# ACT20P-VMR-3PH-ILP-H-P

ACT20P: The flexible solution

• Precise and highly functional signal converters
• Release levers simplify handling

## General ordering data

| | |
|---|---|
| Version | Limit value monitoring, Input : 3 phase, Output : 2 x relays |
| Order No. | 7760054361 |
| Type | ACT20P-VMR-3PH-ILP-H-P |
| GTIN (EAN) | 4050118559750 |
| Qty. | 1 items |

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# ACT20P-VMR-3PH-ILP-H-P

## Technical data

### Approvals

| | |
|---|---|
| Approvals | |
| ROHS | Conform |
| UL File Number Search | UL Website |
| Certificate No. (cURus) | E469563 |

### Dimensions and weights

| | | | |
|---|---|---|---|
| Depth | 114.3 mm | Depth (inches) | 4.5 inch |
| Height | 117 mm | Height (inches) | 4.6063 inch |
| Width | 22.5 mm | Width (inches) | 0.8858 inch |
| Net weight | 140 g | | |

### Temperatures

| | | | |
|---|---|---|---|
| Storage temperature | -40 °C...85 °C | Operating temperature | -20 °C...60 °C |
| Humidity at operating temperature | 0...95 % (no condensation) | Humidity | 5...85 % rel. humidity, no condensation |

### Probability of failure

| | |
|---|---|
| SIL in compliance with IEC 61508 | None |

### Environmental Product Compliance

| | |
|---|---|
| RoHS Compliance Status | Compliant with exemption |
| RoHS Exemption (if applicable/known) | 7a, 7cI |
| REACH SVHC | Lead 7439-92-1 |
| SCIP | 2f6dd957-421a-46db-a0c2-cf1609156924 |

### Input

| | | | |
|---|---|---|---|
| Number inputs | 1 | Type | 3-phase or 3-phase plus zero conductor, AC voltage |
| Input voltage | 180...500 VAC | Input resistance, voltage | ≥1,8MΩ |

### Output

| | |
|---|---|
| Number of outputs | 2 |

### Output (digital)

| | | | |
|---|---|---|---|
| Rated switching current | 5 A | Number of digital outputs | 2 |
| Max. switching voltage, AC | 250 V | Max. switching voltage, DC | 30 V |
| Hysteresis | 5 % @ Phase asymmetry | Type | 2 x 1 - or 1 x 2 changeover contact relay, Relay polarity can be inverted |
| Switch-on delay | 0...10 s, configurable | Alarm function | Top and bottom limit values, window range, Holding function can be activated, Phase error, Phase sequence, Asymmetry, Alarm delay: 0...10 s |

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# ACT20P-VMR-3PH-ILP-H-P

## Technical data

| | | | |
|---|---|---|---|
| Switching thresholds | Adjustable, MIN = 50... 100 % x URated input voltage (undervoltage alarm), MAX = 70...120 % x URated input voltage (overvoltage alarm) | | |

### General data

| | | | |
|---|---|---|---|
| Repeat accuracy | 2 % *Urated voltage | Accuracy | 3 % *Urated voltage |
| Protection degree | IP20 | Supply voltage | supplied from voltage measurement inputs |
| Long-term drift | 0.1 % / 10.000 h | Step response time | ≤ 100 ms |
| Mounting rail | TS 35 | Power consumption | ≤ 3VA, <2 W |
| Temperature coefficient | 350 ppm/K | Nominal power consumption | 1.5 VA |
| Configuration | DIP switch and potentiometer | Operating altitude | ≤ 2000 m |

### Insulation coordination

| | | | |
|---|---|---|---|
| Impulse withstand voltage | 6 kV (input - output), 4 kV (output 1- output 2), 1.2/50 µs | EMC standards | EN 61326-1 |
| Test voltage | 0.5 kV | Surge voltage category | III |
| Pollution severity | 2 | Galvanic isolation | between input / output / supply / relay |
| Insulation voltage | 2.5 kV (input / output) | Rated voltage | 600 VAC (input - output), 300 VAC (output 1 - output 2) |

### Connection data

| | | | |
|---|---|---|---|
| Type of connection | PUSH IN | Tightening torque, min. | 0.4 Nm |
| Tightening torque, max. | 0.6 Nm | Clamping range, rated connection | 2.5 mm² |
| Clamping range, min. | 0.5 mm² | Clamping range, max. | 2.5 mm² |
| Wire connection cross section AWG, min. | AWG 26 | Wire connection cross section AWG, max. | AWG 14 |

### Part description

| | |
|---|---|
| Product description | ACT20P-VMR-3PH-ILP-H is a three-phase voltage setpoint limit monitor relay (3-phase or 3-phase plus zero conductor). The device is powered by the input measuring circuit. The device incorporates two separate relay outputs which trigger an alarm upon phase asymmetry, phase loss, phase sequence errors and phase angle errors and when exceeding or falling below preset voltage limit values. The alarm can also be set to trigger after an adjustable time delay. Features |

- Supply from the input measuring circuit
- Manual front-sided configuration via DIP switch, potentiometer and rotary switch
- Various alarm functions: phase asymmetry, phase loss, phase sequence errors, phase angle errors, alarm delay, upper/lower limit value alarm, window alarm
- Front LEDs indicates operation status and malfunction.
- 3-way galvanic isolation between input, output 1 and output 2.

### Classifications

| | | | |
|---|---|---|---|
| ETIM 8.0 | EC002654 | ETIM 9.0 | EC002654 |
| ETIM 10.0 | EC002654 | ECLASS 14.0 | 27-21-01-22 |
| ECLASS 15.0 | 27-21-01-22 | | |

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# ACT20P-VMR-3PH-ILP-H-P

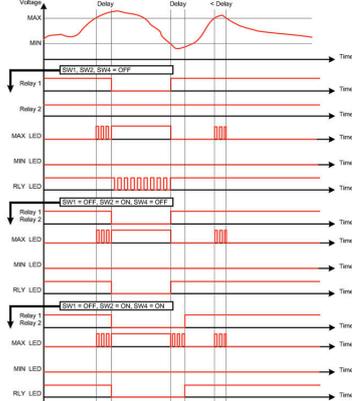## Drawings

### Connection diagram
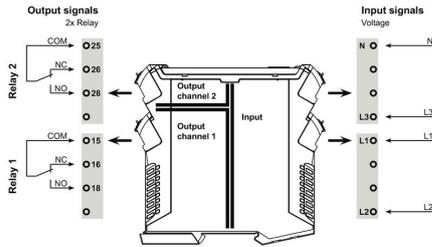


### Dimensioned drawing
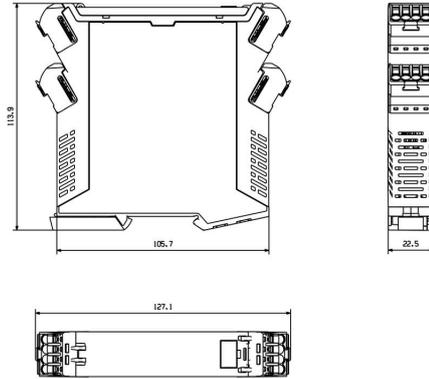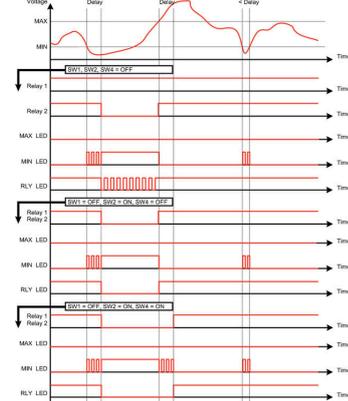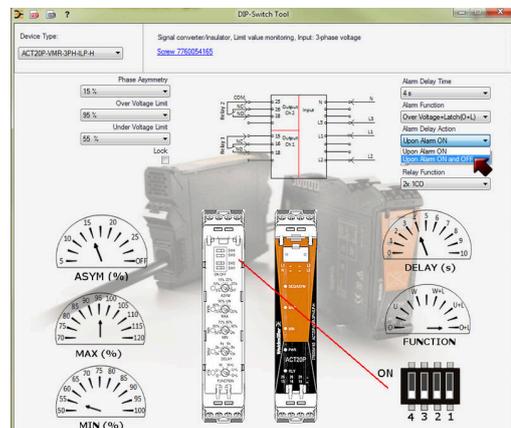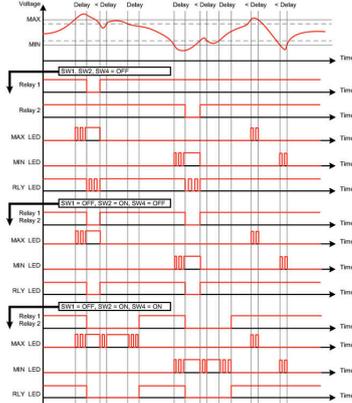










example for DIP switch setting (with ACT20 tool)

**ACT20P-VMR-3PH-ILP-H-P**

**Drawings**

5

PUSH IN
technology

in

out
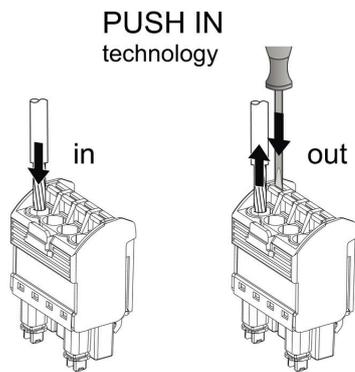
# ACT20P-VMR-3PH-ILP-H-P

## Accessories

### Blank
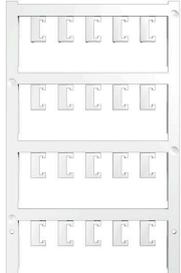
ESG is the tried-and-tested marker in MultiCard format for use on many well-known electrical devices. The result is high-quality device marking with a high-contrast appearance.

Various types are available for devices from manufacturers like Siemens, ABB, Beckhoff etc.

Advantages at a glance:

- Tags for universal usage, self-adhesive or clip-on tags, depending on type
- For aligned equipment, e.g. circuit breakers, we supply ESG markers for clipping onto tag rails
- Individual laser-quality printing according to specifications

For custom printing: Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

### General ordering data

| Type | ESG 6.6/20 BHZ 5.00/04 | Version |
| --- | --- | --- |
| Order No. | 1082540000 | ESG, Device markers x 20 mm, PA 66, Colour: white, pluggable |
| GTIN (EAN) | 4032248845439 | |
| Qty. | 200 ST | |

| Type | ESG 8/13.5/43.3 SAI AU | Version |
| --- | --- | --- |
| Order No. | 1912130000 | ESG, Device markers x 13.5 mm, PA 66, Colour: Transparent, |
| GTIN (EAN) | 4032248541164 | pluggable |
| Qty. | 5 ST | |