

ACT20X ACT20X-2SDI-2HDO-S

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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

Type	ACT20X-2SDI-2HDO-S
Order No.	8965420000
Version	EX signal isolating converter, Safe-input: relay, Ex-output: Opto module, 2-channel
GTIN (EAN)	4032248785032
Qty.	1 pc(s).

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Technical data
Dimensions and weights

Width	22.5 mm	Width (inches)	0.886 inch
Height	117.2 mm	Height (inches)	4.614 inch
Depth	113.6 mm	Depth (inches)	4.472 inch
Net weight	180 g		

Temperatures

Humidity	0...95 % (no condensation)	Operating temperature, max.	60 °C
Operating temperature, min.	-20 °C	Storage temperature, max.	85 °C
Storage temperature, min.	-20 °C	Operating temperature	-20 °C...60 °C
Storage temperature	-20 °C...85 °C		

Probability of failure

MTBF	176 Years	SIL in compliance with IEC 61508	2
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Input

Number of inputs	2	Type	NPN, PNP transistor, switching signal [input safe-side valve component]
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)	Input resistance, voltage	3.5 kΩ

Output

Type	intrinsically safe circuit, digital, output = input, direct or inverse (configurable)	Residual ripple (current loop)	< 40 mV _{eff}
Output current	max. 35 mA	Output values	depending on terminal assignment: 12.5 V @ 35 mA / 13.5 V @ 35 mA / 14.5 V @ 35 mA

Alarm output

Alarm function	No supply voltage, Device error	Type	Relay, 1 NC (voltage-free)
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

Configuration	With FDT/DTM software	Supply voltage	19.2 – 31.2 V DC
Type of connection	Screw connection, Removable terminal block	Power consumption	≤ 3.1 W
Step response time	10 ms	Protection degree	IP20
Humidity	0...95 % (no condensation)		

Creation date September 4, 2018 8:15:05 AM CEST

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Technical data
Insulation coordination

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

Data for Ex applications (ATEX)

Voltage U_0	28 V DC	Current I_0	≤ 110 mA
Power P_0	≤ 0.95 W	Marking	II (1) G [Ex ia Ga] IIC/IIB/ IIA, II (1) D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I

Safety-related basic specifications

Device type	B	Hardware fault tolerance (HFT)	0
T_{proof}	5 Years	Safety category	SIL 2
Probability of outage PFH	$4.3 \times 10^{-8} h^{-1}$		

Safety-related specifications Low demand mode

Average Probability of Failure on Demand (PFD _{avg})	2.73×10^{-4} ($T_{proof} = 1$ year), 4.52×10^{-4} ($T_{proof} = 2$ years), 9.89×10^{-4} ($T_{proof} = 5$ years)
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Connection data

Type of connection	Screw connection, Removable terminal block	Tightening torque, min.	0.4 Nm
Tightening torque, max.	0.6 Nm	Clamping range, rated connection	2.5 mm ²
Clamping range, min.	0.5 mm ²	Clamping range, max.	2.5 mm ²
Wire connection cross section AWG, min.	AWG 30	Wire connection cross section AWG, max.	AWG 14

Rated data UL

UL certificate	E337701.pdf
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Ratings IECEx/ATEX/cUL

ATEX certificate	10ATEX0019X.pdf	IEC Ex certificate	IECEx certification
Certificate No. (ATEX)	KEMA10ATEX0019X	Certificate No. (IECEx)	IECExKEM09.0071X

Classifications

ETIM 3.0	EC002479	ETIM 4.0	EC002479
ETIM 5.0	EC002479	ETIM 6.0	EC002653
UNSPSC	30-21-18-01	eClass 5.1	27-21-01-07
eClass 6.2	27-21-01-07	eClass 7.1	27-21-01-07
eClass 8.1	27-21-01-07	eClass 9.0	27-21-01-07
eClass 9.1	27-21-01-20		

Product information

Product information	Weidmüller provides an extended guarantee period of 36 months for this device.
Descriptive text ordering data	CBX200 USB configuration adapter - 8978580000

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Data sheet

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Technical data

Approvals

Approvals



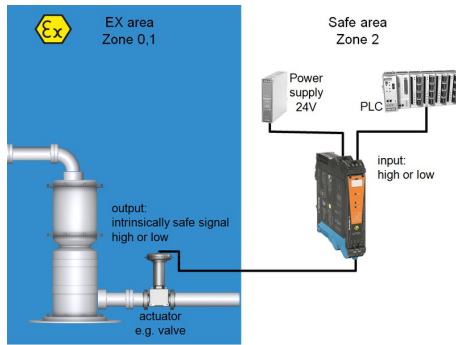
Approvals	DNVGL;
ROHS	Conform

Downloads

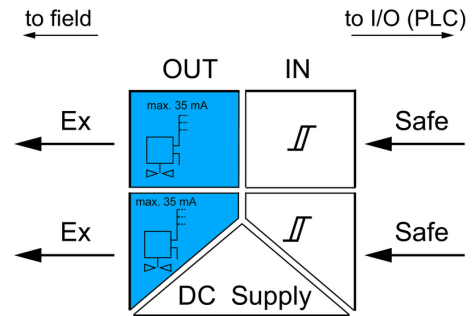
Approval/Certificate/Document of Conformity	SIL certificate Certification DNV GL Declaration of Conformity
Brochure/Catalogue	CAT 4.1 ELECTR 16/17 EN
Engineering Data	EPLAN.WSCAD
Engineering Data	STEP
Software	WI-Manager, DTM-Library for online installation
User Documentation	Instruction sheet Manual MAN SAFETY ACT20X-(2)SDI-(2)HDO-(L)-S

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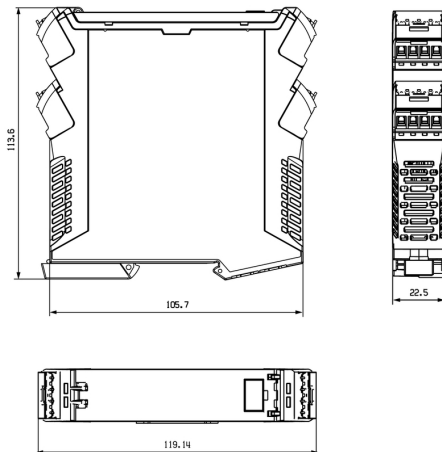
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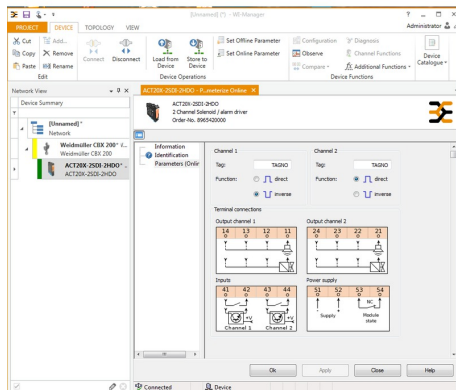
application schematic



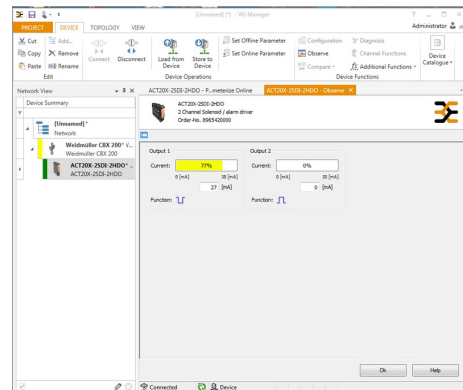
Dimensioned drawing



screenshot configuration with FDT/DTM software example



screenshot of setup configuration with FDT2 / DTM software



screenshot of "observe" with FDT2 / DTM software

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Drawings

