

BY **FORTRES^S**

THE ELECTRICAL SAFETY WARNING INDICATOR SPECIALIST

INSTALLATION DATA SHEET Isolator Check Part No. RL-24i 1kV



The **REMLIVE RL-24i** Isolator Check provides the user with a positive check when isolating plant. It provides electrical isolation between the DIN rail unit and the door mounted display unit. The door unit is designed to fit through the front of a control panel or switch so the user can see a live/isolation status. The super bright **REMLIVE RL-24i** display provides the user with a quick and easy method of proof of isolation in lock out / tag out procedures.



CAUTION, RISK OF ELECTRIC SHOCK

- WARNING!** Do not fit **REMLIVE RL-24i** if the units are damaged in any way.
- IMPORTANT!** Live equipment can kill. Other safety procedures still apply. Test before touching.
- IMPORTANT!** If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- IMPORTANT!** This equipment should be installed by a competent person who is converse with local electrical regulations and standards.

GLOBAL TECHNICAL SUPPORT

Contact us: info@fortress-safety.com

Product FAQ: www.remlive.com/rl-24i-faqs

Connect **REMLIVE RL-24i** to the **OUTGOING** side of the Isolator / Circuit Breaker, making sure that the connections are electrically and mechanically sound and in accordance with current regulations for electrical installations. The **REMLIVE RL-24i** has embedded 500mA fuse protection up stream of internal surge suppression.

REPLACE the **REMLIVE RL-24i** unit if **EITHER** of the two sets of **TWO FLASHING INDICATORS FAIL TO FLASH ONCE A SECOND** when a live supply is connected, unless they have been deliberately switched to the OFF position, in which case only the phase indication LED's should be operational.

If uncertain about any application or aspect of fitting or operating REMLIVE RL-24i, contact the supplier.

No serviceable parts inside, in the event of failure please contact your supplier.

THIS EQUIPMENT MUST BE EARTHED

On 3 Phase installations the Neutral connection is Optional, however should two phases fail, the indicators will cease to operate if Neutral is NOT USED. **REMLIVE Limited strongly recommend the use of NEUTRAL and / or EARTH connections to ensure 100% availability of the REMLIVE Warning Indicator.** If a Neutral connection is not available, the Neutral connection can be connected to Earth, however, advice from a qualified electrical engineer should be taken before connecting in this way.

With Neutral & Earth connected, the Neutral LED and Flashing LED's will illuminate when Neutral to Earth exceeds 24 volts, even with all phases off. Effectively monitoring the Neutral voltage when phases have been correctly isolated.

DC APPLICATIONS

For DC applications external 500mA Time Delay fuses rated to the voltage application shall be used. No DC bus shall exceed 600V Line to Earth, with the maximum voltage between any two connections not exceeding 1kV.

MEASUREMENT CATEGORY IV

The input circuit is designed to withstand transient overvoltages according to measurement category IV. The equipment should not be subjected to transient overvoltage exceeding 8kV L-E. The internal surge arrestors may begin to operate at 700Vrms L-E [1.2kVrms L-L], additional protection may be necessary in applications where there is a risk of temporary overvoltage in excess of this. For full details of voltage configurations supported, please see the table on page 4.

INSTALLATION

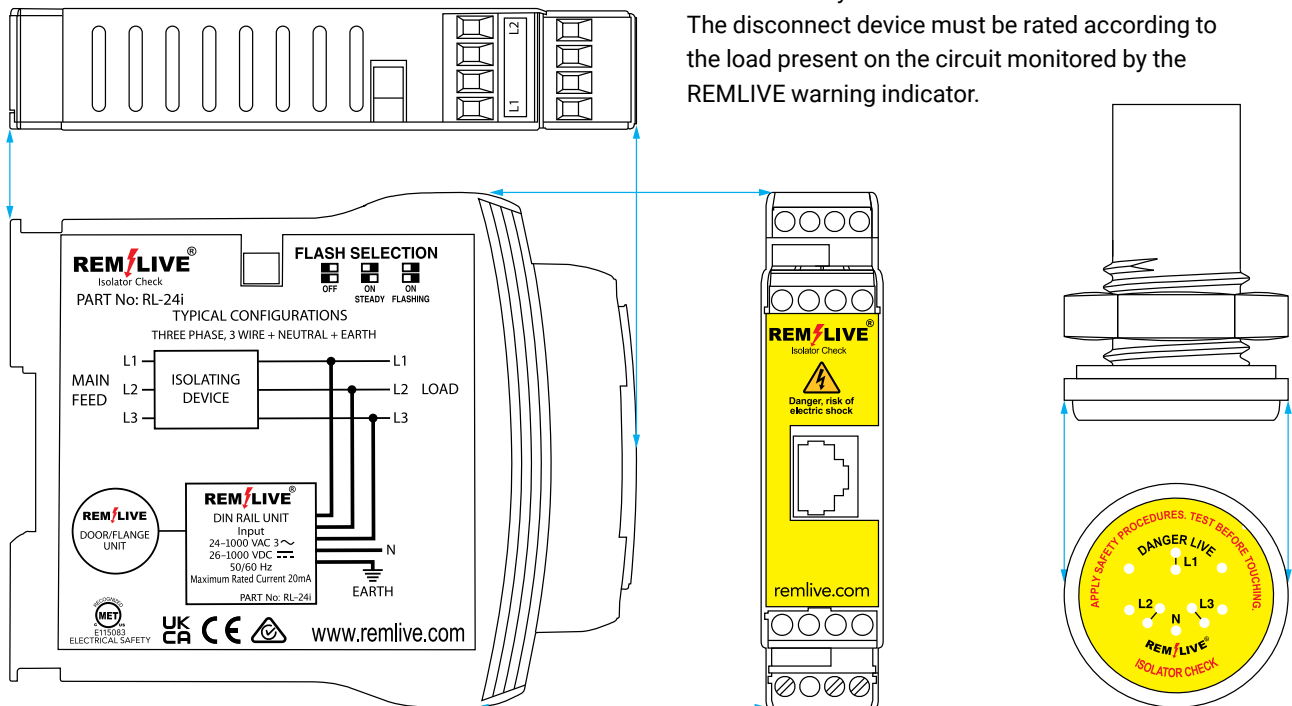
To mechanically install **REMLIVE RL-24i** simply clip the Main Panel Unit onto Din Rail (Top Hat). Fit Door Unit via 30.5mm hole, secure with locking nut and plug the RJ45 connector into the Main Panel Unit front fascia socket.

The equipment shall be connected to the supply using suitable wiring of at least 1mm², with insulation rated to the voltage of the system being monitored. Cables shall be coded or marked in accordance with local standards.

Cables must be secured to a fixed point in such a way that they are unable to become loose through pulling, vibration or movement. Where cables enter the wider enclosure, a suitable cable gland or other appropriate restraint shall be used.

A suitable disconnect device shall be installed in a location readily accessible and visible to the user.

The disconnect device must be rated according to the load present on the circuit monitored by the **REMLIVE** warning indicator.



SUPPLY DETAILS			
AC Voltages (50/60Hz) (Continuous)		DC Voltages (Continuous)	
Min	Max	Min	Max
24	1,000	26	1,000
Maximum Rated Current 20mA			

CONNECTION DETAILS
1 DC & Earth
1 Phase & Earth
1 Phase, Neutral & Earth
2 Phase & Earth
3 Phase & Earth
3 Phase, Neutral & Earth

DIMENSIONS
DIN Rail Module 22.5mm (W) x 100mm (H) x 122mm (D)
Door Display Unit 30.5mm mounting hole diameter. The indicator unit itself measures 57mm (Deep) x 26mm (Rear Diameter) / 41mm (Front Diameter).
Weight 232g total weight per RL-24i unit

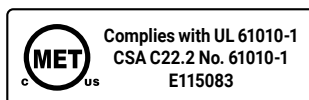
STANDARDS AND CERTIFICATIONS

The updated REMLIVE RL-24i has undergone independent testing to demonstrate compliance with the European harmonised standards necessary to apply the **CE** and **UKCA** marks. These are **EN 61326-1:2013** relating to electromagnetic compatibility and **EN 61010-2-030:2017** relating to the safety of electrical equipment.

The RL-24i meets all the requirements of the **MET Mark for the United States and Canada**. The MET Mark for product safety indicates compliance to federal regulations for safe use in the workplace. The RL-24i complies with **UL 61010-1** and **CSA C22.2 No. 61010-1**.

The RL-24i has been designed to support compliance with **IEC 60204 – Safety of Machines**. There is an internal diode connection to earth which allows the device to report the presence of hazardous voltages upon a failure of the neutral conductor. When performing insulation resistance tests please ensure that the negative terminal of your test equipment is connected to the earth conductor in order to reverse bias this diode.

REMLIVE Ltd is committed to demonstrating the highest standard of global environmental management. Our dedication is demonstrated by our compliance efforts as they apply to the **European Union Directive 2011/65/EU – Restriction of Hazardous Substances (RoHS) Directive** and **Commission Delegated Directive (EU) 2015/863**.



LIMITATIONS OF USE

REMLIVE RL-24i is housed in a robust UL94 V-0 flame retardant enclosure, which has been selected for its durability and protective, insulation and zero halogen properties. **REMLIVE RL-24i Main Panel Unit** has been designed to fit into enclosures having a suitable IP Rating for the environment in which the installation will normally operate and should **ALWAYS** be fitted in accordance with the manufacturer's recommendations. **REMLIVE RL-24i Door Unit** has been designed to meet with **IP66** requirements. This equipment is tested and certified for use at ambient temperature between -35°C to 55°C and below 5000m altitude.

LED ILLUMINATION SEQUENCE

The following sequences are related to the illumination and connection of the **REMLIVE RL-24i VISUAL SAFETY WARNING DEVICE**.

The two banks of two light emitting diodes at either side of the RL-24i door unit will flash if **REMLIVE RL-24i** detects a potential difference above 24Vac / 26Vdc between any two connected cables. Users can select, via DIL switches in the main panel unit, if this indication should be **ON FLASHING** or **ON STEADY** or **OFF ALTOGETHER**. See product labelling for details. Factory setting is **ON FLASHING**.

The four dual light emitting diodes towards the centre of RL-24i Door Unit, L1, L2, L3 and N will illuminate as follows:

AC VOLTAGES	ILLUMINATION			
	L1	L2	L3	N
When a single phase connection is made and:				
L1 is chosen for the live connection	ON	OFF	OFF	ON
L2 is chosen for the live connection	OFF	ON	OFF	ON
L3 is chosen for the live connection	OFF	OFF	ON	ON
When a three phase connection is made:	ON	ON	ON	OFF
NOTE: If a single phase is lost, the LED associated with that phase will go off and the Neutral LED will illuminate. Example: L2 fails:	ON	OFF	ON	ON
If two phases are lost, the LED's associated with those two phases will go off and the Neutral LED will illuminate. Example: L1 and L2 fail:	OFF	OFF	ON	ON
NOTE: If Neutral and Earth are connected and the Neutral line has in excess of 24 volts active, the Neutral LED will be illuminated, even with all phases off.	OFF	OFF	OFF	ON

DC VOLTAGES	ILLUMINATION			
	L1	L2	L3	N
If a Direct Current voltage is connected: Positive to L1 and Negative to N	ON	OFF	OFF	ON
NOTE: L2 or L3 can also be used for the positive connection.				

NOMINAL VOLTAGE OF INSTALLATION

The REMLIVE RL-24i supports the following configurations. If you have any questions regarding supported voltage configurations, please contact info@fortress-safety.com

VAC – 3 PHASE			
Nominal voltage	Voltage L-N	Voltage L-L	OVC
690V	400V	690V	Cat IV
1000V	590V	1000V	Cat III

Note: No single conductor may be more than 625VAC in normal operating conditions.

VDC		
Nominal voltage	Voltage P-E max.	OVC
600V	600VDC	Cat IV
1000V	825VDC	Cat III

Note: No single conductor may be more than 825VDC with respect to earth in normal operating conditions.

SURGE / IMPULSE WITHSTAND	
(1.2/50, 8/20µs according to IEC 61000-4-5 & IEC 61180-1)	
Mode of Impulse	Amplitude (+/-)
Line - Earth	8kV
Line - Neutral	2.4kV
Line - Line	2.4kV

TEMPORARY OVERVOLTAGE		
Duration	Voltage	Trise
1s	2000V	30K
5s	1800V	80K
60s	1500V	20K
Indefinite*	1200V	5K

***Note:** Permanent operation may impair performance.

VOLTAGE TOLERANCES		
Range	Maximum	Minimum
Nominal Voltage	+10%	-11%

Note: Under normal operating conditions. Utilization voltage range in accordance with IEC 60038:2012

INSULATION RESISTANCE
Phase to Earth
>20Mohm

Note: Resistance in accordance with AS/NZS 2081.4

CURRENT / POWER	
Maximum rated current	Maximum power dissipation
20mA	20W