



Current measuring relay IMR 3

with 3 measuring ranges and adjustable switch-off delay

Ring-type current transformer IW 32

Ratio 30:1 / Measuring range up to 60 A

Current-dependent switching of consumers, e.g. for switching-on the dust exhaust system when starting wood processing machines

Special features

- ▶ 3 measuring ranges: 20 mA-0.2 A / 0.2-2 A / 1.6-16 A
(extendable via external current transformer)
- ▶ Measuring circuit galvanically isolated
- ▶ Holding threshold display
- ▶ adjustable hysteresis
- ▶ Adjustable switch-off delay
- ▶ Output contacts potential-free



General information

The current measuring relay IMR 3 is used where loads are switched on or off depending on a defined alternating current. The potential-free monitoring of a preset power consumption for signalling and monitoring systems is also possible.

Supply voltage, measuring input and relay output are each galvanically isolated from each other.

Applications

Current-dependent switching in control, signalling and monitoring systems. E.g. control an dust exhaust system in wood processing plants, depending on the switching status of various machines.

Operation

The supply voltage of IMR 3 is applied to terminals L and N. The alternating current to be measured is conducted via the potential-free current measuring input (terminals k and I). The phase position is irrelevant here.

The required measuring range (0.2 A, 2 A or 16 A) is set via a rotary switch on the front panel.

Regardless of the selected measuring range, however, the current via terminals I and k can be up to 16 A at all times. An external current transformer (e.g. IW 32 for up to 60 A) can also be connected upstream for the detection of larger currents.

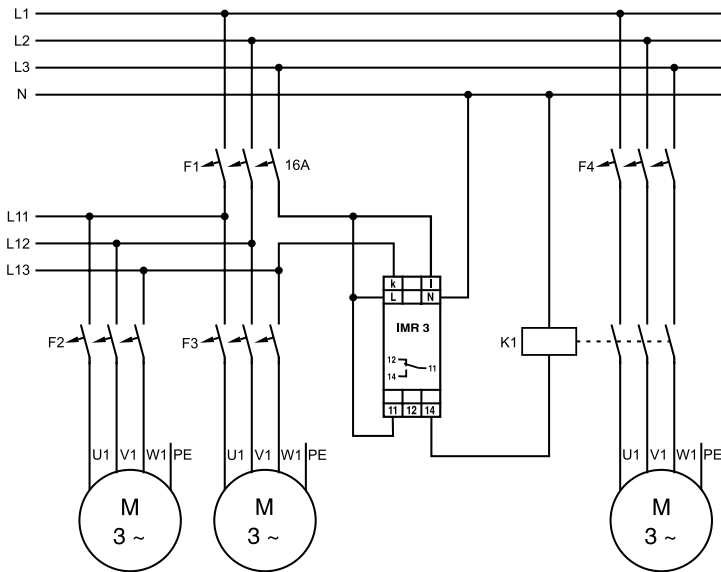
The desired switching-on threshold (within the selected measuring range) can be set exactly with the "I_{on}" controller. The setting range is 10% to 100% of the measuring range. Thus currents from 20mA to 16A can be detected.

With the aid of the adjustable hysteresis, the switch-off threshold can be set up to 50% below the value of the switch-on threshold. This results in a very wide holding range if required. This ensures stable switching behaviour even under difficult measuring conditions.

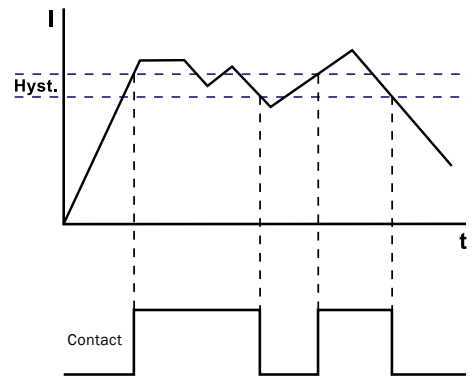
With the "t_{off}" controller, the IMR 3 can still set a switch-off delay in the range from 1s to 90s.

The "hold" LED indicates whether the measured current is within the set range and thus serves as a setting aid. The "on" LED indicates the current switching state of the relay.

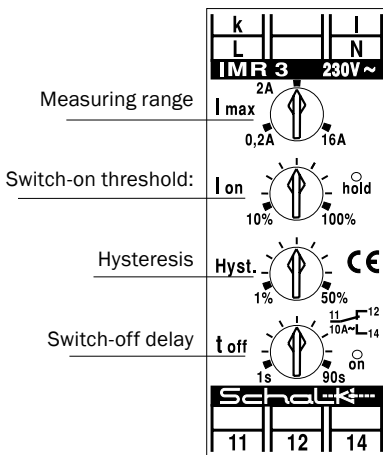
Connection example



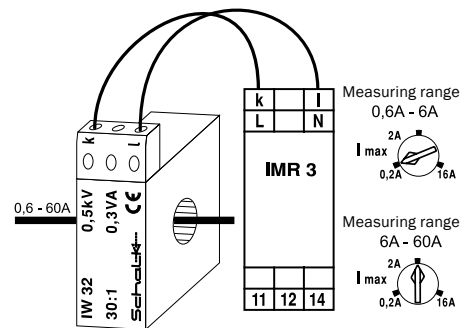
Functional diagrams IMR 3



Measuring relays



IMR 3 control elements



IMR 3 measurement up to 60 A with IW 32

Technical Data IMR 3

Operating voltage:	230 V 50/60 Hz 10 %
Power consumption:	approx. 0.65 W
Measuring range	20 mA-0,2 A / 0,2 A-2 A / 1,6 A-16 A
Switch-on threshold:	10-100 % of the measuring range
Hysteresis	1-50 % of the switch-on threshold
Switch-on delay	approx. 0.5s
Switch-off delay	adjustable 1-90s
Relay output	1 CO contacts potential-free 10 A 250 V AC
Connection terminals	Socket terminals with captive screws M3.5
Clamping range	0.5 mm ² - 4.0 mm ²
Strip length	6.0 mm - 6.5 mm
Screwing torque	0.80 Nm
Mounting	Click-mount on standard 35-mm rail (EN 60715)
External dimensions	18 x 88(45) x 58 mm
Installation depth	55 mm
Transformer input	max. 16 A / 250 V~ (100 % ED)
max. switching capacity	see "Relay contacts" data sheet
Mounting orientation	arbitrarily
Ambient temperature	-10°C to +45°C
RAL colour	grey 7035 / green 6029
Weight	approx. 80 g

Technical Data IW 32

Transformer ratio	30:1
Measuring range	0,6 A-60 A
Accuracy class	1
Nominal power	1.5 VA
Line resistance	max. 0.25 Ω (corresponds approx. 10 m supply cable with 2 x 1.5 mm ²)
Housing dimensions	32 x 32 x 15,5 mm ³
Hole diameters	10 mm

Order data

Item no.	EAN	Type	Designation
IMR309	4 046929 301008	IMR 3	Current measuring relay, 230V AC, 3 measuring ranges 0.02-16A
IW3200	4 046929 901031	IW 32	Ring-type current transformer 30:1