

**ACT20M-FRQ-AO-X-S**

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

[www.weidmueller.com](http://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, exclusive of rail bus supply, Input : Frequency, Output : 0(4)-20 mA, 0(2)-10 V
Order No.	<a href="#">2825130000</a>
Type	ACT20M-FRQ-AO-X-S
GTIN (EAN)	4064675360940
Qty.	1 items

## ACT20M-FRQ-AO-X-S

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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	70 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: $\leq 4$ V high: $\geq 7$ V), TTL (trig-level low: $\leq 0.8$ V high: $\geq 2.0$ V), Tacho (trig-level low: $\leq -50$ mV high: $\geq +50$ mV), Special current (trig-level: user-defined), Special voltage (trig-level: user-defined), SO (trig-level low: $\leq 2.2$ mA high: $\geq 9.0$ mA)	Number inputs	1
Input frequency	0...100kHz, adjustable	Sensor supply	5...17 V

## Output

Number of outputs	1	load impedance voltage	$\geq 10$ k $\Omega$
Load impedance current	$\leq 600$ $\Omega$	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 $\pm 30$ %	Step response time	$\leq 30$ ms, (0...90% / 100...10% of input level)

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### Technical data

Mounting rail	TS 35	Temperature coefficient	≤0,01% of measurement range/°C
Nominal power consumption	0.5 VA	Configuration	DIP switch, With 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	300 Veff, 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 <sup>2</sup>
Clamping range, min.	0.5 mm <sup>2</sup>	Clamping range, max.	2.5 mm <sup>2</sup>
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
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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		

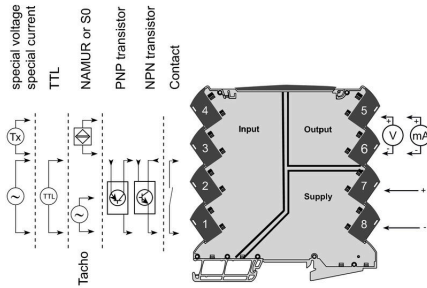
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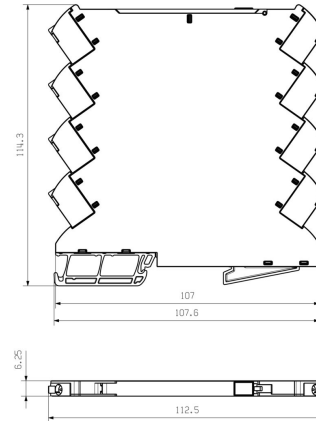
## Drawings

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### 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	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	

Low cut off S1	9
On	■
Off	

Output error level S1	8
Downscale	
Upscale	■

Configuration S1	10
DIP	
Software	■

■ = ON  
 f1 = S2.1 + S2.2 + S2.3 + S2.4 + S2.5 + S2.6 + S2.7  
 f high = f1 x f2

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## Accessories

### Blank



MultiFit is the Weidmüller marker system used for other makes of terminals. Similar to the Weidmüller Dekafix, the markers of the MultiFit family are available ready-for-use with standard printing.

We recommend to carry out a test with sample markers on the terminals used when using MultiFit for the first time.

- One marker, suitable for different makes of terminals.
- Ready-to-use markers with standard printing
- Blank markers for printing with the PrintJet CONNECT or Plotter
- Delivery of individually printed markers according to customer CAE data or specifications
- One marking system for all applications

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	MF 5/7.5 MC NE WS	Version	
Order No.	<a href="#">1877680000</a>		MultiFit, Terminal marker, 5 x 7.5 mm, Pitch in mm (P): 7.50 Adels
GTIN (EAN)	4032248468270		RKW, Phoenix, white
Qty.	320 ST		

### Configuration interfaces



### General ordering data

Type	CBX200 USB	Version	
Order No.	<a href="#">8978580000</a>		
GTIN (EAN)	4032248813759		
Qty.	1 ST		