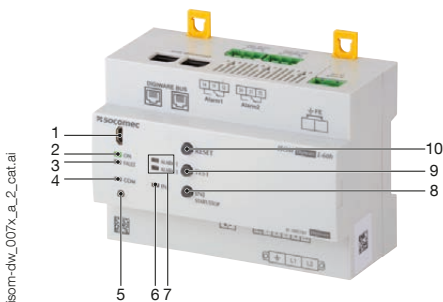
IFD (insulation fault testing device)

- Search signal limited to 1 mA.
- Synchronises with locating unit ISOM Digiware F-60 via Digiware bus.

Current and temperature monitoring

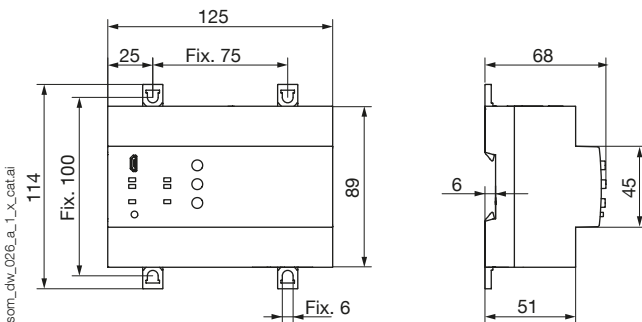
- Temperature threshold alarm.
- Current threshold alarm (with ISOM Digiware F-60).

Front panel



1. USB port for configuration.
2. ON indicator. Lights up when the device is active.
3. FAULT indicator for system alerts (connection, etc.)
4. COM indicator. Flashes when the communication bus is active.
5. Auto-addressing button.
6. INJ LED. Lights up when the booster is active.
7. ALARM 1 and 2 indicators. Light up when the preset thresholds for Alert 1 or Alert 2 are reached.
8. INJ button. To start locating a fault.
9. TEST button. To run an autotest.
10. RESET button: To reset alarms.

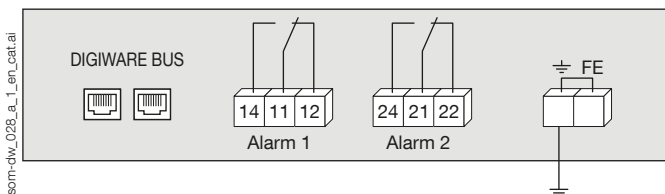
Dimensions (mm)



Type	Modular
Dimensions W x H x D	125 x 89 x 68 mm
Front panel protection degree	IP40
Terminal block degree of protection	IP20
Rigid cable cross-section	0.2 to 2.5 mm ²
Flexible cable cross-section	0.2 to 2.5 mm ²
Weight	370 g

Terminals

Upper terminal



DIGIWARE BUS: Digiware bus connection to other Digiware units

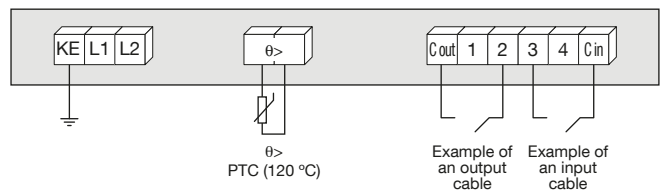
14 - 11 - 12: alarm relay output 1

24 - 21 - 24: alarm relay output 2

TERRE FE: earth connection

KE - L1 - L2: mains voltage U_n (see following page)

Lower terminal



$\theta >$: Connection to the temperature sensor (PTC)

C out: shared output connection

C in: shared input connection

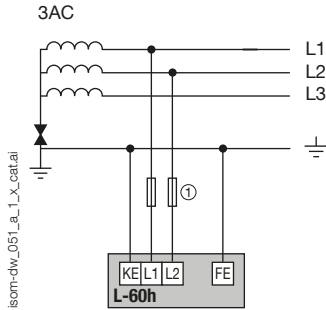
1 - 2 - 3 - 4: input or output connection (as per configuration)

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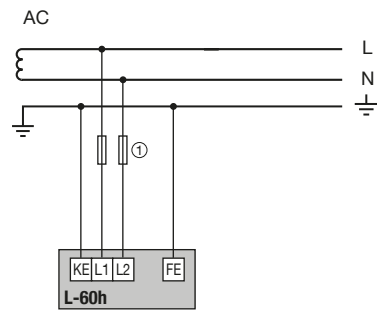
Connections

Three-phase network



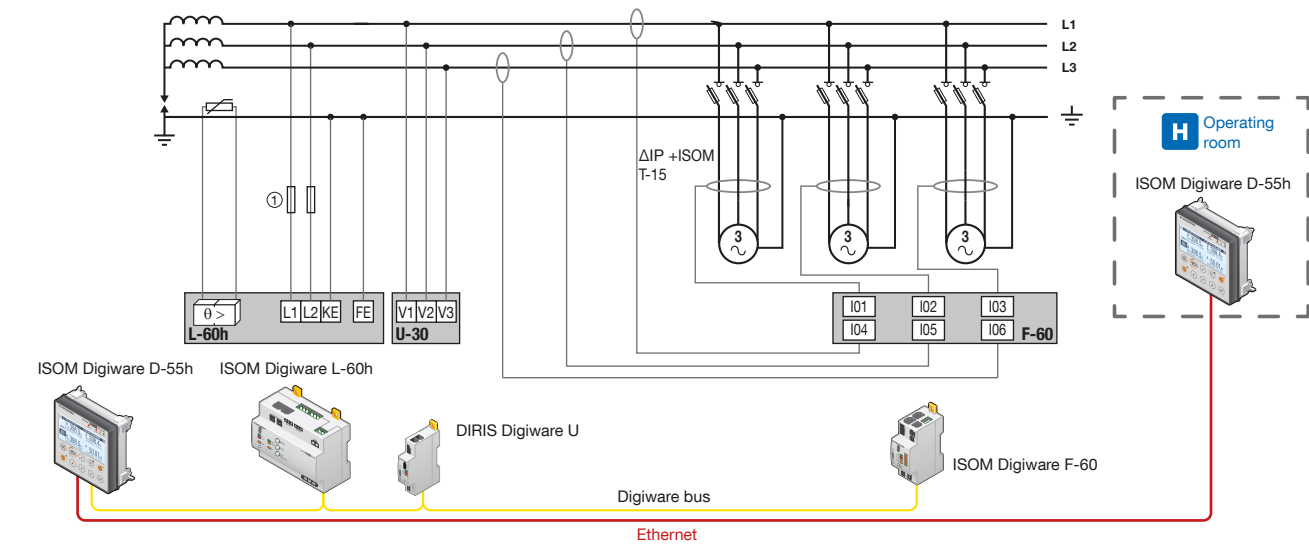
1. 2 A gG fuses

Single-phase network



1. 2 A gG fuses

Connection example with ISOM Digiware D-55h, F-60, T-15 and DIRIS Digiware U for monitoring insulation, locating faults and monitoring the temperature and overloads on the insulation transformer.



- Balanced three-phase load.
- Measuring device.
- Locating core balance transformer and T-15 adapter.
- 1. 2 A gG fuse

Characteristics

Network voltage U_n	
AC range	AC 24 to 250 V
Frequency	50 to 60 Hz
Assigned insulation voltage	690 V
Auxiliary power supply U_s	
Power supply voltage	Digiware bus
Max. consumption	2.3 W
Fault alerts	
Number of thresholds	1
Type of threshold	Adjustable
Value of the threshold	50 kΩ to 500 kΩ
Max. leakage capacity	10 μF
Inputs/outputs	
Number of I/O	4
Types of I/O	Adjustable

Output contacts	
Number of contacts	2
Contact type	Changeover switch
AC nominal voltage	250 V
DC nominal voltage	30 V
Steady-state current	5 A
Operating mode	Standby / On
Preset operating mode	Standby
Operating conditions	
Operating temperature	-10 to +55 °C
Storage temperature	-40 to +85 °C
Relative humidity	95% at 55 °C

References

ISOM Digiware	Network voltage U _n	Alert threshold	Reference
L-60h	AC 24 to 250 V	50 to 500 kΩ	4729 0112
Accessories			Reference
PTC temperature sensor (120°C)			4729 0560
Fuse circuit breakers to protect measurement inputs (type RM) 2 pole			5701 0020
gG 2 A fuses			6012 0002
Digiware connection cables			Reference
RJ45 cables for Digiware Bus	Length 0.06 m		4829 0189
	Length 0.10 m		4829 0181
	Length 0.20 m		4829 0188
	Length 0.50 m		4829 0182
	Length 1 m		4829 0183
	Length 2 m		4829 0184
	Length 3 m		4829 0190
	Length 5 m		4829 0186
	Length 10 m		4829 0187
	50 m reel + 100 connectors		4829 0185
Termination for Digiware Bus (supplied with interfaces C and D)			4829 0180
USB configuration cable			4829 0050

Want to monitor your systems?

WEBVIEW-M solution built into the ISOM Digiware D-75 display
The ISOM Digiware D-75 display centralises data from modules in the Digiware range. It embeds the WEBVIEW-M software allowing remote visualisation, monitoring and use of measurement data and the insulation level of the electrical system.



System requirement:
WEBVIEW-M is built into
the ISOM Digiware D-75.



ISOM Digiware D-75 is
ready to be connected
to a Cloud platform.



Display of multi-product
electrical parameters on
a customised platform
like an electrical circuit
diagram or a site drawing.

Expert Services

Socomec offers a range of services to help you optimise your electrical installations and increase efficiency:

Pre-project & installation

- Inspecting the installation
- Commissioning the equipment
- Training for operative teams

Operation

- Checking the insulation monitoring architecture (NFC 15100)
- Fault-finding
- Training on the handheld fault location tool, ISOM PS-62

To find out more, ask your Socomec representative.