

## VARIMETER

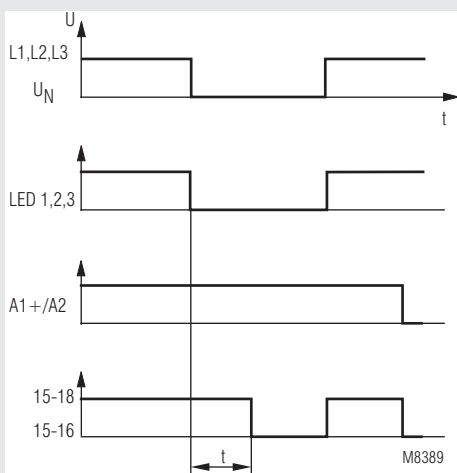
### Phase Failure Relay, With Time Delay IL 5201/20006

Translation  
of the original instructions



- According to IEC/EN 60255-1
- Monitoring of phase failure in 3-phase voltage systems
- 4 time ranges 0.25 ... 640 min adjustable
- Auxiliary supply DC 48 V
- Independent of phase sequence
- Single phase connection possible
- De-energized on trip
- LED indicator for each phase and state of output contacts
- Output 1 changeover contact
- Width 35 mm

### Function Diagram



### Approvals and Markings



### Applications

Monitoring of 3 phase voltage systems for phase failure. On phase loss the output relay is de-energized after an adjustable time delay (contact 15-18 closed)

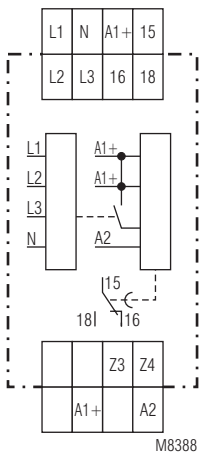
### Indicators

- LED L1, L2, L3: On, when the corresponding phase voltage is applied
- LED A1 + / A2: On, when output relay is energized (contact 15-18 closed)

### Notes

On loss of neutral all LEDs are off also when all 3 phases are present. To make sure that no voltage is applied in this case it must be proved by measuring.

### Circuit Diagram



### Connection Terminals

Terminal designation	Signal description
A1+, A2	Auxiliary voltage U <sub>H</sub>
L1, L2, L3	Phase voltage L1, L2 and L3
N	Neutral
15, 16, 18	Fault signal relay (changeover contact)
Z3	Bridge terminal time range Z3
Z4	Bridge terminal time range Z4

## Technical Data

### Input

<b>Nominal voltage <math>U_N</math>:</b>	3/N AC 400/230 V
<b>Voltage range:</b>	0.8 ... 1.15 $U_N$
<b>Nominal frequency:</b>	50 / 60 Hz
<b>Frequency range:</b>	45 ... 65 Hz

### Auxiliary Circuit

<b>Auxiliary voltage <math>U_H</math>:</b>	DC 24 V
<b>Voltage range of <math>U_H</math>:</b>	0.9 ... 1.25 $U_H$
<b>Nominal consumption:</b>	0.7 W

### Time Circuit

<b>Time ranges:</b>	4 different time ranges programmable via terminals:
Min - time range	Bridge
0.25 ... 2.5 min	Z4-----A2
1 ... 10 min	Z3-----A2
8 ... 80 min	Z3-----Z4-----A2
64 ... 640 min	(without)
<b>Tolerance of the max. scale value:</b>	- 5 ... + 25 %
<b>Time setting:</b>	Infinitely variable 1:10 on relative scale
<b>Repeat accuracy:</b>	≤ 0.5 % + 20 ms
<b>Voltage influence:</b>	≤ 1 %
<b>Temperature influence:</b>	≤ 0.25 % / K

### Output

<b>Contacts:</b>	1 changeover contact	
<b>Thermal current <math>I_{th}</math>:</b>	10 A up to 45°C (see continuous current limit curve)	
<b>Switching capacity</b>	To AC 15	
NO contact:	10 A / AC 230 V	IEC/EN 60947-5-1
NC contact:	5 A / AC 230 V	IEC/EN 60947-5-1
<b>Electrical life</b>	At 3 A, AC 230 V $\cos \varphi = 1$ : ≥ 5 x 10 <sup>5</sup> switching cycles	
<b>Short circuit strength</b>		
<b>max. fuse rating:</b>	10 A gG / gL	IEC/EN 60947-5-1
<b>Mechanical life:</b>	≥ 30 x 10 <sup>6</sup> switching cycles	

### General Data

<b>Operating mode:</b>	Continuous operation	
<b>Temperature range</b>		
Operation:	- 20 ... + 60°C	
Storage:	- 20 ... + 60°C	
<b>Altitude:</b>	< 2000 m	
<b>Clearance and creepage distances</b>		
Overvoltage category / pollution degree	4 kV / 2	IEC 60664-1
<b>EMC</b>		
Electrostatic discharge:	6 kV (air)	IEC/EN 61000-4-2
HF irradiation:	10 V/m	IEC/EN 61000-4-3
Fast transients:	4 kV	IEC/EN 61000-4-4
Surge voltages		
Between wires for power supply:	1 kV (0.5 kV at AC/DC 24 V)	IEC/EN 61000-4-5
Between wire and ground:	2 kV	IEC/EN 61000-4-5
Interference suppression:	Limit value class B	EN 55011
<b>Degree of protection</b>		
Housing:	IP 40	IEC/EN 60529
Terminals:	IP 20	IEC/EN 60529
<b>Housing:</b>	Thermoplastic with V0 behaviour according to UL subject 94	
<b>Vibration resistance:</b>	Amplitude 0.35 mm frequency 10 ... 55 Hz IEC/EN 60068-2-6	
<b>Climate resistance:</b>	20 / 060 / 04	IEC/EN 60068-1

## Technical Data

<b>Terminal designation:</b>	EN 50005
<b>Wire connection:</b>	2 x 2.5 mm <sup>2</sup> solid or 2 x 1.5 mm <sup>2</sup> stranded ferruled DIN 46228-1/-2/-3/-4
Min. cross section:	0.6 mm <sup>2</sup>
Stripping length:	10 mm
<b>Wire fixing:</b>	Flat terminals with self-lifting clamping piece IEC/EN 60999-1
<b>Fixing torque:</b>	0,8 Nm
<b>Mounting:</b>	DIN rail IEC/EN 60715
<b>Weight</b>	130 g

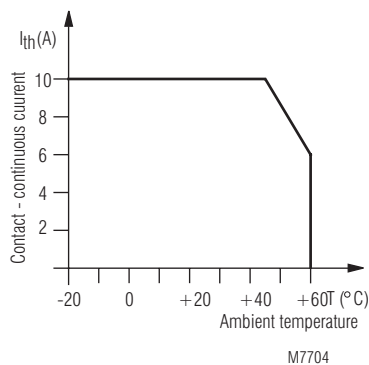
### Dimensions

<b>Width x height x depth:</b>	35 x 90 x 59 mm
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### Standard Type

IL 5201/20006	3/N AC 400 / 230 V	DC 48 V	0.25 ... 640 min
Article number:	0055397		
• Output:	1 changeover contact		
• Nominal voltage $U_N$ :	3/N AC 400 / 230 V		
• Auxiliary voltage $U_H$ :	DC 24 V		
• Time range:	0.25 ... 640 min adjustable		
• Width:	35 mm		

### Characteristic



Continuous current limit curve