

Data sheet

Measurement Amplifier MCMpro



Benefits/Application

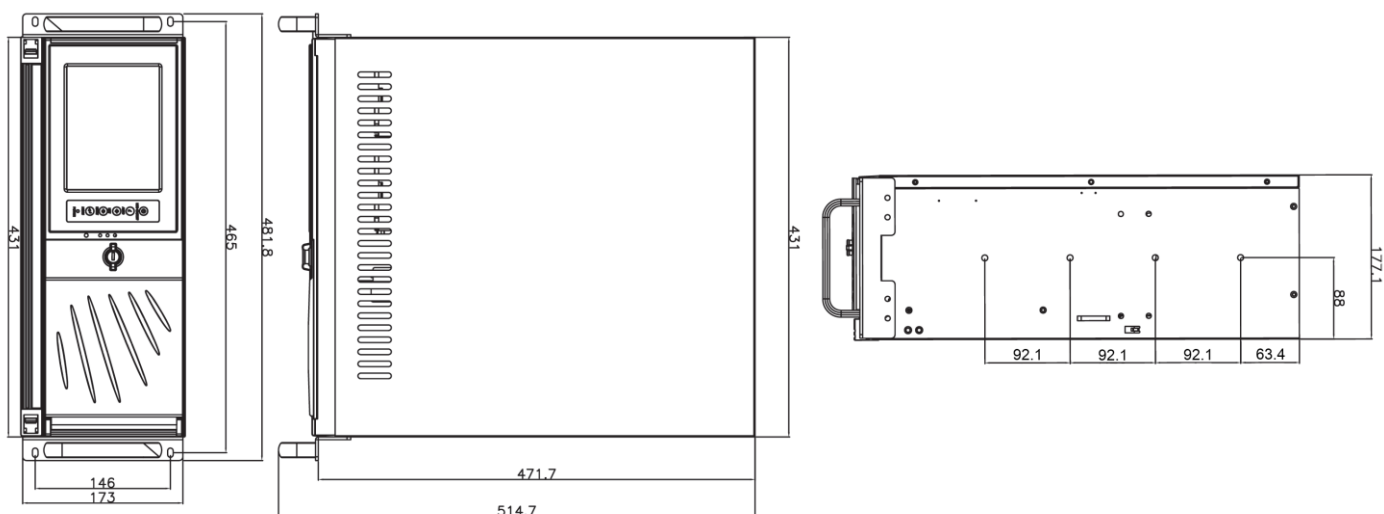
<ul style="list-style-type: none"> Accuracy class 0,0025 	<ul style="list-style-type: none"> Flexible multi component measurement amplifier
<ul style="list-style-type: none"> Configurable operation software 	<ul style="list-style-type: none"> Touch screen operation
<ul style="list-style-type: none"> Configurable data processing (patent pending) 	

Options/Accessories

<ul style="list-style-type: none"> Various digital and analog interfaces 	<ul style="list-style-type: none"> Design of an application-specific operating software
<ul style="list-style-type: none"> Keyboard with touchpad 	<ul style="list-style-type: none"> Voltage ratio calibration according to DAkKS

Technical data

General data	Dummykopfzeile	x	x
	Maximum amount of slots		12
	Maximum sampling rate	1/s	2000
	Supply voltage	V	100 - 240 V / 50 - 60 Hz
	Rated input	W	max. 500
	Operating temperature range	°C	0...40
	Rated temperature range	°C	0...50
	Dimensions	mm	431 * 177 * 480
	Weight	kg	ca. 20
	Operation		Touch-Screen (opt.: Keyboard incl. Touch-Pad)
Interface		USB; PS/2; LAN	



Option: DMS-Input

	Dummykopfzeile	x	x
Metrological data	Number of channels per slot		2
	Accuracy class	ppm	25
	Nonlinearity	ppm	±10
	Reproducibility	ppm	±5
	Temperature drift: Zero point	ppm/K	< ±1
	Sensitivity	ppm/K	< ±2,5
	Drift: without auto calibration	ppm	---
	with auto calibration	ppm	< ±20
manual calibration	ppm	< ±5	
Long term stability	ppm/a	±25	
Sensor connection	Connector		9-pin Sub-D female
	Sensor connection technique		6-wire
	Maximum cable length to sensor	m	100 (0,25 mm ²)
	Sensor type		DMS-full bridge
	Input resistance	MΩ	>100
	Bridge resistance	Ω	150...5000 @ 5V 300...5000 @ 10V 1000...5000 @ 20V
	Input signal range	mV	max. ±40
	Maximum input voltage	V	10
	Excitation voltage	VDC	5; 10; 20
Signal processing	Integration time electronic	ms	0,1; 0,2; 0,3; 0,4; 0,5; 0,9; 1; 2; 5; 10; 20; 16,6; 20; 33,3; 40; 50; 60; 100; 120; 200; 300; 500; 1000; 2000; 5000
	Integration time software		programmable floating average filter
	Resolution		±200000
	Channel synchronicity	ms	< 0,05
	Noise (3σ-value) @ 500 ms	ppm	±10
EMC	Galvanic isolation	VDC	1000
	Interference resistance: ESD	kV	4
	Fields	V/m	10
	Burst	kV	1
	Radio interference	V	10

Option: SSI-Output

Metrological data	Number of channels per slot		8
	Resolution	Bit	2...16
	Output type		RS-485
	Maximum clock	MHz	2
	Maximum delay time between clock and data @ 24 V	μ s	70
EMC	Galvanic isolation	V DC	1000

Option: Analog Output

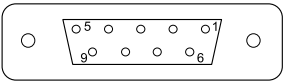
Metrological data	Number of channels per slot		8
	Resolution	Bit	14
	Output typ		Voltage output
	Output range	V	\pm 10
	Settling time	μ s	30...50
	Relative accuracy (INL)	LSB	\pm 1
	Diff. Nonlinearity (DNL)	LSB	\pm 2,5
	Bipolar Zero Offset	mV	\pm 7
	Maximum load		\pm 5 mA // 500 pF (opt.: \pm 10 mA)
EMC	Galvanic isolation	V DC	500
	Interference resistance:		
	ESD	kV	8
	Fields	V/m	10
	Burst	kV	4
Radio interference	V	10	

Options: Digital I/O

Metrological data	Number of channels per slot		16 IN; 16 OUT
	Nominal voltage (input)	V	14
	Input current @ 24 V	mA	typ. 6
	Logical input level	V	U _{nominal} : 24 U _H max.: 30 U _H min.: 19 U _L max.: 17 U _L min.: 0
	Signal delay @ 24 V	µs	70
	Nominal voltage (output)	V	24
	Supply voltage range	V DC	10...36
	Maximum output current (all)	A	typ. 3
	Maximum output current / output	mA	500
	Turn on time (24 V, 500 mA)	µs	typ. 100
	Turn off time (24 V, 500 mA)	µs	typ. 60
	EMC	Galvanic isolation	V DC
Interference resistance:			
ESD		kV	4
Fields		V/m	10
Burst		kV	2
Radio interference	V	10	

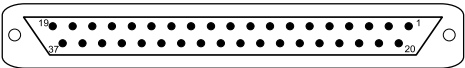
Sensor connection

(DMS)

		Connection pluggable ¹⁾
		9-pin Sub-D Female connector 
Connection		Pin
Supply voltage (+)	U_{in+}	2
Supply voltage (-)	U_{in-}	3
Measurement signal (+)	U_{out+}	5
Measurement signal (-)	U_{out-}	9
Sense (+)	Sense+	6
Sense (-)	Sense-	7
Shielding		Housing
1) Wehingside view		

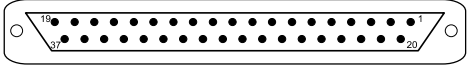
Sensor connection

(Analog I/O)

Connection pluggable ¹⁾			
37-pin Sub-D Male connector 			
Connection	Pin	Connection	Pin
Output 1	12	Output 1 (GND)	30
Output 2	13	Output 2 (GND)	31
Output 3	14	Output 3 (GND)	32
Output 4	15	Output 4 (GND)	33
Output 5	16	Output 5 (GND)	34
Output 6	17	Output 6 (GND)	35
Output 7	18	Output 7 (GND)	36
Output 8	19	Output 8 (GND)	37
1) Wehingside view			

Sensor connection

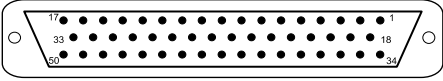
(Digital I/O)

Connection pluggable ¹⁾			
37-pin Sub-D Male connector			
			
Connection	Pin	Connection	Pin
Input 1	1	Input 2	20
Input 3	2	Input 4	21
Input 5	3	Input 6	22
Input 7	4	Input 8	23
Input 9	5	Input 10	24
Input 11	6	Input 12	25
Input 13	7	Input 14	26
Input 15	8	Input 16	27
24 Vext.	9	24 Vext.	28
(Inp.) 0 Vext.	10	(Outp.) 0 Vext.	29
Output 1	11	Output 2	30
Output 3	12	Output 4	31
Output 5	13	Output 6	32
Output 7	14	Output 8	33
Output 9	15	Output 10	34
Output 11	16	Output 12	35
Output 13	17	Output 14	36
Output 15	18	Output 16	37
Diagnosis	19		

¹⁾ With side view

Sensor connection

(SSI)

Connection pluggable ¹⁾				
50-pin Sub-D Male connector				
				
Connection	Pin		Connection	Pin
0 V ext.	1		Ch. 5 Data +	18
Ch. 1 Data +	2		Ch. 5 Data -	19
Ch. 1 Data -	3		Ch. 6 Data +	20
Ch. 2 Data +	4		Ch. 6 Data -	21
Ch. 2 Data -	5		Ch. 5 Clk +	22
Ch. 1 Clk +	6		Ch. 5 Clk -	23
Ch. 1 Clk -	7		Ch. 6 Clk +	24
Ch. 2 Clk +	8		Ch. 6 Clk -	25
Ch. 2 Clk -	9		Ch. 7 Data +	26
Ch. 3 Data +	10		Ch. 7 Data -	27
Ch. 3 Data -	11		Ch. 8 Data +	28
Ch. 4 Data +	12		Ch. 8 Data -	29
Ch. 4 Data -	13		Ch. 7 Clk +	30
Ch. 3 Clk +	14		Ch. 7 Clk -	31
Ch. 3 Clk -	15		Ch. 8 Clk +	32
Ch. 4 Clk +	16		Ch. 8 Clk -	33
Ch. 4 Clk -	17			
1) Weidingside view				

Änderungen vorbehalten. Alle Angaben beschreiben unsere Produkte in allgemeiner Form. Sie stellen keine vereinbarte Beschaffenheit im Sinne des § 434 Abs. 1 BGB dar.



GTM Testing and Metrology GmbH
 Philipp-Reis-Straße 4-6, 64404 Bickenbach, Germany
www.gtm-gmbh.com
 Phone +49(0)6257-9720-0, Fax +49(0)6257-9720-77
contact@gtm-gmbh.com