CROUZET

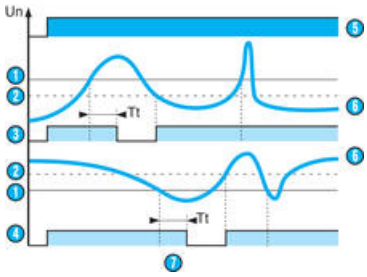
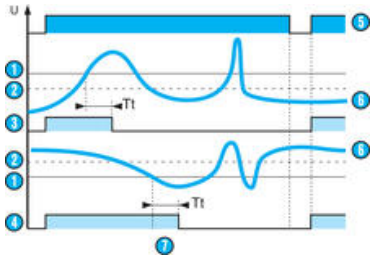
1 PHASE OVER/UNDER VOLTAGE RELAY HUL, HUH

84872120
HUL VOLTAGE CONTROL RELAY

- Two modules, HUL 0.2-60 V, HUH 15-600 V
- Galvanic isolation control/measurement
- Automatic detection of ac or dc
- 35 mm cabinet with DIN rail

PRODUCT DESCRIPTION

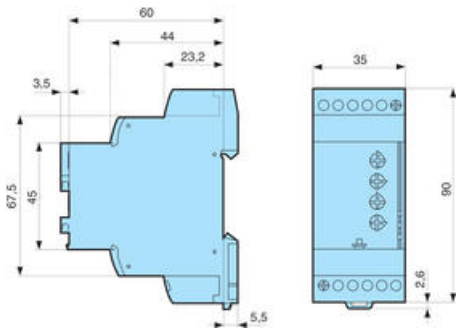
HUL and HUH control relays are used for monitoring 1-phase AC/DC voltages. The relay automatically detects the form of voltage that is to be measured. The relay requires a supply voltage. Using a rotary switch, selection can be made between over- or under-voltage, with or without memory. The switch position and consequently the control relay's function mode is detected when the operating voltage is switched on. If the switch is in the wrong position, the relay will remain deactivated and the LEDs will flash to indicate incorrect setting. If the switch position is changed during operation, all LEDs begin to flash but the unit will continue to function normally with the voltage set at the most recent power connection. The LEDs return to normal function when the switch has been returned to its original position, which was set before the first power connection. The limit value for over- or under-voltage is set with a potentiometer that is scaled in the percentage of the voltage range that is to be monitored. The hysteresis value is similarly set with a scale from 5-50 % of the set limit value. The hysteresis value cannot exceed the measurement range's limit value. Both relays are equipped with a time delay (Tt) to ignore temporary voltage deviations. Green LED (Un) indicates supply voltage OK. Yellow LED (R) indicates active relay output.

Without memory	With memory
	
1: Limit value	1: Limit value
2: Hysteresis	2: Hysteresis
3: Over-voltage	3: Over-voltage
4: Under-voltage	4: Under-voltage
5: Activation of operating voltage	5: Activation of operating voltage
6: Monitored voltage	6: Monitored voltage
7: Time delay (Tt)	7: Time delay (Tt)

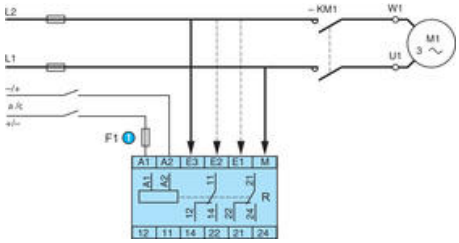
TECHNICAL DATA

Supply voltage	24-240 V AC/DC 50/60 Hz ±10 % (wide range input voltage)		
Galvanic isolation	Yes, operating voltage measurement		
Power consumption	3.5 VA AC/0.6 W DC		
Adjustable limit value	10-100 %		
Adjustable hysteresis	5-50 %		
Time delay (Tt)	0.1–3 s ±10 %		
Time delay, start-up	<600 ms (static)		
Output relay	Max. breaking current 5 A (2 change-over contacts) Max. breaking voltage 250 V AC		
Temperature	-20 °C to +50 °C		
Weight	130 g		
Approval	CE, (LVD)73/23/EEC-EMC 89/336/EEC, RoHs.WEEE		
Mounting	DIN rail		
Measurement range, HUL	**E1-M**	**E2-M**	**E3-M**
Adjustable range	0.2-2 V	1-10 V	6-60 V
Input resistance	6 Ω	30 Ω	180 Ω
Max. continual overload at 25 °C	10 V	30 V	150 V
Measurement range, EUH	**E1-M**	**E2-M**	**E3-M**
Adjustable range	15-150 V	30-300 V	60-600 V
Input resistance	150 Ω	300 Ω	600 Ω
Max. continual overload at 25 °C	250 V	500 V	700 V

DIMENSIONS



CONNECTION



F1: Fast-blow fuse 100 mA (recommendation)
NB: When monitoring DC voltage from the same power supply that is connected at A1 or A2, the connection point M must be directly connected to minus (-) in this power supply.

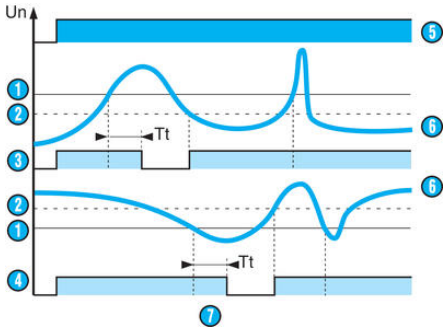
ORDER NUMBER

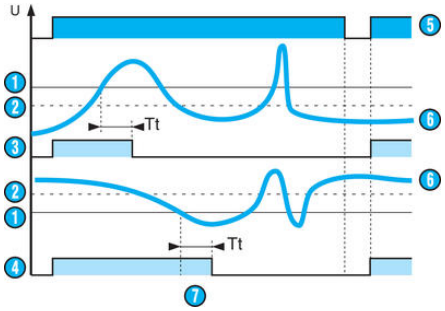
Order no.	Description	Supply voltage
84872120	HUL voltage control, over-/under-voltage 0.2-60 V AC/DC	24-240 V AC/DC
84872130	HUH voltage control, over-/under-voltage 15-600 V AC/DC	24-240 V AC/DC

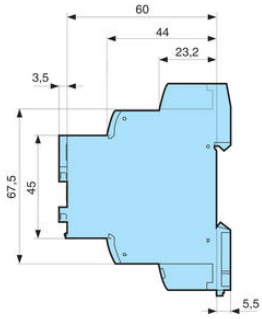
SPECIFICATIONS

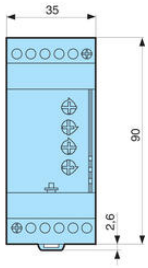
Approvals	CE, CSA, RoHS, UL
Breaking capacity	5A, 250V AC/DC
IP Class Connection	IP20
IP Class Housing	IP30
Measuring range E1-M	0,2-2 V
Measuring range E2-M	1-10 V
Measuring range E3-M	6-60 V
Output	Relay 2 pole C/O
Supply voltage	24-240V ac/dc
Temperature range bearing, from	-40 °C
Temperature range bearing, to	70 °C
Temperature range from	-20 °C
Temperature range to	50 °C
Threshold Adjustable from	10 %
Threshold Adjustable to	100 %
Time Delay On Crossing The Threshold	0,1-3s
Time Delay Start	0,6 s

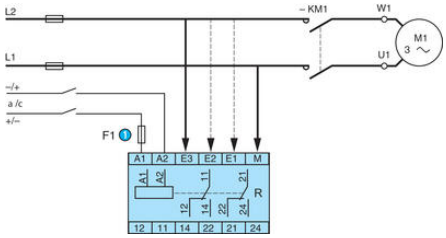
Weight	130 g


Un
Tt
Tt


U
Tt
Tt


60
44
23,2
3,5
67,5
45
5,5


35
90
2,6


L2
L1
~ KM1
W1
U1
M1
3 ~
F1
A1
A2
E3
E2
E1
M
R
12
11
14
22
21
24