

**ACT20P-VMR-1PH-H-S**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany

www.weidmueller.com



**ACT20P: The flexible solution**

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

**General ordering data**

|            |  |
|------------|--|
| Version    | Limit value monitoring, Input : 1 phase, Output : 2 x relays |
| Order No.  | <a href="#">7760054164</a>                                   |
| Type       | ACT20P-VMR-1PH-H-S   |
| GTIN (EAN) | 6944 169689079   |
| Qty.       | 1 items  |

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## 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 | 198.7 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, 7cl                              |
| REACH SVHC                           | Lead 7439-92-1                       |
| SCIP                                 | 2f6dd957-421a-46db-a0c2-cf1609156924 |

## Input

|                         |                                      |                           |   |
|-------------------------|--------------------------------------|---------------------------|---|
| Number inputs           | 1                                    | Input frequency           | 40...60 Hz, DC  |
| Type                    | single-phase                         | Input voltage             | Channel 1: (U1-E): 110V AC/DC, Channel 2: (U2-E): 240V AC/DC, Channel 3 1: (U3-E): 400V AC/DC |
| Input measurement range | 50...120% U <sub>rated</sub> voltage | Input resistance, voltage | 1 MΩ±5%   |

## 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% of final value      | 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        |

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activated, Alarm delay: 0...  
10 s

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

### General data

|                         |                                 |                           |  |
|-------------------------|---------------------------------|---------------------------|--|
| Repeat accuracy         | 2 % *URated voltage             | Accuracy                  | 3 % *URated voltage                          |
| Protection degree       | IP20                            | Supply voltage            | 24...240 VUC ±10%                            |
| Long-term drift         | 0.1 % / 10.000 h                | Step response time        | <220 ms (10...90 %)                          |
| Mounting rail           | TS 35                           | Power consumption         | ≤ 100 mA @ 24 VDC, ≤<br>120mA @ 24V AC, <2 W |
| Temperature coefficient | 350 ppm/K                       | Nominal power consumption | 1.5 VA                                       |
| Configuration           | DIP switch and<br>potentiometer | Operating altitude        | ≤ 2000 m                                     |

### Insulation coordination

|                           |   |                    |  |
|---------------------------|---|--------------------|--|
| Impulse withstand voltage | Supply/output: 4 kV; input/<br>output, input/output: 6 kV,<br>1.2/50 µs                               | EMC standards      | EN 61326-1   |
| Surge voltage category    | III   | Pollution severity | 2  |
| Galvanic isolation        | between input / output /<br>supply / relay  | Insulation voltage | 2.5 kV (input / output), 2<br>kV input / output/ power<br>supply |
| Rated voltage             | 300 VAC (output 1 -<br>output 2), 300 VAC<br>(supply-output), 500 VAC<br>(supply-input; input-output) |                    |  |

### Connection data

|  |                     |  |                     |
|--|---------------------|--|---------------------|
| Type of connection                         | Screw connection    | Tightening torque, min.                    | 0.4 Nm              |
| Tightening torque, max.                    | 0.6 Nm              | Clamping range, rated connection           | 1.5 mm <sup>2</sup> |
| Clamping range, min.                       | 0.5 mm <sup>2</sup> | Clamping range, max.                       | 2.5 mm <sup>2</sup> |
| Wire connection cross section AWG,<br>min. | AWG 26              | Wire connection cross section AWG,<br>max. | AWG 12              |

### Part description

|                     |  |
|---------------------|--|
| Product description | The ACT20P-VMR-1PH-H is a monitoring relay for DC voltage or single-phase AC voltage. The device has two independent relay outputs which emit an alarm when levels exceed or fall below preset voltage limits. The alarm can also be set to trigger after an adjustable time delay.<br>Features <ul style="list-style-type: none"> <li>• Manual front-sided configuration via DIP switch, potentiometer and rotary switch</li> <li>• Various alarm functions: upper/lower limit value alarm, window alarm</li> <li>• Adjustable start and alarm delay</li> <li>• Front LEDs indicates operation status and malfunction[</li> <li>• 4-way galvanic isolation between input, output 1, output 2 and power supplywitch</li> </ul> |
|---------------------|--|

### 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 |             |             |

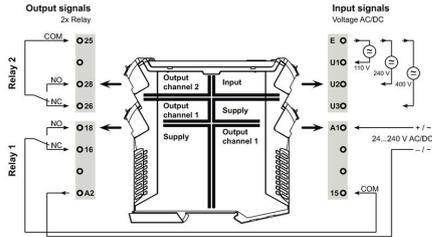
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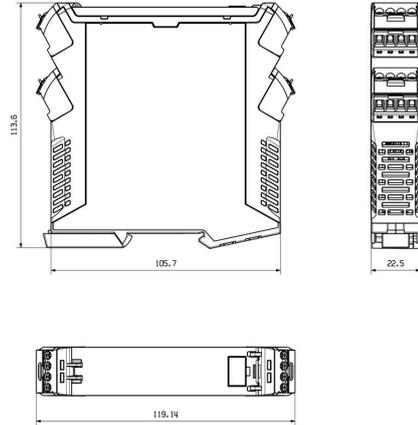
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**Drawings**

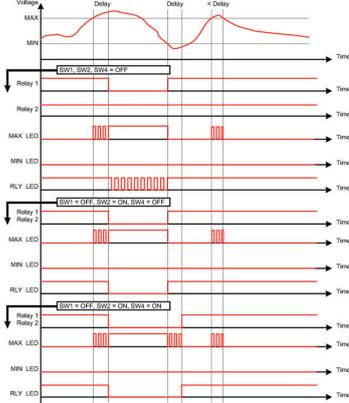
**Connection diagram**



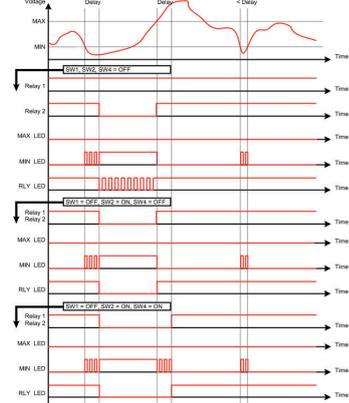
**Dimensioned drawing**



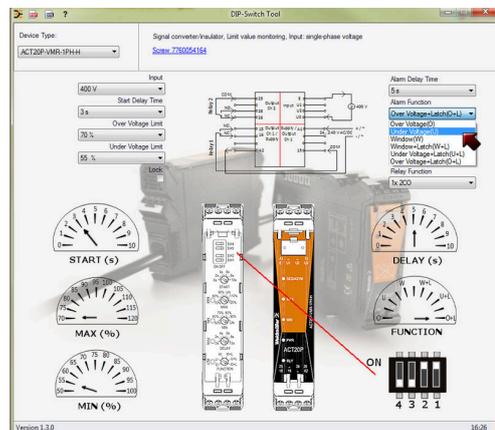
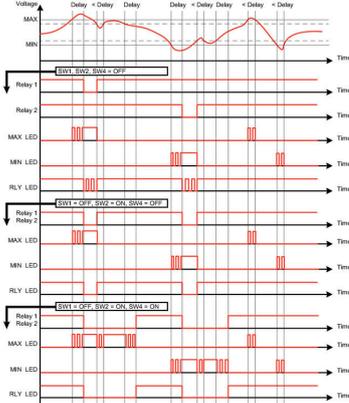
**Overvoltage alarm (O)**



**Undervoltage alarm (U)**



**Window alarm (W)**



example for DIP switch setting (with ACT20 tool)

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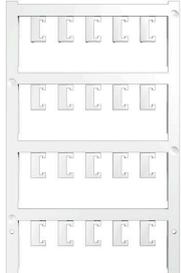
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## Accessories

### 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.  | <a href="#">1082540000</a> | 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.  | <a href="#">1912130000</a> | ESG, Device markers x 13.5 mm, PA 66, Colour: Transparent, pluggable |  |
| GTIN (EAN) | 4032248541164              |  |  |
| Qty.       | 5 ST                       |  |  |