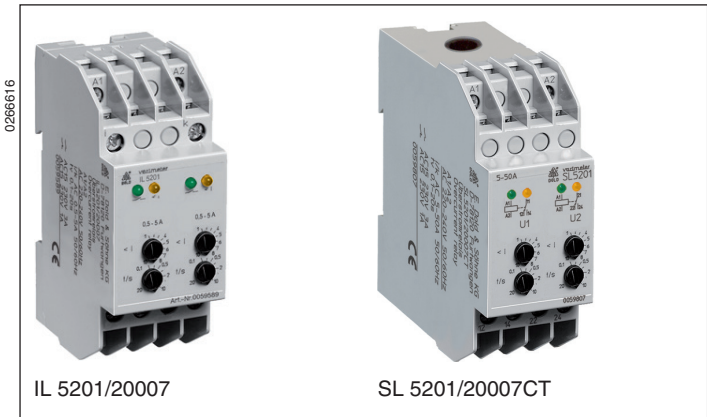


Monitoring Technique

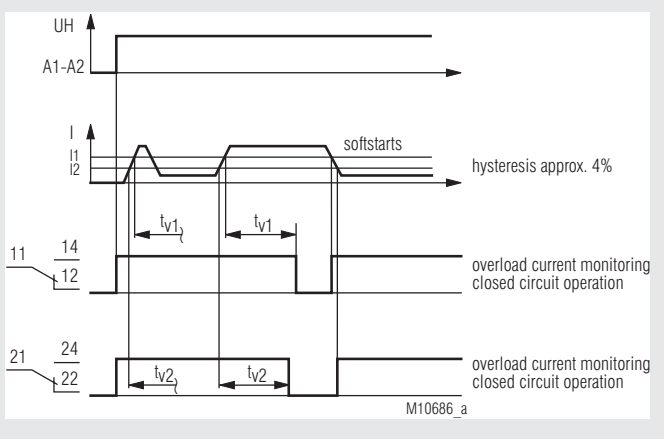
VARIMETER Overcurrent Relay IL 5201/20007, SL 5201/20007CT

Translation
of the original instructions



- According to IEC/EN 60255-1
- 2 independent relays in once enclosure
- 2 measuring ranges from 0.5 to 5 A
- Adjustable response values
- Fixed hysteresis
- Adjustable switching delay
- Closed circuit operation
- LED indicators
- With auxiliary voltage
- Galvanic separation between auxiliary circuit and measuring circuit
- 2 models available:
 - IL 5201: 63 mm deep with terminals near to the bottom to be mounted in consumer units or industrial distribution systems according to DIN 43880
 - SL 5201: 100 mm deep with terminals near to the top to be mounted in cabinets with mounting plate and cable ducts
- Width: 35 mm

Function Diagram



Approvals and Markings



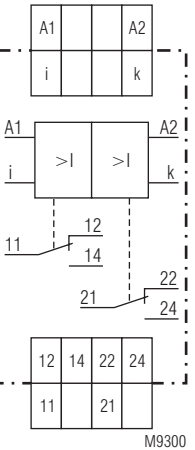
Applications

Overcurrent detection in single phase or 3-phase voltage systems

Indicators

LEDs green: On, when supply voltage connected
LEDs yellow: On, when output relay active

Circuit Diagram



Connection Terminals

Terminal designation	Signal description
A1+, A2	Auxiliary voltage U_H
i, k	Current measuring circuit AC
11, 12, 14	Fault signal relay (1. changeover contact)
21, 22, 24	Fault signal relay (2. changeover contact)

Technical Data	
Measuring Circuit	
Measuring ranges	
IL 5201/20007:	2 separate measuring circuits 0.5 ... 5 A adjustable
SL 5201/20007CT:	2 separate measuring circuits 5 ... 50 A adjustable
Nominal frequency:	50 ... 400 Hz
Thermal continuous current ambient-temperature:	20 A / 50°C 15 A / 60°C
Temperature influence:	≤ 0.05 % / K
Reaction time:	See characteristic switching delay
Internal resistance:	< 5 mΩ

Setting Ranges

Setting of response value:	Infinetely variable at measuring range
Hysteresis:	Approx. 4 % of setting range, factory set fixed value
Repeat accuracy:	≤ ± 1 %
Time delay tv:	0.1 ... 20 s adjustable

Auxiliary Circuit

Auxiliary voltage U_H:	AC 220 ... 240 V
Voltage range:	0.8 ... 1.1 U _H
Nominal consumption:	2 x 2.3 VA
Nominal frequency:	50 / 60 Hz
Frequency range:	± 5 %

Output

Contacts:	2 x 1 changeover contacts
Thermal current I_{th}:	2 x 5 A
Switching capacity	
To AC 15	
NO contact:	3 A / AC 230 V IEC/EN 60947-5-1
NC contact:	1 A / AC 230 V IEC/EN 60947-5-1
Electrical life	
At 1 A, AC 230 V, cos φ = 1	
NO contact:	3 x 10 ⁵ switch. cycl.
Short circuit strength	
max. fuse rating:	4 A gG / gL IEC/EN 60947-5-1
Mechanical life:	> 50 x 10 ⁶ switching cycles

General Data

Nominal operating mode:	Continuous operation
Temperature range	
Operation:	- 20 ... + 60°C
Storage:	- 25 ... + 70°C
Altitude:	< 2000 m
Clearance and creepage distance	
Rated impulse voltage / pollution degree:	IEC 60664-1
Auxiliary voltage-contacts:	4 kV / 2
Auxiliary voltage-measur. circuit:	6 kV / 2
Measuring circuit-contacts:	6 kV / 2
The contacts are not designed for voltage systems with 400 / 690 V	
EMC	
Electrostatic discharge (ESD):	8 kV (air) IEC/EN 61000-4-2
HF irradiation	
80 MHz ... 1 GHz:	20 V / m IEC/EN 61000-4-3
1 GHz ... 2,7 GHz:	10 V / m IEC/EN 61000-4-3
Fast transients:	4 kV IEC/EN 61000-4-4
Surge voltage	
Between	
wires for power supply:	2 kV IEC/EN 61000-4-5
Between wire and ground:	4 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 VO behaviour accroding to UL subject 94

Technical Data	
Vibration resistance:	Amplitude 0.35 mm frequency 10 ... 55 Hz, IEC/EN 60068-2-6 20 / 060 / 04 IEC/EN 60068-1
Climate resistance:	EN 50005
Terminal designation:	
Wire connection:	2 x 2.5 mm ² solid or 2 x 1.5 mm ² stranded wire with sleeve DIN 46228-1/-2/-3/-4
Min. cross section:	0.6 mm ²
Stripping length:	10 mm
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 5201/20007:	Approx. 124 g
SL 5201/20007CT:	Approx. 245 g

Dimensions

IL 5201/20007:	35 x 90 x 63 mm
SL 5201/20007CT:	35 x 90 x 100 mm

Standard Types

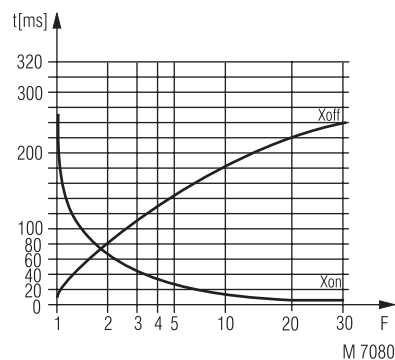
IL 5201/20007 AC 220 ... 240 V 50/60 Hz 0,5 ... 5 A
Article number: 0059589

- Single phase
- 2 adjustable measuring ranges up to 5 A
- Closed circuit operation
- Auxiliary voltage U_H AC 220 ... 240 V
- 2 x 1 changeover contacts
- Width: 35 mm

SL 5201/20007CT AC 220 ... 240 V 50/60 Hz 5 ... 50 A
Article number: 0059807

- Single phase
- 2 adjustable measuring ranges up to 50 A
- Closed circuit operation
- Auxiliary voltage U_H AC 220 ... 240 V
- 2 x 1 changeover contacts
- Width: 35 mm

Characteristic



Switching delay

The characteristic shows the switching delay depending on the values of X_{on} - X_{off} when switching the current on or off. A slow current change reduces the delay.

$$F = \frac{I_{\text{applied}}}{I_{\text{setting}}}$$