

Application of Overvoltage Arrestor

The Resi MAX / MAX 4 Series of Overvoltage Arrestor equipment includes single- and three-pole arrestors for limiting overvoltages in low voltage consumer switchboards against overvoltages, such as those induced by distant lightning strikes or by switching operations.

Warning

The use of the Resi MAX / MAX 4 Series overvoltage arrestor is only permitted within the limits shown herein. If the overvoltage arrestor is subject to loads outside the stated values, e.g. due to a direct lightning strike, the Overvoltage Arrestor and the equipment connected can be destroyed.

The Resi MAX / MAX 4 Series Overvoltage Arrestor uses varister technology. The device clamps voltages greater than 350V. The higher the voltage the greater the clamping effect. The performance of these devices is excellent, however, high voltages can still occur in some situations causing damage to electrical equipment.

The overvoltage arrestor is to be checked by the electrician for signs of external damage prior to installation and is not to be installed if damage or any other defect is detected in this check.

Note: opening or otherwise tampering with the overvoltage arrestor is strictly prohibited for safety reasons and voids the warranty.

Installation Instructions

Surge Protection Devices

Resi MAX™ and MAX 4™ Series

920RM/1, 940RMT/1, 940RMT/3

Installation

When an arrestor is installed at the main switchboard (MEN connection). The input of the arrestor may be fitted to the active conductor (L1, L2, L3) and the output of the arrestor is earthed.

A connection must exist to the equipotential bonding system. The maximum voltage at the supply terminal must not exceed 350V.

The overvoltage arrestor is to be connected on the load side of the main switch and before the residual current device.

Connection of Remote Alarm Contacts

The 940RMT is fitted with terminals for remote alarms.

The plug-in terminal block (supplied loose with the arrestor) is first connected and then inserted into the contact hole provided on the arrestor until it engages. Ensure that the terminal block is not inserted until the arrestor is fitted onto the DIN rail.

Unless special overvoltage protection measures are implemented, the remote alarm line is only to be laid inside the building, otherwise the protection offered by the arrestor could be adversely affected.

Fault Indicator

The power handled by the arrestor is monitored by a built-in thermal supervisory device. This device automatically disconnects the overvoltage arrestor from the supply network in the event of a thermal overload fault.

Subsequent electrical equipment is no longer protected against overvoltages. This is indicated by a red defect indicator in the window.

Insulation Measurement

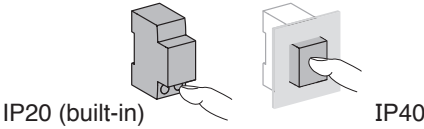
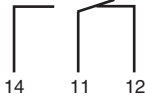
The arrestor must be disconnected on the earth side for making insulation measurements on the customer's electrical system, otherwise the measurement result can be affected.

Local Regulations

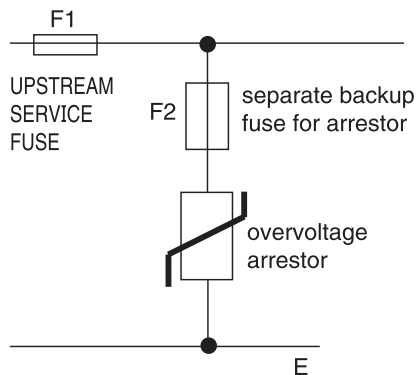
To ensure compliance to local rules please consult local service rules.

Model	Poles	I_{max}	Removable cartridge	Remote Alarm Auxiliary	Replacement Cartridge
920RM/1	1	20kA	Yes	No	920PM
940RMT/1	1	40kA	Yes	Yes	940PM
940RMT/3	3	40kA	Yes	Yes	940PM (1 per pole)

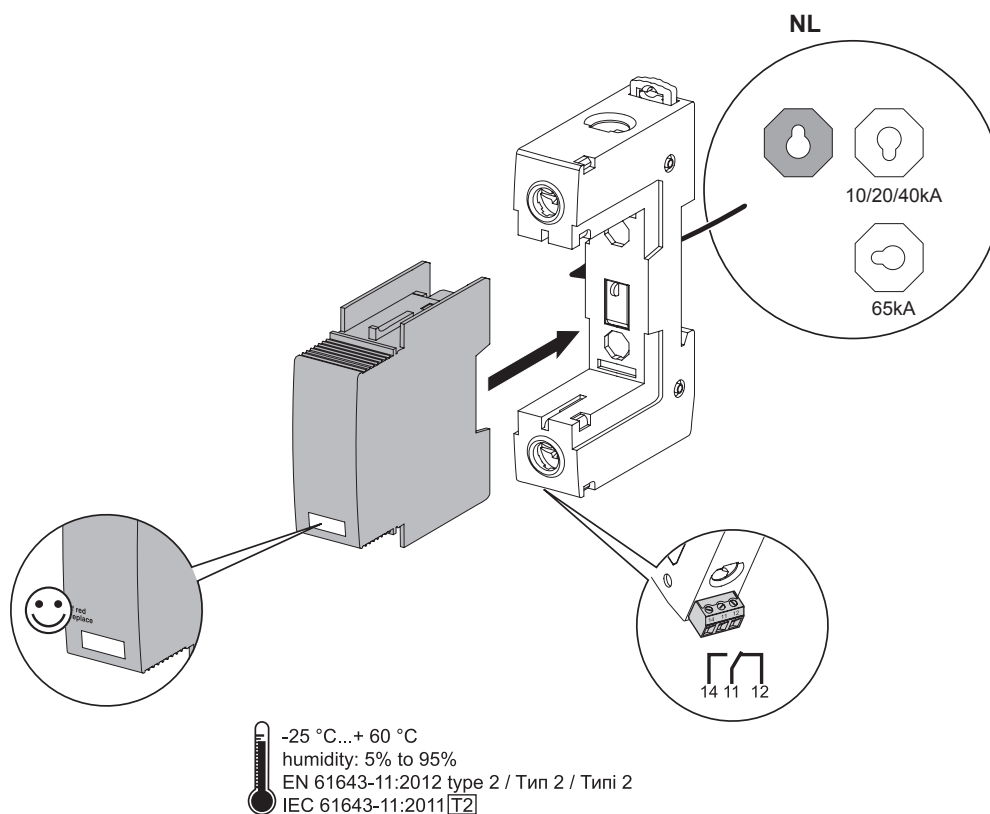
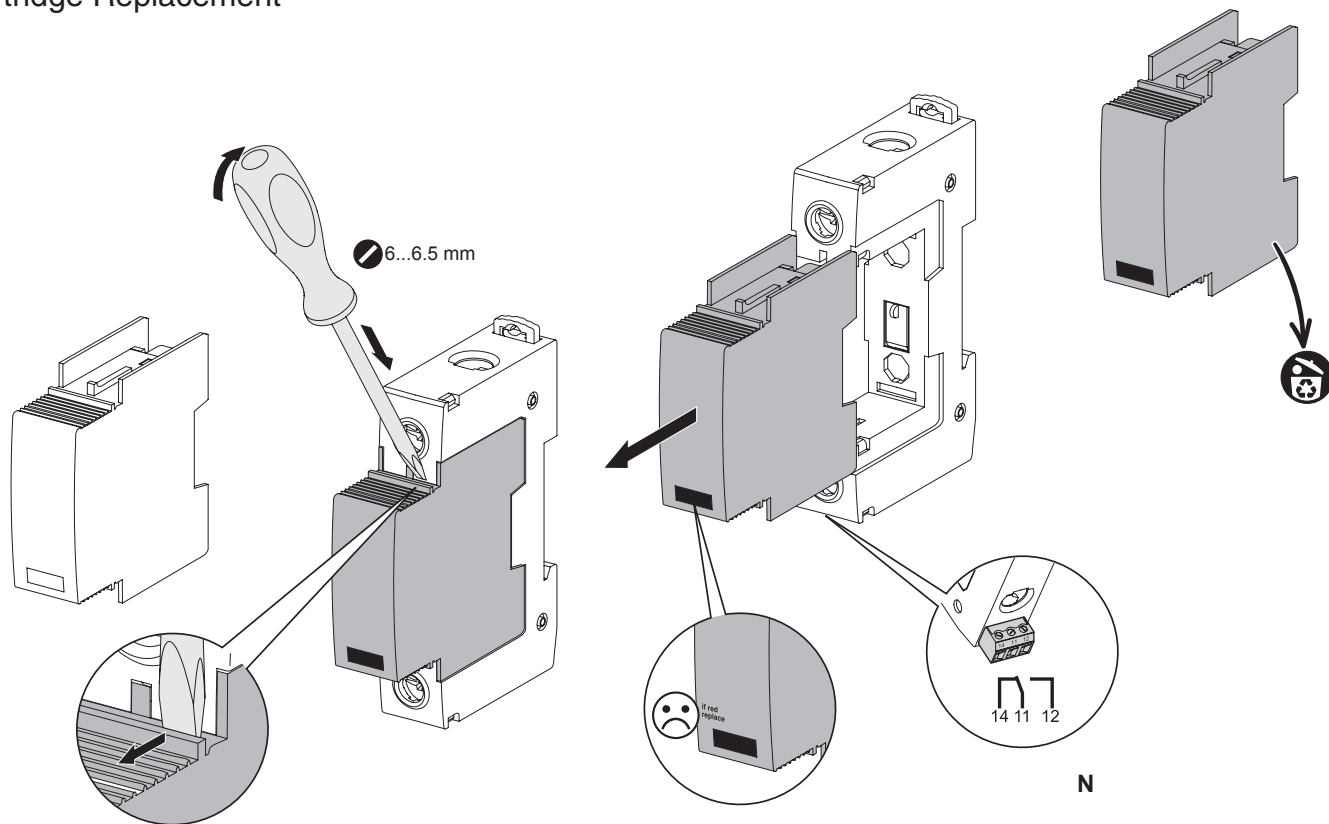
Technical data

		920RM/1	940RMT/1	940RMT/3
Tested to		IEC 61643-11: 2011		
Maximum permanent operating voltage	U_c	350V~		
Nominal discharge current (8/20)	I_n	5kA	15kA	15kA
Maximum discharge current (8/20)	I_{max}	20kA	40kA	40kA
Protection level	U_p	$\leq 1.2kV$	$\leq 1.6kV$	$\leq 1.6kV$
Operating voltage	U_e	240V AC $\pm 6\%$		240/415V AC $\pm 6\%$
Earthing System		TT, TN-S (1P+N, 3P+N), TN-C		
Backup fuse (only required if not already provided in the mains)		$\leq 125A$ gL/gG		
Degree of protection (IEC 60529)				
Operating temperature range		$-25^{\circ}C$ to $60^{\circ}C$		
Humidity Range		5% to 95%		
Short circuit withstand (Iscsr)		50kA (50Hz)		
Ground residual current (IPE)	$I_{PE(L-PE)}$	600 μA for 1P, 3P		
Type of Connection Terminals		Rigid: 2.5 to 25 mm ² Flexible or with ferrule: 4 to 16mm ²		
Mounting		Indoor on 35mm DIN rail		
Remote indication of satisfactory operation		By contact NO, NC max 1.5mm ² cable max 250V / 0.25A		

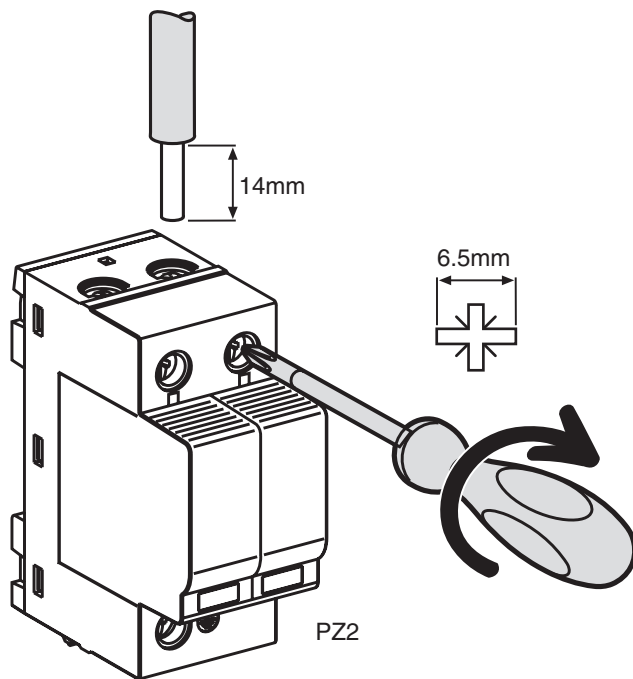
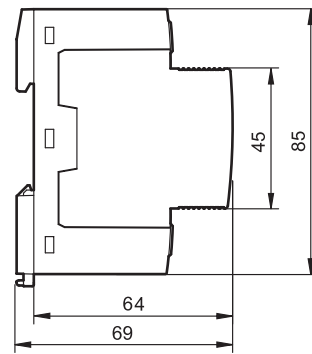
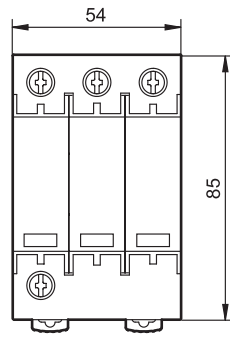
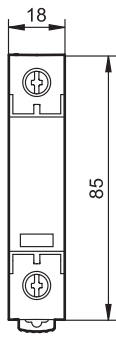
Upstream service fuse	Short circuit level	Backup fuse for arrester	
		920RM	940RM
$F1 \leq 125A$	$I_{sc} < 50kA$	No need for F2	
$F1 > 125A$	$I_{sc} < 50kA$	F2=125A gG	F2=125A gG
	$I_{sc} < 25kA$	F2=63A gG	F2=63A gG
	$I_{sc} < 15kA$	F2=32A gG	F2=50A gG



Cartridge Replacement



Dimensions and Connection



⚡ ⚠ DANGER



HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- This device must only be installed and serviced by qualified electrical personnel.
- Turn off all power before working on the device.

Failure to follow these instructions will result in death or serious injury.

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