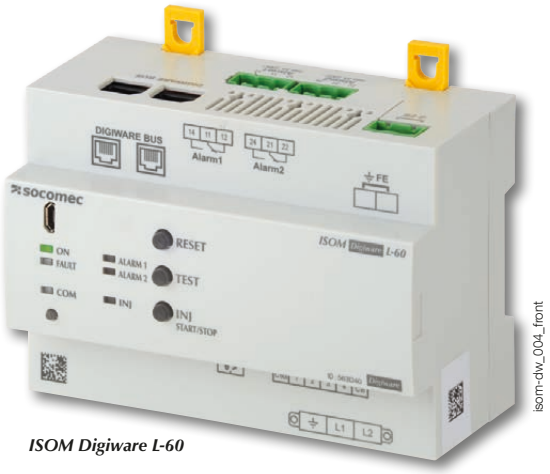
ISOM Digiware L-60

Control module for insulation and fault location

for power networks or control/command circuits



isom-dw_004_front

ISOM Digiware L-60

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**

METER SELECTOR DIGITAL TOOL AVAILABLE

ISOM Digiware L-60

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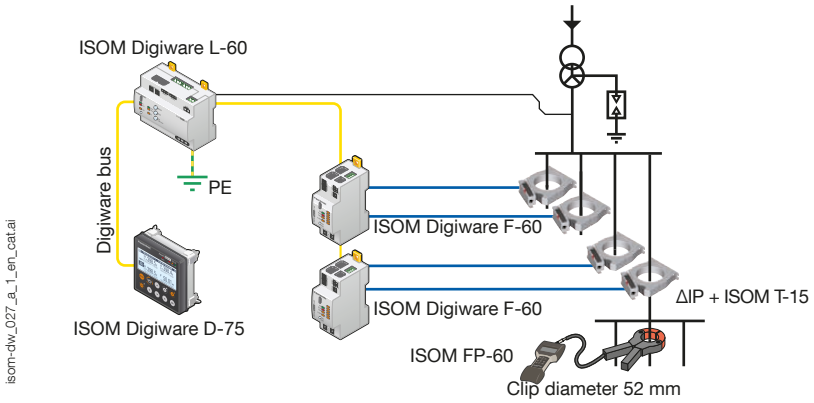
for power networks or control/command circuits

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.



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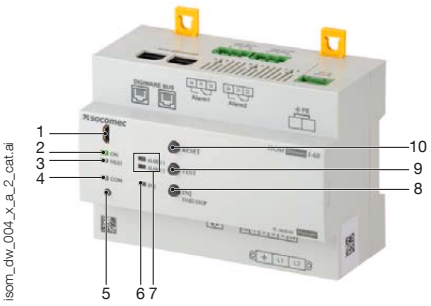
General characteristics

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



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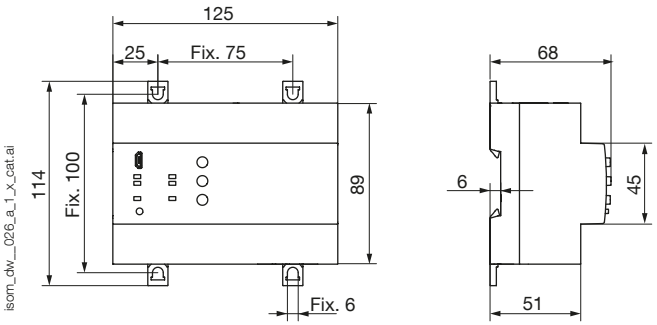
1. USB port for configuration.
2. ON indicator. Lights up when the device is active.
3. FAULT indicator for system alerts (connection, etc.)
4. COM indicator. Flashes when the communication bus is active.
5. Auto-addressing button.
6. ALARM 1 and 2 indicators. Light up when the preset thresholds for 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)



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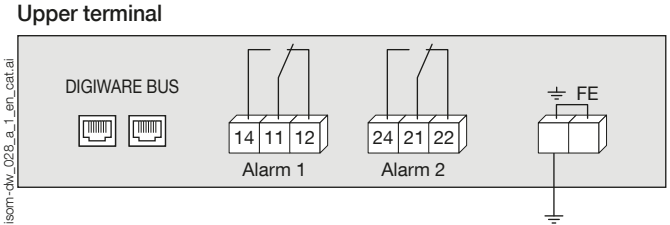
Type	Modular
Dimensions W x H x D	125 x 89 x 68 mm
Front panel protection degree	IP40
Terminal block protection degree	IP20
Rigid cable cross-section	0.2 to 2.5 mm²
Flexible cable cross-section	0.2 to 2.5 mm²
Weight	370 g

Terminals

Upper terminal



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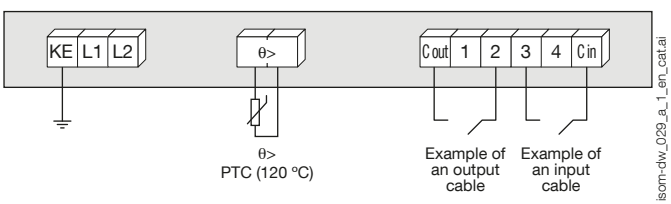
DIGIWARE BUS: Digiware bus connection to other Digiware units
14 - 11 - 12: alarm relay output 1
24 - 21 - 24: alarm relay output 2
TERRE FE: earth connection
KE - L1 - L2: mains voltage Un (see following page)

Lower terminal



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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)

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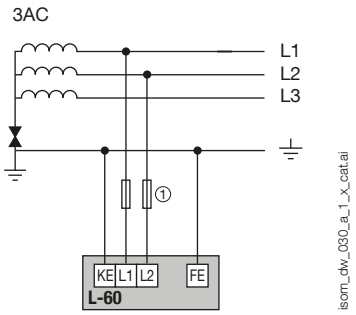
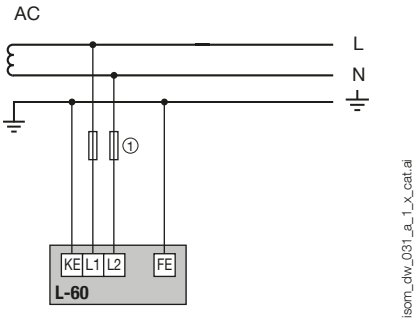
Connection to mains

Three-phase network



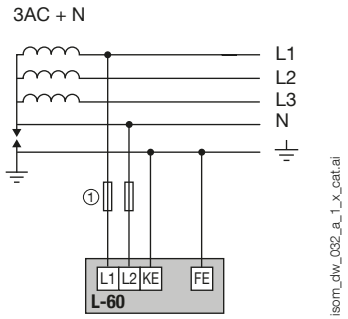
1. 2 A gG fuses

Single-phase network



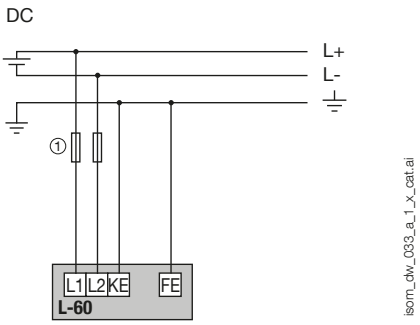
1. 2 A gG fuses

Three-phase network + N



1. 2 A gG fuses

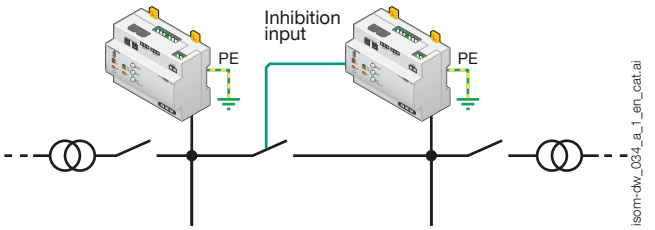
DC network



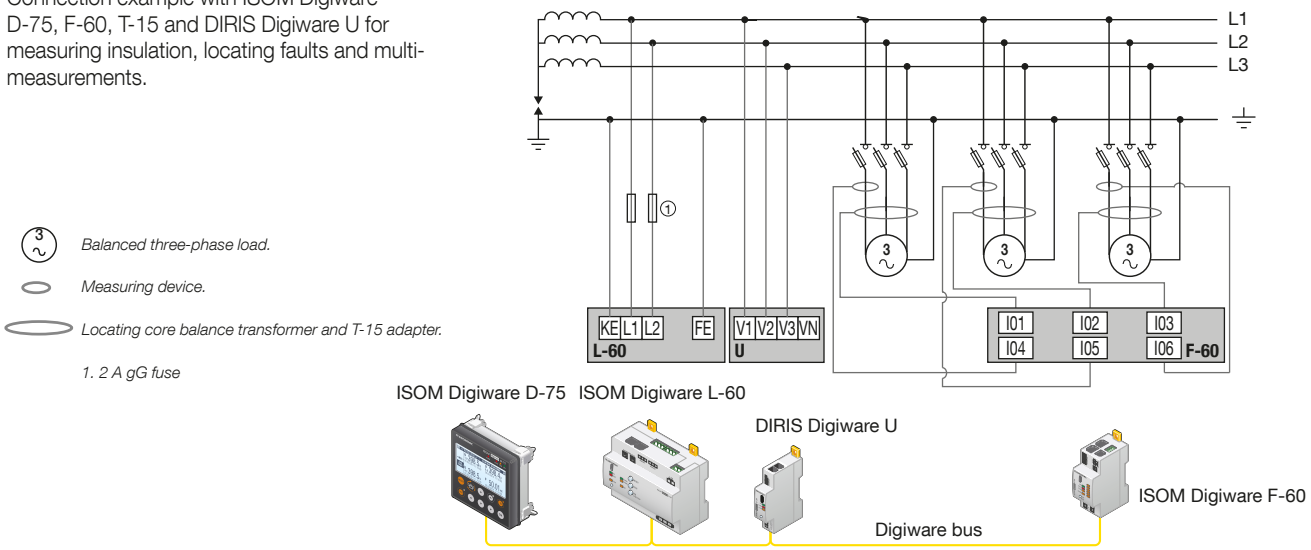
1. 2 A gG fuses

Connections

IMD automatically disconnects in the case of a network coupling.



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

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Innovative Power Solutions

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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.