

## ACT20X-2HAI-2SAO-P

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

www.weidmueller.com



The ACT20X-HAI-SAO/2HAI-2SAO HART-protocol transparent current-supply isolators are capable of transmitting 4...20 mA signals from Ex zone 0 into the safe zone. External sensors can be supplied with power through the device.

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

The rail mounted current-supply isolators 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, HART®, 2-channel, Ex-input: 4 - 20 mA, Safe-output: 4-20mA |
| Order No.  | <a href="#">2456 150000</a>                                                               |
| Type       | ACT20X-2HAI-2SAO-P                                                                        |
| GTIN (EAN) | 4050118471281                                                                             |
| Qty.       | 1 items                                                                                   |

**ACT20X-2HAI-2SAO-P**

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

www.weidmueller.com

**Technical data**

**Approvals**

Approvals



|                         |                            |
|-------------------------|----------------------------|
| ROHS                    | Conform                    |
| UL File Number Search   | <a href="#">UL Website</a> |
| Certificate no. (cULus) | E337701                    |

**Dimensions and weights**

|            |          |                 |             |
|------------|----------|-----------------|-------------|
| Depth      | 114.6 mm | Depth (inches)  | 4.5118 inch |
| Height     | 127.3 mm | Height (inches) | 5.0118 inch |
| Width      | 22.5 mm  | Width (inches)  | 0.8858 inch |
| Net weight | 212 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_C006_V2R1.pdf<br>(application/pdf) | SIL in compliance with IEC 61508 | 2 |
| MTBF      | 315 a                                                                                      |                                  |   |

**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 |

**Assembling**

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

**Input EX**

|                          |                                                                                     |                                     |            |
|--------------------------|-------------------------------------------------------------------------------------|-------------------------------------|------------|
| Type                     | intrinsically safe circuit, active (as current source) or passive (as current sink) | Residual ripple (current loop)      | <7.5 mVeff |
| Sensor supply            | > 16 V DC                                                                           | Output signal in case of wire break | <1 mA      |
| Input current            | 4...20mA                                                                            | Voltage drop powered                | <4.5 V     |
| Voltage drop not powered | <6 V                                                                                |                                     |            |

**Output**

|                     |                                                         |                        |                               |
|---------------------|---------------------------------------------------------|------------------------|-------------------------------|
| Number of outputs   | 2                                                       | Load impedance current | ≤ 600 Ω                       |
| Type                | active (as current source) or passive (as current sink) | Output current         | 4...20 mA                     |
| Output signal limit | <28 mA                                                  | Load stability         | ≤ 0.01 % of end value / 100 Ω |

## ACT20X-2HAI-2SAO-P

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26  
D-32758 Detmold  
Germany

www.weidmueller.com

## Technical data

### Output (Status)

|                           |                                                                                           |                         |                                                                 |
|---------------------------|-------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------------------|
| Hysteresis                | 0.1 mA (switching threshold)                                                              | Type                    | Status relay, 1 NC (voltage-free)                               |
| Alarm function            | Device error, No supply voltage, Activation relay within set range, between 3,8 - 20,5 mA | 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                                                                     | Accuracy                                     | <0.1% span |
| Humidity                     | 0...95 % (no condensation)                                                  | Protection degree                            | IP20       |
| Supply voltage               | 19.2...31.2 V DC                                                            | Step response time                           | ≤ 5 ms     |
| Temperature coefficient      | <0.01% of span/°C (TU)                                                      | Type of signal forwarding according to HART® | unchanged  |
| Configuration                | With FDT/DTM software, Requires configuration adapter 8978580000 CBX200 USB | Operating altitude                           | ≤ 2000 m   |
| HART® transparency supported | Yes                                                                         |                                              |            |

### 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> |
| 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 |
|---------------|---------|

**ACT20X-2HAI-2SAO-P**

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

[www.weidmueller.com](http://www.weidmueller.com)

**Technical data****Part description**

**Product description** The ACT20X-HAI-SAO-S current supply isolator is a HART-protocol, transparent isolator for analogue DC current signals from Ex-zone 0. The input may also operate as an active current loop (the loop current provided by the device). The device provides an 4...20 mA current signal for the safe zone on the output side. The device is available as single-channel or dual-channel version.

**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 |             |             |

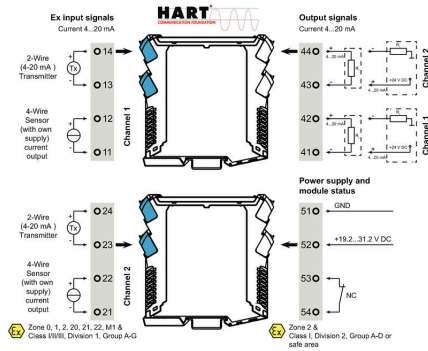
**ACT20X-2HAI-2SAO-P**

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

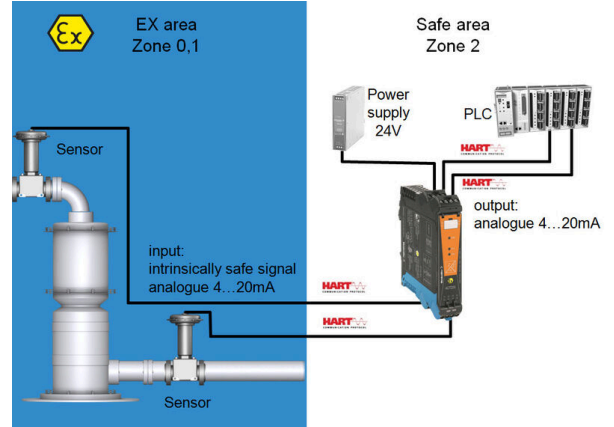
www.weidmueller.com

Drawings

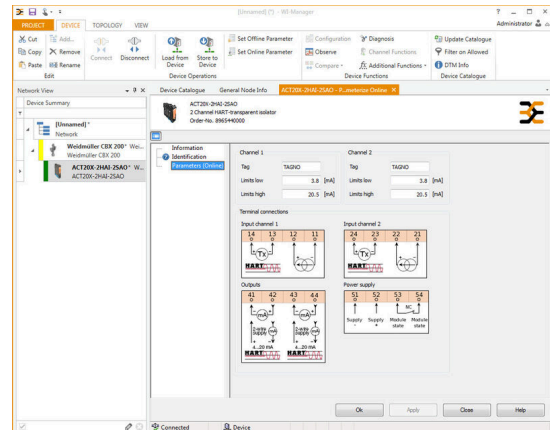
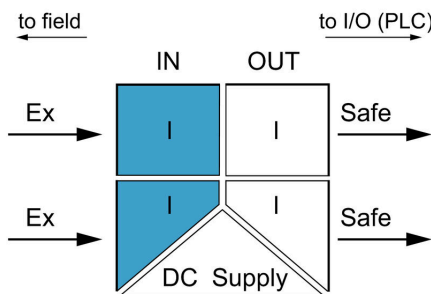
Connection diagram



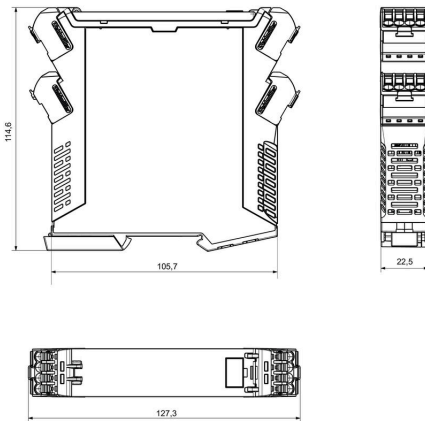
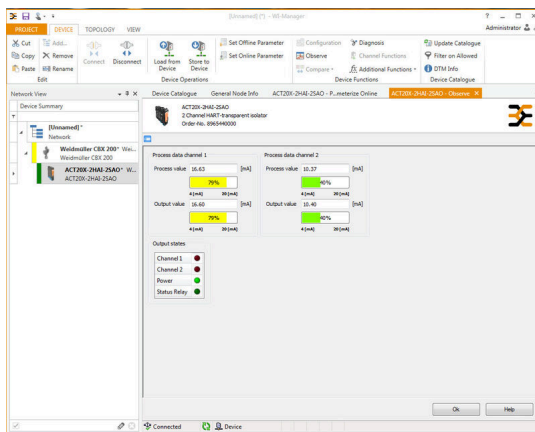
Application



Block diagram



Dimensioned drawing



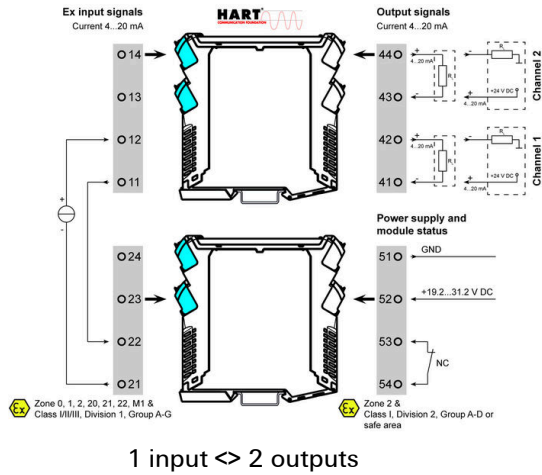
ACT20X-2HAI-2SAO-P

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

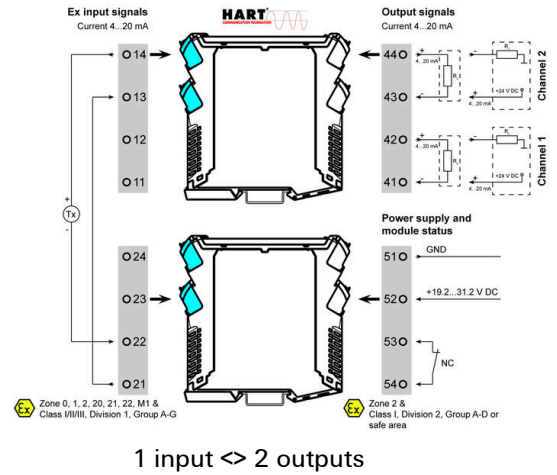
Drawings

www.weidmueller.com

Application



Application



## ACT20X-2HAI-2SAO-P

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

www.weidmueller.com

## 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                       |         |  |