

ACT20X-SDI-HDO-H-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, 1-channel, Output current : max. 60 mA
Order No.	2456 120000
Type	ACT20X-SDI-HDO-H-P
GTIN (EAN)	4050118471533
Qty.	1 pc(s).

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

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data**Dimensions and weights**

Depth	113.6 mm	Depth (inches)	4.472 inch
Height	127.1 mm	Height (inches)	5.004 inch
Net weight	170 g	Width	22.5 mm
Width (inches)	0.886 inch		

Temperatures

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

Probability of failure

SIL in compliance with IEC 61508	2	MTBF	175 Years
SFF	91 %		

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
------------	----------------

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		Type	NPN, PNP transistor, switching signal [input safe-side valve component]
	1		

Output

Output current	max. 60 mA	Output values	depending on terminal assignment
Residual ripple (current loop)		Type	intrinsically safe circuit, digital, output = input, direct or inverse (configurable)
	< 40 mV _{eff}		

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)		

General specifications

Configuration	With FDT/DTM software	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		

Creation date April 15, 2021 9:35:13 PM CEST

ACT20X-SDI-HDO-H-P

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

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)

Current I_0	≤ 135 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	≤ 0.77 W
Voltage U_0	28 V DC		

Safety-related basic specifications

Demand mode	High	Demand rate	1,000 s
Demand response time	< 10 ms (opto output)	Description of the "safe state"	de-energized (relay output)
Device type	B	Diagnostic test interval	10 s
Hardware fault tolerance (HFT)	0	Mean Time To Repair (MTTR)	24 h
Probability of outage PFH	$4.6 \times 10^{-8} \text{ h}^{-1}$	Safe Failure Fraction (SFF)	91 %
Safety category	SIL 2	T_{proof}	4 Years
Total failure rate for dangerous detected failures (λ_{DD})	61 FIT	Total failure rate for dangerous undetected failures (λ_{DU})	46 FIT
Total failure rate for safe detected failures (λ_{SD})	0 FIT	Total failure rate for safe undetected failures (λ_{SU})	480 FIT

Safety-related specifications Low demand mode

Average Probability of Failure on Demand (PFD_{avg})	2.92×10^{-4} ($T_{\text{proof}} = 1$ year), 4.84×10^{-4} ($T_{\text{proof}} = 2$ year), 1.06×10^{-4} ($T_{\text{proof}} = 5$ year)
---	--

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		

Classifications

ETIM 6.0	EC002653	ETIM 7.0	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

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

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data**Approvals**

Approvals



ROHS	Conform
UL File Number Search	E337701

Downloads

Approval/Certificate/Document of Conformity	Certification SIL Certification DNV GL Certification ATEX Certification IECEX Certification UL Declaration of Conformity
Engineering Data	STEP
Software	WI-Manager, DTM-Library for online installation V.1.2.2
User Documentation	Safety Manual for SIL application Instruction sheet Handbuch ACT20X- Serie, deutsch Manual ACT20X- series, english
Brochure/Catalogue	Catalogues in PDF-format

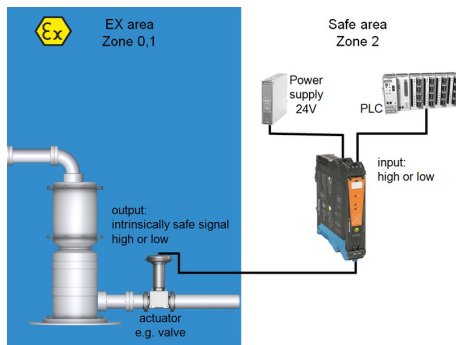
ACT20X-SDI-HDO-H-P

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

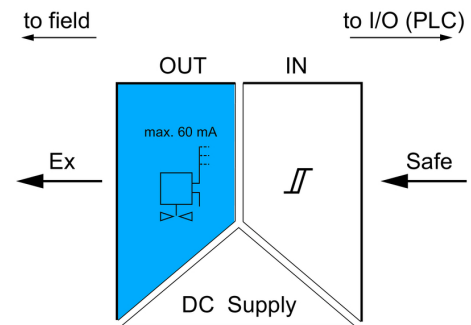
www.weidmueller.com

Drawings

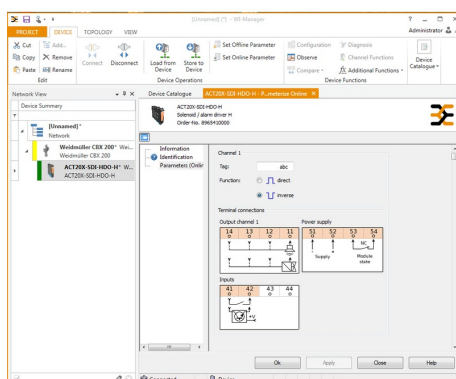
Application



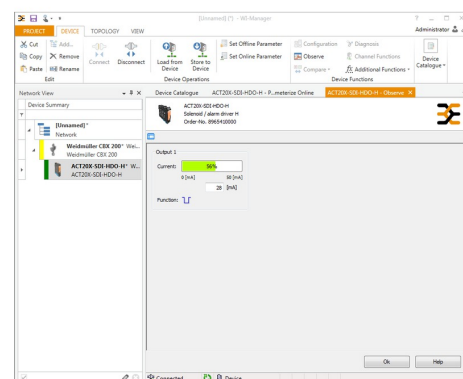
Block diagram



Dimensioned drawing



screenshot of configuration with
FDT2 / DTM software example



screenshot of "observe" with FDT2 / DTM software

ACT20X-SDI-HDO-H-P

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

www.weidmueller.com

Drawings

Connection diagram

