



Measuring & control

precise and safe

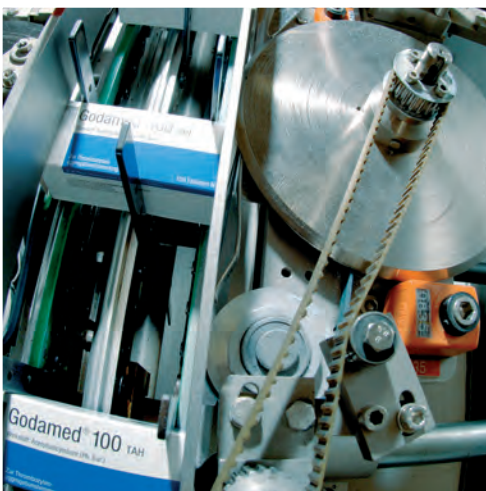
Always live

Electronic measuring and monitoring relays for measuring input values such as current, voltage, 3-phases, cos phi, temperature. They carry out both simple and complex monitoring in machines and systems.



Features:

- The optimum device for every monitoring task
- Voltage, current, phase sequence, phase error, temperature or cos phi
- Broad temperature range
- Gold-plated switching contacts for maximum operational reliability



Multi-functional measuring relay

economical & flexible

Measuring relays **flare** CONTROL

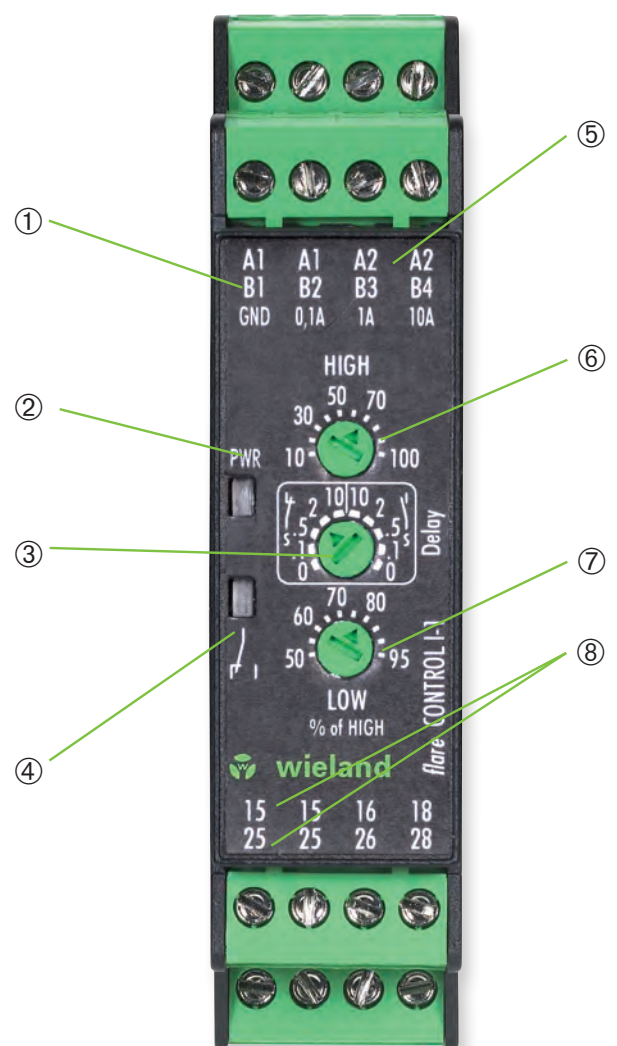
The product family **flare** CONTROL convinces by the universal use in industrial automation.

All functions required for measuring relays are combined in one device. Only one type for current and voltage measurement is necessary.

This simplifies engineering and reduces stock.

Features:

- ① 3 measuring ranges in one device
- ② Power LED
- ③ Adjustable for closed circuit or operating circuit principle
In additional also time delay for exceeding the threshold
- ④ LED for exceedance of the threshold value
- ⑤ One terminal for supply voltage
- ⑥ Upper threshold in percent of measuring range
- ⑦ Lower threshold in percent of upper threshold
- ⑧ 2 changeover contacts simultaneously switching, one changeover contact output per terminal



Measuring relay

flare CONTROL U-1-A | UL-1-A

- Multi-function measuring relay
- Upper and lower threshold separately adjustable
- 3 measurement ranges (single phase)
- Signal shape DC and sinus
- Closed circuit or operating circuit principle
- Response delay at threshold exceedance/ undercut adjustable
- Wide input voltage range 20.4 ... 264 V AC/DC
- Width 22.5 mm
- Pluggable screw clamps
- Wide temperature range
- 2 change-over contacts 5 A



Type	Part No.
Threshold exceedance	
flare CONTROL U-1-A	81.030.0100.0
Threshold undercut	
flare CONTROL UL-1-A	81.030.0101.0
Technical data	
Measuring ranges	5 / 50 / 300 V
Upper threshold U-1-A UL-1-A	10...100 % of measuring range
Lower threshold U-1-A	50 ... 95 % of upper threshold
Lower threshold UL-1-A	10...100 % of measuring range
Signal shape	DC and sinus
Nominal frequency of measured signal at AC	45 ... 400 Hz
Nominal power	app. 2 W / 4 VA
Supply voltage range	20.4 ... 264 V AC/DC
Galvanic isolation toward supply	Yes
Functions	Closed circuit or operating circuit principle
Time delay adjustable	0 / 0.1 / 0.5 / 2 / 10 s
Number of change-over contacts	2 (simultaneously switching)
Maximum switching current	5 A
Mechanical life time	20 x 10 ⁶
Electrical life time AC1	0.1 x 10 ⁶
Isolation voltage of input/output	2 kV
Connection clamps	Pluggable screw clamp
Wire range fine-stranded/solid	0.2 - 2.5 mm ² (AWG 24 - 14)
Degree of protection / mounting rail	IP 20 / TS 35 (EN60715)
Dimensions (mm) W x H x D	22.5 x 96.5 x 114
Operation temperature range	-25 ... +55 °C
Approvals U-1-A UL-1-A	CE CE

flare CONTROL I-1-A | IL-1-A

- Multi-function measuring relay
- Upper and lower threshold separately adjustable
- 3 measuring ranges (single phase)
- Signal shape DC and sinus
- Closed circuit or operating circuit principle
- Response delay at threshold exceedance/ undercut adjustable
- Wide input voltage range 20,4 ... 264 V AC/DC
- Width 22.5 mm
- Pluggable screw clamps
- Wide temperature range
- 2 change-over contacts 5 A



Type	Part No.
Threshold exceedance	
flare CONTROL I-1-A	81.030.0110.0
Threshold undercut	
flare CONTROL IL-1-A	81.030.0111.0
Technical data	
Measuring ranges	0,1 / 1 / 10 A
Upper threshold I-1-A IL-1-A	10...100 % of measuring range
Lower threshold I-1-A	50 ... 95 % of upper threshold
Lower threshold IL-1-A	10...100 % of measuring range
Signal shape	DC and sinus
Nominal frequency of measured signal at AC	45 ... 400 Hz
Nominal power	ca. 2 W / 4 VA
Supply voltage range	20.4 ... 264 V AC/DC
Galvanic isolation toward supply	Yes
Functions	Closed circuit or operating circuit principle
Time delay adjustable	0 / 0.1 / 0.5 / 2 / 10 s
Number of change-over contacts	2 (simultaneously switching)
Maximum switching current	5 A
Mechanical life time	20 x 10 ⁶
Electrical life time AC1	0.1 x 10 ⁶
Isolation voltage of input/output	2 kV
Connection clamps	Pluggable screw clamp
Wire range fine-stranded/solid	0.2 - 2.5 mm ² (AWG 24 - 14)
Degree of protection / mounting rail	IP 20 / TS 35 (EN60715)
Dimensions (mm) W x H x D	22.5 x 96.5 x 114
Operation temperature range	-25 ... +55 °C
Approvals I-1-A IL-1-A	CE CE

Monitoring relay

flare CONTROL P3-L

- 3 phase monitoring relay
- Detection for loss of one or more phases
- Detection of wrong phase sequence
- Closed circuit principle
- Width 22.5 mm
- 2 change-over contacts 5 A



Type	Part No.
flare CONTROL P3-L	81.030.0020.1
Technical data	
Supply voltage range	200 ... 480 V AC
Detection time	max. 0.1 s
Number of change-over contacts	2
Maximum switching current	5 A
Mechanical life time	10 x 10 ⁶
Electrical life time AC1	0.05 x 10 ⁶
Connection clamps	Screw clamp
Wire range fine-stranded/solid	0.14 - 4 mm ² (AWG 26-12)
Degree of protection / Mounting rail	IP 20 / TS 35 (EN60715)
Dimensions (mm) W x H x D	22.5 x 100 x 100
Operation temperature range	-20 ... +60°C
Approvals	CE

flare CONTROL P3-LTN

- 3 phase monitoring relay
- 3 or 4 wire monitoring
- Detection for loss of one or more phases
- Detection of wrong phase sequence
- Adjustable asymmetry trigger 3 wire
- Closed circuit principle
- Supports worldwide mains systems (adjustable)
- Width 22,5 mm
- 1 change-over contacts 5 A



Type	Part No.
flare CONTROL P3-LTN	81.030.0021.1
Technical data	
Supply voltage 3 phase / 3 wire	380, 400, 415, 480 V AC
Supply voltage 3 phase / 4 wire	220, 230, 240, 277 V AC
Detection range for asymmetry	2 ... 22 %
Detection time at asymmetry	0.1 ... 30 s
Number of change-over contacts	1
Maximum switching current	5 A
Mechanical life time	10 x 10 ⁶
Electrical life time AC1	0.05 x 10 ⁶
Connection clamps	Screw clamp
Wire range fine-stranded/solid	0.14 - 4 mm ² (AWG 26-12)
Degree of protection / Mounting rail	IP 20 / TS 35 (EN60715)
Dimensions (mm) W x H x D	22.5 x 100 x 100
Operation temperature range	-20 ... +60 °C
Approvals	CE

