

ACT20X-2SDI-2HDO-P

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

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.	2456 130000
Type	ACT20X-2SDI-2HDO-P
GTIN (EAN)	4050118471298
Qty.	1 Stück

Erstellungs-Datum May 25, 2023 2:29:05 PM CEST

Katalogstand 12.05.2023 / Technische Änderungen vorbehalten

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Technische Daten

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

Probability of failure

SIL PAPER	SIL certificate	SIL in compliance with IEC 61508	2
MTBF	176 Years		

Input

Input resistance, voltage	3.5 kΩ	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)
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)	< 40 mV _{eff}	Type	intrinsically safe circuit, digital, output = input, direct or inverse (configurable)

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)		

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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		

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 Years
Total failure rate for safe detected failures (λ _{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 (λ _{SU})	477 FIT
Total failure rate for dangerous detected failures (λ _{DD})	61 FIT	Total failure rate for dangerous undetected failures (λ _{DU})	43 FIT
Probability of outage PFH	4.3 x 10 ⁻⁸ 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 x 10 ⁻⁴ (T _{proof} = 1 year), 4.52 x 10 ⁻⁴ (T _{proof} = 2 years), 9.89 x 10 ⁻⁴ (T _{proof} = 5 years)
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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

Classifications

ETIM 6.0	EC002653	ETIM 7.0	EC002653
ETIM 8.0	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

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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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
Engineering Data	EPLAN
Software	Runtime Software – WI-Manager, DTM-Library for online installation Release notes for Weidmueller FDT-DTM Software version
User Documentation	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

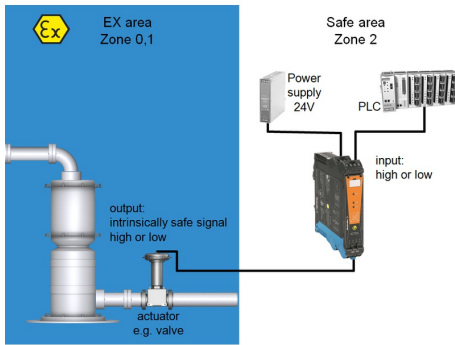
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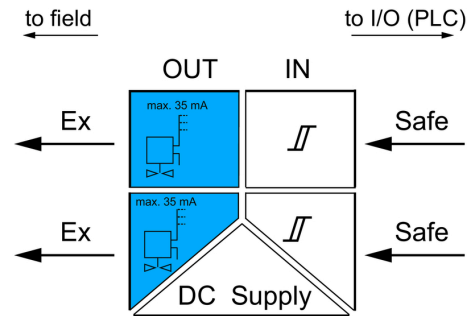
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Zeichnungen

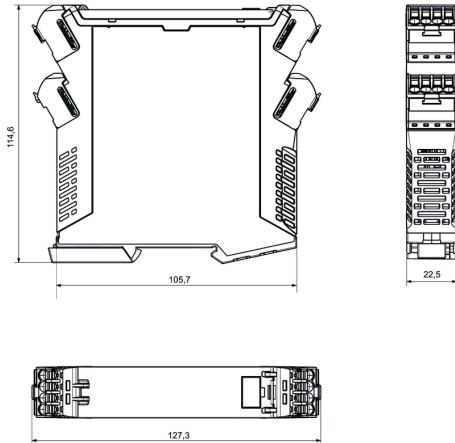
Application



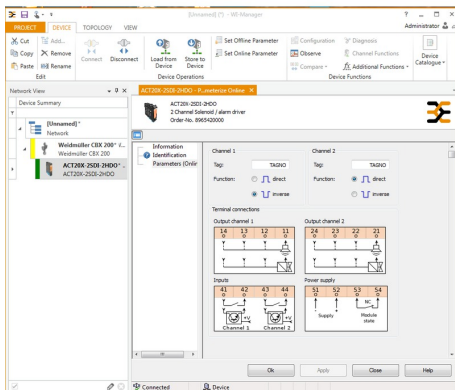
Block diagram



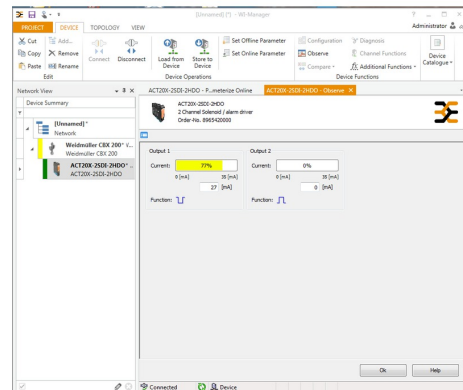
Dimensioned drawing



Similar to illustration



screenshot of setup configuration with FDT2 / DTM software



screenshot of "observe" with FDT2 / DTM software

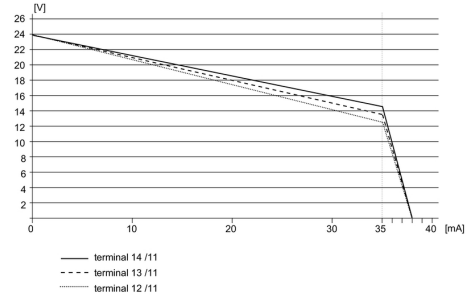
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Zeichnungen

Derating curve



Connection diagram

