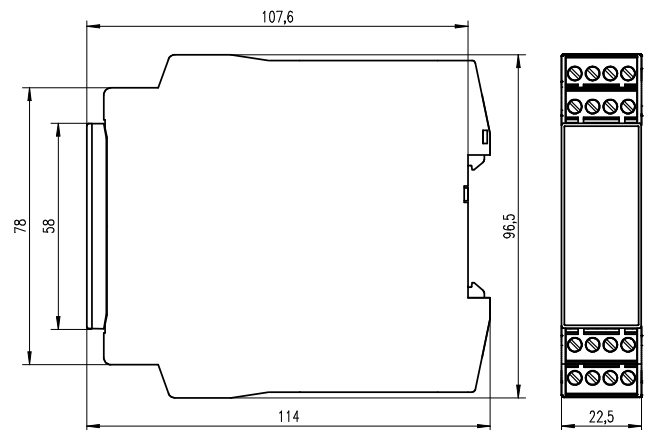
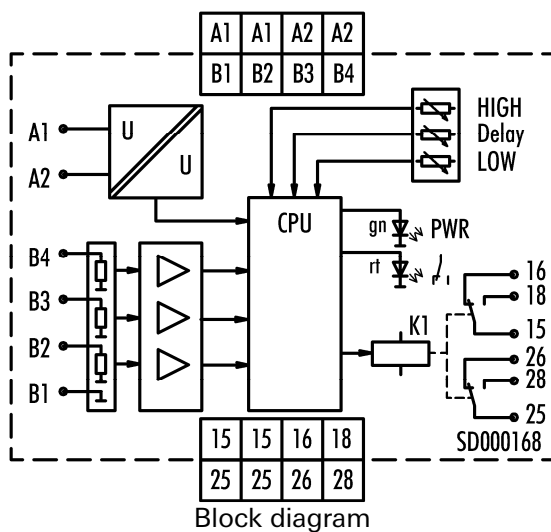




flare CONTROL UL-1-A
Measuring and Monitoring Relay
81.030.0101.0

Time delay at lower limit undercut

- Measuring and monitoring relay
- Upper and lower threshold adjustable separately
- 3 measurement ranges (single phase)
- Delay time selectable
- Multiple supply voltage range 20.4 ... 264 V AC/DC
- Mounting width 22.5 mm



Technical Data

flare CONTROL UL-1-A	Order no. 81.030.0101.0
Power Supply Circuit	
Rated supply voltage A1-A2	24 ... 230 V AC/DC
Supply voltage range	20.4 ... 264 V AC/DC
Line frequency AC	50/60 Hz
Power consumption	ca. 3 VA at 230 V, 50 Hz/ ca. 1.5 W at 24 V DC
Measurement (DC and sinusoidal)	
Measurement ranges (B1 - B2; B1 - B3; B1 - B4)	5 V/50 V/300 V
Nominal frequency of measured signal at AC	45 ... 400 Hz or DC
Setting range Upper threshold (HIGH)	10 ... 100 % of measurement range
Setting range Lower threshold (LOW)	10 ... 100 % of measurement range
at LOW \geq HIGH (error threshold value)	HIGH = LOW plus 2% of measurement range, LED 'PWR' (green) flashes
Functions/Switch Delay	
Working principle (see Fig. 2 Functional diagram)	Closed circuit or operating circuit principle
Time delay at lower limit undercut (for both working principles) (t_A)	0/0.1/0.5/2/10 s

Technical Data

flare CONTROL UL-1-A	Order no. 81.030.0101.0
Operating/Functional Elements	(see Fig. 1 Control and display elements)
1 potentiometer HIGH (Fig. 1 - a)	Upper threshold (HIGH)
1 turn switch DELAY (Fig. 1 - c)	Function and switch delay
1 potentiometer LOW (Fig. 1 - e)	Lower threshold (LOW)
1 LED 'PWR' (green) (Fig. 1 - b)	on flashing supply voltage ON (Power, PWR) at $LOW \geq HIGH$ (error threshold value)
1 LED I_1 (rot) (Fig. 1 - d)	flashing on during switching delay time at persistent undercut
Output/Switching Contact	
Contacts	2 changeover contacts (1 relay)
Contact load max. AC/DC	5 A at 250 V AC/5 A at 24 V DC
Contact output minimum load	10 mA at 12 V, 100 mA at 5 V
Rated voltage	230 V
Utilization category acc. EN60947-5-1:2004	AC-15: U_e 230 V AC, I_e 3 A DC-13: U_e 24V DC, I_e 2 A
Contact material	AgNI 90/10
Mechanical life cycle	20 x 10 ⁶ switching cycles
Electrical life cycle acc. EN60730-1	>10 x 10 ⁴ switching cycles (20 op/h)
Isolation Property	
Isolation voltage (supply/input/output)	2,000 V AC (50/60 Hz, for 1 min)
Isolation voltage (open contacts)	1,000 V AC (50/60 Hz, for 1 min)
Approvals and Standards	
CE	EMV 2004/108/EC; Low voltage 2006/95/EC
EMV immunity	EN60255-26
EMV emission	EN60255-26
Operating/Dimensions/Wiring	
Operating temperature range [T _U]	-25 ... +55 °C
Storage temperature range [T _U]	-25 ... +70 °C
Dimensions (W x H x D)	22.5 x 97 x 114 mm
Weight	ca. 130 g
Housing material	plastic
Mounting	TH35-7,5 DIN rail acc. EN 60715
Cooling	free convection
IP protection	IP20
Clamp type	pluggable screw clamp, 4-poles
Connector cross section solid/stranded	1 x 0.2 ... 2.5 mm ² /0.2 x 0.2 ... 1.0 mm ²
stranded with cable sleeve	1 x 0.25 ... 2.5 mm ² /0.25 x 0.25 ... 1.0 mm ²
Wire gauge AWG (use only CU wires)	AWG 26 - 14
Strip length	7 mm max.
Recommended torque	0.5 - 0.6 Nm (5 - 7 lbf-in)
Terminal Connections	
A1 - A1/A2 - A2	Supply voltage
B1, B2, B3, B4	Measurement input, 3 measurement ranges
15 - 15, 16, 18	Changeover contact (relay contact 1)
25 - 25, 26, 28	Changeover contact (relay contact 2)

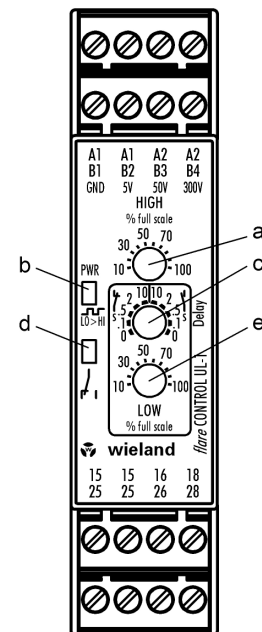


Fig. 1 Control and display elements

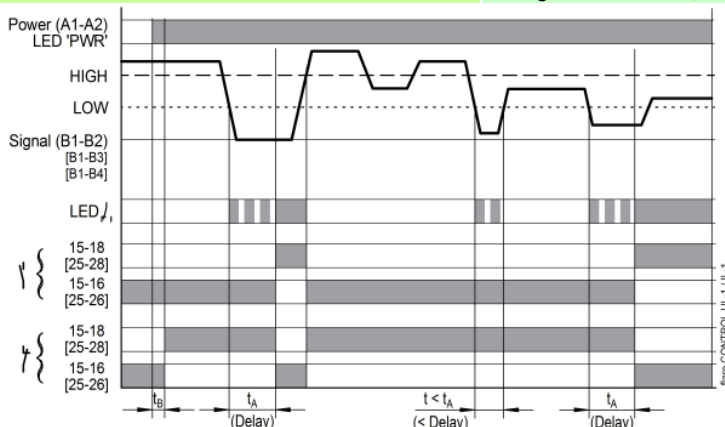


Fig. 2 Functional diagram