

**ACT20X-2SDI-2HDO-P****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Product image, Similar to illustration**

The ACT20X-SDI-HDO/2SDI-2HDO valve control modules are controlled from the safe zone on the input side by the switching signals (NPN, PNP) and provide digital outputs to switch actuators (solenoids, alarms) in Ex zone 0. Depending on the module, the output current is limited for the ignition protection groups IIC/IIB to 35 mA or 60 mA (only one channel). 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, Safe-input: relay, Ex-output: Opto module, 2-channel, Output current : max. 35 mA
Order No.	<a href="#">2456130000</a>
Type	ACT20X-2SDI-2HDO-P
GTIN (EAN)	4050118471298
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	180 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	176 a		

**Assembling**

Mounting position	horizontal or vertical	Type of mounting	Rail, Snap mounting support rail
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**Input**

Input resistance, voltage		Input voltage	≤ 28 V DC, Trigger level low: ≤ 2.0 V DC (NPN), ≤ 8.0 V DC (PNP), Trigger level high: ≥ 4.0 V DC (NPN), ≥ 10.0 V DC (PNP)
	3.5 kΩ		
Number of inputs	2	Sensor	NAMUR sensor, according to EN60947-5-6
Type	NPN, PNP transistor, switching signal [input safe-side valve component]		

**Output**

Output current	max. 35 mA	Output values	depending on terminal assignment
Residual ripple (current loop)		Type	intrinsically safe circuit, digital, output = input, direct or inverse (configurable)
	<40 mV <sub>eff</sub>		

**Digital output**

Max. switching frequency	20 Hz
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**Alarm output**

Alarm function	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)		

Creation date April 26, 2024 5:53:06 AM CEST

Catalogue status 20.04.2024 / We reserve the right to make technical changes.

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## Technical data

## General specifications

Configuration	With FDT/DTM software, Requires configuration adapter 8978580000 CBX200 USB	Humidity	0...95 % (no condensation)
Power consumption	≤ 1.9 W	Protection degree	IP20
Step response time	10 ms	Type of connection	PUSH IN
Voltage supply	19.2...31.2 V DC		

## Insulation coordination

EMC standards	DIN EN 61326, NE 21	Insulation voltage	2.6 kV (input / output)
Rated voltage	300 V	Standards	EN 61326

## Data for Ex applications (ATEX)

Current $I_0$	≤ 110 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 $P_0$	≤ 0.95 W
Voltage $U_0$	28 V DC		

## Safety-related basic specifications

Description of the "safe state"	de-energized (relay output)	Device type	B
Diagnostic test interval	10 s	$T_{proof}$	5 a
Total failure rate for safe detected failures ( $\lambda_{SD}$ )	0 FIT	Hardware fault tolerance (HFT)	0
Safety category	SIL 2	Safe Failure Fraction (SFF)	91 %
Mean Time To Repair (MTTR)	24 h	Total failure rate for safe undetected failures ( $\lambda_{SU}$ )	477 FIT
Total failure rate for dangerous detected failures ( $\lambda_{DD}$ )	61 FIT	Total failure rate for dangerous undetected failures ( $\lambda_{DU}$ )	43 FIT
Probability of outage PFH	$4.3 \times 10^{-8} \text{ h}^{-1}$	Demand mode	High
Demand rate	1,000 s	Demand response time	<10 ms (opto output)

## Safety-related specifications Low demand mode

Average Probability of Failure on Demand ( $PFD_{avg}$ )	$2.73 \times 10^{-4}$ ( $T_{proof} = 1$ year), $4.52 \times 10^{-4}$ ( $T_{proof} =$ 2 years), $9.89 \times 10^{-4}$ ( $T_{proof}$ = 5 years)
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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 <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
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**Classifications**

ETIM 6.0	EC002653	ETIM 7.0	EC002653
ETIM 8.0	EC002653	ETIM 9.0	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

**Environmental Product Compliance**

REACH SVHC	Lead 7439-92-1
SCIP	2f6dd957-421a-46db-a0c2-cf1609156924

**Approvals**

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E337701

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

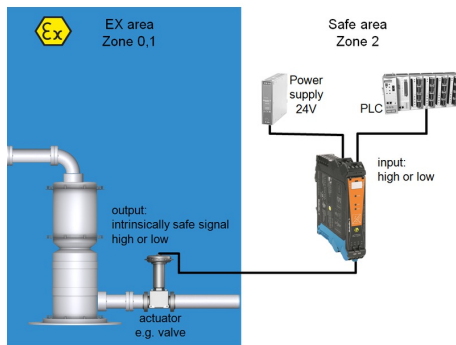
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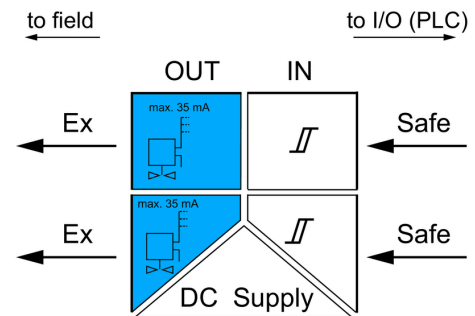
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## Drawings

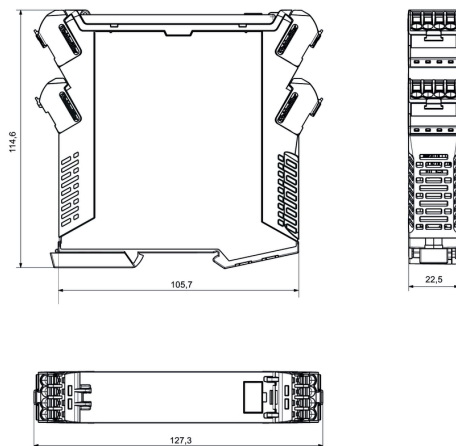
### Application



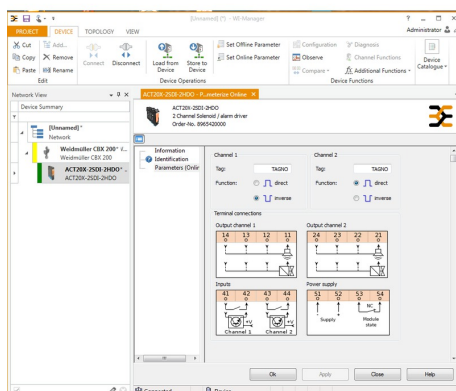
### Block diagram



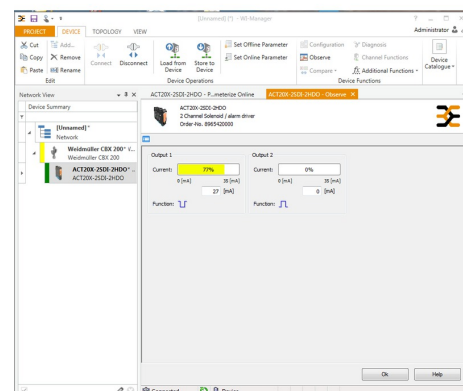
### Dimensioned drawing



### Similar to illustration



screenshot of setup configuration  
with FDT2 / DTM software



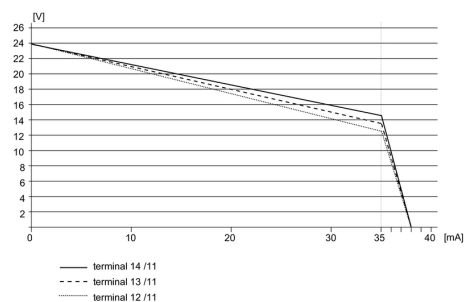
screenshot of "observe" with FDT2 / DTM software

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**Drawings**
**Derating curve**

**Connection diagram**
