



## Application

- Monitoring of vibration velocity (severity) of rotating machinery to ISO 20816-1
- Vibration monitoring of reciprocating engines to ISO 10816-6
- Monitoring of pumps, compressors, centrifuges, ventilators, mills, and mixers
- Monitoring of bearing vibration, for instance by means of RMS or peak values, crest factor
- Emergency shut-off or alarm tripping in case of increasing vibration
- Sound level monitoring using IEPE compatible microphones
- Production quality control

## Properties

- Extremely flexible
- Monitoring of vibration acceleration, velocity and displacement (single and double integration)
- True RMS and true peak-to-peak measurement
- Three measuring ranges
- Plug-in high pass and low pass filter modules
- Relay output with adjustable threshold and alarm delay to prevent false alarm
- Insulated current loop output (4 .. 20 mA)
- DC 0 .. 10 V output of RMS and peak-to-peak signal
- AC output for signal analyzers, recorders or scopes, selectable with or without filtering / integration
- LED bar graph display for vibration signal and threshold
- Easy snap attachment on 35 mm DIN rail
- Simple connection via screw terminal blocks
- Self test of power supply and transducer functioning, overload indicator
- External 12 .. 28 V DC supply

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**Metra Mess- und Frequenztechnik in Radebeul e.K.**



## Technical Data

### Measurement functions

Measurands	Vibration acceleration	
	Vibration velocity	
	Vibration displacement	
Overall values	True RMS value	
	True pak value	
Measuring range acceleration	10; 50; 250 (selectable with DIP switches )	m/s <sup>2</sup>
Measuring range velocity	10; 50; 250 (selectable with DIP switches )	mm/s
Measuring range displacement	10; 50; 250 (selectable with DIP switches )	µm
Input of transducer sensitivity	8 to 120 mV/g; trim potentiometer	
Accuracy	±1 (> 10 % of full scale; mid-band )	%
Lower frequency limit acceleration	1 to 1000 (with FB3 filter module)	Hz
Lower frequency limit velocity	3 to 10 (with FB3 filter module)	Hz
Lower frequency limit displacement	3 to 10 (with FB3 filter module)	Hz
Upper frequency limit acceleration	100 to 50000 (with FB2 filter module)	Hz
Upper frequency limit velocity	100 to 1000 (with FB2 filter module)	Hz
Upper frequency limit displacement	100 to 300 (with FB2 filter module)	Hz
Indication	LED bar graph for level; 10 steps	
	LEDs for alarm, sensor and overload	

### Connectors

Input channels	1	
Input signals	IEPE	
	AC voltage	
Input connector	Screw terminals	
Output connector	4 – 20 mA RMS or peak; insulated; screw terminlas	
	0 – 10 V RMS or peak; screw terminlas	
	±10 V wide-band signal; filtered or unfiltered	
Relay output	40 VAC; 2 A; change-over; screw terminals	
Relay trip value	10 to 100 % of full scale; front potentiometer	
Relay trip delay	0 to 25 2; by front potentiometer	s
Relay hold time	2 or 8; selectable	s

### Power Supply

External supply voltage	12 to 28	VDC
External supply current	80 to 200	mA
Supply connection	Screw terminals	

### Case Data

Dimensions without connectors	22 x 76 x 111 (W x H x D)	mm
Case material	ABS	
Weight	140	g
Operating temperature range	-20 to 55 (95 % rel. humidity without condensation)	°C

### Optional accessories

FB2-xx low pass modules  
 FB3-xx high pass modules  
 M12DIS 4-20 mA LCD module

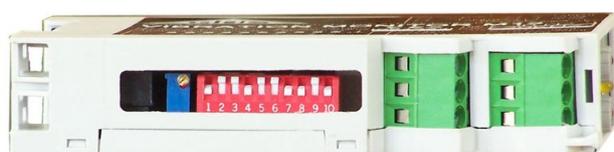
### Notice

Please order the low pass filter module separately. A low pass module is required for the operation of model M12C.  
 Please order a high pass filter if needed. The high pass filter can be disabled by a jumper.



**M12DIS**

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