



ISOM Digiware L-60

Control module for insulation and fault location for power networks or control/command circuits

Insulation monitoring



ISOM Digiware L-60

isom-ew_004_front



Configuration with Easy Config System.

Function

ISOM Digiware L-60 units combine the functions of the insulation monitoring device (IMD) and the location signal booster.

It monitors the level of isolation of power networks in IT neutral arrangements. Options include a version for healthcare facilities and a tropicalised version for harsh environments.

Advantages

Built-in booster

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

OhmScanner solution

Our OhmScanner technology allows you to track the system's general degree of insulation, while regularly measuring the insulation of each circuit in detail.

Plug & Play

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

Configurable inputs/outputs

With configurable inputs/outputs you can relay alarm states or use with automation systems, as well as ensure remote monitoring (e.g. disabling in case of network coupling).

Compatible with the ISOM FP-60 portable system

Use the ISOM FP-60 portable system together with the ISOM Digiware L-60 for fault location:

- On circuits not equipped with a fixed locating system.
- Next to the load.

Fine-tuned insulation

Resistive and capacitive breakdown for each circuit.

The solution for

- > Industries
- > Energy production
- > Naval, military and railway infrastructures



Key points

- > Built-in booster
- > OhmScanner solution
- > Plug & Play
- > Configurable inputs/outputs
- > Compatible with the portable system
- > Fine-tuned insulation

Integrated technologies



OhmScanner

For more information, visit www.socomec.com

Conformity to standards

- > IEC 61557-8
- > IEC 61557-9
- > ISO 14025



Approvals and certifications

- > Naval certifications ⁽¹⁾

(1) Certification in progress

Create your project

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



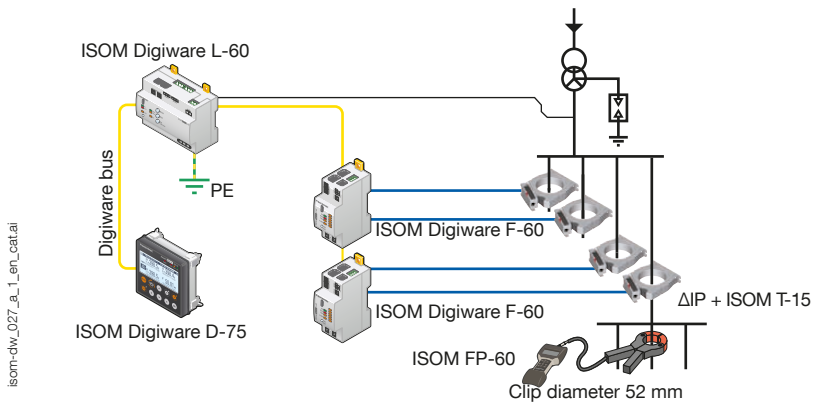
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Applications

This IMD can be used for multiple applications:

- Industrial, especially in the case of speed controllers.
- AC, DC and combined networks:
 - Very large (up to 300 μF of leakage)
 - With power converters
- Railway applications
- Coupled networks
- Heating systems with thyristors
- Finds faults on high-interference networks.
- Locating transient faults.



General characteristics

IMD (insulation monitoring device)

- Automatically filters problems on the network.
- Digiware bus communication with ISOM Digiware D-x5 screen.
- Self-monitors the connection.
- Timestamped log.
- Measurement stops (disconnects the measuring circuit).

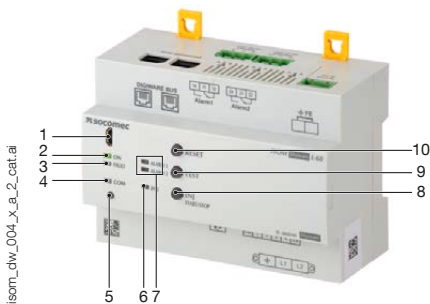
IFD (insulation fault detection) testing device

- OhmScanner technology to prevent reductions in insulation for each monitored circuit (with ISOM Digiware F-60).
- Adjustable search signal (1 - 5 - 10 - 25 mA).
- Synchronises with locating unit ISOM Digiware F-60 via Digiware bus.

Temperature monitoring

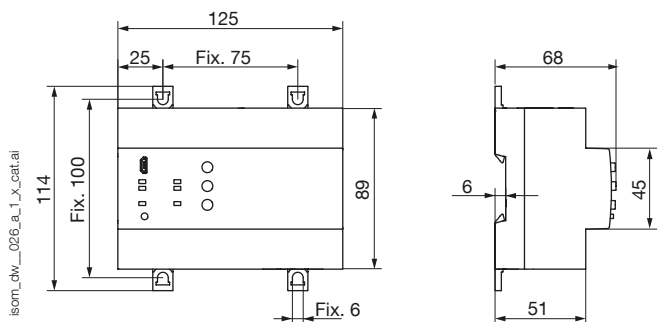
- Alarm on the fixed temperature threshold.

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. ALARM 1 and 2 indicators. Light up when the preset thresholds for Alert 1 or Alert 2 are reached.
7. INJ LED. Lights up when the booster is active.
8. INJ button. To start locating a fault.
9. TEST button. To run an autotest.
10. RESET button: To reset alarms.

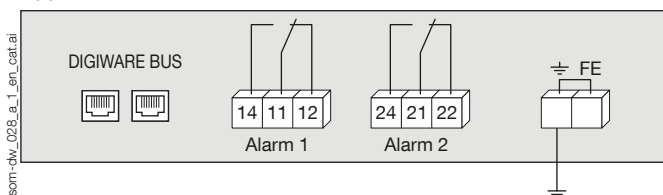
Dimensions (mm)



Type	Modular
Dimensions W x H x D	125 x 89 x 68 mm
Front panel protection degree	IP40
Terminal block protection degree	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

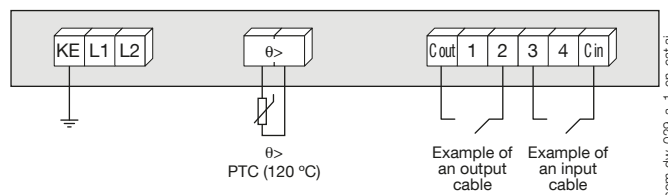
14 - 11 - 12: alarm relay output 1

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

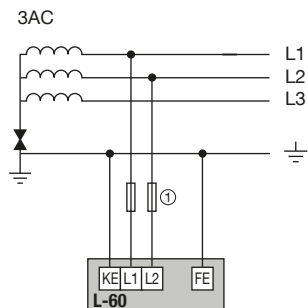
1 - 2 - 3 - 4: input or output connection (as per configuration)

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Connection to mains

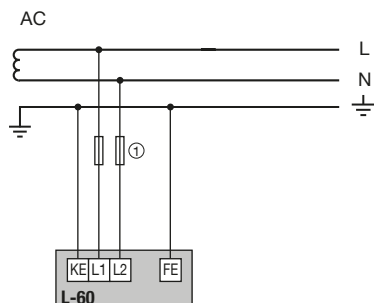
Three-phase network



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1. 2 A gG fuses

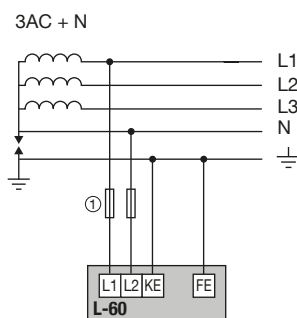
Single-phase network



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1. 2 A gG fuses

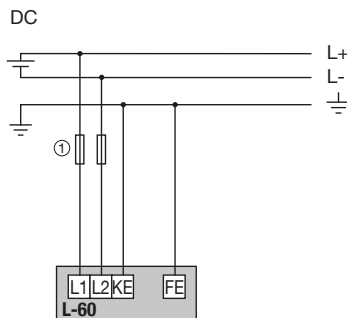
Three-phase network + N



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1. 2 A gG fuses

DC network

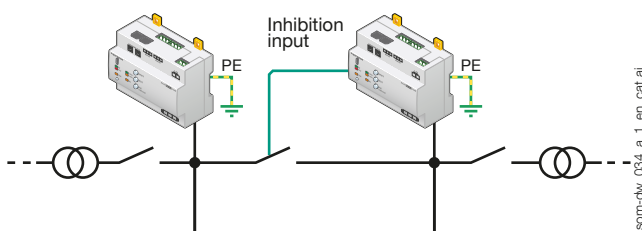


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1. 2 A gG fuses




Connections

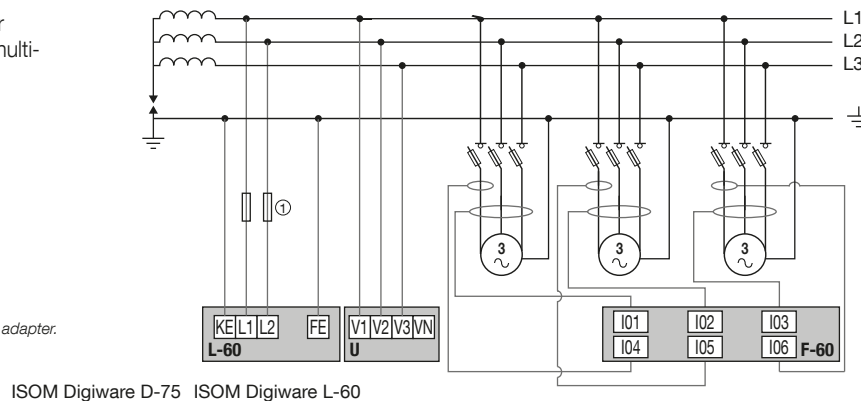
IMD automatically disconnects in the case of a network coupling.



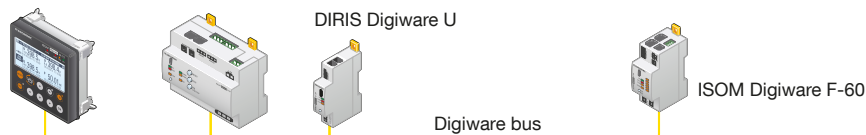
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Connection example with ISOM Digiware D-75, F-60, T-15 and DIRIS Digiware U for measuring insulation, locating faults and multi-measurements.

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



ISOM Digiware D-75 ISOM Digiware L-60



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Characteristics

Network voltage U_n	
AC range	AC 24 to 480 V
DC range	DC 24 to 480 V
Frequency	DC, 10 to 460 Hz
Rated insulation voltage	690 V
Auxiliary power supply U_s	
Power supply voltage	Digiware bus
Max. consumption	2.3 W
Fault alerts	
Number of thresholds	2
Type of threshold	Adjustable
Value of the threshold	0.5 kΩ to 1 MΩ
Max. leakage capacity	300 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 70 °C
Relative humidity	90% at 55 °C
Operating conditions (version t)	
Operating temperature	-10 to 70 °C
Storage temperature	-40 to 85 °C
Relative humidity	97% at 55 °C

References

Standard IMD model	Network voltage U _n	Alert threshold	Reference	
Standard model L-60	AC 24 to 480 V / DC 24 to 480 V	0.5 to 1,000 kΩ	4729 0110	
Heavy-duty IMD model	Network voltage U _n	Alert threshold	Reference	
Heavy-duty model L-60t	AC 24 to 480 V / DC 24 to 480 V	0.5 to 1,000 kΩ	4729 0111	
Accessories		Available for order in multiples of	Reference	
PTC temperature sensor (120 °C)			4729 0560	
Fuse circuit breakers to protect measurement inputs (type RM) 2-pole			5701 0020	
gG 10x38 2 A fuse		10	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.