IRDH275-435

Insulation Monitoring Device

Complete product-page dossier for buyer review, technical screening and quotation preparation.

01 Product overview

IRDH275-435 continuously measures insulation resistance in an unearthed network and reports two configurable alarm stages locally, by relay and over RS-485.

Continuous insulation supervision

The device measures insulation resistance while the unearthed network remains energized.

Wide coupling range

AC, DC and mixed systems are monitored within the documented nominal-voltage limits.

Two-stage alarm handling

Independently configured response values drive two relay outputs and the serial interface.

IRDH275-435 supervises insulation resistance in unearthed AC, DC and mixed-voltage systems. Selection depends on the complete suffix, network voltage, coupling arrangement and connected converter or DC-link components.

The device uses an active measuring signal and evaluates the complete network including leakage capacitance. Alarm thresholds, time delay, relay operating mode and RS-485 settings must be copied from the installed configuration.

After replacement, run the built-in test, verify the measuring circuit and protective conductor, simulate an approved insulation fault and confirm both local indication and remote alarm transmission.

02 Buyer identity

Manufacturer part number	IRDH275-435
Product type	Insulation Monitoring Device
System / platform	Bender IRDH275 unearthed AC and DC power systems
Lifecycle statement	Installed-base insulation-monitoring device

03 Published technical data

Nominal system voltage, AC	0 to 793 V
Nominal system voltage, DC	0 to 650 V
Supply voltage, AC	88 to 264 V
Supply voltage, DC	77 to 286 V
Power consumption	14 VA maximum

Response-value range	1 kohm to 10 Mohm
Measuring voltage	50 V maximum
Measuring current	280 uA maximum
System leakage capacitance	500 uF maximum
Alarm relays	2 changeover contacts

Interface	RS-485
Device protection	IP30
Terminal protection	IP20
Operating temperature	-10 to +55 deg C

04 Applications / compatibility

Unearthed industrial networks

Detect developing earth faults without immediate process shutdown.

Converter-fed systems

Supervise mixed AC/DC networks within the documented coupling boundary.

Critical-power systems

Provide staged insulation alarms where continuity of supply is required.

Predictive electrical maintenance

Trend insulation resistance and leakage-capacitance behavior.

05 Product precautions

Identify the monitored network

Record voltage, frequency, DC components and converter topology.

Preserve coupling conductors

Label measuring, earth, supply and relay terminals.

Export settings

Capture alarm values, delays, relay modes and address.

Check one monitor per network

Avoid parallel active insulation monitors unless explicitly approved.

Run the device test

Verify display, relay outputs and communication.

Simulate a controlled fault

Confirm response value and alarm routing before handover.

06 Lifecycle, available unit and technical notes

Lifecycle Status

Installed-base insulation-monitoring device. Copy both response thresholds, delay, relay energization, fault memory and serial settings only after the network and coupling arrangement have been confirmed.

Available Unit Details

Offered reference: Bender IRDH275-435. Check the -435 suffix, supply execution, network terminals, protective-earth path, relay assignments and RS-485 wiring. Confirm the IRDH275-435 monitor and the specifically quoted coupling, mounting or terminal accessories in the quotation.

Technical notes

Connected-network boundary: Identify every galvanically connected feeder, converter, filter and DC link included in the insulation measurement. Measuring-circuit integrity: Verify the network coupling and protective-earth connection before running internal or external fault tests. Two-stage alarm proof: Simulate an approved insulation fault and confirm display, both relays and serial alarm transmission.

07 Engineering FAQ

Which system-voltage limits apply to IRDH275-435?	Use it only within the documented 0-793 V AC or 0-650 V DC nominal system limits and the approved coupling arrangement.
Why must parallel insulation monitors be considered before fitting IRDH275-435?	Two active measuring devices on the same connected network can influence each other and invalidate the insulation reading.
How does system leakage capacitance affect IRDH275-435?	Higher capacitance can extend measuring and response time; the documented upper boundary is 500 uF.
Which alarm settings should be retained for IRDH275-435?	Record both response values, time delay, relay energization mode, fault memory and any start-up behavior.
What should the RS-485 check for IRDH275-435 include?	Verify address, protocol mode, termination, polarity and receipt of the correct measured value and alarm states.
How is the measuring connection of IRDH275-435 proven?	Inspect the network coupling and protective-earth path, then run the internal test and an approved external fault simulation.
What network changes require reassessment of IRDH275-435?	Adding converters, filters, DC links, large cable capacitance or galvanically connected sections can change the measuring boundary.
Which alarm and insulation checks complete commissioning of IRDH275-435?	Retain the saved configuration, internal-test result, approved simulated-fault response, relay operation and remote-system confirmation.

08 Quotation and handover

Match the complete marking	Match IRDH275-435, revision and visible labels.
Review the reference	Send the complete IRDH275-435 marking, label photos and required quantity.
Confirm the offer	Review the offered revision, condition, included items and documents for IRDH275-435.
Arrange dispatch	Confirm quantity, dispatch date and delivery details for IRDH275-435 in the quotation.

09 Separate verified listings

Emerson PR6423/10R-010 CON021
Eight-Millimetre Eddy-Current Sensor and Converter Assembly; separate listing, not an automatic substitute.

HIMA Z7127
Eight-Channel Analog Input Front Cable Plug; separate listing, not an automatic substitute.

Request current photographs and written quotation details from Apter Power.
sales13@apterpower.com | +86 18030235313
Quote the complete reference: IRDH275-435