

ACT20M-FRQ-AO-S**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Product image, Similar to illustration**

The universal frequency measuring transducer, which can be configured via software, disconnects and converts input signals (frequency, Namur, NPN, PNP, speedometer, TTL and S0) into an active analogue standard output signal. The power supply is galvanically isolated from the input and output (3-way isolation) by means of direct wiring. The model ACT20M-FRQ-AO-S can be supplied via the Weidmüller DIN rail bus

General ordering data

Version	Frequency signal converter, including rail bus supply, Input : Frequency, Output : 0(4)-20 mA, 0(2)-10 V
Order No.	2825020000
Type	ACT20M-FRQ-AO-S
GTIN (EAN)	4064675360834
Qty.	1 items

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Technical data

Approvals

ROHS	Conform
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Dimensions and weights

Depth	114.3 mm	Depth (inches)	4.5 inch
Height	112.5 mm	Height (inches)	4.4291 inch
Width	6.1 mm	Width (inches)	0.2402 inch
Net weight	80 g		

Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-25 °C...70 °C
Humidity	0...95 % (no condensation)		

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

Input

Sensor	NAMUR sensor, according to EN60947-5-6, NPN / PNP transistor (trig-level low: ≤ 4 V high: ≥ 7 V), TTL (trig-level low: ≤ 0.8 V high: ≥ 2.0 V), Tacho (trig-level low: ≤ -50 mV high: $\geq +50$ mV), Special current (trig-level: user-defined), Special voltage (trig-level: user-defined), SO (trig-level low: ≤ 2.2 mA high: ≥ 9.0 mA)	Number inputs	1
Input frequency	adjustable, 0...100kHz	Sensor supply	5...17 V

Output

Number of outputs	1	load impedance voltage	≥ 10 k Ω
Load impedance current	≤ 600 Ω	Type	active, connected control must be passive
Output voltage, note	0(2)...10 V, 0(1)...5 V, 0(0,2)...1 V	Output current	0...20 mA, 4...20 mA, in case of sensor error, downscale (3,5 mA), upscale (23 mA)
Output behaviour on failure downscale	3.5 mA	Output behaviour on failure upscale	23 mA
Output signal limit	<28 mA		

General data

Accuracy	Basic accuracy: 0.0002 Hz	Protection degree	IP20
Supply voltage	24 V DC ± 30 % at terminal or via CH20M rail bus	Step response time	≤ 30 ms, (0...90% / 100...10% of input level)

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Mounting rail	TS 35	Temperature coefficient	≤0,01% of measurement range/°C
Nominal power consumption	0.5 VA	Configuration	DIP switch or via FDT/DTM software
Operating altitude	≤ 2000 m	Power consumption, max.	1.2 W
Power consumption, typ.	0.65 W		

Insulation coordination

EMC standards	IEC 61326-1	Surge voltage category	II
Pollution severity	2	Galvanic isolation	3-way isolator
Insulation voltage	2.5 kVeff / 1 min.	Rated voltage	250 V, 300 V

Connection data

Type of connection	Screw connection	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

EMC conformity and approvals

EMC standards	IEC 61326-1	Standards	IEC 61010-1
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Part description

Product description	The universal frequency measuring transducer, which can be configured via software, disconnects and converts input signals (frequency, Namur, NPN, PNP, speedometer, TTL and S0) into an active analogue standard output signal. The power supply is galvanically isolated from the input and output (3-way isolation) by means of direct wiring. The model ACT20M-FRQ-AO-S can be supplied via the Weidmüller DIN rail bus		
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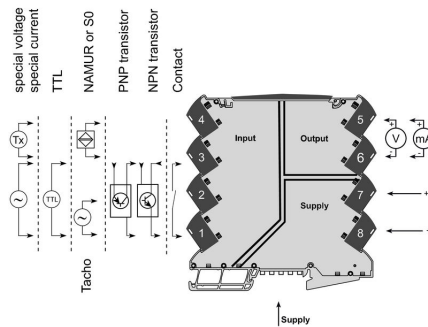
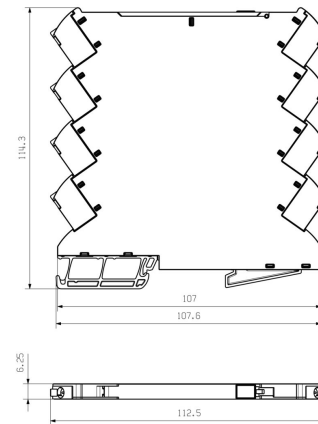
Classifications

ETIM 8.0	EC002918	ETIM 9.0	EC002918
ETIM 10.0	EC002918	ECLASS 14.0	27-21-01-28
ECLASS 15.0	27-21-01-28		

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Drawings
Connection diagram

Dimensional drawing


Input types	Sensor supply S1	1	2	3
NAMUR w/o sensor error det.	8.3 V			■
NAMUR with sensor error det.	8.3 V		■	■
NPN	17 V		■	■
PNOP	17 V	■	■	
Tacho	17 V	■	■	
TTL	5 V	■	■	
S0	17 V	■	■	

Output types S1	4	5	6
0...20 mA			■
4...20 mA			■
0...1 V		■	■
0.2...1 V		■	■
0...10 V		■	■
2...10 V		■	■
0...5 V		■	■
1...5 V		■	■

Frequency input max. (f high)	f1 [Hz] S2	1	2	3	4	5	6	7	f2 [x factor] S2	8	9	10
1		■							0.001			■
2			■						0.01			■
4				■					0.1		■	■
8					■				1		■	■
16						■			10		■	■
32							■		100		■	■
64								■	1000		■	■
									10.000		■	■

Input filter S1	7
On	■
Off	
Output error level S1	8
Downscale	
Upscale	■
Low cut off S1	9
On	■
Off	
Configuration S1	10
DIP	
Software	■

■ = ON
 $f1 = S2.1 + S2.2 + S2.3 + S2.4 + S2.5 + S2.6 + S2.7$
 $f \text{ high} = f1 \times f2$



Additional power supply option via bus