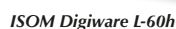




Insulation control system for medical premises



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

- 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.

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).

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



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

- > 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



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.

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.

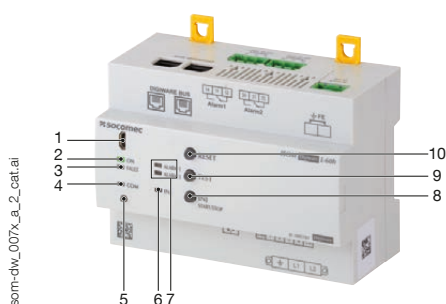
IFD (insulation fault testing device)

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

Current and temperature monitoring

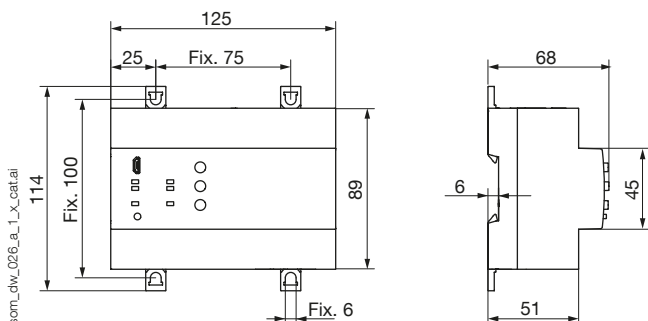
- Temperature threshold alarm.
- Current threshold alarm (with ISOM Digiware F-60).

Front panel



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

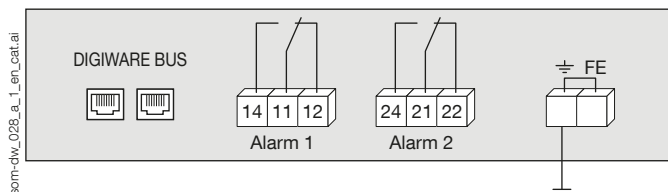
Dimensions (mm)



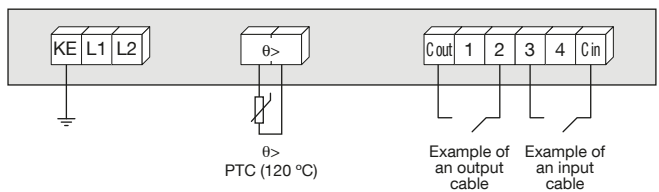
Type	Modular
Dimensions W x H x D	125 x 89 x 68 mm
Front panel protection degree	IP40
Terminal block degree of protection	IP20
Rigid cable cross-section	0.2 to 2.5 mm ²
Flexible cable cross-section	0.2 to 2.5 mm ²
Weight	370 g

Terminals

Upper terminal



Lower 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)

θ >: Connection to the temperature sensor (PTC)

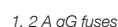
C out: shared output connection

C in: shared input connection

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

for medical premises

Three-phase network



The diagram illustrates a power distribution system. At the top, a three-phase supply (L1, L2, L3) is connected to a main busbar. A transformer is shown on the left. The system includes several components:

- ISOM Digiware D-55h**: A digital display unit connected to the system.
- ISOM Digiware L-60h**: A load monitoring unit connected to the main busbar.
- DIRIS Digiware U**: A unit connected to the main busbar.
- ISOM Digiware F-60**: A unit connected to the main busbar.
- Digiware bus**: A central communication bus connecting the units.
- Ethernet**: A network connection for the system.

 The diagram also shows a detailed view of the main busbar with three phases (L1, L2, L3) and a ground connection. It includes a transformer, a switch, and a fuse. The busbar is labeled with 'ΔIP + ISOM T-15'. The units are connected to the busbar via a 'Digiware bus' and an 'Ethernet' connection. A dashed box on the right indicates the 'Operating room' where the ISOM Digiware D-55h is located.

③

Balanced three-phase load.

Measuring device.

Locating core balance transformer and T-15 adapter.

1.2 A aG 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 k Ω to 500 k Ω
Max. leakage capacity	10 μ F
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 k Ω	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.