



Main

Range of Product	Harmony Control Relays
Product or Component Type	Pump control relay
Relay Type	Pump control relays
Product Specific Application	For 3-phase and single-phase pump
Relay name	RM35BA
Relay monitored parameters	Overcurrent and undercurrent control Phase sequence on 3-phase supply Phase failure on 3-phase supply
Time delay type	Adjustable 1...60 s, +/- 10 % Ti on energisation Fixed 0.3 s reset on terminal Y2 Adjustable 0.1...10 s, +/- 10 % Tt on crossing the threshold
Switching capacity in VA	1250 VA
Minimum switching current	10 mA 5 V DC
Maximum switching current	5 A AC/DC
Maximum power consumption in VA	5 VA AC
Measurement range	1...10 A AC
Utilisation category	AC-12 IEC 60947-5-1 AC-13 IEC 60947-5-1 AC-14 IEC 60947-5-1 AC-15 IEC 60947-5-1 DC-12 IEC 60947-5-1 DC-13 IEC 60947-5-1

Complementary

Reset time	2000 ms
Maximum switching voltage	250 V AC/DC
[Un] rated nominal voltage	208...480 V AC 3 phase 230 V AC single phase
[Un] rated nominal voltage	208...480 V AC 3 phase 230 V AC 1 phase
Supply voltage limits	183...528 V AC
Operating voltage tolerance	- 15 % + 10 % Un
Resistance across terminals	0.01 Ohm E1-L2 terminals
Width	1.38 in (35 mm)
Output contacts	1 C/O
Nominal output current	5 A
Maximum measuring cycle	140 ms as true rms value
Delay at power up	0.5 s
Hysteresis	5 % threshold
Measurement accuracy	+/- 10 % of the full scale value
Repeat accuracy	+/- 1 % input and measurement circuit +/- 1 % time delay
Measurement error	1 % by volt over the whole range +/- 0.05 %/°C
Response time	< 300 ms (in the event of a fault)

Overload input current	11 A permanent at 25 °C E1-L2 terminals 50 A non repetitive < 1 s at 25 °C E1-L2 terminals
Marking	CE : EMC 89/336/EEC CE : 73/23/EEC
Overvoltage category	III IEC 60664-1
Insulation resistance	> 500 MOhm 500 V DC between supply and relay output 60255-5 > 500 MOhm 500 V DC between measurement and relay output 60664-1 > 1 MOhm 500 V DC between supply and measurement 60255-5 > 500 MOhm 500 V DC between supply and relay output 60664-1 > 500 MOhm 500 V DC between measurement and relay output 60255-5 > 1 MOhm 500 V DC between supply and measurement 60664-1
[Ui] rated insulation voltage	400 V IEC 60664-1
Supply frequency	50/60 Hz +/- 10 %
Operating position	Any position
Connections - terminals	Screw terminals, 1 x 0.5...1 x 4 mm ² AWG 20...AWG 11) solid without cable end Screw terminals, 2 x 0.5...2 x 2.5 mm ² AWG 20...AWG 14) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm ² AWG 24...AWG 12) flexible with cable end Screw terminals, 2 x 0.2...2 x 1.5 mm ² AWG 24...AWG 16) flexible with cable end
Tightening torque	5.31...8.85 lbf.in (0.6...1 N.m) IEC 60947-1
Housing material	Self-extinguishing plastic
Status LED	1 LED Green power ON 1 LED Yellow fault 1 LED Yellow relay ON
Mounting support	35 mm symmetrical DIN rail conforming to EN/IEC 60715
Electrical durability	100000 cycles
Mechanical durability	30000000 cycles
Operating rate	<= 360 operations/hour full load

Environment

Immunity to microbreaks	500 ms
Electromagnetic compatibility	Emission standard for industrial environments EN/IEC 61000-6-4 Emission standard for residential, commercial and light-industrial environments EN/IEC 61000-6-3 Immunity for industrial environments NF EN/IEC 61000-6-2
Standards	EN/IEC 60255-6
Product Certifications	C-tick CSA GOST UL GL
Ambient Air Temperature for Storage	-40...158 °F (-40...70 °C)
Ambient air temperature for operation	-4...122 °F (-20...50 °C)
Relative humidity	95 % 131 °F (55 °C) IEC 60068-2-30
Vibration resistance	0.35 mm 5...57.6 Hz)IEC 60068-2-6/IEC 60255-21-1 1 gn 57.6...150 Hz)IEC 60068-2-6/IEC 60255-21-1
Shock resistance	15 gn 11 ms IEC 60255-21-1
IP degree of protection	IP20 IEC 60529 terminals) IP30 IEC 60529 casing)
Pollution degree	3 IEC 60664-1
Dielectric strength	2 kV AC 50 Hz shock wave 4 kV)

Ordering and shipping details

Category	22380 - RELAYS-MEASUREMENT (RM17-RM35)
Discount Schedule	CP2
GTIN	3389119405195
Nbr. of units in pkg.	1
Package weight(Lbs)	4.34 oz (123 g)
Returnability	No
Country of origin	ID

Packing Units

Unit Type of Package 1	PCE
Package 1 Height	3.15 in (8 cm)
Package 1 width	1.81 in (4.6 cm)
Package 1 Length	3.82 in (9.7 cm)
Unit Type of Package 2	S03
Number of Units in Package 2	48
Package 2 Weight	14.39 lb(US) (6.526 kg)
Package 2 Height	11.81 in (30 cm)
Package 2 width	11.81 in (30 cm)
Package 2 Length	15.75 in (40 cm)

Offer Sustainability

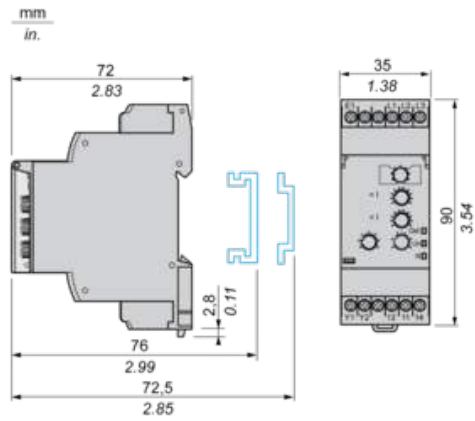
Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
REACH Regulation	REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

Contractual warranty

Warranty	18 months
----------	-----------

3-Phase and Single-Phase Pump Control Relays

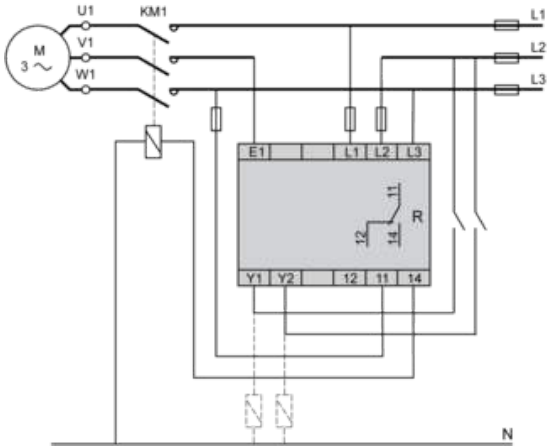
Dimensions and Mounting



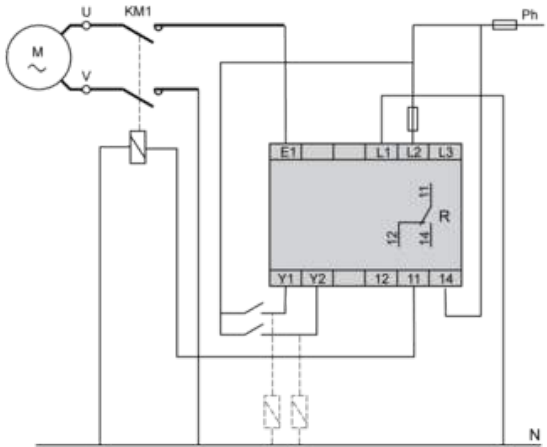
3-Phase and Single-Phase Pump Control Relays

Wiring Diagrams

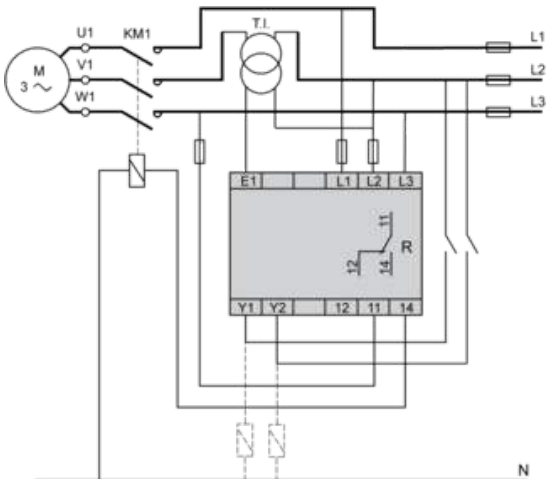
3-phase < 10 A



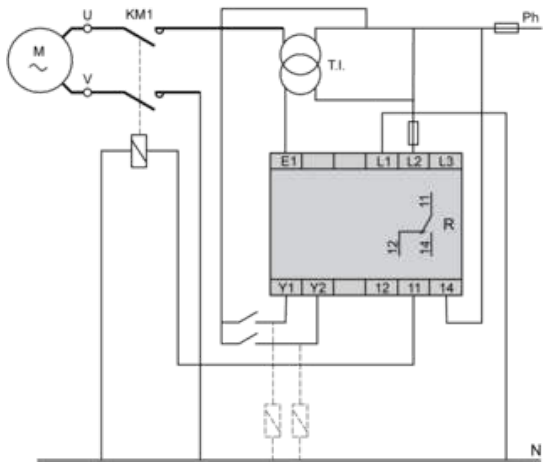
Single-phase ~ 230 V < 10 A



3-phase > 10 A



Single-phase ~ 230 V > 10 A



Function Diagrams

Single Control Mode

This mode is designed to control a pump via an external signal. The relay output is closed when the signal is present at Y1 (contact closed). Y2 can be used to reset the relay after a current fault.



Double Control Mode

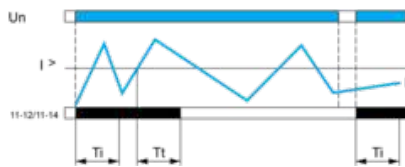
This mode is designed to control a pump via two external control signals (Y1 and Y2). The output relay closes when both input signals are present (Y1 and Y2 closed).



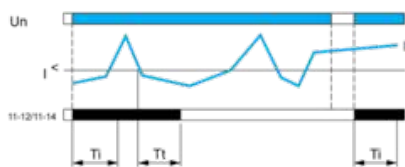
Current Control

If the control relay is configured for a single-phase supply, it monitors the current consumed by the pump. If the control relay is configured for a 3-phase supply, it monitors the current, phase sequence and phase failure.

Overcurrent detection



Undercurrent Detection



Legend

Ti Time delay to inhibit fault monitoring on starting of pump

Tt Time delay in the event of a fault

Un 3-phase or single-phase power supply

I Monitored current

I < Undercurrent threshold

I > Overcurrent threshold

I. Def Presence of a current fault

11-12, 11-14 Output relay connections

Relay status: black color = energized.