

## ACT20X-SAI-HAO-S

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

www.weidmueller.com

### Product image, Similar to illustration



The ACT20X-SAI-HAO/2SAI-2HAO current output isolators are suitable for controlling field devices in Ex areas, up to Zone 0.

The input/output-side HART protocol transparent signal connection is implemented using 4 to 20 mA current loops.

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

The rail-mounted current output 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® transparency, 1-channel, Safe-input: 4-20mA, Ex output: 4 - 20 mA
Order No.	<a href="#">8965450000</a>
Type	ACT20X-SAI-HAO-S
GTIN (EAN)	4032248785063
Qty.	1 items

**ACT20X-SAI-HAO-S**

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

www.weidmueller.com

**Technical data**

**Approvals**

Approvals	CE; CULUS; DEKRAATEX; DETNORVER; FMEX; FUSAFETY; IECEXDEK
Approvals	DNVGL;
Approvals	



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

**Dimensions and weights**

Depth	113.6 mm	Depth (inches)	4.4724 inch
Height	119.2 mm	Height (inches)	4.6929 inch
Width	22.5 mm	Width (inches)	0.8858 inch
Net weight	189 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/ Cert_Weidmueller_070902_P0002_C007_V2R1.pdf (application/pdf)	SIL in compliance with IEC 61508	2
MTBF	135 a		

**Environmental Product Compliance**

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cl
REACH SVHC	Lead 7439-92-1
SCIP	2f6dd957-42 1a-46db-a0c2-cf1609156924

**Assembling**

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

**Input**

Number inputs	1	Input current	4...20mA
Voltage drop	<2 V		

**Output**

Load impedance current	≤ 725 Ω	Influence of load resistance	≤ 0.01% of span / 100 Ω
Type	intrinsically safe circuit	Output current	4...20 mA (max. 23 mA)
Number of outputs, Ex	1	Output signal limit	<28 mA

**ACT20X-SAI-HAO-S**

**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) ≤ 32 V AC / 32 V DC (zone 2)	Continuous current	≤ 0,5 A AC / 1 A DC (zone 2)
Power rating	≤ 62.5 VA / 32 W (safe area) ≤ 16 VA / 32 W (Zone 2)		

**General specifications**

Type of connection	Screw connection	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	Current IO	93 mA
Voltage U0	28 V DC	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	Power P0	<650 mW
Installation location	Device installed in safe area, zone 2		

**Connection data**

Type of connection	Screw connection	Tightening torque, min.	0.4 Nm
Tightening torque, max.	0.6 Nm	Clamping range, rated connection	2.5 mm <sup>2</sup>
Clamping range, min.	0.25 mm <sup>2</sup>	Clamping range, max.	2.5 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 26	Wire connection cross section AWG, max.	AWG 12

**Guarantee**

Time interval	3 years
---------------	---------

**ACT20X-SAI-HAO-S**

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

www.weidmueller.com

**Technical data**

**Part description**

**Product description** The ACT20X-SAI-HAO-S is a HART-protocol, transparent current output isolator. A DC current input signal from the safe area will be galvanically separated and drives controlled field devices in Ex zone 0. 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		

**Tender specification sheets**

Long specification	Short specification
<p>Ex output isolation amplifier for standard DC current signals, HART transparent</p> <p>1-channel output isolation amplifier in 22.5 mm width with external power supply, for transmitting and isolating standard signals 4 to 20 mA from the safe zone to Ex zones 0,1,2. Status-/ error messages are available via a relay contact (NO). The component can be configured using standard FDT/DTM software. Add-on housing for TS35 rail mounting</p> <p>Dimensions: L/W/H                      119.2/ 22.5/ 113.6</p> <p>Screw connection/                      Nominal cross-section 2.5 mm<sup>2</sup></p> <p>Protection degree: IP 20</p> <p>Input 4...20 mA</p> <p>Output 4...20 mA</p> <p>Load &lt; 600 Ohm</p> <p>Accuracy &lt; 0,1 % v.E</p> <p>Temperature coefficient &lt; 0,01% v.E./°C (Tu)</p> <p>Alarm output relay 1 NO contact</p> <p>250 V AC / 30 V DC @ 2A safe zone</p> <p>32 V AC @ 0.5 A/ 32 VDC @ 1 A Zone 2</p> <p>Auxiliary power 19...31.2 V DC</p> <p>Power loss approx. 1.8 W</p> <p>Ambient temperature range -20 °C...+60 °C</p> <p>Secure isolation EN</p>	<p>Ex output isolation amplifier for standard DC current signals, HART transparent</p> <p>1-channel output isolation amplifier in 22.5 mm width with external power supply, for transmitting and isolating standard signals 4 to 20 mA from the safe zone to Ex zones 0,1,2. Status-/ error messages are available via a relay contact (NO). The component can be configured using standard FDT/DTM software.</p>

## Technical data

61010, 3-way isolation  
up to 2.6 kV AC/DC of all  
circuits against each other  
Working  
voltage 300  
V AC/DC at overvoltage  
category II and pollution  
degree 2  
Approvals cULus, ATEX  
IECEX, FM  
ATEX marking II 3 G ExnA  
nC IIC T4  
ATEX characteristic data  
U0 = 28 V DC  
IO =  
93 mA DC  
PO =  
650 mW  
Type  
ACT20X-SAI-HAO-S

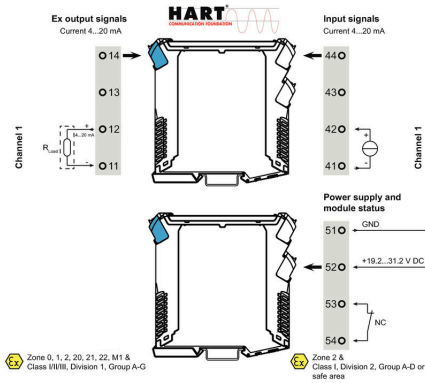
**ACT20X-SAI-HAO-S**

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

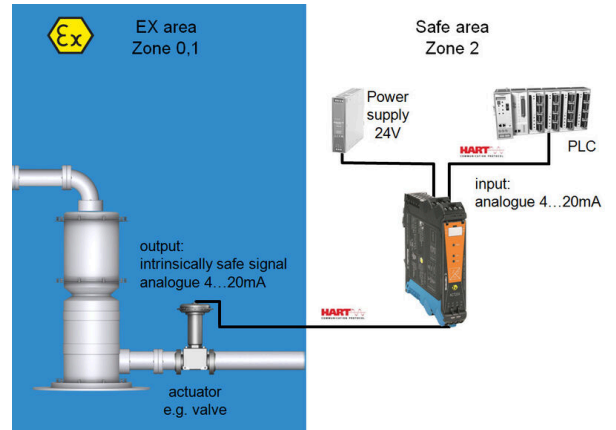
www.weidmueller.com

**Drawings**

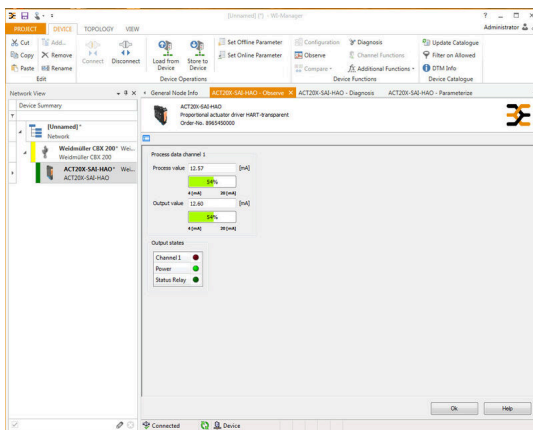
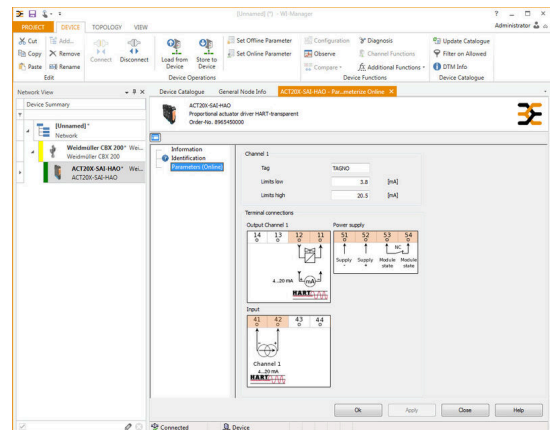
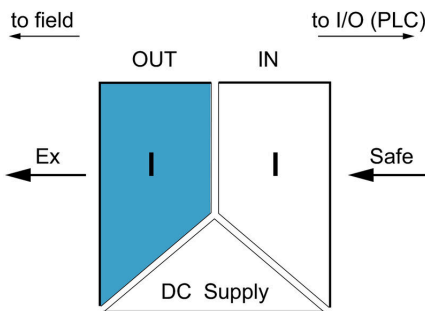
**Connection diagram**



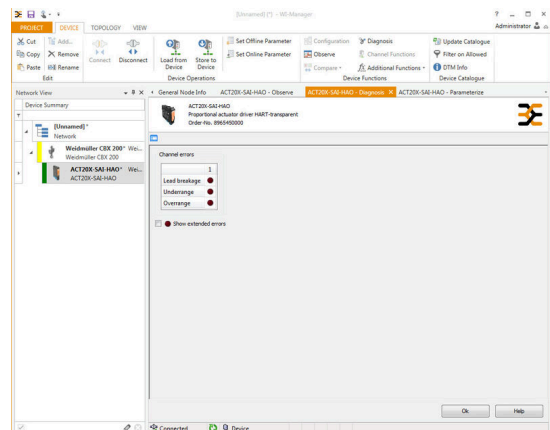
**Application**



**Block diagram**

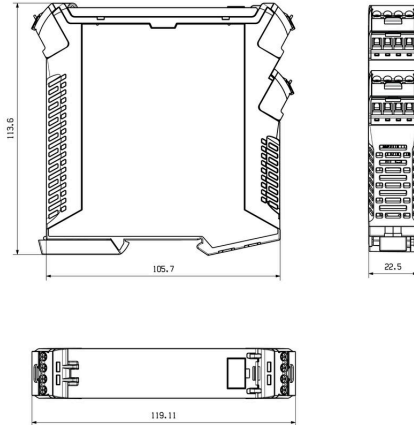


screenshot of configuration with FDT2 / DTM software



screenshot of "observe" with FDT2 / DTM software

Dimensioned drawing



Removable terminals with coding

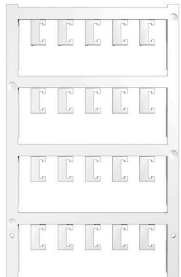
**ACT20X-SAI-HAO-S**

**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		