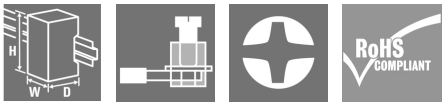
ACT20P-PRO-FI-AO-DO-S

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

Input Frequency measurement

Frequency range, max.	200,000 Hz	Frequency range, min.	0 Hz
Input frequency	0,01 Hz...200 kHz	Input voltage	Threshold voltage (NPN / PNP Sensor): 3 V...43.5 V (configurable), Hysterisis level: ≥0.5 V
Number of inputs	1	Sensor	NPN / PNP transistor (trig-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
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-Transitor, Switching frequency 5 kHz		

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Output (analogue)

Load resistance current	≤ 600 Ω	Load resistance voltage	≥ 1 kΩ
Number of analogue outputs	1	Output current	-20...+20 mA, ± 10mA, 0(4)...20 mA, configurable downscale (3.5 mA) / upscale (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, √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	≤0.05 % of span	Configuration	with push-buttons and display
Long-term drift	≤±0.05% of the measurement range / year	Nominal power consumption	1 VA
Operating altitude	≤ 2000 m	Power consumption	≤ 2.6 W
Protection degree	IP20	Rail	TS 35
Step response time	40 ms + period	Temperature coefficient	≤ 0.02 % / °C, ≤ 100 ppm/K of final value
Voltage supply	24...230 V DC ±15%, 24...230 V AC ±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

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 mm²	Wire connection cross section, finely stranded, max.	2 mm²
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

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

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cI
REACH SVHC	Lead 7439-92-1
SCIP	2f6dd957-421a-46db-a0c2-cf1609156924

Downloads

Approval/Certificate/Document of Conformity	UL certification for US DNV certification Bureau Veritas certification UL Certification 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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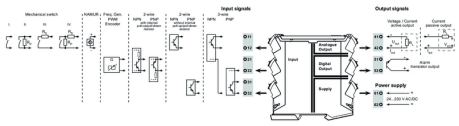
Drawings

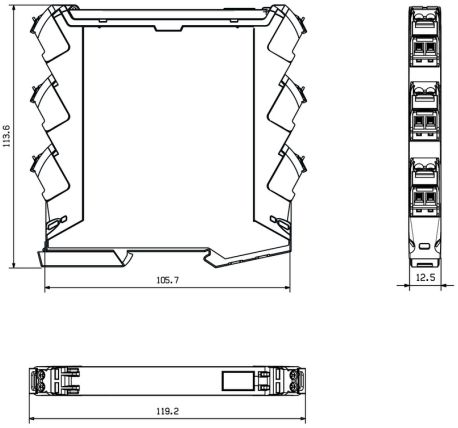
Connection diagram



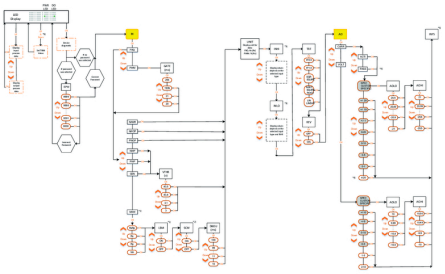
setting via display and push-buttons

coding of terminal block

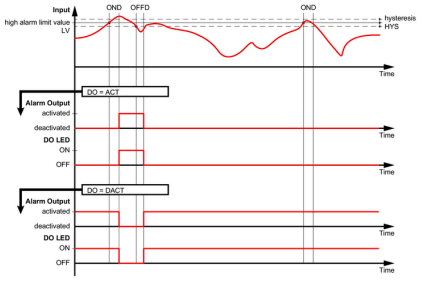
Dimensioned drawing



Flow diagram part



Measuring overrange



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Accessories

Blank

ESG is the tried-and-tested marker in MultiCard format for use on many well-known electrical devices. The result is high-quality device marking with a high-contrast appearance.
Various types are available for devices from manufacturers like Siemens, ABB, Beckhoff etc.
Advantages at a glance:

- Tags for universal usage, self-adhesive or clip-on tags, depending on type
- For aligned equipment, e.g. circuit breakers, we supply ESG markers for clipping onto tag rails
- Individual laser-quality printing according to specifications

For custom printing: Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

General ordering data

Type	ESG 6.6/11 BHZ 5.00/02	Version
Order No.	1082490000	ESG, Device markers x 11 mm, PA 66, Colour: white, pluggable
GTIN (EAN)	4032248845330	
Qty.	200 pc(s).	

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General ordering data

Type	ESG 8/13.5/43.3 SAI AU	Version
Order No.	1912130000	ESG, Device markers x 13.5 mm, PA 66, Colour: Transparent,
GTIN (EAN)	4032248541164	pluggable
Qty.	5 pc(s).	

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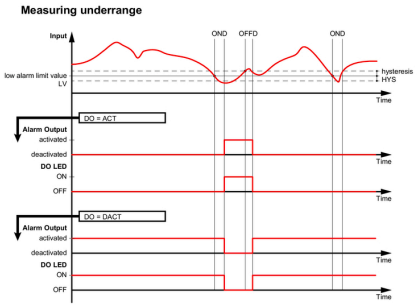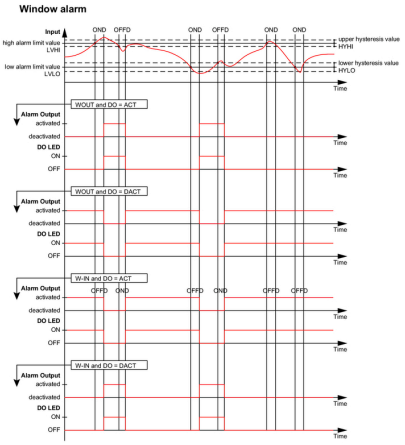
Drawings