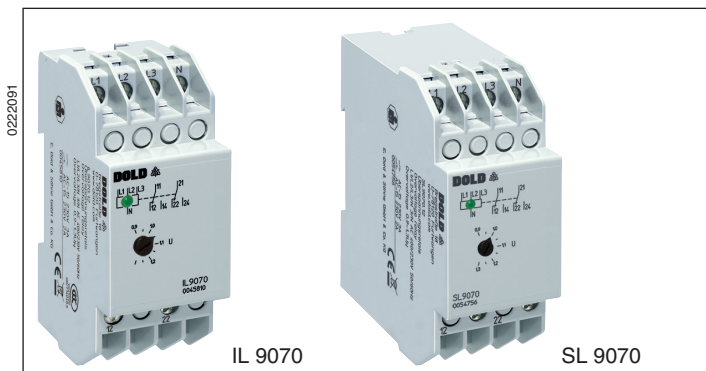


VARIMETER Overvoltage Relay IL 9070, SL 9070

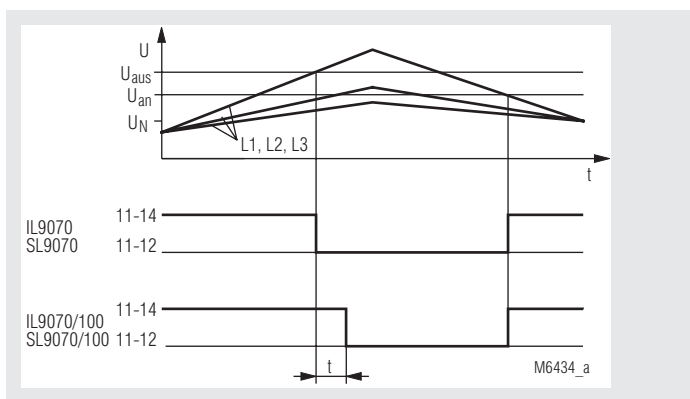
Translation
of the original instructions



0222091

- According to IEC/EN 60255-1
- Identification of overvoltage in three-phase voltage systems
- With asymmetry identification (even with feed back voltage) as an option
- Single-phase connection possible
- Variable setting value
- Fixed time delay as an option
- Closed circuit operation
- LED display
- Independent of phase sequence
- Optionally for 3P3W Systems
- 2 changeover contacts
- Devices available in 2 enclosure versions:
 - IL 9070: Depth 59 mm, with terminals at the bottom for installation systems and industrial distribution systems according to DIN 43880
 - SL 9070: Depth 98 mm, with terminals at the top for cabinets with mounting plate and cable duct
- Width 35 mm

Function Diagram



Approvals and Markings



*) Only IL 9070

Applications

Monitoring of single- and three-phase voltage systems to identify overvoltage and asymmetry.

Indicators

LED on green: Output relay activated
LED on red: Overvoltage / asymmetry

Technical Data

Input

Nominal voltage U_N :
Single-phase connection: AC 100 V, 115 V, 220 V, 230 V, AC 400 V, 415 V, 440 V, 500V

3-phase without
Neutral connection: 3AC 100 V, 115 V, 220 V, 230 V, 3AC 400 V, 415 V, 440 V, 500 V

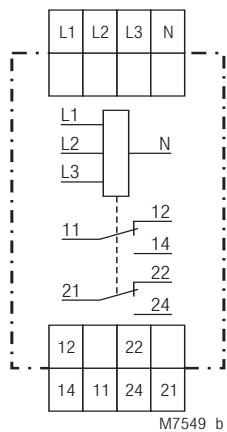
3-phase with
Neutral connection: 3/N AC 100 V / 58 V; 3/N AC 110 V / 64 V; 3/N AC 200 V / 115 V; 3/N AC 220 V / 127 V; 3/N AC 230 V / 133 V; 3/N AC 400 V / 230 V; 3/N AC 415 V / 240 V; 3/N AC 440V / 254 V; 3/N AC 500 V / 290 V

Voltage range: 0.7 ... 1.3 U_N
Maximum overload: 1.35 U_N , permanent
Nominal consumption: Approx. 8 VA (L3-N)
Nominal frequency: 50 / 60 Hz
Input resistance: Approx. 180 k Ω (L1-N, L2-N)

Setting Ranges

Setting value U_{off} : 0.9 ... 1.3 U_N
Hysteresis: Approx. 4 %
Asymmetry identification
IL 9070/010, SL 9070/010: Approx. 6 ... 8 % phase asymmetry
Delay time
IL 9070/100, SL 9070/100: 0.5 or 1 s, fixed

Circuit Diagram



M7549_b

IL 9070.12, SL 9070.12

Technical Data

Output

Contacts

IL 9070.12, SL 9070.12:	2 changeover contacts
Contact material:	AgNi
Switching voltage:	AC 250 V
Thermal current I_{th}:	4 A
Switching capacity	
To AC 15	
NO contact:	3 A / AC 230 V IEC/EN 60947-5-1
NC contact:	2 A / AC 230 V IEC/EN 60947-5-1
Electrical life	IEC/EN 60947-5-1
To AC 15 at 1 A, AC 230 V:	5 x 10 ⁵ switching cycles
Short circuit strength	
max. fuse rating:	4 A gG / gL IEC/EN 60947-5-1
Mechanical life:	30 x 10 ⁶ switching cycles

General Data

Operating mode:	Continuous operation
Temperature range:	
Operation:	- 20 ... + 60 °C
Storage:	- 25 ... + 60 °C
Relative air humidity:	93 % at 40 °C
Altitude:	< 2000 m
Clearance and creepage distances	
Rated rated impulse voltage / pollution degree:	4 kV / 2 IEC 60664-1
EMC	
Electrostatic discharge:	8 kV (air) IEC/EN 61000-4-2
HF irradiation	
80 MHz ... 1 GHz:	10 V / m IEC/EN 61000-4-3
1 GHz ... 2 GHz:	10 V / m IEC/EN 61000-4-3
2 GHz ... 2.7 GHz:	10 V / m IEC/EN 61000-4-3
Fast transients:	4 kV IEC/EN 61000-4-4
Surge voltages	
Between	
wires for power supply:	2 kV IEC/EN 61000-4-5
Between wire and ground:	2 kV IEC/EN 61000-4-5
Interference suppression:	Limit value class B EN 55011
Degree of protection	
Housing:	IP 40 IEC/EN 60529
Terminals:	IP 20 IEC/EN 60529
Housing:	Thermoplastic with V0 behaviour according to UL subject 94
Vibration resistance:	Amplitude 0.35 mm, frequency 10 ... 55 Hz, IEC/EN 60068-2-6
Climate resistance:	20 / 060 / 04 IEC/EN 60068-1
Terminal designation:	EN 50005
Wire connection:	2 x 2.5 mm ² solid or 2 x 1.5 mm ² stranded ferruled DIN 46228-1/-2/-3/-4
Wire fixing:	Flat terminals with self-lifting clamping piece IEC/EN 60999-1
Fixing torque:	0.8 Nm
Mounting:	DIN rail IEC/EN 60715
Weight	
IL 9070:	110 g
SL 9070:	137 g

Dimensions

Width x height x depth

IL 9070:	35 x 90 x 59 mm
SL 9070:	35 x 90 x 98 mm

Standard Type

IL 9070.12 3/N AC 400 / 230 V	
Article number:	0045810
• Output:	2 changeover contacts
• Nominal voltage U_N :	3/N AC 400 / 230 V
• Width:	35 mm
SL 9070.12 3/N AC 400 / 230 V	
Article number:	0054756
• Output:	2 changeover contacts
• Nominal voltage U_N :	3/N AC 400 / 230 V
• Width:	35 mm

Variants

IL 9070/001:	For 3P3W systems
IL 9070/010:	With asymmetry identification, even when there is feed back voltage
IL 9070/100:	With a fixed delay time

Ordering example for variants

