

**ACT20X-2HDI-2SDO-RNC-P**

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

www.weidmueller.com

**Product image, Similar to illustration**



The ACT20X-HDI-SDO/ 2HDI-2SNO RNO/RNC isolating switch amplifiers are specially designed for recording NAMUR sensor signals and digital switching signals which originate from Ex zone 0.

Switching relays, optionally available with NO or NC contacts, transfer output signals to the safe zone.

Integrated alarm contacts issue an alert in the event of a malfunction; this makes troubleshooting easier and increases system availability.

The rail mounted disconnect-switch amplifiers are optionally available in one- or two-channel versions.

With 11 mm width per channel, the devices need little space in the electrical cabinet.

**General ordering data**

|            |   |
|------------|---|
| Version    | EX signal isolating converter, Ex-input: NAMUR sensor/switch, Safe-output: relay, NC contact, 2-channel |
| Order No.  | <a href="#">2456090000</a>  |
| Type       | ACT20X-2HDI-2SDO-RNC-P  |
| GTIN (EAN) | 4050118471557   |
| Qty.       | 1 items   |

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## Technical data

### Approvals

Approvals



ROHS Conform

 UL File Number Search [UL Website](#)

Certificate no. (cULus) E337701

### Dimensions and weights

|            |          |                 |             |
|------------|----------|-----------------|-------------|
| Depth      | 113.6 mm | Depth (inches)  | 4.4724 inch |
| Height     | 127.3 mm | Height (inches) | 5.0118 inch |
| Width      | 22.5 mm  | Width (inches)  | 0.8858 inch |
| Net weight | 192 g    |                 |             |

### Temperatures

|                     |                            |                       |                |
|---------------------|----------------------------|-----------------------|----------------|
| Storage temperature | -20 °C...85 °C             | Operating temperature | -20 °C...60 °C |
| Humidity            | 0...95 % (no condensation) |                       |                |

### Probability of failure

|           |  |                                  |   |
|-----------|--|----------------------------------|---|
| SIL PAPER | SIL certificate - PDF/<br>Cert_Weidmueller_070902_P0002_C001_V2R1.pdf<br>(application/pdf) | SIL in compliance with IEC 61508 | 2 |
| MTBF      | 207 a  |                                  |   |

### 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 |

### Assembling

|                   |                            |               |       |
|-------------------|----------------------------|---------------|-------|
| Type of mounting  | Snap mounting support rail | Mounting rail | TS 35 |
| Mounting position | horizontal or vertical     |               |       |

### Input EX

|                                     |   |                   |                            |
|-------------------------------------|---|-------------------|----------------------------|
| Sensor                              | NAMUR sensor, according to EN60947-5-6, switch with or without RS, RP | Input frequency   | <20 Hz                     |
| Input resistance                    | 1 kΩ  | Type              | intrinsically safe circuit |
| Sensor supply                       | 8 V DC / 8 mA   | Resistance        | RP = 750 Ω / RS = 15kΩ     |
| Output signal in case of wire break | <0.1 mA, > 6.5 mA (in case of wire break)                             | Pulse duration    | > 0.1 ms                   |
| NAMUR supply                        | 8 V DC / 8 mA   | Trigger level low | <1.2 mA                    |
| Trigger level high                  | > 2.1 mA  |                   |                            |

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### Digital output

|                           |  |                           |  |
|---------------------------|--|---------------------------|--|
| Number of digital outputs | 2  | Max. switching frequency  | 20 Hz  |
| Switching capacity        | 500 VA / 60 W (safe area), 16 VA / 60 W (zone 2) | Type                      | Relay, 1 NC contact  |
| Function                  | Output = input, direct or inverse (configurable) | Nominal switching voltage | ≤ 250 V AC / 30 V DC (safe area)<br>≤ 32 V AC / 32 V DC (zone 2) |
| Continuous current        | ≤ 2 A AC/DC (safe area, Zone 2 area)             |                           |  |

### Output (Status)

|                           |  |                         |   |
|---------------------------|--|-------------------------|---|
| Hysteresis                | 0.1 mA (switching threshold)   | Type                    | Status relay, 1 NC (voltage-free)                               |
| Alarm function            | Device error, No supply voltage, Short circuit at input, Open circuit at input | Number of alarm outputs | 1   |
| Nominal switching voltage | ≤ 125 V AC / 110 V DC (safe area)<br>≤ 32 V AC / 32 V DC (zone 2)              | Continuous current      | ≤ 0.5 A AC / 0.3 A DC (safe zone), ≤ 0.5 A AC / 1 A DC (zone 2) |
| Power rating              | ≤ 62.5 VA / 32 W (safe area)<br>≤ 16 VA / 32 W (Zone 2)                        |                         |   |

### General specifications

|                    |   |                    |                            |
|--------------------|---|--------------------|----------------------------|
| Type of connection | PUSH IN   | Humidity           | 0...95 % (no condensation) |
| Protection degree  | IP20  | Supply voltage     | 19.2...31.2 V DC           |
| Configuration      | With FDT/DTM software, Requires configuration adapter 8978580000 CBX200 USB | Operating altitude | ≤ 2000 m                   |

### Insulation coordination

|                    |                         |               |            |
|--------------------|-------------------------|---------------|------------|
| EMC standards      | EN 61326-1              | Standards     | EN 61010-1 |
| Insulation voltage | 2.6 kV (input / output) | Rated voltage | 300 V      |

### Data for Ex applications (ATEX)

|                       |  |                       |   |
|-----------------------|--|-----------------------|---|
| ATEX - gas labelling  | II (1) G [Ex ia Ga] IIC/IIB/IIA            | ATEX - dust labelling | II (1) D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I |
| IECEx - gas labelling | Ex ec nC IIC T4 Gc, [Ex ia Ga] IIC/IIB/IIA | Installation location | Device installed in safe area, zone 2         |

### Connection data

|  |                     |   |                     |
|--|---------------------|---|---------------------|
| Type of connection                                   | PUSH IN             | Wire connection cross section AWG, min.   | AWG 26              |
| Wire connection cross section AWG, max.              | AWG 14              | Wire cross-section, solid, min.   | 0.2 mm <sup>2</sup> |
| Wire cross-section, solid, max.                      | 2.5 mm <sup>2</sup> | Wire connection cross section, finely stranded, min.                                    | 0.2 mm <sup>2</sup> |
| Wire connection cross section, finely stranded, max. | 2.5 mm <sup>2</sup> | Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min. | 0.2 mm <sup>2</sup> |

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**Technical data**

Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max. 2.5 mm<sup>2</sup>

**Guarantee**

Time interval 3 years

**Part description**

**Product description** The devices of the ACT20X-HDI-SDO-S family transmit digital signals galvanic isolated from potentially explosive atmospheres to non-hazardous or less hazardous areas. For this purpose the input circuits are designed intrinsically safe. They can process NAMUR sensor signals according to EN 60947-5-6 or be connected to potential-free contacts (with or without resistor circuitry). Single and dual channel versions are available with relay or transistor outputs.

**Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 8.0    | EC002653    | ETIM 9.0    | EC002653    |
| ETIM 10.0   | EC002653    | ECLASS 14.0 | 27-21-01-20 |
| ECLASS 15.0 | 27-21-01-20 |             |             |

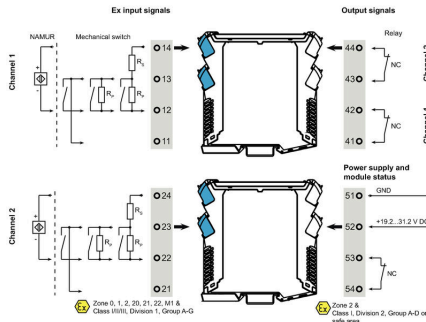
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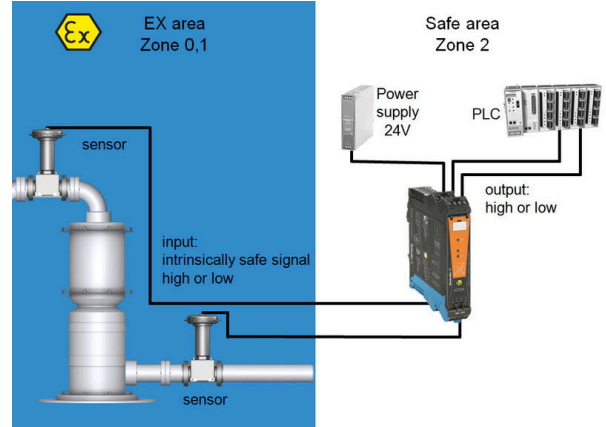
Drawings

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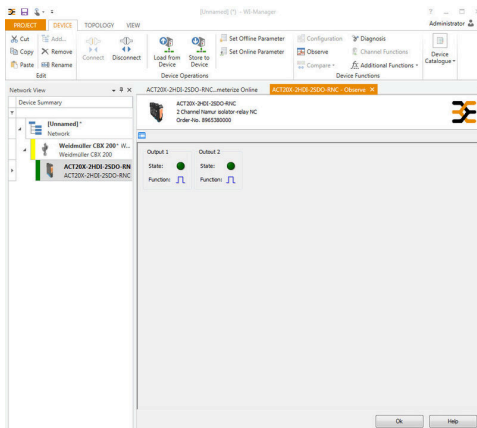
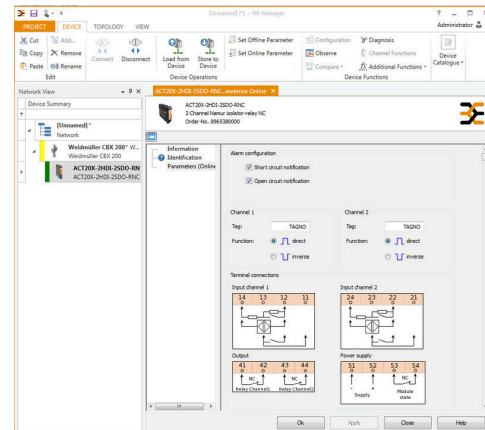
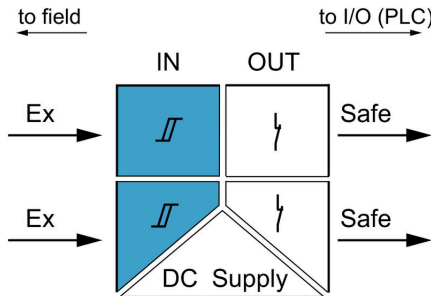
Connection diagram



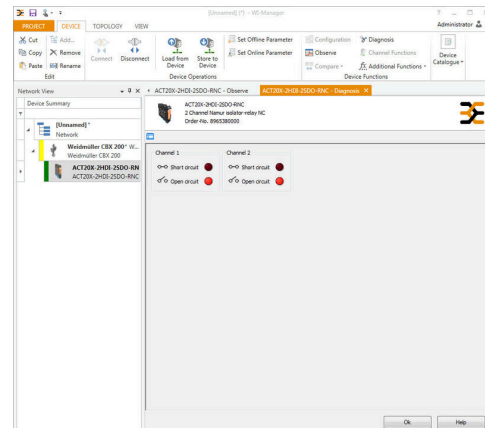
Application



Block diagram



screenshot of configuration with FDT2 / DTM software



screenshot of "observe" with FDT2 / DTM software

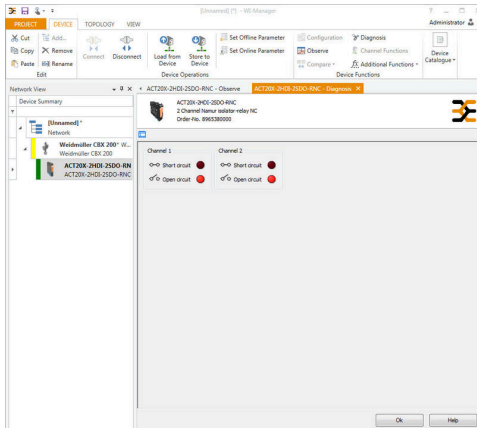
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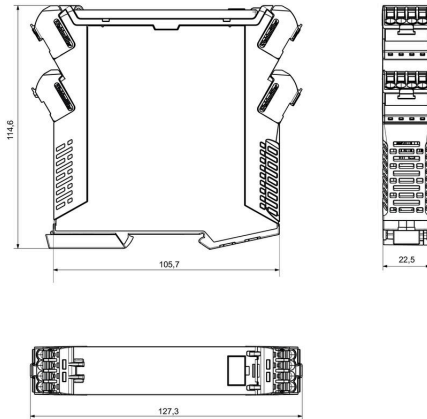
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Drawings

Dimensioned drawing



screenshot of "diagnosis" with FDT2 / DTM software



Removable terminals with coding

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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                       |  |  |

### Configuration interfaces



### General ordering data

|            |                            |         |  |
|------------|----------------------------|---------|--|
| Type       | CBX200 USB                 | Version |  |
| Order No.  | <a href="#">8978580000</a> |         |  |
| GTIN (EAN) | 4032248813759              |         |  |
| Qty.       | 1 ST                       |         |  |