

ACT20X-2HAI-2SAO-P**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

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.	2456150000
Type	ACT20X-2HAI-2SAO-P
GTIN (EAN)	4050118471281
Qty.	1 pc(s).

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Technical data**Dimensions and weights**

Depth	114.6 mm	Depth (inches)	4.512 inch
Height	127.3 mm	Height (inches)	5.012 inch
Width	22.5 mm	Width (inches)	0.886 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	SIL in compliance with IEC 61508	2
MTBF	315 a		

Assembling

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

Input EX

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

Output

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

Digital output

Max. switching frequency	0 Hz		
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Alarm output

Alarm function	Signal limit exceeded, Line interruption at the input, No supply voltage, Device error	Continuous current	≤ 0.5 A AC / 0.3 A DC (safe zone), ≤ 0.5 A AC / 1 A DC (zone 2)
Nominal switching voltage	≤ 125 V AC / 110 V DC (safe area) ≤ 32 V AC / 32 V DC (zone 2)	Power rating	≤ 62.5 VA / 32 W (safe area) ≤ 16 VA / 32 W (Zone 2)
Type	Status relay, 1 NC (voltage-free)		

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Technical data**General specifications**

Accuracy		Configuration	With FDT/DTM software, Requires configuration adapter 8978580000 CBX200 USB
	<0.1% span		
HART® transparency supported	Yes	Humidity	0...95 % (no condensation)
Operating altitude	≤ 2000 m	Power consumption	≤ 1.9 W
Protection degree	IP20	Step response time	≤ 5 ms
Temperature coefficient	<0.01% of span/°C (TU)	Type of connection	PUSH IN
Type of signal forwarding according to HART®	unchanged	Voltage supply	19.2...31.2 V DC

Insulation coordination

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

Data for Ex applications (ATEX)

Current I ₀	Current loop 93 mA / ex- ternally 10 mA	Installation location	Device installed in safe area, zone 2
Marking	II (1) G [Ex ia Ga] IIC/IIB/ IIA, II (1) D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I	Power P ₀	Current loop 0.65 W / ex- ternally 0.1 W
Voltage U ₀	Current loop 28 V / exter- nally 10 V		

Safety-related basic specifications

Description of the "safe state"	analogue Output ≤ 3.6 mA or output ≥ 21 mA	Device type	A
T _{proof}	5 a	Total failure rate for safe detected failures (λ _{SD})	0 FIT
Hardware fault tolerance (HFT)	0	Safety category	SIL 2
Safe Failure Fraction (SFF)	85 %	Mean Time To Repair (MTTR)	24 h
Total failure rate for safe undetected fail- ures (λ _{SU})	164 FIT	Total failure rate for dangerous detected failures (λ _{DD})	127 FIT
Total failure rate for dangerous undetect- ed failures (λ _{DU})	48 FIT	Probability of outage PFH	4.1 x 10 ⁻⁸ h ⁻¹
Demand mode	High		

Safety-related specifications Low demand mode

Average Probability of Failure on De- mand (PFD _{avg})	1.92 x 10 ⁻⁴ (T _{proof} = 1 year), 3.67 x 10 ⁻⁴ (T _{proof} = 2 years), 8.92 x 10 ⁻⁴ (T _{proof} = 5 years), additional data in the safety manual
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Technical data**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 ²
Wire cross-section, solid, max.	2.5 mm ²	Wire connection cross section, finely stranded, min.	0.2 mm ²
Wire connection cross section, finely stranded, max.	2.5 mm ²	Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min.	0.2 mm ²
Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max.	2.5 mm ²		

Guarantee

Time interval	3 years
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Classifications

ETIM 6.0	EC002653	ETIM 7.0	EC002653
ETIM 8.0	EC002653	ETIM 9.0	EC002653
ETIM 10.0	EC002653	ECLASS 9.0	27-21-01-20
ECLASS 9.1	27-21-01-20	ECLASS 10.0	27-21-01-20
ECLASS 11.0	27-21-01-20	ECLASS 12.0	27-21-01-20
ECLASS 13.0	27-21-01-20	ECLASS 14.0	27-21-01-20
ECLASS 15.0	27-21-01-20		

Approvals

Approvals



Approvals MAMID	https://mdcop.weidmueller.com/mediadelivery/rendition/900_319222/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319228/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319234/-T1z1mm-S800/
ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E337701

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

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Technical data

Downloads

Approval/Certificate/Document of Conformity	Certification SIL Certification DNV GL Certification ATEX Certification IECEx Certification UL Declaration of Conformity
Engineering Data	CAD data – STEP
Software	WI-Manager, DTM-Library for online installation Release notes for Weidmueller FDT-DTM Software version
User Documentation	Application notes – Safety Manual for SIL application Instruction sheet Handbuch ACT20X- Serie, deutsch Manual ACT20X- series, english 20210120 Security Advisory - WI-Manager affected by MundM Software fdtCONTAINER vulnerability
Catalogues	Catalogues in PDF-format

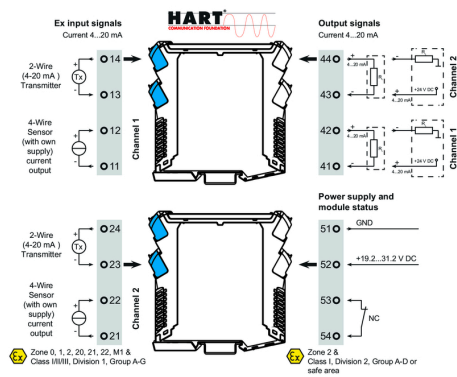
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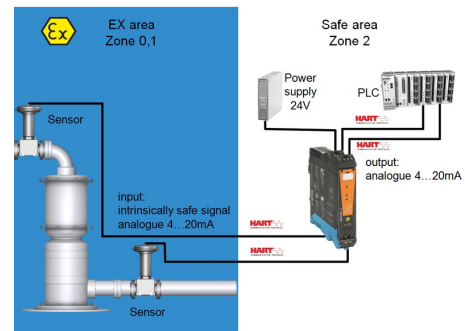
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Drawings

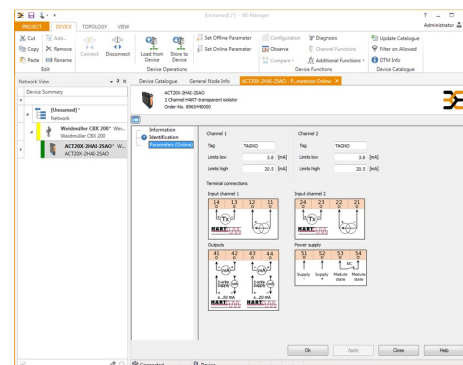
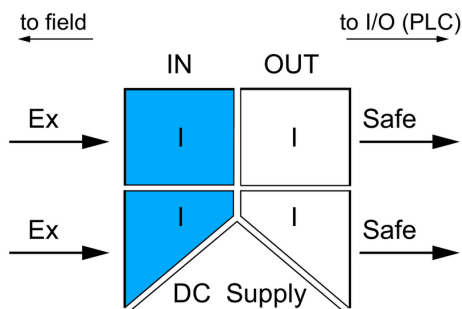
Connection diagram



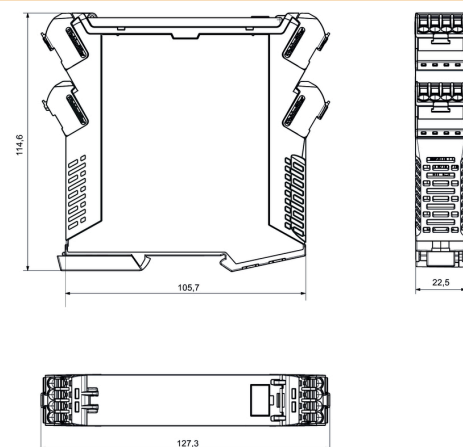
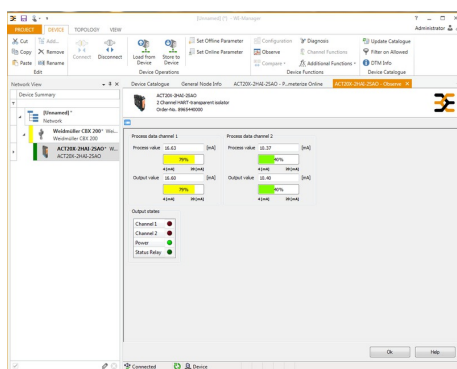
Application



Block diagram



Dimensioned drawing



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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

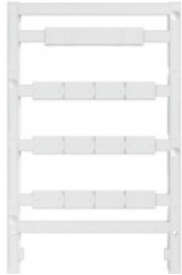
Type	ESG 6.6/20 BHZ 5.00/04	Version
Order No.	1082540000	ESG, Device markers x 20 mm, PA 66, Colour: white, pluggable
GTIN (EAN)	4032248845439	
Qty.	200 pc(s).	

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General ordering data

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 pc(s).	

Configuration interfaces**General ordering data**

Type	CBX200 USB
Order No.	8978580000
GTIN (EAN)	4032248813759
Qty.	1 pc(s).

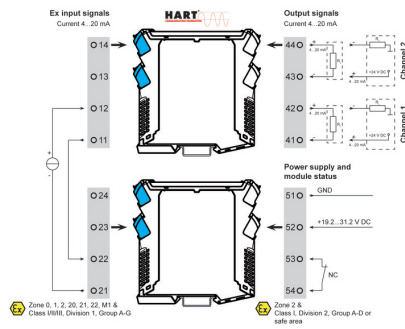
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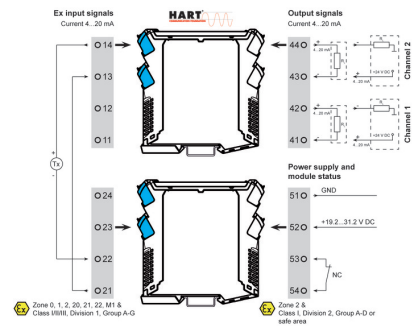
Drawings

Application



1 input <=> 2 outputs

Application



1 input <=> 2 outputs