

ACT20P-PRO-FI-AO-DO-S**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image, Similar to illustration

Universal, electrically-isolated signal converters for measuring frequencies with auxiliary power supply and optional limit-value monitoring.

Similar frequency signals from 2-/3-wire PNP/NPN- or Namur initiators can be processed on the input side.

Frequency converters can be used to measure speeds for drives and motors. They can also be used for counting and checking the flow of incoming goods in industrial shipping and handling applications.

General ordering data

Version	Frequency signal converter, Limit value monitoring, Frequency, PWM, analogue V / mA, Transistor (Alarm)
Order No.	2447940000
Type	ACT20P-PRO-FI-AO-DO-S
GTIN (EAN)	4050118462111
Qty.	1 pc(s).

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Technical data**Dimensions and weights**

Depth	113.7 mm	Depth (inches)	4.476 inch
Height	117.2 mm	Height (inches)	4.614 inch
Width	12.5 mm	Width (inches)	0.492 inch
Net weight	999 g		

Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-40 °C...60 °C
Humidity	0...95 % (no condensation)		

Probability of failure

SIL in compliance with IEC 61508	None
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Input Frequency measurement

Frequency range, max.	200,000 Hz	Frequency range, min.	0 Hz
Input frequency		Input voltage	Threshold voltage (NPN / PNP Sensor): 3 V...43.5 V (configurable), Hysteresis level: ≥ 0.5 V
	0,01 Hz...200 kHz		
Number of inputs		Sensor	NPN / PNP transistor (trigger level low: ≤ 4 V high: ≥ 7 V), NAMUR sensor, according to EN60947-5-6, switch with or without RS, RP, 2-wire transmitter (without own power supply), 3 wire NPN/PNP-transistor, frequency generator, PDM
	1		
Sensor supply	18 V ± 15 %, 8.2 V ± 15 % (@ NAMUR sensor)		

Input PWM signal measurement

PWM measurement, gate time	20 ms ... 20 s	PWM measurement, step response time	20 ms ... 20 s + 20 ms
Pulse duty factor	0...100% push/pull or push, parameterisable		

Output (digital)

Alarm function	configurable, Top and bottom limit values, window range, Short circuit at input, Alarm delay: 0...10 s, Hysteresis adjustable	Hysteresis	1...20 %
Number of digital outputs	1	Rated switching current	100 mA
Rated switching voltage	24 VDC ± 30 %	Switch-on delay	0...180 s
Type	NPN-Transistor, Switching frequency 5 kHz		

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Output (analogue)

Load resistance current	$\leq 600 \Omega$	Load resistance voltage	$\geq 1 \text{ k}\Omega$
Number of analogue outputs	1	Output current	-20...+20 mA, $\pm 10 \text{ mA}$, 0(4)...20 mA, configurable downscale (3.5 mA)/ up- scale (23 mA) @ error
Output voltage	0...5 V, 0(1)...5 V, 0(2)...10 V, -5...+5 V, -10...+10 V	Signal output	direct or inverted
Transmit function	linear, $\sqrt{X}$, X^1 , $X^{1.5}$, X^2 , $X^{2.5}$, 1-X, direct or inverted, -5...+5 % of output span (TRIM)	Type (analogue output)	Voltage and current output (configurable)

General data

Accuracy	$\leq 0.05 \%$ of span	Configuration	with push-buttons and display
Galvanic isolation	4-way isolator;	Long-term drift	$\leq \pm 0.05\%$ of the measurement range / year
Nominal power consumption	1 VA	Operating altitude	$\leq 2000 \text{ m}$
Power consumption	$\leq 2.6 \text{ W}$	Protection degree	IP20
Rail	TS 35	Step response time	40 ms + period
Temperature coefficient	$\leq 0.02 \%$ / $^{\circ}\text{C}$, $\leq 100 \text{ ppm/K}$ of final value	Voltage supply	24...230 V DC $\pm 15\%$, 24... 230 V AC $\pm 15\%$ @48...62 Hz

Insulation coordination

EMC standards	EN 61326-1	Galvanic isolation	4-way isolator;
Impulse withstand voltage	5 kV (1.2/50 μs)	Insulation voltage	4 kV _{eff} / 1 min.
Pollution severity	2	Rated voltage	600 V
Surge voltage category	II		

Safety-related basic specifications

Safety category	No
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Connection data

Type of connection	Screw connection	Stripping length, rated connection	8 mm
Tightening torque, min.	0.4 Nm	Tightening torque, max.	0.6 Nm
Wire connection cross section, finely stranded, min.	0.2 mm ²	Wire connection cross section, finely stranded, max.	2 mm ²
Wire cross-section, finely stranded, min. (AWG)	AWG 24	Wire cross-section, finely stranded, max. (AWG)	AWG 14

Classifications

ETIM 6.0	EC002918	ETIM 7.0	EC002918
ETIM 8.0	EC002918	ETIM 9.0	EC002918
ETIM 10.0	EC002918	ECLASS 9.0	27-21-01-28
ECLASS 9.1	27-21-01-28	ECLASS 10.0	27-21-01-28
ECLASS 11.0	27-21-01-28	ECLASS 12.0	27-21-01-28
ECLASS 13.0	27-21-01-28	ECLASS 14.0	27-21-01-28
ECLASS 15.0	27-21-01-28		

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Technical data**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

Approvals

Approvals



Approvals MAMID	https://mdcop.weidmueller.com/mediadelivery/rendition/900_319215/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319222/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319228/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319234/-T1z1mm-S800/
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ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E337701

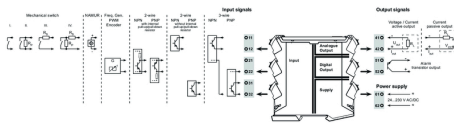
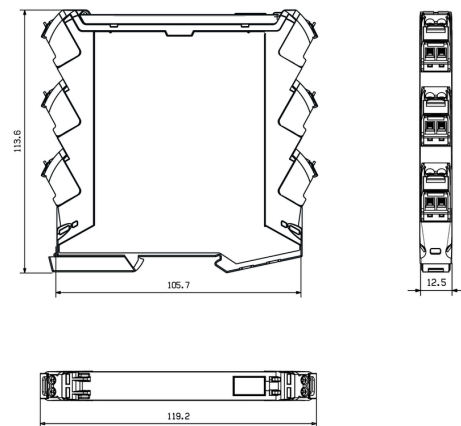
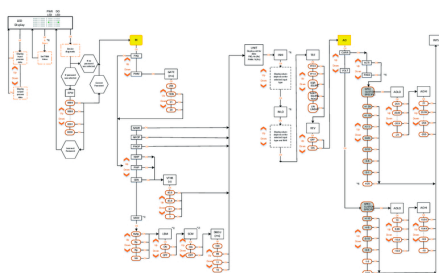
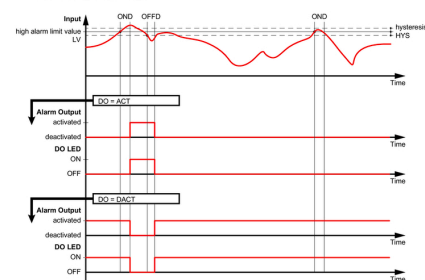
Downloads

Approval/Certificate/Document of Conformity	UL certification for US DNV certification Bureau Veritas certification UL certification for canada UL certification (hazardous locations) for canada Declaration of Conformity
Engineering Data	CAD data – STEP
User Documentation	Configuration manual Instruction sheet
Catalogues	Catalogues in PDF-format

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Drawings
Connection diagram

Dimensioned drawing

Flow diagram part

Measuring overrange


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