

## ACT20X-2HDI-2SDO-RNO-S

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

www.weidmueller.com



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, NO contact, 2-channel
Order No.	<a href="#">8965370000</a>
Type	ACT20X-2HDI-2SDO-RNO-S
GTIN (EAN)	4032248784882
Qty.	1 items

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## Technical data

### Approvals

Approvals CE; CULUS; DETNORVER; FMEX; FUSAFETY; IECEXKEM; KEMAATEX

Approvals DNVGL;

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	119.2 mm	Height (inches)	4.6929 inch
Width	22.5 mm	Width (inches)	0.8858 inch
Net weight	190 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_C001_V2R1.pdf (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, 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

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

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NAMUR supply	8 V DC / 8 mA	Trigger level low	<1.2 mA
Trigger level high	> 2.1 mA		

#### 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 NO
Function	Output = input, direct or inverse (configurable)	Nominal switching voltage	≤ 250 V AC / 30 V DC (safe area) ≤ 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) ≤ 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) ≤ 16 VA / 32 W (Zone 2)		

#### General specifications

Type of connection	Screw connection	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	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

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**Technical data**

**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		

**Tender specification sheets**

Long specification	<p>Ex isolating switch amplifiers for Namur sensors, 2 channels                  2-channel isolating switch amplifiers in 22.5 mm width with an external power supply, to transmit and isolate Namur sensor signals from Ex zones 0, 1, 2 into the safe zone.                  On the output side there is a potential-free relay contact per channel with closing function and a common alarm contact ("a" contact) for status/error messages. The component can be configured using standard FDT/DTM software.                  Add-on housing for TS35 DIN rail installation                  Dimensions: L/W/H 119.2/ 22.5/ 113.6                  screw connection/ nominal cross-section 2.5 mm<sup>2</sup>                  Protection degree: IP20                  Input /channel NAMUR sensor according to EN 60947</p> <p>8                  VDC / 8 mA sensor power supply</p> <p>0...5                  kHz input frequency</p> <p>wire-                  break detection                  Output Ex/ channel                  Relay 1 NO contact</p>	Short specification	<p>Ex isolating switch amplifiers for Namur sensors, 2 channels                  2-channel isolating switch amplifiers in 22.5 mm width with an external power supply, to transmit and isolate Namur sensor signals from Ex zones 0, 1, 2 into the safe zone.                  On the output side there is a potential-free relay contact per channel with closing function and a common alarm contact ("a" contact) for status/error messages. The component can be configured using standard FDT/DTM software.</p>
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## Technical data

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250  
VAC / 30 VDC @ 2A safe  
zone  
32  
VAC @ 0.5 A/ 32 VDC @ 1  
A zone 2  
Alarm output relay 1 NO  
contact  
250  
VAC / 30 VDC @ 2A safe  
zone  
32  
VAC @ 0.5 A/ 32 VDC @ 1  
A zone 2  
Auxiliary  
power  
19...31.2 VDC  
Power loss approx. 3 W  
Ambient  
temperature range -20 °C  
to +60 °C  
Secure isolation  
EN 61010, 4-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 = 10, 6 V DC  
IO =  
12 mA DC  
PO =  
32 W  
Type  
ACT20X-  
HDI-2SDO-2RNO-S

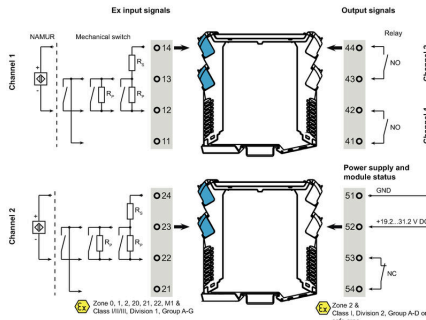
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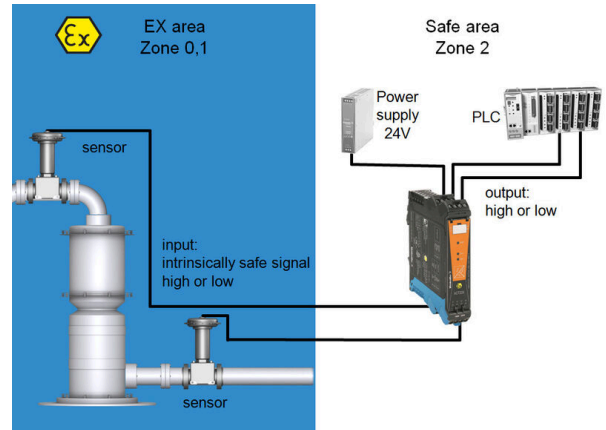
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**Drawings**

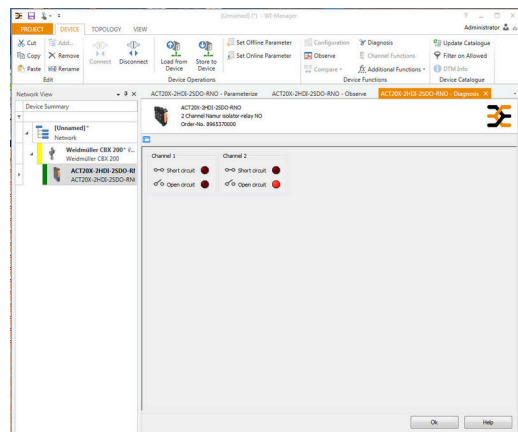
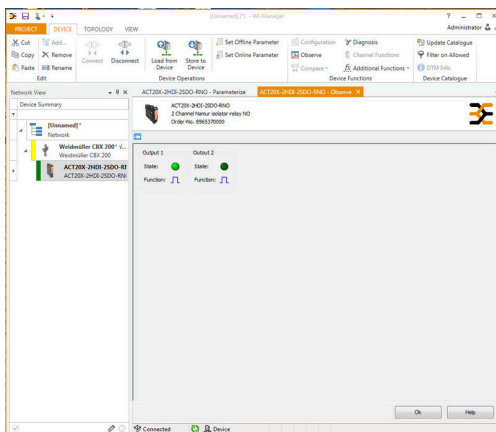
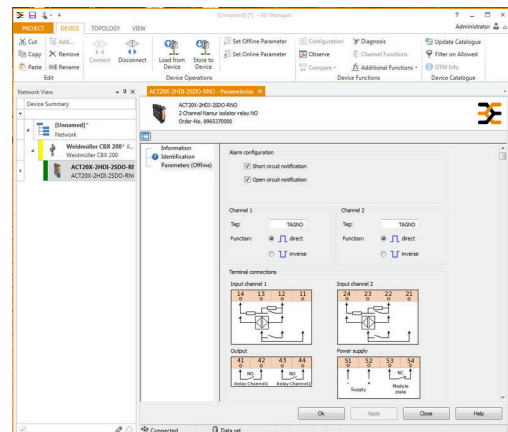
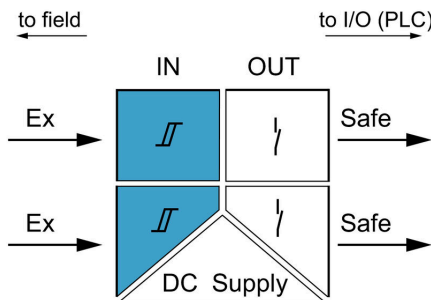
**Connection diagram**



**Application**



**Block diagram**



screenshot of configuration with FDT2 / DTM software

screenshot of "observe" with FDT2 / DTM software

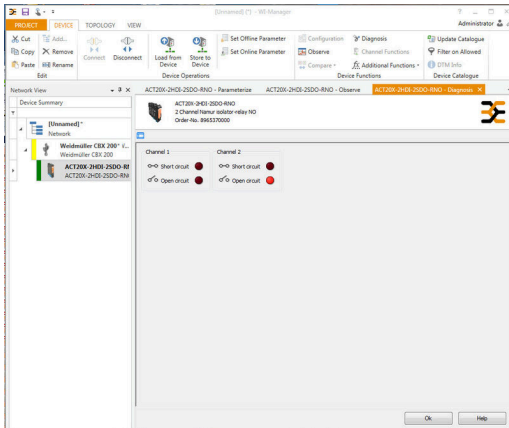
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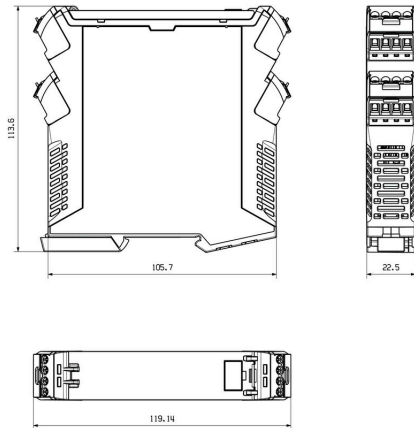
Drawings

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Dimensioned drawing



screenshot of "diagnosis" with FDT2 / DTM software



Removable terminals with coding

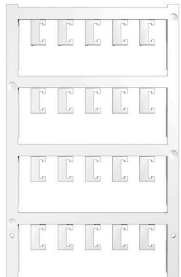
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## Accessories

### 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		