

# MC2A, MC3

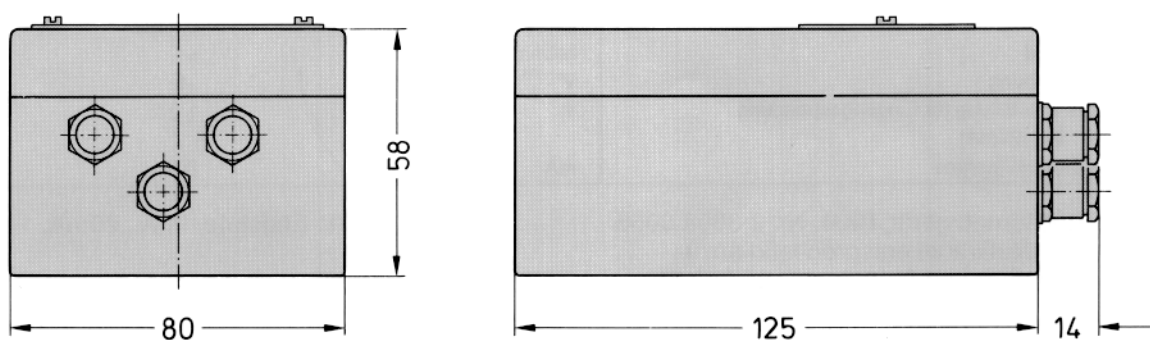
Measuring amplifiers for inductive and strain gage full-bridge



## Special features

- Analog carrier frequency amplifier for industrial automation and process control
- Two switchable measuring ranges
- Integral limit value switch
- Easy operation and installation
- Dustproof and hoseproof housing
- +4...+20 mA output stage (option)

Dimensions (in mm; 1 mm= 0.03937 inches)



# Specifications

Type		MC2A	MC3
<b>Accuracy class</b>	%	0.1	
<b>Transducers which can be connected</b>			
Inductive transducers (half bridge)	mH	8...20	-
Strain gage transducers (full bridge)	$\Omega$	-	300...1400
Maximum cable length	m	100	25
<b>Bridge excitation voltage</b>	V	1.8 $\pm$ 5%	2 $\pm$ 3%
<b>Carrier frequency</b>	kHz	5 $\pm$ 8%	1 $\pm$ 5%
<b>Number of measuring ranges</b>		2	2
Measuring ranges, switchable (factory setting)	mV/V	$\pm$ 8; $\pm$ 80	$\pm$ 2; $\pm$ 0.2
Continuous fine adjustment	%	$\pm$ 20	$\pm$ 20
<b>Bridge balancing range (factory setting)</b>	mV/V	$\pm$ 9	$\pm$ 0.1
<b>Measuring frequency range (-1 dB)</b>	Hz	0...100	0...30 <sup>1)</sup>
Phase transit time	ms	1.7	3.5
Rise time	ms	2.5	5
Overshoot with square wave voltage	%	5	0
<b>Output (asymmetrical)</b>			
Nominal voltage (impressed)	V		$\pm$ 5
Permissible load resistance	$\Omega$		> 2500
Internal resistance	$\Omega$		> 5
Maximum current	mA		$\pm$ 2
<b>Residual carrier voltage</b>	%		< 1
<b>Operating voltage (DC)</b>	V	10.5...26	
<b>Maximum current consumption</b>	mA	< 60; typ. 50	
<b>Effect of a change of 10 V in the operating voltage in the range of 10.5 ... 26 V on</b>			
sensitivity	%	< 0.02	
zero point	%	< 0.02	
<b>Limit value switch with collector output</b>			
Limit value setting range	V	0...+5	
Adjustable hysteresis	mV	25	
Temperature effect on the switching point per 10K in the nominal temperature range	%	< 0.2; typ. 0.1	
<b>Maximum switching voltage</b>	V	+28	
<b>Maximum switching current</b>	mA	50	
<b>Optional current output stage</b>			
Nominal current	mA	+4...+20	
Permissible burden	$\Omega$	0...400	
Internal resistance	M $\Omega$	> 1	
Maximum voltage	V	+8	
Tolerance on the setting for the input voltage 0 V(+4 mA)...5 V(+20 mA)	%	$\pm$ 0.2	
Maximum current consumption	mA	80	
<b>Temperature effect per 10 K in the nominal temperature range on</b>			
sensitivity	%	< 0.2; typ. 0.1	
zero point			
in the meas. range of 8 mV/V or 0.2 mV/V, at output	mV	< 20	< 6.5
in the meas. range of 80 mV/V or 2 mV/V, at output	mV	< 3.5	< 2
<b>Nominal temperature range</b>	$^{\circ}$ C [ $^{\circ}$ F]	-20...+60 [-4...+140]	
<b>Service temperature range</b>	$^{\circ}$ C [ $^{\circ}$ F]	-20...+60 [-4...+140]	
<b>Storage temperature range</b>	$^{\circ}$ C [ $^{\circ}$ F]	-20...+75 [-4...+167]	
<b>Long term drift over 48 h (after 1 h warm up time)</b>	$\mu$ V/V	< 20	< 0.2
<b>Weight, approx.</b>	g	600	
<b>Degree of protection</b>		IP 65	
<b>Mounting</b>		2 through holes for screws $\varnothing$ 4 mm	
<b>Housing material</b>		diecast aluminum enclosure	

<sup>1)</sup> 0 ... 65 Hz at -3dB

**Option:** 4 mA...20 mA output stage, 1-MC3/Z01

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**Hottinger Baldwin Messtechnik GmbH**

Im Tiefen See 45 · 64293 Darmstadt · Germany  
Tel. +49 6151 803-0 · Fax: +49 6151 803-9100  
E-mail: info@hbm.com · www.hbm.com



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