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Special sizes for digital and bar graph indicators available on request!



DIGEM 48 x 24 AK5 – A1125

Digital display for grid mosaic application



The DIGEM 48 x 24 AK5 digital panel meter is a 3¹/₂-digit display with a housing specifically designed for grid applications.

Using the fastening element included in the scope of delivery, installation is possible in all known 24 mm grids.

Its display range is $\pm 1\,999$ digits.

As an option, it can be extended to $\pm 19\,990$ digits with an additional digit hard-wired to "zero".

The decimal points are fixed by solder bridges on the display in the unit according to the specifications on the type plate.

Optionally, the display range can be adjusted with coding plugs and potentiometers.

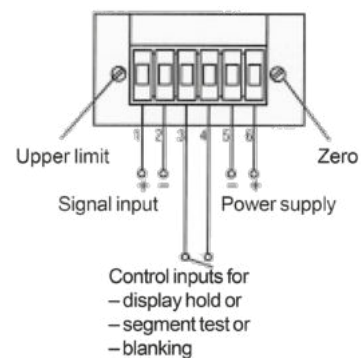
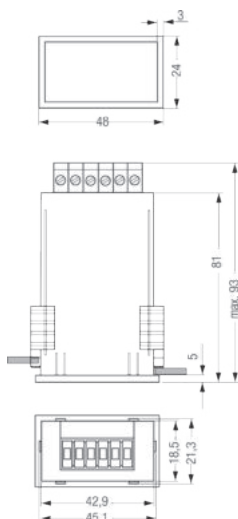
In the same way, the display for the start of the measuring range can be set to any value.

This version is particularly suitable for displaying measured values coming from a measuring transducer.

Features

- Bright LED display
- One standard fastening element for all grids
- Suitable for installation in all known grids
- Very easy to install
- Power supply galvanically isolated from measuring circuit, test voltage 500 V

Dimensions & pin assignment



Technical parameters

Display

Type	7-segment LED
Display colour	red option: green
Digit height	approx. 8 mm
Display range	- 1 999...1 999 optional: $\pm 19\,990$
Polarity	"-" is displayed automatically
Decimal point	fixed
Out-of-range indicator	"1 ..."

Measuring ranges

Direct voltage	± 200 mV to ± 50 V
Direct current	± 200 μ A to ± 200 mA
Error limits	$\pm (0.05\% + 20$ digits) [withwith option: $\pm 19\,990 \pm (0.05\% + 20$ digits)]
Error limits	< 100 ppm / $^{\circ}$ C
Offset drift	< 0.2 digit / $^{\circ}$ C
Warm-up time	approx. 1 min.

Supply voltages

	18 ... 36 V DC 24 V AC 50 / 60 Hz
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A / D conversion

Conversion method	dual slope
Integration time	approx. 100 ms
Measurements/sec. typical	3, settling time of the overall instrument is greater depending on the filter at the measuring input. It is about 1 second.

Environmental conditions

Operating temperature range	0 ... +50 $^{\circ}$ C
Storage temperature range	-20 ... +70 $^{\circ}$ C
Degree of pollution	2
Overvoltage category	II

Housing

Protection class	front panel IP 50 rear panel IP 20
Connection type	screw terminals

**Order information DIGEM 48 x 24 AK5 - A1125**

Features		Item no.
Base unit		
	3 ½-digits, ±1 999 digits with supply voltage 24 V / 18 ... 36 V DC and 24 V AC 50 / 60 Hz	A1125
Display		
	red	A0
	green	A1
Direct current		
	0 ... 200 mA	D01
	± 2 mA	D02
	± 20 mA	D03
	± 200 mA	D04
	± xxx mA (min. ± 0.2 mA; max. 200 mA)	D92
	0 ... xxx mA (min. ± 0.2 mA; max. 200 mA)	D90
	4 ... 20 mA	D005
	xx ... xxx mA (max. 200 mA)	D094
Direct voltage		
	± 2 V	D11
	± 20 V	D12
	0 ... 10 V	D014
	0 ... xx V (min. 0.2 V; max. 50 V)	D91
	± xx V (min. 0.2 V; max. 50 V)	D93
	2 ... 10 V	D015
	xx ... xxx V	D095
at shunt resistor		
	± 60 mV	D17
	± 150 mV	D18
	± 200 mV	D10
	± 300 mV	D19
Display range		
	as measuring range with max. resolution	E0
	display preset to approx. 0 ... 1000	E02
	± xxx per specification	E91
	0 ... xxx per specification	E92
	X ... xxx per specification	E93
	± xxxx0 per specification (4 ½ digits. max. ± 19 990)	E94
	0 ... xxxx0 per specification (4 ½ digits. max. ± 19 990)	E95
	x0 ... xxxx0 per specification (4 ½ digits. max. ± 19 990)	E96
Designation of the measured parameter		
	like measuring range	EM0
	without measurement imprint	EM01
	according to specification	EM090
Decimal point		
	as measuring range with max. resolution	F0
	without decimal point	F1
	xxx.x(0)	F2
	xx.xx(0)	F3
	x.xxx(0)	F4
	xxxx.(0)	F5

Order information DIGEM 48 x 24 AK5 - A1125

Features	Item no.
Control input	
saving function for measured values	K0
blanking	K1
segment test	K2
Front panel	
white GMW design, black font	L0
with matte company logo	L018
without logo	L100
black GMC design, white font	L200
Front bezel	
black, glossy	P0
grey, glossy	P1
pebble grey, matte RAL 7032	P2
light grey, matte RAL 7035	P3
dark beige, matte	P4
black, matte	P5
grey, matte RAL 7037	P6
Labelling on front side	
without additional lettering	TA0
as per specification, bottom	TA091
as per specification, top	TA092
Labelling, rear side	
without labelling	T0
as per specification, top	T010
as per specification, bottom	T011
Operating manual	
German	W0
English	
French	
Manufacturer certificates	
certificate general, without proof of calibration	WZ001
certificate general, with proof of calibration	WZ002
test certificate device-specific, without measuring points	WZ003
test certificate device-specific, with measuring points	WZ004



DIGEM 62 x 38 A5 - A1155

Digital display 3.5-digit with LED or LCD display



Depending on the version, this measuring instrument has either a bright LED display or a reflective LCD display.

As an option, the LCD display can be fitted with additional illumination (transreflective).

The instrument is suitable for measuring direct current or direct voltage.

The measuring range and the display range are set in the factory.

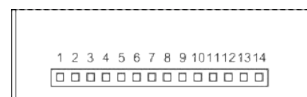
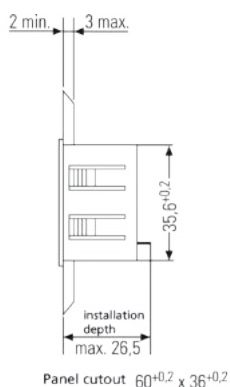
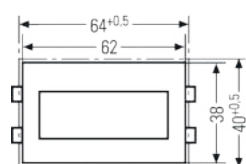
The supply voltage is 5 V and it is galvanically connected to the measuring input.

The power supply adapter for 18 V ... 36 V DC is available as an accessory. This adapter is snapped onto the back of the measuring instrument.

Features

- Supply voltage 5 V
- Power supply module available as accessory
- Easy installation thanks to snap-on mechanism

Dimensions & pin assignment



- 1 Measuring input "+" for 20 V/200 V and intermediate ranges
- 2 No connection
- 3 Measuring input "+" (high) for other ranges
- 4 Measuring input "-" (low)
- 5 Hold/segment test
- 6 Segment test
- 7 Decimal point
- 8 Decimal point
- 9 Decimal point
- 10 Decimal point
- 11 Display storage (hold)
- 12 Illumination
- 13 Power supply 0 V
- 14 Power supply +5 V

Technical parameters

Display	
Type	7-segment LED
Digit height	14 mm or LCD reflective with 12.7 mm
Polarity	"-" is displayed automatically
Decimal point	externally selectable or fixed
Out-of-range indicator	"1 ..."
Measuring ranges	
Direct voltage	± 2 V up to 200 V and additionally ± 200 mV
Direct current	± 200 μ A to ± 200 mA
Auxiliary voltage	5 V ± 5 %
Power supplies	
	galvanically isolated from measurement circuit
Test voltage	500 V
Primary voltage	18 ... 36 V DC
Secondary voltage	5 V ± 5 %
Load capacity	max. 250 mA
Ripple voltage	< 200 mV
Power consumption	at max. load 3 W
Environmental conditions	
Operating temperature range	0 ... +50 °C
Storage temperature range	-20 ... +70 °C
Relative humidity	max. 85 %
Housing	
Protection class	front panel IP 50 rear panel IP 0
Attachment	snap-on mounting
Connections	via multi-pin connector, the corresponding plug is included in the scope of delivery

**Order information DIGEM 62 x 38 A5**

Features	Item no.
Base unit	
3½-digit, ±1999 digits with supply voltage 5 V DC	A1155
Display	
LED display red	A0
LED display green	A001
LED display red, casing red	A007
LCD reflective (not illuminated)	A008
LCD transreflective (illuminated)	A009
Direct current	
± 200 µA	D001
± 2 mA	D002
± 20 mA	D003
± 200 mA	D004
0 ... 20 mA	D005
4 ... 20 mA	D006
0 ... xxx mA (max. 200 mA)	D090
± xxx mA (max. 200 mA)	D091
xx ... xxx mA	D101
Direct voltage	
± 200 mV	D010
± 2 V	D011
± 20 V	D012
± 200 V	D013
± xx V (min. 0.2 V; max. 200 V)	D092
0 ... xxx V	D093
xx ... xxx V	D102
analogue output	
without	DN0
with clip-on module for analogue output 20 mA	DN001
Supply voltage	
with clip-on module for 18 ... 36 V DC	DS001
Designation of the measured parameter	
without measurement imprint	EM0
according to specification	EM090
Attachment	
without additional mount	RM0
with additional mount for 3 modules	RM008
Operating manual	
English	W001
French	W002
English, German	W003
German / English / French	W004
Manufacturer certificates	
certificate general, without proof of calibration	WZ001
certificate general, with proof of calibration	WZ002
test certificate device-specific, without measuring points	WZ003
test certificate device-specific, with measuring points	WZ004



DIGEM 62 x 38 B5 - A1175

Digital display 4.5-digit with LED or LCD display



Depending on the version, this measuring instrument has either a bright LED display or a reflective LCD display.

It is designed specifically to meet the needs of the equipment manufacturing industry.

The instrument is suitable for measuring direct current or direct voltage.

The measuring range and the display range are set in the factory according to your specifications.

The supply voltage is $5\text{ V} \pm 5\%$ and is galvanically connected to the measuring input.

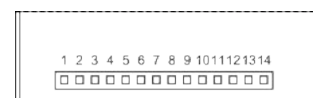
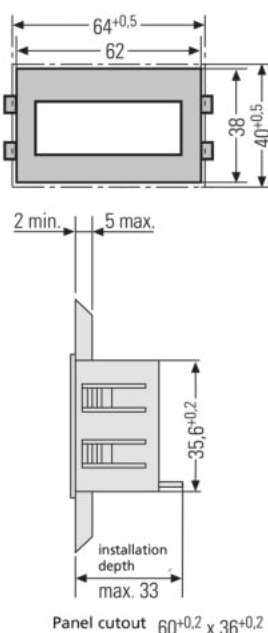
By disconnecting a bridge, the measuring instrument receives a differential input. In this case, a maximum voltage of $+2\text{ V}$ may be applied between the measuring input and the 0 V supply.

It is connected via a 14-pin male connector.
The corresponding plug is included in the delivery.

Features

- Supply voltage 5 V DC
- Easy installation thanks to snap-on mechanism

Dimensions & pin assignment



- 1 Measuring input "+" for 20 V and 200 V
- 2 Decimal point control
- 3 Decimal point 4 (x.xxxx)
- 4 Decimal point 4 (xxxx.x)
- 5 Supply +5 V for the displays
- 6 Supply +5 V for the A/D converter
- 7 Decimal point 2 (xxx.xx)
- 8 Decimal point 2 (xx.xxx)
- 9 Segment test
- 10 Supply 0 V
- 11 Measuring input + for ranges 2 V and all ammeters
- 12 Measuring input -
- 13 Display storage
- 14 Free

Technical parameters

Display	
Type	7-segment LED
Digit height	10 mm or LCD reflective with 10 mm
Polarity	"-" is displayed automatically
Decimal point	externally selectable
Out-of-range indicator	flashing
Measuring ranges	
Direct voltage	$\pm 2 \text{ V}$ up to 200 V
Direct current	$\pm 200 \mu\text{A}$ to $\pm 200 \text{ mA}$
Auxiliary voltage	$5 \text{ V} \pm 5 \%$
Environmental conditions	
Operating temperature range	0 ... +50 °C
Storage temperature range	-20 ... +70 °C
Relative humidity	max. 85%
Housing	
Protection class	front panel IP 50 rear panel IP 0
Attachment	snap-on mounting
Connections	via multi-pin connector, the corresponding plug is included in the scope of delivery

**Order information DIGEM 62 x 38 B5**

Features	Item no.
Base unit	
3½-digit, ±1999 digits with supply voltage 5 V DC	A1175
Display	
LED display red	A0
LCD reflective (not illuminated)	A008
Direct current	
± 200 µA	D001
± 2 mA	D002
± 20 mA	D003
± 200 mA	D004
± xxx mA (max. 200 mA)	D090
Direct voltage	
± 2 V	D011
± 20 V	D012
± 200 V	D013
± xxx V (min. 2 V; max. 200 V)	D092
Display range	
as measuring range with max. resolution	E0
± xxxx as requested	E090
Designation of the measured parameter	
without measurement imprint	EM0
according to specification	EM090
Front panel	
GMW design	PD0
without logo	PD100
according to specification	PD900
Lettering	
without additional lettering	TA0
as per specification, bottom	TA091
as per specification, top	TA092
Operating manual	
English	W001
German	W003
Manufacturer certificates	
certificate general, without proof of calibration	WZ001
certificate general, with proof of calibration	WZ002
test certificate device-specific, without measuring points	WZ003
test certificate device-specific, with measuring points	WZ004

DIGEM 96 x 24 B5 - A1375

Digital display 4-digit



The modular DIGEM 96 x 24 B5 digital display is a precise panel meter with a programmable display range.

Display range and decimal point can be easily configured to meet the specific measuring task.

The measured values are processed in a microcomputer and are displayed on a 7-segment display unit.

The front keys can be used to set the start and end of the display range depending on the measuring task.

The set data can be protected against unauthorised adjustments with an external contact on the back of the unit.

Each unit has a control input for display storage, which keeps the current display fixed. The measuring cycle is not influenced by this.

In the non-programmable version, the display range is preset at the factory. With these units, a subsequent change is only possible at the factory.

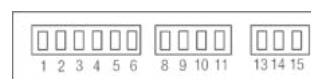
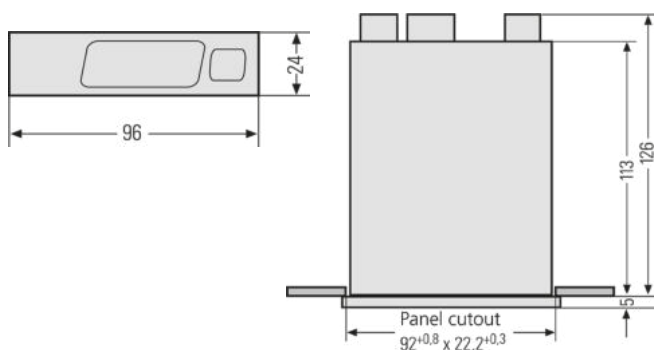
Depending on the measuring module currently in use, it can be used for the following measuring tasks:

- Direct voltage
- Direct current
- Alternating voltage
- Alternating current
- Temperature

Features

- Can be optimally adjusted to meet the respective measuring task with the aid of measuring modules.
- Programmable, and easy to configure
- Power supply galvanically isolated from measurement circuit
- Also available with supply for 2-wire measuring transducer
- Quick mounting thanks to mounting slider
- Also available as non-programmable unit

Dimensions & pin assignment



- 1 Measuring input +
- 2 Temperature measurement
- 3 Measuring input -
- 4 Temperature measurement
- 5 Free
- 6 Free
- 8 Reset and unit test (reset)
- 9 Display storage (hold)
- 10 Programming protection (lock)
- 11 Retrace blanking
- 13 Earthing
- 14 Power supply "-"
- 15 Power supply "+"

Technical parameters

Display	
Type	7-segment LED
Display colour	red
Digit height	14 mm
Display range	-1 999 ... 9 999
Polarity	"-" is displayed automatically
Decimal point	programmable or fixed
Out-of-range indicator	flashing - overbar
Measuring ranges	
Direct voltage	± 60 mV to ± 300 V
Direct current	± 2 mA to ± 200 mA 0 ... 20 mA 4 ... 20 mA with power supply for 2-wire measuring transducer
Alternating voltage	0 ... 700 V
Alternating current	0 ... 200 mA, 0 ... 1 A / 5 A
TRMS voltage	0 ... 700 V
TRMS current	0 ... 200 mA, 0 ... 1 A / 5 A
Crest factor	6 (additionally 0.5% of the measured value)
Temperature	Pt100 -200 ... +800 °C
Supply voltages	
	90 ... 230 V AC 50 / 60 Hz and 90 ... 260 V DC or 24 V AC 50 / 60 Hz and 18 ... 36 V DC
Environmental conditions	
Operating temperature range	0 ... +50 °C
Storage temperature range	-20 ... +70 °C
Degree of pollution	2
Overvoltage category	II
Housing	
Protection class	front panel IP 54 rear panel IP 20
Front bezel colour	black
Attachment	slider
Connection type	screw terminals

**Order information DIGEM 96 x 24 B5**

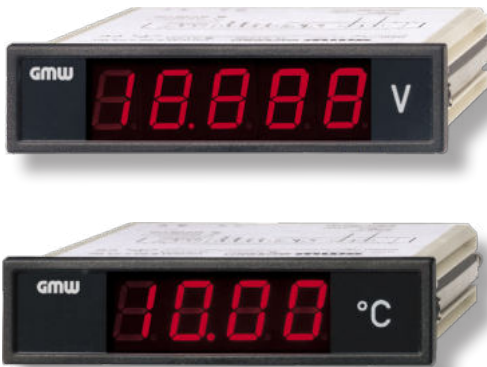
Features	Item no.
Base unit	
4-digit, -1 999 to 9 999 digits	A1375
Display	
red	
Measuring range	
programmable (with keys)	PR000
not programmable (without keys)	PR001
Direct current	
0 ... x mA (min. 2 mA, max. 200 mA)	D900
\pm x mA (min. 2 mA, max. 200 mA)	D901
0 ... 20 mA	D001
4 ... 20 mA	D002
4 ... 20 mA 24 V / 20 mA DC with supply for 2-wire measuring transducer	D003
Direct voltage	
0 ... x V (min. 2 V, max. 600 V)	D910
\pm x V (min. 2 V, max. 600 V)	D911
0 ... 10 V	D010
0 ... 2 V	D011
at shunt resistor	
\pm 60 mV	D012
\pm 150 mV	D013
\pm 200 mV	D014
\pm 300 mV	D015
Alternating current	
0 ... x mA (min. 2 mA, max. 200 mA)	D920
0 ... x A (min. 0.2 A; max. 6 A)	D922
0 ... 1 A	D027
0 ... 5 A	D028
Alternating voltage	
0 ... 200 V	D020
0 ... 700 V	D021
0 ... x V (min. 0.2 V, max. 100 V)	D921
0 ... x V (min. 100 V, max. 700 V)	D923
Alternating current TRMS	
0 ... x mA (min. 2 mA, max. 200 mA)	D925
0 ... x A (min. 0.2 A; max. 6 A)	D931
0 ... 1 A	D207
0 ... 5 A	D208
Alternating voltage TRMS	
0 ... 200 V	D025
0 ... 700 V	D026
0 ... x V (min. 0.2 V; max. 100 V)	D926
0 ... x V (min. 100 V, max. 700 V)	D933

Order information DIGEM 96 x 24 B5

Features	Item no.
Temperature	
Pt100 3-wire -199,9 ... 800 °C	D060
Pt100 2- or 4-wire -199,9 ... 800 °C	D061
Pt100 3-wire -328 ... 1473 °F	D064
Pt100 2- or 4-wire -328 ... 1473 °F	D065
Display range	
as measuring range with max. resolution	E00
± x as specified (max. ±1999)	E90
0 ... x as specified	E91
x ... y as specified	E92
-x ... y as specified (x = min. -1999, y = max. 9999)	E93
Decimal point	
as measuring range with max. resolution	ED0
without decimal point	ED1
xxx.x	ED2
xx.xx	ED3
x.xxx	ED4
Designation of the measured parameter	
like measuring range	EM00
without measurement imprint	EM01
as specified (max. 4 digits)	EM090
Supply voltage	
230 V / 115 V AC 50 / 60 Hz or 90 ... 260 V DC	H1
18 ... 36 V DC or 24 V AC 50 / 60 Hz	H3
Labelling, rear side	
without labelling	T0
as per specification, top	T010
as per specification, bottom	T011
Manufacturer certificates	
certificate general, without proof of calibration	WZ001
certificate general, with proof of calibration	WZ002
test certificate device-specific, without measuring points	WZ003
test certificate device-specific, with measuring points	WZ004

DIGEM 96 x 24 BK5 - A1275

Digital display 3.5 or 4.5 digits with LED display



The DIGEM 96 x 24 BK5 is a digitally displaying measuring instrument for general use in an industrial environment and is optimally adapted to the respective measuring task using modules connected to the measuring input.

DIGEM 96 x 24 BK5 contains a precise DC voltmeter as the basic unit, which is adapted to the required measuring task by upstream measuring modules.

Each unit contains the additional functions of display storage, segment test and brightness control. The inputs of the control commands for these functions are galvanically connected to the measuring input.

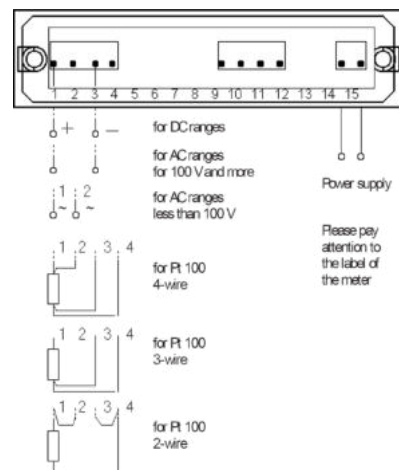
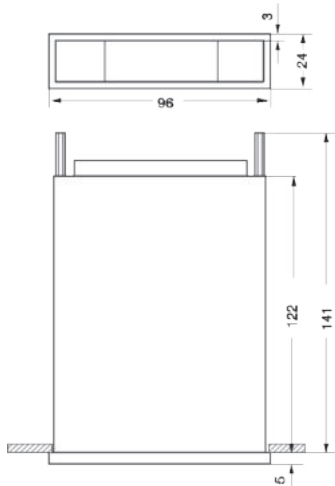
Measuring modules for the following measuring tasks are available for this series of units:

- DC current and DC voltage measurement
- AC current and AC voltage measurement, sinusoidal
- AC current and AC voltage measurement, TRMS
- Temperature measurement

Features

- Can be optimally adjusted to meet the respective measuring task at hand with the aid of measuring modules
- Power supply galvanically isolated from measurement circuit

Dimensions & pin assignment



Technical parameters

Display	
Type	7-segment LED
Display colour	red option: green
Digit height	approx. 14 mm
Display range	3 ¹ / ₂ -digit ± 1 999 4 ¹ / ₂ -digit ± 19 999
Polarity	"-" is displayed automatically
Decimal point	set internally
Out-of-range indicator	3 ¹ / ₂ -digit: "1 ..." 4 ¹ / ₂ -digit: display flashes
Measuring ranges	
Direct voltage	± 60 mV to ± 300 V
Direct current	± 2 mA to ± 200 mA 0 ... 20 mA
Alternating voltage	0 ... 2 V to 0 ... 250 V
TRMS voltage	0 ... 2 V to 0 ... 250 V
Alternating current	0 ... 200 mA, 0 ... 1 A / 5 A
TRMS current	0 ... 200 mA, 0 ... 1 A / 5 A
Temperature	Pt100 -50 ... 199,9 °C and -200 ... +800 °C
Supply voltages	
	90 ... 230 V AC 50 / 60 Hz or 18 ... 36 V DC / 24 V AC 10 ... 50 V DC or 60 V DC only on request (only possible with 3 ¹ / ₂ -digit)
Environmental conditions	
Operating temperature range	0 ... +50 °C
Storage temperature range	-20 ... +70 °C
Relative humidity	max. 85%
Degree of pollution	2
Overvoltage category	II
Housing	
Protection class	front panel IP 50 rear panel IP 20
Material	polycarbonate-blend
Front bezel colour	black Option: grey, pebble grey or light grey
Attachment	metal slide
Connection type	screw terminals Option: flat plug

**Order information DIGEM 96 x 24 BK5**

Features		Item no.
Base unit		
	3½-digit, 1 999 digits	A1275
Display		
	red	A0
	green	A001
Display range		
	3½-digit, ±1 999 digits	AU0
	4½-digit, ±19 999 digits	AU001
Direct current		
	± 2 mA	D001
	± 20 mA	D002
	± 200 mA	D003
	0 ... 20 mA	D004
	4 ... 20 mA	D005
	± xxx mA (max ± 200 mA)	D900
	0 ... xxx mA (max. 200 mA)	D901
Direct voltage		
	± 2 V	D010
	± 20 V	D011
	0 ... 10 V	D013
	± xxx V (min. 2, max. 300 V)	D910
at shunt resistor		
	± 60 mV (max. display 6000)	D015
	± 150 mV (max. display 15000)	D016
	± 200 mV	D019
Alternating current		
	0 ... 2 mA	D021
	0 ... 20 mA	D022
	0 ... 200 mA	D023
	0 ... xxx mA (min. 2 mA, max. 200 mA)	D920
	0 ... x A (min. 0.2 mA; max. 5 A)	D922
	0 ... 1 A at current transformer	D027
	0 ... 5 A at current transformer	D028
Alternating voltage		
	0 ... 2 V	D031
	0 ... 20 V	D032
	0 ... xxx V (min. 2 V, max. 250 V)	D923
Alternating current TRMS		
	0 ... 2 mA	D200
	0 ... 20 mA	D201
	0 ... 200 mA	D202
	0 ... xxx mA (max. 200 mA)	D930
	0 ... xxxx A (min. 0.2 A; max. 5 A)	D931
	0 ... 1 A at current transformer	D207
	0 ... 5 A at current transformer	D208

Order information DIGEM 96 x 24 BK5		
Features		Item no.
Alternating voltage TRMS		
	0 ... 2 V	D210
	0 ... 20 V	D211
	0 ... xx V (max. 50 V)	D933
	0 ... xxx V (min. 50 V, max. 250 V)	D934
Temperature (only in connection with 3 ½-digit display)		
	Pt100 3-wire -200 ... 800 °C	D062
	Pt100 2- or 4-wire 200 ... 800 °C	D063
	Pt100 3-wire -328 ... 1473 °F	D064
	Pt100 2- or 4-wire -328 ... 1473 °F	D065
	Pt100 3-wire -50 ... 199.9 °C	D066
	Pt100 2- or 4-wire -50 ... 199.9 °C	D067
Display range		
	like measuring range max. resolution	E0
	according to specification	E090
Decimal point		
	as measuring range with max. resolution	ED0
	according to specification	ED090
Designation of the measured parameter		
	like measuring range	EM0
	as specified	EM090
Supply voltage		
	230 V / 115 V AC 50 / 60 Hz or 90 ... 260 V DC	H001
	18 ... 36 V DC or 24 V AC 50 / 60 Hz	H003
Switching hysteresis		
	without switching hysteresis	MD0
	with switching hysteresis	MD9
Front bezel		
	black, matte	P0
	on request	P090
Front panel		
	GMW design	PD0
	according to specification	PD950
Labelling on front side		
	without additional lettering	TA0
	according to specification	TA090
Labelling, rear side		
	without labelling	T0
	according to specification	TA090
Connections		
	screw terminals	R0
	Flat plug connectors	R001
Manufacturer certificates		
	certificate general, without proof of calibration	WZ001
	certificate general, with proof of calibration	WZ002
	test certificate device-specific, without measuring points	WZ003
	test certificate device-specific, with measuring points	WZ004

DIGEM 96 x 48 AK5 - A1065

Digital display 3.5-digit



Display range easily adjustable using coding plugs and potentiometer. With its robust metal housing, this measuring instrument is suitable for all industrial applications.

The display ranges are preset in the factory according to your specifications.

The preselection for the display range is made by means of clearly arranged coding plugs inside the instruments.

For fine adjustment, the corresponding potentiometers are accessible from the front after removing the filter panel.

That makes the measuring instrument also suitable for applications in which on-site adjustment of the display range is beneficial.

For the measuring range 4 ... 20 mA, the adjustment is entirely possible with the 4 mA signal alone.

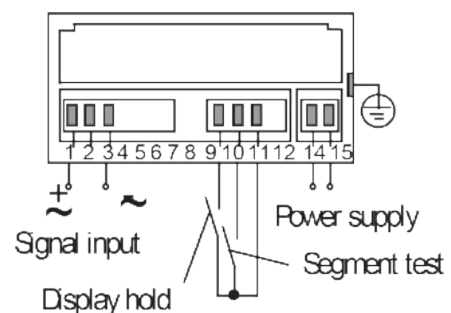
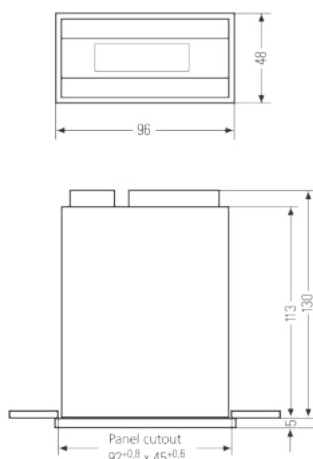
Depending on the version, the following measuring ranges are possible:

- DC current and DC voltage measurement
- AC voltage measurement
- AC current measurement for connection to current transformers
- Temperature measurement
- Frequency measurement

Features

- Robust metal housing
- Power supply galvanically isolated from measurement circuit
- Available up to 300 V DC
- Front side up to IP 65 possible

Dimensions & pin assignment



Technical parameters

Display	
Type	7-segment LED
Display colour	red option: green
Digit height	approx. 14 mm
Display range	$\pm 1\ 999$
Polarity	"-" is displayed automatically
Decimal point	set internally
Out-of-range indicator	flashing - overbar
Measuring ranges	
Direct voltage	$\pm 200\text{ mV}$ to $\pm 300\text{ V}$ $\pm 60\text{ mV}$; $\pm 150\text{ mV}$ and $\pm 300\text{ mV}$
Direct current	$\pm 200\ \mu\text{A}$ to $\pm 200\text{ mA}$ 0 ... 20 mA
Alternating voltage	0 ... 199,9 V; 0 ... 700 V
TRMS voltage	0 ... 100,0 V; 0 ... 700 V
Alternating current via current transformer	0 ... 1A / 5 A
TRMS current	0 ... 1A / 5 A
Frequency	0 ... 500 Hz
Temperature	Pt100 0 ... 199,9 °C and -200 ... +800 °C
Thermocouples	type J 0 ... 760 °C or type K 0 ... 1260 °C
Supply voltages	
	230 V AC 50 / 60 Hz 115 V AC 50 / 60 Hz 24 V DC / AC
Environmental conditions	
Operating temperature range	0 ... +50 °C
Storage temperature range	-20 ... +70 °C
Relative humidity	max. 85%
Degree of pollution	2
Overvoltage category	II
Housing	
Protection class	front panel IP 50 rear panel IP 20
Front bezel colour	black
Attachment	screw clips
Connection type	either flat plugs or screw terminals

**Order information DIGEM 96 x 48 AK5**

Features		Item no.
Base unit		
	3½-digit, ±1 999 digits	A1065
Display		
	red	A0
	green	A001
Direct current		
	± 200 µA	D001
	± 2 mA	D002
	± 20 mA	D003
	± 200 mA	D004
	0 ... 20 mA	D005
	4 ... 20 mA	D007
	as specified (max. 200 mA)	D09
Direct voltage		
	± 200 mV	D010
	± 2 V	D011
	± 20 V	D012
	± 200 V	D013
	0 ... 5 V	D017
	0 ... 10 V	D018
	as specified (min. 2 V, max. 200 V)	D09
	0 ... 300 V	D102
at shunt resistor		
	± 60 mV (max. 50 V against GND)	D014
	± 150 mV (max. 50 V against GND)	D015
	± 300 mV (max. 50 V against GND)	D016
Alternating current		
	0 ... 1 A	D020
	0 ... 5 A	D021
Alternating voltage		
	0 ... 199.9 V	D030
	0 ... 700 V	D031
	0 ... xxx V (min. 2 V, max. 199.9 V)	D098
Alternating current RMS		
	0 ... 199.9 mA	D039
	0 ... 1 A current transformer	D040
	0 ... 5 A current transformer	D041
Alternating voltage		
	0 ... 199.9 V	D050
	0 ... 700 V	D051
	0 ... xxx V (min. 20 V, max. 700 V)	D099
Temperature		
	Pt100 3-wire 0 ... 199.9 °C ¹	D060
	Pt100 2- or 4-wire 0 ... 199.9 °C ¹	D062
	Pt100 3-wire -190 ... 800 °C ¹	D066
	Pt100 2- or 4-wire -190 ... 800 °C ¹	D068
	thermocouple type J 0 ... 760 °C ¹	D070
	thermocouple type K 0 ... 1260 °C ¹	D072

1) Pt 100 or thermocouple in drive unit possible on request

Order information DIGEM 96 x 48 AK5

Features	Item no.
Frequency	
12 ... 199.9 Hz (level 80 ... 700 V)	D080
12 ... 500 Hz (level 80 ... 700 V)	D081
Display range	
end preset to approx. 1000	E0
according to specification	E090
Decimal point	
as measuring range with max. resolution	ED0
without decimal point	ED001
according to specification	ED090
Designation of the measured parameter	
like measuring range	EM0
without measurement imprint	EM001
as specified	EM090
Supply voltage	
230 V 50 / 60 Hz	H001
115 V 50 / 60 Hz	H002
24 V DC / AC 50 / 60 Hz	H003
Front bezel	
black, matte	P0
on request	P090
Front panel	
GMW design	PD0
according to specification	PD950
Protection class	
Protection class front IP 40	PP0
Protection class front IP 54	PP001
Protection class front IP 65	PP002
Connections	
Flat plug 2.8 x 0.8 mm	R001
screw terminals	R002
Attachment	
fastened with DIN screw clamp	RM0
fastening for Maull grid	RM001
fastening for Kreutzenbeck grid	RM002
Labelling on front side	
without additional lettering	TA0
as specified	TA090
Labelling, rear side	
without labelling	T0
as specified	T090
Operating manual	
German / English, French	W001
Manufacturer certificate	
certificate general, without proof of calibration	WZ001
certificate general, with proof of calibration	WZ002
test certificate device-specific, without measuring points	WZ003
test certificate device-specific, with measuring points	WZ004

DIGEM 96 x 48 B5 - A1385

Digital display 4-digit



The DIGEM 96 x 48 B5 is a precise DC voltmeter unit, that can be adapted to the required measuring task with the aid of upstream measuring modules.

This measuring device is therefore also suitable for applications where it is often necessary to adjust the display on site.

Each unit has a control input for display storage, which keeps the current display fixed. This does not affect the measuring cycle.

For the measuring ranges 4 ... 20 mA and 0 ... 20 mA, an adjustment of the display range is still possible even in the installed state without a calibrator .

The measured values are further processed in a microcomputer and displayed on a 7-segment display unit.

The keys on the front panel can be used to set the start and end of the display range, the switching behaviour of the relays, the position of the limit values and a hysteresis.

Should the limit values need to be adjusted during operation, the protection against adjustments can be cancelled for this function.

The set data can be protected against unauthorised changes via an external contact on the rear of the unit.

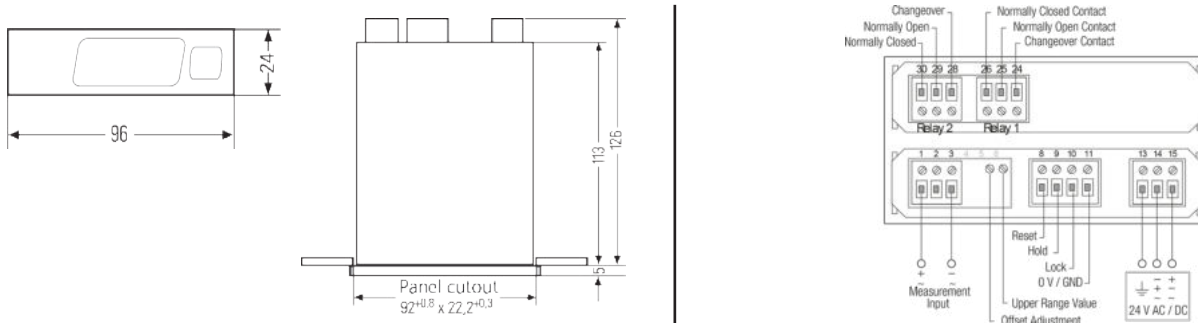
Depending on the measuring module currently in use, it can be used for the following measuring tasks:

- Direct voltage
- Direct current
- Alternating voltage
- Alternating current
- Temperature

Features

- Can be optimally adjusted to meet the respective measuring task with the aid of measuring modules.
- Two separately adjustable limit values (option)
- Particularly easy programming
- Power supply galvanically isolated from measurement circuit
- Also available with supply for 2-wire measuring transducer
- Housing suitable for grid installation

Dimensions & pin assignment



Technical parameters

Display

Type	7-segment LED
Display colour	red
Digit height	14 mm
Display range	-1 999 ... 9 999
Polarity	"-" is displayed automatically
Decimal point	programmable
Out-of-range indicator	flashing - overbar

Measuring ranges

Direct voltage	± 60 mV to ± 300 V
Direct current	± 2 mA to ± 200 mA and 0 ... 20 mA 4 ... 20 mA with power supply for 2-wire measuring transducer
Alternating voltage	0 ... 2 V to 0 ... 700 V
Alternating current	0 ... 200 mA, 0 ... 1 A / 5 A
TRMS voltage	0 ... 700 V
TRMS current	0 ... 200 mA, 0 ... 1 A / 5 A
Crest factor	6 (additionally 0.5% of the measured value)
Temperature	Pt100 -200 ... +800 °C

Supply voltages

	230 V / 115 V AC 50 / 60 Hz or 18 ... 36 V DC / 24 V AC
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Environmental conditions

Operating temperature range	0 ... +50 °C
Storage temperature range	-20 ... +70 °C
Degree of pollution	2
Overvoltage category	II

Housing

Protection class	front panel IP 54 rear panel IP 20
Front bezel colour	black
Attachment	slider
Connection type	screw terminals

**Order information DIGEM 96 x 48 B5**

Features		Item no.
Base unit		
	4-digit, -1 999 to 9,999 digits	A1385
Display		
	red	
Limit values		
	without limit values	C0
	2 limit values min. - max. contact	C1
	2 limit values min. - min. contact	C2
	2 limit values max. - max. contact	C3
	2 limit values max. - min. contact	C4
Direct current		
	0 ... x mA (min. 2 mA, max. 200 mA)	D900
	± x mA (min. 2 mA, max. 200 mA)	D901
	0 ... 20 mA	D001
	4 ... 20 mA	D002
	4 ... 20 mA 24 V / 20 mA DC with supply for 2-wire measuring transducer	D003
Direct voltage		
	0 ... x V (min. 2 V, max. 300 V)	D910
	± x V (min. 2 V, max. 300 V)	D911
	0 ... 2 V	D011
	0 ... 10 V	D010
at shunt resistor		
	± 60 mV	D012
	± 150 mV	D013
	± 200 mV	D014
	± 300 mV	D015
Alternating current		
	0 ... x mA (min. 2 mA, max. 200 mA)	D920
	0 ... x A (min. 0.2 A, max. 6 A)	D922
	at current transformer 0 ... 1 A	D027
	at current transformer 0 ... 5 A	D028
Alternating voltage		
	0 ... 200 V	D020
	0 ... 700 V	D021
	0 ... x V (min. 0.2 V, max. 100 V)	D921
	0 ... xxx V (min. 100 V, max. 700 V)	D923
Alternating current TRMS		
	0 ... x mA (min. 2 mA, max. 200 mA)	D925
	0 ... x A (min. 0.2 A; max. 6 A)	D931
	0 ... 1 A current transformer	D207
	0 ... 5 A current transformer	D208
Alternating voltage TRMS		
	0 ... 200 V	D025
	0 ... 700 V	D026
	0 ... x V (min. 0.2 V, max. 100 V)	D926
	0 ... x V (min. 100 V, max. 700 V)	D933

Order information DIGEM 96 x 48 B5

Features	Item no.
Temperature	
Pt100 3-wire -199,9 ... 800 °C	D060
Pt100 2- or 4-wire -199,9 ... 800 °C	D061
Pt100 3-wire -328 ... 1473 °F	D064
Pt100 2- or 4-wire -328 ... 1473 °F	D065
Display range	
like measuring range	E00
± x as specified (max. ±1999)	E90
0 ... x as specified (max. 9999)	E91
x ... y as specified (x = max. 9999, y = max. 9999)	E92
-x ... y as specified (x = max. -1999, y = max. 9999)	E93
Decimal point	
as measuring range with max. resolution	ED0
without decimal point	ED1
xxx.x	ED2
xx.xx	ED3
x.xxx	ED4
Designation of the measured parameter	
like measuring range	EM0
without measurement imprint	EM1
as specified (max. 4 digits)	EM9
Supply voltage	
230 V / 115 V AC 50 / 60 Hz	H1
18 ... 36 V DC or 24 V AC 50 / 60 Hz	H3
Switching hysteresis	
without switching hysteresis	MD0
with switching hysteresis	MD9
Labelling, rear side	
without labelling	T0
as specified, rear	T009
as per specification, top	T010
as per specification, bottom	T011
Manufacturer certificates	
certificate general, without proof of calibration	WZ001
certificate general, with proof of calibration	WZ002
test certificate device-specific, without measuring points	WZ003
test certificate device-specific, with measuring points	WZ004

DIGEM 96 x 48 CK5 - A1265

Digital display with limit value and LED display



The DIGEM 96 x 48 CK5 is a precise panel meter with a modular design.

The measuring devices are prepared for the respective measuring task using a variety of different measuring modules.

Scaling, and setting target values can be easily achieved via front buttons, even when installed.

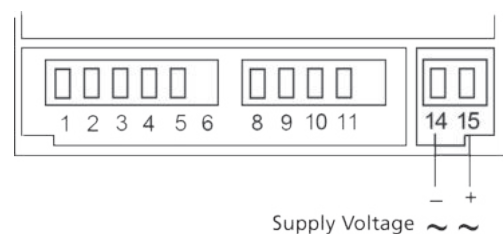
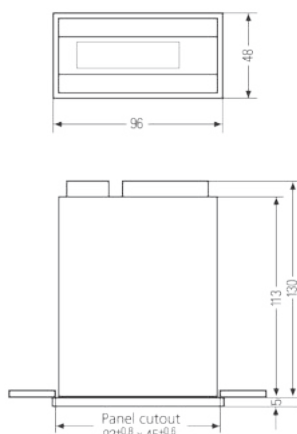
A wide range of additional functions expand the range of applications so the measuring instruments can be optimally adjusted to the measuring task at hand.

Optionally, the device is also designed for use in areas in which measured values must be monitored, evaluated and, if necessary, forwarded via an analogue output or a serial interface.

Features

- Easy to configure
- Up to 4 limit values possible as an option
- Adaptation to customer-specific characteristic curve
- Addition, subtraction of two measured values
- Multiplication, division of two measured values
- Auto-taring
- Automatic adjustment during pressure measurement
- Storage of min./max. measured values
- Supply galvanically isolated from other circuits
- Also available with supply for 2-wire measuring transducer
- RS232 or RS485 interfaces (optional)
- Analogue output (optional)
- Housing suitable for grid installation

Dimensions & pin assignment



Technical parameters

Display

Type	7-segment LED
Display colour	red option: green
Digit height	approx. 14 mm
Display range	-19 999 ... 32 765
Polarity	"-" is displayed automatically
Decimal point	programmable
Out-of-range indicator	flashing - overbar

Measuring range

Direct voltage	± 60 mV to ± 300 V
Direct current	± 2 mA to ± 200 mA, 0 ... 20 mA 4 ... 20 mA with power supply for 2-wire measuring transducer
Alternating voltage	0 ... 700 V
Alternating current	0 ... 200 mA, 0 ... 1 A / 5 A
TRMS voltage	0 ... 700 V
TRMS current	0 ... 200 mA, 0 ... 1 A / 5 A
Crest factor	6 (additionally 0.5% of the measured value)
Temperature	Pt100 -200 ... +800 °C, -328 ... +1473 °F Thermocouples type J, K, R, S 0 ... +1600 °C, -310 ... +2300 °F
Resistance	0 ... 10 000 Ω
Frequency	0 ... 200 kHz
Reversal	max. 0.1 Hz
Print	min. 2 mV / V max. 20 mV / V
Impulse counter	incrementer, decrementer

Interfaces

	limit value max. 4 relays, analogue output (optional) Serial interface (optional), RS232 or RS485
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Supply voltages

	90 ... 230 V AC 50 / 60 Hz, 24 V AC 50 / 60 Hz 90 ... 260 V DC or 18 ... 36 V DC
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Environmental conditions

Operating temperature range	0 ... +50 °C
Storage temperature range	-20 ... +70 °C
Relative humidity	max. 85%
Degree of pollution	2
Overvoltage category	II

Housing

Protection class	front panel IP 40 rear panel IP 20
Front bezel colour	black
Attachment	slider
Connection type	screw terminals

**Order information DIGEM 96 x 48 CK5**

Features	Item no.
Base unit	
3¾-digit, -19 999 to 32 765 digits	A1265
Display	
red	A0
green	A001
Display range	
Preset standard	E0
according to specification	E999
Limit values	
without limit values	C0
Working current min. - max. contact	C001
Working current min. - min. contact	C002
Working current max. - max. contact	C003
Quiescent current min. - max. contact	C004
Quiescent current min. - min. contact	C005
Quiescent current max. - max. contact	C006
Working current min. - min. - max. - max. contact	C007
Working current min. - min. - min. - min. contact	C008
Working current min. - min. - max. - max. contact	C009
Quiescent current min. - min. - max. - max. contact	C010
Quiescent current min. - min. - min. - min. contact	C011
Quiescent current max. - max. - max. - max. contact	C012
Direct current	
± 2 mA	D001
± 20 mA	D002
± 200 mA	D003
0 ... 20 mA	D004
4 ... 20 mA	D005
± xxx mA (min. 2mA, max. 200 mA)	D900
0 ... xxx mA (min. 2mA, max. 200 mA)	D901
-xx ... 0 ... mA	D902
± 1 A	D006
± 2 A	D007
4 ... 20 mA 24 V / 20 mA DC with supply for 2-wire measuring transducer	D008
Direct voltage	
± 2 V	D010
± 20 V	D011
± 200 V	D012
0 ... 10 V	D013
± xxx V (min. 2 V, max. 300 V)	D910
0 ... xxx V (min. 2 V, max. 300 V)	D911
-xx ... 0 xxx V	D912
at shunt resistor	
± 60 mV (max. display 6000)	D015
± 150 mV (max. display 15000)	D016
± 300 mV	D017

Order information DIGEM 96 x 48 CK5

Features	Item no.
Alternating current	
0 ... 2 mA	D021
0 ... 20 mA	D022
0 ... 200 mA	D023
0 ... xxx mA (min. 2 mA, max. 200 mA)	D920
0 ... x A (min. 0.2 A; max. 5 A)	D922
0 ... 1 A current transformer	D027
0 ... 5 A current transformer	D028
Alternating voltage	
0 ... 2 V	D031
0 ... 20 V	D032
0 ... 200 V	D037
0 ... 700 V	D038
0 ... xxx V (min. 2 V, max. 250 V)	D923
Alternating current TRMS	
0 ... 2 mA	D200
0 ... 20 mA	D201
0 ... 200 mA	D202
0 ... xxx mA (max. 200 mA)	D930
0 ... x A (min. 0.2 A; max. 6 A)	D931
0 ... 1 A current transformer	D207
0 ... 5 A current transformer	D208
Alternating voltage TRMS	
0 ... 2 V	D210
0 ... 20 V	D211
0 ... 200 V	D212
0 ... 700 V	D213
0 ... xxx V (min. 2 V, max. 250 V)	D933
Frequency	
5.0 ... 100.0 ... 500.0 Hz / 90 - 360 V	D050
0 ... 2000.0 Hz / 90 - 360 V	D051
5.0 ... 100.0 ... 500.0 Hz / 5 - 30 Vss	D052
5.0 ... 100.0 ... 500.0 Hz / open collector	D053
0 ... 2000.0 Hz / 5 - 30 Vss	D054
0 ... 2000.0 Hz / open collector	D055
0 ... 20 000 Hz / 5 - 30 Vss	D056
0 ... 20 000 Hz / open collector	D057
0 ... 200 000 Hz / 5 - 30 Vss	D058
xx ... xxx Hz / 5 ... 30 V	D952
Impulse counter	
incrementer xx imp. / digit 5 30 V	D950
decrementer xx imp. / digit 5 30 V	D951

**Order information DIGEM 96 x 48 CK5**

Features	Item no.
Temperature	
Pt100 3-wire -200 ... 800 °C	D062
Pt100 2- or 4-wire -200 ... 800 °C	D063
Pt100 3-wire -328 ... 1473 °F	D064
Pt100 2- or 4-wire -328 ... 1473 °F	D065
thermocouple type J 0 ... 760 °C	D310
thermocouple type J -32 ... 1260 °F	D311
thermocouple type K -190 ... 1300 °C	D320
thermocouple type K -310 ... 2300 °F	D321
thermocouple type R 0 ... 1600 °C	D330
thermocouple type R 32 ... 2900 °F	D331
thermocouple type S 0 ... 1600 °C	D340
thermocouple type S 32 ... 2900 °F	D341
Resistance	
0 ... 10 000 Ω / 2-wire	D081
0 ... 10 000 Ω / 3-wire	D082
0 ... 10 000 Ω / 4-wire	D083
0 ... 2 000 Ω / 2-wire	D084
0 ... 2 000 Ω / 3-wire	D085
0 ... 2 000 Ω / 4-wire	D086
0 ... 200 Ω / 2-wire	D087
0 ... 200 Ω / 3-wire	D088
0 ... 200 Ω / 4-wire	D089
x ... xxx Ω / 2-wire	D980
x ... xxx Ω / 3-wire	D981
x ... xxx Ω / 4-wire	D982
Print	
pressure sensor xx.x mV/V (min. 2 max. 20 mV/V)	D990
Linking the measuring ranges	
2 x direct voltage U1: ±xx V, U2: ±xx V	D960
2 x direct current I1: ±xxx mA, I2: ±xxx mA	D961
2 x direct current I1: 4 ... 20 mA, I2: 4 ... 20 mA	D962
Linking the measured values	
display = U1+ U2 or I1 + I2	DV001
display = U1- U2 or I1- I2	DV002
display = U1 (I1) x 20 000 / U2 (I2)	DV003
display = U1 (I1) x U2 (I2) / 10 000	DV004
Display range	
as measuring range with max. resolution	E00
±xxxxx	E091
0 ... xxxxx	E092
xxx ... xxxxx	E093
/1: xxx ... xxx, /2: xxx ... xxx	E094

Order information DIGEM 96 x 48 CK5

Features	Item no.
Display	
linear to the input variable	EA0
display in cos phi	EA001
with auto-tare	EA002
display non-linear (max. 10 inflection points)	EA009
Decimal point	
as measuring range with max. resolution	ED0
without decimal point	ED001
xxxx.x	ED002
xxx.xx	ED003
xx.xxx	ED004
x.xxxx	ED005
Designation of the measured parameter	
like measuring range	EM0
without measurement imprint	EM001
according to specification	EM090
Supply voltage	
230 V / 115 V AC 50 / 60 Hz or 90 ... 260 V DC	H001
18 ... 36 V DC or 24 V AC 50 / 60 Hz 10 ... 50 V DC or 60 V DC possible on request	H003
Output	
without output	D990
analogue output 0 ... 20 mA / display xxxx ... x	K090
analogue output 4 ... 20 mA / display xxxx ... x	K091
analogue output 0 ... 10 V / display xxxx ... xx	K092
analogue output 1 ... 5 V / display xxxx ... xxx	K093
analogue output xx ... xx mA / display xxxx ... xx	K099
Linking the measuring ranges	
2 x direct voltage U1: $\pm xx$ V, U2: $\pm xx$ V	D960
2 x direct current I1: $\pm xxx$ mA, I2: $\pm xxx$ mA	D961
2 x direct current I1: 4 ... 20 mA, I2: 4 ... 20 mA	D962
Interface	
without interface	L0
serial interface RS232 / V24	L001
serial interface RS485	L002
Averaging	
without averaging	M0
average over 2 measurements	M001
average over 4 measurements	M002
average over 8 measurements	M003
average over 16 measurements	M004
average over 32 measurements	M005

**Order information DIGEM 96 x 48 CK5**

Features	Item no.
Rounding of last digit	
without rounding	MA0
rounding in increments of 2	MA001
rounding in increments of 5	MA002
rounding in increments of 10	MA003
Switching behaviour only possible with limit values	
without hysteresis and without delay	MX0
switching hysteresis \pm xxx digits (max. 127)	MX091
response delay xxx sec. (max. 120)	MX092
Storage only possible with limit values	
without alarm storage	NX000
min. - max. values storage	NX001
max. value display, min. value storage	NX002
min. value display, max. value storage	NX003
with alarm storage	NX004
Front bezel	
black, matte	P0
grey, matte RAL 7037	P001
pebble grey, matte RAL 7032	P002
light grey, matte RAL 7035	P003
black, matte, 8 mm	P008
grey, matte, 8 mm	P009
Front panel	
GMW design	PD0
according to specification	PD950
Attachment	
with DIN screw clamp	RM0
for Mauell grids	RM001
Labelling, rear side	
without labelling	T0
according to specifications, rear	T009
according to specifications, top	T010
according to data, bottom	T011
Labelling on front side	
without additional lettering	TA0
according to specifications, top	TA092
Operating manual	
German / English, French	W002
Manufacturer certificates	
certificate general, without proof of calibration	WZ001
certificate general, with proof of calibration	WZ002
test certificate device-specific, without measuring points	WZ003
test certificate device-specific, with measuring points	WZ004

DIGEM 144 x 72 C5 - A1005

Digital display with limit value and LED display



DIGEM 144 x72 C5 is suitable for applications requiring more than two limit values or requiring outputs and interfaces at the same time.

The MESSCONTACTER version can be set to four limit values

The alarm is generated via four relays. At the same time, the alarm is indicated with LEDs.

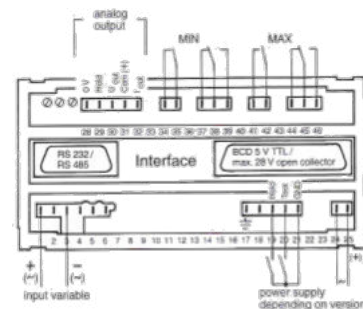
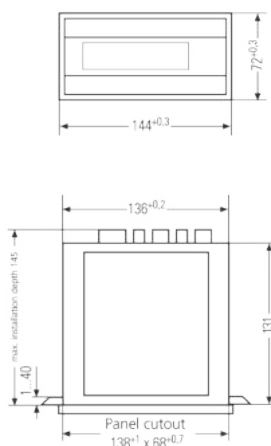
The measuring input is modular and can be configured for the following measuring tasks:

- DC current and voltage measurement
- AC current and voltage measurement
- Alternating voltage
- Temperature measurement
- Frequency measurement
- Impulse counter
- Display in $\cos \varphi$
- Non-linear input variables

Features

- Adaptation to customer-specific characteristic curve
- Flexible thanks to modular plug-in system
- Calibration and special functions selectable by keys
- Power supply galvanically isolated from measurement circuit
- A maximum of 4 limit values
- Suitable for grid installation
- Adjustable switching hysteresis
- Adjustable time delay for the limit values
- storage of one alarm message

Dimensions & pin assignment



Technical parameters

Display	
Type	7-segment LED
Display colour	red option: green
Digit height	approx. 20 mm
Display range	max. $\pm 19\,999$
Polarity	"-" is displayed automatically
Decimal point	programmable
Out-of-range indicator	flashing - overbar
Measuring ranges	
Direct voltage	± 200 mV to ± 300 V
Direct current	± 2 mA to ± 200 mA ± 1 A; ± 2 A 0 ... 20 mA; 4 ... 20 mA
Alternating voltage	0 ... 500 V
Alternating current	0 ... 200 mA
TRMS voltage	0 ... 500 V
TRMS current	0 ... 200 mA, 0 ... 1 A / 5 A
Crest factor	6 (additionally 0.5% of the measured value)
Temperature	Pt100 -200 ... +800 °C, -328 ... + 1 473 °F
Resistance	0 ... 10 000 Ω
Frequency	0 ... 200 Hz
Reversal	max. 0.1 Hz
Impulse counter	incrementer, decrementer
Interfaces	
	limit value max. 4 relays
	outputs (optional)
	BCD or analogue
	serial interface (optional)
	RS232 or RS485
Supply voltages	
	230 V AC 50 / 60 Hz , 115 V AC 50 / 60 Hz 18 ... 36 V DC / 24 V AC
Environmental conditions	
Operating temperature range	0 ... +50 °C
Storage temperature range	-20 ... +70 °C
Relative humidity	max. 85%
Degree of pollution	2
Overvoltage category	II
Housing	
Protection class	front panel IP 54 rear panel IP 20
Attachment	screw clips
Connection type	screw terminals

**Order information DIGEM A 144 x 72 C5**

Features	Item no.
Base unit	
4 ½-digits, ±19 999 digits	A1005
Display	
red	A0
green	A001
Limit values	
without limit values	B0
quiescent current min. min. - max. max. contact	B001
quiescent current min. min. - min. min. contact	B002
quiescent current max. max. - max. max. contact	B003
working current min. min. - max. max. contact	B004
working current min. min. - min. min. contact	B005
working current max. max. - max. max. contact	B006
Precontact	
Normally Open contact	C001
Normally Closed contact	C002
Direct current	
± 2 mA	D001
± 20 mA (± 5 / 20 / 50 / 200 mA)	D002
± 200 mA (± 5 / 20 / 50 / 200 mA)	D003
0 ... 20 mA (± 5 / 20 / 50 / 200 mA)	D004
4 ... 20 mA (± 5 / 20 / 50 / 200 mA)	D005
± 1 A	D006
± 2 A	D007
± xx mA (± 5 / 20 / 50 / 200 mA)	D090
± xx mA (min. 200 mA, max. 1 A)	D092
xx ... xxx mA	D103
Direct voltage	
± 2 V	D010
± 20 V (± 5 / 20 / 50 / 200 V)	D011
± 200 V (± 5 / 20 / 50 / 200 V)	D012
0 ... 10 V (± 5 / 20 / 50 / 200 V)	D013
± 200 mV	D017
x ... xx V	D097
xx ... xxx V	D104
± xxx V (± 5 / 20 / 50 / 300 V)	D091
Alternating current	
0 ... 2 mA	D021
0 ... 20 mA	D022
0 ... 200 mA	D023
0 ... xxx mA (max. 200 mA)	D093

Order information DIGEM A 144 x 72 C5

Features	Item no.
Alternating voltage	
0 ... 2 V	D031
0 ... 20 V	D032
0 ... 200 V	D033
0 ... xx V (min. 2 V, max. 500 V)	D094
Alternating current TRMS	
0 ... 2 mA	D040
0 ... 20 mA	D041
0 ... 200 mA	D042
0 ... xxx mA (max. 5000 mA)	D095
0 ... 1 A current transformer	D043
0 ... 5 A current transformer	D044
Alternating voltage TRMS	
0 ... 2 V	D045
0 ... 20 V	D046
0 ... 200 V	D047
0 ... xx V (min. 2 V, max. 500 V)	D096
Frequency	
5 ... 100 ... 500 Hz / 90-350 V	D050
0 ... 2 000 Hz / 90-350 V	D051
5 ... 100 ... 500 Hz / 5-30 Vss	D052
5 ... 100 ... 500 Hz / 2-16 V 2-wire	D053
0 ... 2000 Hz / 5-30 Vss	D054
0 ... 2000 Hz / 2-16 V 2-wire	D055
0 ... 20 000 kHz / 5-30 Vss	D056
0 ... 20 000 kHz / 2-16 V 2-wire	D057
0 ... 200 kHz / 5-30 Vss	D058
0 ... 200 kHz / 2-16 V 2-wire	D059
xx ... xxx Hz / 5-30 Vss	D100
xx ... xxx Hz / 2-16 V 2-wire	D101
xx ... xxx Hz / 90-350 Vss	D102
Impulse counter	
incrementer xx imp./digit 5-30 V	D098
decrementer xx imp./digit 5-30 V	D099
Temperature	
Pt100 ¹⁾ 3-wire 0 ... 200 °C	D060
Pt100 ¹⁾ 2-wire or 4-wire 0 ... 200 °C	D061
Pt100 ¹⁾ 3-wire -200 ... 800 °C	D062
Pt100 ¹⁾ 2-wire or 4-wire -200 ... 800 °C	D063
Pt100 ¹⁾ 3-wire 32 ... 392 °F	D064
Pt100 ¹⁾ 2-wire or 4-wire 32 ... 392 °F	D065
Pt100 ¹⁾ 3-wire -328 ... 1473 °F	D066
Pt100 ¹⁾ 2-wire or 4-wire -328 ... 1473 °F	D067

1) Pt 1000 available upon request



Order information DIGEM A 144 x 72 C5

Features	Item no.
Resistance	
0 ... 10 000 Ω / 2-wire	D081
0 ... 10 000 Ω / 3-wire	D082
0 ... 10 000 Ω / 4-wire	D083
Display range	
as measuring range with max. resolution	E0
\pm xxxx	E091
0 ... xxxx	E092
xxx ... xxxx	E093
Display	
linear to the input variable	EA0
display in cos phi	EA001
display non-linear (max. 10 inflection points)	EA009
Decimal point	
as measuring range with max. resolution	ED0
without decimal point	ED001
xxxx.x	ED002
xxx.xx	ED003
xx.xxx	ED004
x.xxxx	ED005
Designation of the measured parameter	
like measuring range	EM0
without measurement imprint	EM001
according to specification	EM090
Supply voltage	
230 V 50/60 Hz	H001
115 V 50/60 Hz	H002
24 V DC/AC 50/60 Hz	H003
Output BCD	
without output	K0
BCD data output 5 V	K006
BCD data output 24 V	K007
analogue output	
0 ... 20 mA / display xxxx ... x	K091
4 ... 20 mA / display xxxx ... x	K092
\pm 20 mA / display xxxx ... xx	K093
0 ... 10 V / display xxxx ... xx	K094
1 ... 5 / display xxxx ... xxx	K095
xx ... xxx / display xxxxx ... xxx	K099
Interface	
without interface	L0
serial interface RS232 / V24	L001
serial interface RS485	L002
Switching behaviour	
without hysteresis and without delay	MD0
switching hysteresis \pm xxx digits (max. 127)	MD091
response delay xxx sec. (max. 120)	MD092

Order information DIGEM A 144 x 72 C5

Features	Item no.
Averaging	
without averaging	M0
average over 2 measurements	M001
average over 4 measurements	M002
average over 8 measurements	M003
average over 16 measurements	M004
average over 32 measurements	M005
average over 64 measurements	M006
average over 128 measurements	M007
Rounding of last digit	
without rounding	MA0
rounding in increments of 2	MA001
rounding in increments of 5	MA002
rounding in increments of 10	MA003
Storage only possible with limit values	
no storage	N0
with alarm message storage	N004
Differential display	
without differential display	ND0
with target/actual value comparison	ND001
Front bezel	
black, matte	P0
on request	P090
Front panel	
GMW design	PD0
GMC design, low-reflection front screen	PD999
Labelling, rear side	
without labelling	T0
according to specification	T090
Labelling on front side	
without additional lettering	TA0
according to specification	TA090
Operating manual	
German, English	W0
Specifications	
without additional specifications	WS0
conditionally tropicalised	WS010
Manufacturer certificates	
certificate general, without proof of calibration	WZ001
certificate general, with proof of calibration	WZ002
test certificate device-specific, without measuring points	WZ003
test certificate device-specific, with measuring points	WZ004

DPM 24 x 48 - 2000D

Digital display



The digital panel meters DPM 24 x 48 - 2000D are digital displays for the connection to a measuring voltage of 10 V and measuring currents of 1 mA, 10 mA or 4 ... 20 mA.

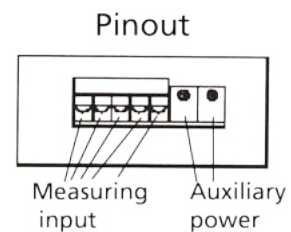
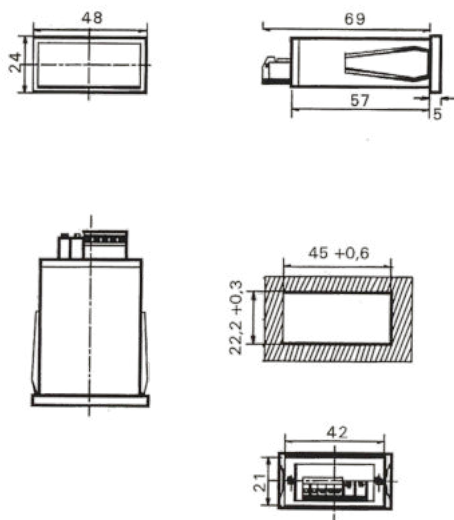
Four measuring ranges are available, and they are set via DIP switches on the back of the unit.

The unit is designed for connecting common current and voltage signals including 4 . 20 mA and ensures a high packing density in the panel due to its small dimensions and low power consumption.

Features

- Measuring range set with jumpers
- Zero and end values adjustable
- Low installation depth of only 69 mm
- Brightness adjustment (optional)
- HOLD input (optional)
- Front panel IP65 available

Dimensions & pin assignment



Technical parameters

Display

Type	7-segment LED
Digit height	8 mm / 7-segment symbols
Overload	last 3 digits dark
Display range	1999
Polarity	"-"
Decimal point	adjustable

Measuring ranges

Direct voltage (input current < 100 µA)	<u>identifier D</u> 0 ... 10 V
Direct current (voltage drop < 200 mV)	0 ... 1 mA 0 ... 10 mA 4 ... 20 mA
Full-scale value adjustment	1 : 10
Temperature coefficient	100 ppm/°K plus
zero drift	plus 100 ppm/°K
Measurement error	< 0.2% + 1 digit

Auxiliary energy

	21 ... 30 V DC, 0.9 W
Option	5 V DC ± 5%, 0.9 W

Environmental conditions

Operating temperature range	0 ... 50 °C
Storage temperature range	-40 ... +80 °C
Climate suitability	climate class 2 as per VDE / DIN 3540
Device safety	as per IEC EN 61 010
EMI immunity	DIN EN 61 000-4-1 to 4
EMI emissions	DIN EN 50 081 class B

Housing

Protection class	IP 20 as per IEC EN 60 529 front side IP 54 (IP 65 on request)
Protection class	II as per IEC 348 / VDE 0411

**Order information DIGEM 24 x 48 - 2000D**

Features	Item no.
Base unit	
3½-digit, measuring range and indicator adjustable	
Auxiliary voltage	
24 V DC	55001 00000
5 V DC	55001 00010
Display	
red	A0
green	A001
Measuring range	
Preset standard direct voltage 10 V or direct current 0 ... 1 mA, or 20 mA or 4 ... 20 mA settable DIP switch	D950
as specified	D999
Designation of the measured parameter	
without measurement imprint	EM001
as specified	EM090
Front panel	
GMW design	PD0
without company logo neutral	PD100
according to specification (the stereotype plate costs are charged separately)	PD999
Display range	
Preset standard	E0
according to specification	E999
Decimal point	
without decimal point	ED001
xxx.x only for E999	ED002
xx.xx only for E999	ED003
x.xxx only for E999	ED004
Designation of the measured parameter	
without measured variable imprint (standard)	EM001
according to specification	EM090
Front panel	
GMW design (standard)	PD0
without company logo (neutral)	PD100
according to specification (stereotype plate costs will be charged separately)	PD999
Protection class	
Front panel IP54 (standard)	PP001
Front panel IP65	PP002
Operating manual	
German	W0
English	W001

DPM 24 x 96 - 2000S

Digital display



The digital panel meters DPM 24 x 96-2000 S are display units for DC current and DC voltage measurements with 9 basic measuring ranges.

The measuring ranges are set using the terminals and the jumpers on the rear of the unit.

Calibration of the final display value is achieved with a potentiometer in the range 1 : 5 on the front side (after removing the front panel), as well as the options for zero point adjustment and brightness control.

Comma programming is carried out with jumpers on the back of the unit.

Different auxiliary voltages can be connected optionally.

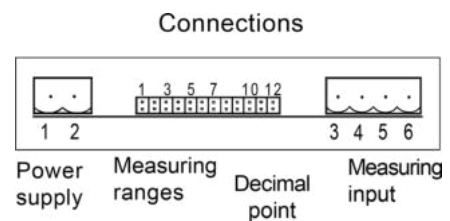
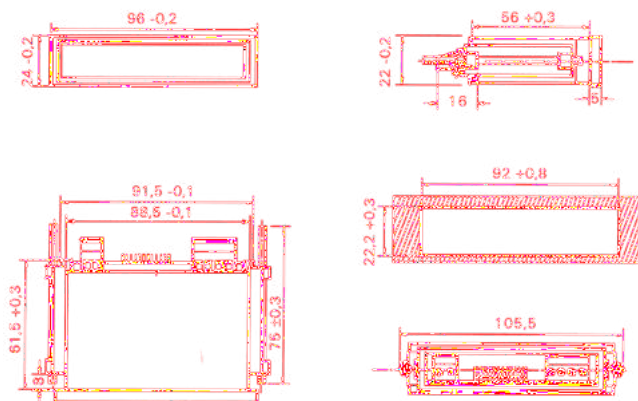
The available measuring ranges include standard signals, so that stock-keeping at the customer can be reduced.

Universally usable display unit for connection to different auxiliary voltages.

Features

- Measuring range set with jumpers
- Zero and end values adjustable
- Low installation depth of only 72 mm
- Brightness adjustment (optional)
- HOLD input (optional)
- IP 65 (optional)

Dimensions & pin assignment



Technical parameters

Display	
Type	7-segment LED
Digit height	14 mm
Overload	last 3 digits dark
Display range	1999
Polarity	"_"
Decimal point	adjustable
Measuring ranges	
Direct voltage (input current < 300 µA)	0 ... 0.2 V 0 ... 1 V 0 ... 5 V 0 ... 25 V 0 ... 100 V 0 ... 300 V
Direct current (voltage drop < 600 mV)	0 ... 1 mA 0 ... 20 mA 0 ... 200 mA
Full-scale value adjustment	1 : 5
Zero suppression	< - 1000
Measurement error	< 0.2% + 1 digit
Temperature coefficient	100 ppm/°C plus 100 ppm/°C zero drift
Digital signals	
HOLD	"0"
Auxiliary energy	
Direct voltage	5 V ± 5% 0.6 W not insulated
	24 V ± 15% 0.9 W
Alternating voltage	230 V ± 10% - 15% 1.3 W
Environmental conditions	
Operating temperature range	0 ... 50 °C
Storage temperature range	-40 ... +80 °C
Device safety	as per IEC EN 61 010
EMI immunity	corresponds to DIN EN 61 000-4-1 to 4
EMI emissions	corresponds to DIN EN 50 081 class B
Housing	
Protection class	IP 20 as per IEC EN 60 529 front side IP 54 (IP 65 on request)
Protection class	II as per IEC 348 / VDE 0411
Connection type	indirect screw-type terminal plugs

**Order information DIGEM 24 x 96 - 2000S**

Features	Item no.
Base unit	
3½-digit, measuring range and display adjustable	
Auxiliary voltage	
230 V AC	55005 00000
24 V DC	55005 00010
5 V DC	55005 00020
Display	
red	A0
green	A001
Measuring ranges	
Preset standard: current measurement DC 0 ... 1 mA; 0 ... 20 mA; 0 ... 200 mA voltage measurement DC 0 ... 0,2 V; 0 ... 1 V; 0 ... 5 V; 0 ... 25 V; 0 ... 100 V; 0 ... 300 V adjustable with DIP switch	D950
according to specification	D999
Display range	
Preset standard	E0
according to specification	E999
Decimal point	
standard without	ED001
xxx.x only for E999	ED002
xx.xx only for E999	ED003
x.xxx only for E999	ED004
Designation of the measured parameter	
without measurement imprint	EM001
as specified	EM090
Front panel	
GMW design	PD0
without company logo neutral	PD100
according to specification (the stereotype plate costs are charged separately)	PD999
Protection class	
standard front side IP54	PP001
front side IP65	PP002
Option	
without	0000
brightness adjustment	0001
hold - input	0002
Operating manual	
German	W0
English	W001

DPM 24 x 96 - 40.000 MF

Digital display



The DPM 24 x 96 MF5 is a very convenient display unit with a DIN housing. Numerous hard-wired additional functions turn the DPM 24 x 96 MF5 into a universal device for automation and measuring tasks requiring the highest demands.

Optionally, the device is also designed for use in areas where measured values must be monitored, evaluated and, if necessary, forwarded via an analogue output or a serial interface. This includes 2 limit values that can be freely assigned across the measuring ranges.

Display range and decimal point can be easily configured to meet the requirements of the measuring task at hand, and they are freely scalable.

The unit is operated and parameterised with 2 keys or via the interface using PC software.

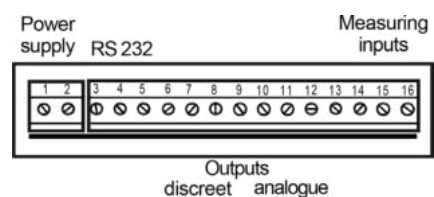
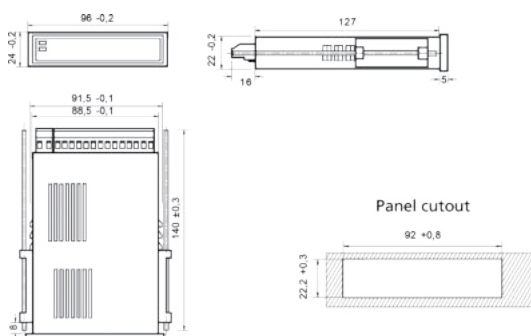
Depending on the hardware configuration, it can be used for the following measuring tasks:

- Direct voltage
- Direct current
- Alternating voltage
- Alternating current
- Temperature

Features

- Freely scalable measuring ranges
- Up to 2 open collector outputs
- analogue output
- RS232 interface
- Scaling of the display according to internally stored functions
- Measured value evaluation
- Display formatting
- Alarm configuration
- DATA logging
- Cascading and loop operation

Dimensions & pin assignment



Technical parameters

Display

Type	7-segment LED
Display colour	red
Digit height	14 mm
Display range	-19 999 ... 99 999
Polarity	"-" is displayed automatically
Decimal point	programmable
Out-of-range indicator	programmable, flashing

Measuring ranges

Direct voltage	± 200 mV to ± 650 V
Direct current	± 20 mA to ± 200 mA 0 ... 20 mA 4 ... 20 mA
Alternating voltage	0 ... 650 V
Alternating current	0 ... 200 mA
Temperature	Pt100 -200 ... +850 °C -260 ... +1820 °C Breaking cut-out available
Connection type	2L, 3L, 4L
Thermocouples	Type B, E, J, K, L, N, R, S, T, U

Interfaces

Limit value	2 open collectors analogue output: max. resolution 4050 steps RS232
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Supply voltages

	230 V / 115 V AC 50 / 60 Hz and 18 ... 36 V DC wide range power supply unit
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Environmental conditions

Operating temperature range	0 ... 50 °C
Storage temperature range	-40 ... +80 °C
Relative humidity	max. 85%
Degree of pollution	2
Overvoltage category	II

Housing

Protection class	front panel IP 54 rear panel IP 20
Front bezel colour	black
Attachment	screw clips
Connection type	screw terminals direct screw terminals (measuring input)

**Order information DPM 24 x 96 - 40.000 MF**

Features	Item no.
Base unit	
5-digit, - 19 999 to 99 999 digits with wide range power supply 230 V / 115 V AC 50/60 Hz and 18 ... 36 V DC	51500 00100
Display	
red	A0
green	A001
Measuring range	
Freely programmable for:	
direct current ± 20 mA to ± 200 mA	D950
direct voltage ± 200 mV to ± 650 V	
alternating current 0 ... 200 mA	
alternating voltage 0 ... 650 V	
temperature: Pt 100 -200 ... +850 °C (2, 3 and 4-wire)	
thermocouple: types K, J, T, E, U, L, N, R, S, B -260 ... +1820 °C (with breaking cut-out)	
Designation of the measured parameter	
without measurement imprint	EM001
as specified	EM090
Front panel	
GMW design	PD0
without company logo neutral	PD100
according to specification (the stereotype plate costs are charged separately)	PD999
Labelling, rear side	
without labelling	T0
as per specification, top	T010
as per specification, bottom	T011
Operating manual	
German	W0
English	W001
French	W002
Manufacturer certificates	
certificate general, without proof of calibration	WZ001
certificate general, with proof of calibration	WZ002
test certificate device-specific, without measuring points	WZ003
test certificate device-specific, with measuring points	WZ004

DPM 48 x 96 - 2000S

Digital display



The DPM 48 x 96 - 2000 S is a very convenient display unit that comes in a DIN housing. For DC current and DC voltage measurements with 8 basic measuring ranges.

The measuring ranges are set using the terminals and the jumpers on the rear of the unit.

Calibration of the final display value is achieved with a potentiometer in the range 1 : 5 on the front side (after removing the front panel), as well as the options for zero point adjustment and brightness control.

Comma programming is carried out with jumpers on the back of the unit.

Different auxiliary voltages can be connected optionally.

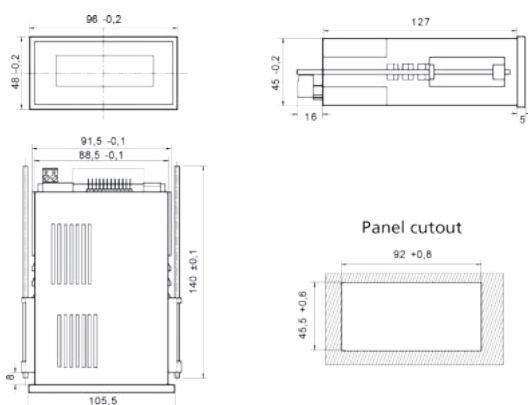
Digital display can be used for measuring tasks under robust operating conditions thanks to its excellent protection.

Universally usable display unit for connection to different auxiliary voltages.

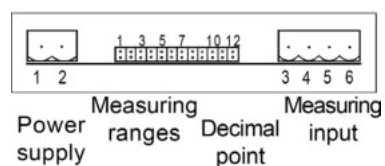
Features

- Digital standard display
- Wide range of input variables
- Wide adjusting range
- Measuring range set with jumpers
- brightness adjustment
- HOLD input
- Zero and end values adjustable
- Front panel IP65 available

Dimensions & pin assignment



Connections



Technical parameters

Display	
Type	7-segment LED
Digit height	14 mm or 20 mm
Overload	last 3 digits dark
Display range	1999
Polarity	"-"
Decimal point	adjustable
Measuring ranges	
Direct voltage (input current < 300 µA)	0 ... 1 V 0 ... 5 V 0 ... 25 V 0 ... 100 V 0 ... 300 V
Direct current (voltage drop < 600 mV)	0 ... 1 mA 0 ... 20 mA 0 ... 200 mA
Full-scale value adjustment	1 : 5
Zero suppression	< - 1000
Measurement error	< 0.1% + 1 digit
Temperature coefficient	100 ppm/°C plus 100 ppm/°C zero drift
Digital signals	
HOLD	"0"
Auxiliary energy	
Direct voltage	5 V ± 5% max. 1 W not insulated 24 V ± 15% max. 4 W
Alternating voltage	24 V + 10% - 15% max. 4 W 115 V + 10% - 15% max. 4 W 230 V + 10% - 15% max. 4 W
Environmental conditions	
Operating temperature range	0 ... 50 °C
Storage temperature range	-40 ... +80 °C
Device safety	as per IEC EN 61 010
EMI immunity	corresponds to DIN EN 61 000-4-1 to 4
EMI emissions	corresponds to DIN EN 50 081 class B
Housing	
Protection class	IP 20 as per IEC EN 60 529 front side IP 54 (IP 65 on request)
Protection class	II as per IEC 348 / VDE 0411
Connection type	indirect screw-type terminal plugs

**Order information DIGEM 48 x 96 - 20005**

Features		Item no.
Base unit		
	3½-digit, measuring range and display adjustable	
LED digit height 14 mm		
	230 V AC	55009 00000
	115 V AC	55009 00010
Auxiliary voltage:	24 V AC	55009 00020
	24 V DC	55009 00030
	5 V DC	55009 00040
LED digit height 20 mm		
	230 V AC	5500910000
	115 V AC	5500910010
Auxiliary voltage:	24 V AC	5500910020
	24 V DC	5500910030
	5 V DC	5500910040
Display		
	red	A0
	green	A001
Measuring ranges		
Preset standard:	current measurement DC 0 ... 1 mA; 0 ... 20 mA; 0 ... 200 mA	D950
	voltage measurement DC 0 ... 0,2 V; 0 ... 1 V; 0 ... 5 V; 0 ... 25 V; 0 ... 100 V; 0 ... 300 V adjustable with DIP switch	
	according to specification	
Display range		
	Preset standard	E0
	according to specification	E999
Decimal point		
	standard without	ED001
	xxx.x only for E999	ED002
	xx.xx only for E999	ED003
	x.xxx only for E999	ED004
Designation of the measured parameter		
	without measurement imprint	EM001
	as specified	EM090
Front panel		
	GMW design	PD0
	without company logo neutral	PD100
	according to specification (the stereotype plate costs are charged separately)	PD999
Protection class		
	standard front side IP54	PP001
	front side IP65	PP002
Option		
	without	0000
	brightness adjustment	0001
	hold - input	0002
Operating manual		
	German, English	W0 / W001

DPM 48 x 96 - 40.000 MF

Digital display



The DPM 48 x 96 - 40.000 MF is a very convenient display unit with a DIN housing. Numerous hard-wired additional functions turn the DPM 48 x 96 - 40.000 MF into a universal device for automation and measuring tasks requiring the highest demands.

Optionally, the device is also designed for use in areas where measured values must be monitored, evaluated and, if necessary, forwarded via an analogue output or a serial interface. This includes 4 limit values that can be freely distributed across the measuring ranges and assigned to the output variables as desired.

The unit is operated and parameterised with 2 or 4 keys or via the interface using PC software.

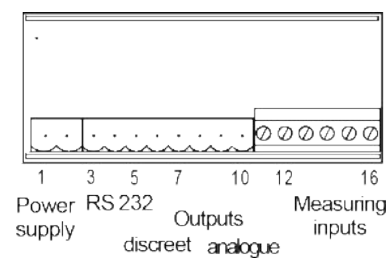
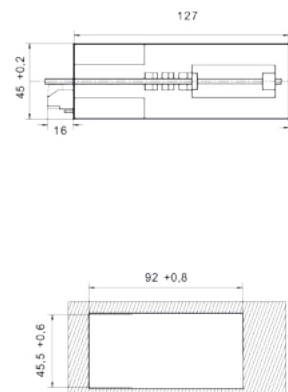
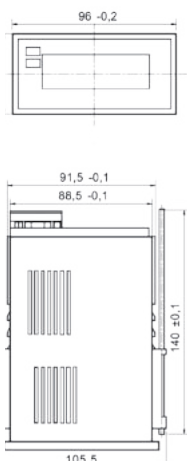
Depending on the hardware configuration, it can be used for the following measuring tasks:

- Direct voltage
- Direct current
- Alternating voltage (TRMS)
- Alternating current (TRMS)
- Temperature

Features

- Freely scalable measuring ranges
- Up to 2 open collector outputs
- analogue output
- RS232 interface
- Multifunctional panel meter

Dimensions & pin assignment



Technical parameters

Display

Type	7-segment LED
Display colour	red
Digit height	14 mm
Display range	-19 999 ... 99 999
Polarity	"-" is displayed automatically
Decimal point	programmable
Out-of-range indicator	programmable, flashing

Measuring ranges

Direct voltage	± 200 mV to ± 400 mV
Direct current	± 20 mA to ± 40 mA
Alternating voltage	0 ... 650 V
Alternating current	0 ... 200 mA
TRMS measurement	Crest factor 4 (max. peak value + 50% of measured value) Frequency impact: 40 ... 400 Hz - 0.1% to max. -5%
Temperature	Pt100 -200 ... +850 °C -260 ... +1820 °C Breaking cut-out available
Connection type	2L, 3L, 4L
Thermocouples	Type B, E, J, K, L, N, R, S, T, U

Interfaces

Limit value	2 open collectors analogue output: max. resolution 2000 steps RS232
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Supply voltages

	230 V / 115 V AC 50 / 60 Hz 18 ... 36 V DC / 24 V DC 18 ... 36 V DC and 230 V / 115 V AC wide range power supply
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Environmental conditions

Operating temperature range	0 ... 50 °C
Storage temperature range	-40 ... +80 °C
Relative humidity	max. 85%
Degree of pollution	2
Overvoltage category	II

Housing

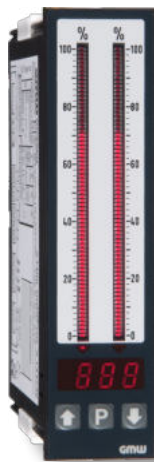
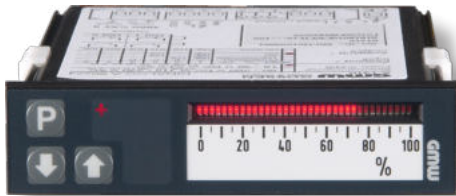
Protection class	front panel IP 54 rear panel IP 20
Front bezel colour	black
Attachment	screw clips
Connection type	indirect screw-type terminal plugs direct screw terminals (measuring input)

**Order information DPM 48 x 96 - 40.000 MF**

Features	Item no.
Base unit	
5-digit, - 19 999 to 99 999 digits with wide range power supply 230 V / 115 V AC 50/60 Hz and 18 ... 36 V DC	
Display	
red	A0
green	A001
MF version	
MF	51500 00200
Measuring range:	
direct current ± 20 mA to ± 200 mA	
direct voltage ± 200 mV to ± 650 V	
alternating current 0 ... 200 mA	
alternating voltage 0 ... 650 V	
temperature: Pt100 -200 ... +850 °C (2, 3 and 4-wire)	
thermocouple: types K, J, T, E, U, L, N, R, S, B	
-260 ... +1820 °C (with breaking cut-out)	
Outputs:	
analogue output	
2x open collector (2x limit value)	
RS232 interface	
Measuring ranges	
freely programmable	D950
according to specification	D960
Designation of the measured parameter	
without measurement imprint	EM001
as specified	EM090
Special version	
configuration according to specification	S000
Front panel	
GMW design	P0
without company logo neutral	P100
according to specification (the stereotype plate costs are charged separately)	P900
Labelling, rear side	
without labelling	T0
as per specification, top	T010
as per specification, bottom	T011
Operating manual	
German	W0
English	W001
French	W002
Manufacturer certificates	
certificate general, without proof of calibration	WZ001
certificate general, with proof of calibration	WZ002
test certificate device-specific, without measuring points	WZ003
test certificate device-specific, with measuring points	WZ004

DIALOG A 96 x 24 - A1410

Bar graph indicator



This measuring instrument is suitable for all applications in which several measurement values are monitored simultaneously.

Thanks to its good readability even in poor lighting conditions, you can get a good overview of important measured values at a glance.

Every unit can be optimally configured for the measuring task at hand by using different measuring modules.

The high-contrast LED display makes these meters a good alternative to conventional analogue indicators or bar graph indicators with liquid crystal displays.

The LED bar graph indicator with 35 segments shows the measured value with a resolution of 3% on a scale with a length of 45 mm.

With the additional polarity display, you can also use the full display range for bipolar measurement.

Straightforward programming with the three buttons allows you to adjust the display range even on-site.

The meter is always a single display with a bar graph indicator and an additional digital display.

Versions with two limit values are available for DC current and DC voltage measuring ranges.

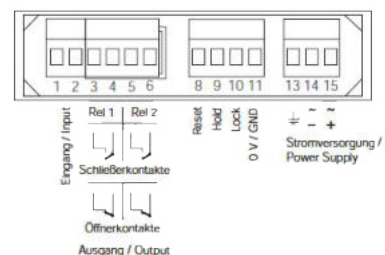
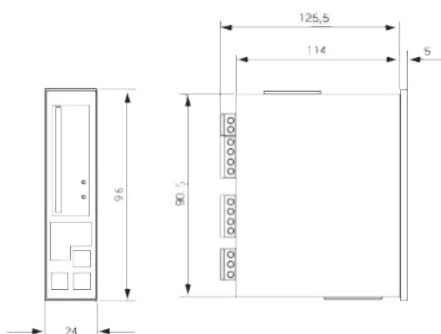
The limit values are simultaneously displayed on the bar graph indicator for the measured value.

Limit value violations are signalled on the rear side by relay contacts and on the scale by LEDs.

Features

- Precise values with additional digital display
- Good readability even from unfavourable viewing angles
- Power supply galvanically isolated from measurement circuit
- Front side with IP65 protection
- Quick mounting thanks to slider attachment for all panel thicknesses
- Pre-wiring is possible thanks to removable screw terminals

Dimensions & pin assignment



Technical parameters

Display

Type	LED
Display colour	red or green
Analogue	35 segments
Digital	3-digit 7-segment display with polarity indicator
Digit height	approx. 8 mm

Scale

Dimensions	96 x 24 mm, portrait or landscape (landscape orientation always without digital display)
Scale length	45 mm
Scale colour	white or black

Measuring ranges

Direct voltage	0 ... 1 V to 0 ... 300 V and ±2 V to ±300 V
Direct current	0 ... 4 ... 20 mA 0 ... 0.2 mA to 0 ... 200 mA and ±0.2 mA to ±200 mA
Alternating voltage	0 ... 0.2 V to 0 ... 300 V and 700 V
Alternating current	0 ... 2 mA to 0 ... 200 mA and 0 ... 1 A 0 ... 5 A
Temperature	via Pt100 or via thermocouples type J, K, R and S
Resistance	0 ... 200 Ω to 0 ... 20 kΩ
Supply voltages	230 V / 115 V AC / 90 ... 260 V DC or 24 V AC / 18 ... 36 V DC

Outputs for limit value signallers

2 relays	one changeover contact each
additional 2 relays	one NO contact each
Switching capacity	5 A / 250 V AC 5 A / 30 V DC
Switching time	max. 200 ms


Order information DIALOG A 96 x 24 - A1410

Features	Item no.
Bar graph indicator	1410
Orientation	
landscape	A1
portrait	A2
Display type	
only bar graph indicator	B0
bar graph indicator and digital display (only with portrait orientation)	B1
Limit values (MESSCONTACTER functions)	
without limit values	C0
2 limit values	C1
Limit value functions	
With min. contact, the alarm is triggered when the value falls below the limit value, with max. contact, the alarm is triggered when the limit value is exceeded.	
min. - max. contacts	CB1
min. - min. contacts	CB2
max. - max. contacts	CB3
max. - min. contacts	CB4
Direct current	
0 ... 20 mA	D001
4 ... 20 mA	D002
4 ... 20 mA with output 24 V / 20 mA	D003
0 ... x mA (x= min. 0.2 mA; max. 300 mA)	D900
± x mA (x = min. 0.2 mA; max. 200 mA)	D901
Direct voltage	
0 ... 10 V	D010
0 ... 200 V	D013
0 ... x V (x= min. 2 V; max. 300 V)	D910
± x V (x = min. 2 V; max. 300 V)	D911
0 ... 60 mV	D015
0 ... 150 mV	D016
0 ... 200 mV	D017
0 ... 300 mV	D018
Alternating current sinusoidal (not for Messcontacter)	
0 ... 1 A	D027
0 ... 5 A	D028
0 ... x mA (x= min. 2mA; max. 200 mA)	D920
Alternating voltage sinusoidal	
0 ... 200 V	D020
0 ... 700 V	D021
0 ... x V (x= min. 0.2 V; max. 300 V)	D921
Alternating current True RMS (not for Messcontacter)	
0 ... 1 A	D022
0 ... 5 A	D023
0 ... x mA (x = min. 2 mA, max. 200 mA)	D925

Order information DIALOG A 96 x 24 - A1410

Features	Item no.	
Input variable		
Alternating voltage True RMS (not for Messcontacter)		
0 ... 200 V	D025	
0 ... 700 V	D026	
0 ... x V (x= min. 0.2 V; max. 300 V)	D926	
Temperature Pt 100 (not for Messcontacter)		
-200 ... 800 °C, 3-wire connection ¹	D060	
-200 ... 800 °C, 2 / 4-wire connection ¹	D061	
-99.9 ... 99.9 °C, 3-wire connection ¹	D062	
-99.9 ... 99.9 °C, 2- / 4-wire connection ¹	D063	
Temperature thermocouples (not for measuring contacts)		
Type J	-200 ... 999 °C ¹	D070
Type K	-200 ... 999 °C ¹	D071
Type R	0 ... 999 °C ¹	D072
Type S	0 ... 999 °C ¹	D073
Resistance (not for Messcontacter)		
0 ... 20 kΩ, 2/3/4-line terminal	D081 / D082 / D083	
0 ... 2 kΩ, 2/3/4-line terminal	D084 / D085 / D086	
0 ... 200 Ω, 2/3/4-line terminal	D087 / D088 / D089	
Display range of the digital display		
as measuring range with max. resolution	E00	
as specified (x = 50, max. 999)	E90	
Decimal point of the digital display		
as measuring range with max. resolution	ED0	
no decimal point	ED1	
according to specification	ED90	
Scale		
like measuring range	F00	
according to specification	F90	
Start of bar graph indicator		
Bar graph indicator starts at 0	FA0	
bar graph indicators start at end of scale	FA2	
Measured variable for the bar graph indicator		
like measuring range	FM0	
Measured variable as specified (max. 3 digits)	FM9	
Auxiliary voltage		
230 V / 115 V AC or 90 ... 260 V DC	H1	
24 V AC or 18 ... 36 V DC	H2	
Additional lettering on the scale		
without additional lettering	S0	
with additional lettering	S9	
Device identification on the rear		
without labelling	T0	
with identification as specified	T9	

1) Pt 100 or thermocouple in drive unit possible on request

LS40 - 96 x 24

Bar graph indicator



Analogue light display with 40 segments, vertical or horizontal mounting.
 Linear light display to show a trend for the measured values.
 Option for zero offset and zero to centre.

They can be used for the following measuring tasks:

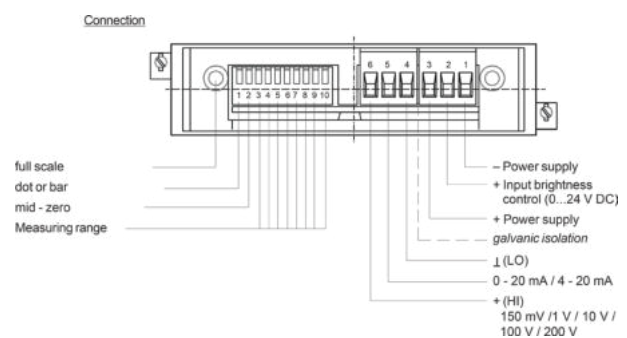
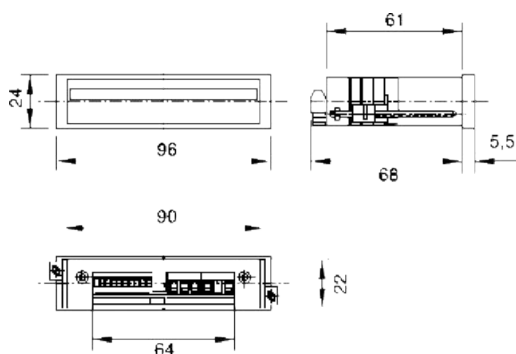
- DC measurement
- Voltage measurements

Linear light display to show a trend for the measured values.

Features

- Electronic panel meter with light-emitting diode array
- 41 individual LEDs
- Measuring range adjustable with DIP switch
- Range adjustment $\pm 25\%$ for all measuring ranges
- LED colours freely selectable
- Dot or bar graph indicator selectable
- Brightness setting via adjustable voltage
- Overflow indication by flashing LEDs
- Horizontal or vertical installation possible
- Independent of position and insensitive to vibrations

Dimensions & pin assignment



Technical parameters

Display

Type	LED
Display colour	red (other colours available on request)
Out-of-range indicator	flashing
Reversal	2.5%

Scale

Dimensions	96 x 24 mm, vertical or horizontal
Scale length	80 mm
Scale colour	black / white

Measuring ranges

Direct voltage	0 ... 150 mV to 0 ... 200 V DC Input resistance 50 k Ω / V
Direct current	0 ... 20 mA 4 ... 20 mA DC Voltage drop across shunt: 200 mV
Operating temperature	0 to 50 °C
Storage temperature	-20 °C to +70 °C
Current consumption	max. 250 mA with bar graph indicator max. 50 mA with dot display
Supply voltages	5 V DC not galvanically isolated 24 V DC
Housing	closed, thermoplastic black
Scale bezel	black plastic

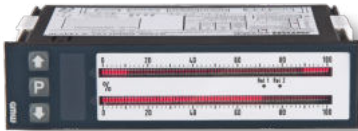


Order information for bar graph indicator LS40 - 96 x 24

Features	Item no.
Bar graph indicator	N54118
Orientation	
Landscape orientation, scale black	B3
Landscape orientation, scale white	B4
Portrait orientation, scale black	B5
Portrait orientation, scale white	B6
Display type	
red	L0
green	L1
yellow	L2
Brightness control (PBM) external	L3
Backlighting	L4
Measuring range	
according to specification	D01
0 ... 20 mA	D10
4 ... 20 mA	D11
Scale	
0 ... x (max. 3 digits)	F90
+/- x (max. 3 digits)	F91
Measured variable for the bar graph indicator	
like measuring range	FM0
as specified (max. 4 digits)	FM9

DIALOG A 144 x 36 - A1400

Bar graph indicator



This measuring instrument is suitable for all applications where several measurement values must be monitored simultaneously.

The high-contrast LED displays ensure good readability even in dark rooms. The displays have been designed so that they can be easily read even from an unfavourable viewing angle.

This means that these units can also be used where conventional analogue indicators or bar graph indicators with liquid crystal displays cannot be used due to poor lighting conditions.

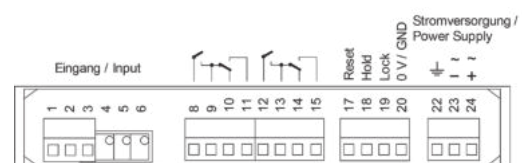
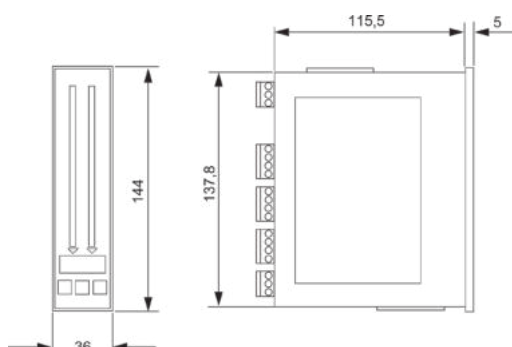
Every unit can be equipped with different measuring modules for the following measuring tasks:

- Direct current measurement up to ± 200 mA
- Direct current measurement 4 ... 20 mA
- Direct current measurement 4 ... 20 mA with power supply for 2-wire measuring transducer
- DC voltage measurement up to ± 300 V
- AC current measurement also for direct connection to current transformer ... / 1 A or ... / 5 A
- AC voltage measurement up to 700 V
- Temperature measurement with Pt100 or with thermocouple types J, K, R, S
- Resistance measurement up to 20 k Ω

Features

- Bar graph indicator consists of 71 high-contrast LEDs
- The luminous colour of the LED display is red
- Display range of the digital display in portrait orientation -999 ... 999
- Portrait or landscape orientation
- Measuring range and limit value digitally adjustable
- Simple programming
- Lockable programming
- Power supply galvanically isolated from measurement circuit
- Housing suitable for grid installation
- Quick mounting thanks to mounting slider

Dimensions & pin assignment



Technical parameters

Display	
Type	LED
Display colour	red or green
Analogue	71 segments
Digital	3-digit 7-segment display with polarity indicator
Digit height	approx. 8 mm
Scale	
Dimensions	144 x 36 mm, portrait or landscape (landscape orientation always without digital display)
Scale length	91 mm
Scale colour	white or black
Measuring ranges	
Direct voltage	0 ... 0.1 V to 0 ... 300 V and ± 2 V to ± 300 V
Direct current	0 ... 4 ... 20 mA 0 ... 0.2 mA to 0 ... 200 mA and ± 0.2 mA to ± 200 mA
Alternating voltage	0 ... 0.2 V to 0 ... 300 V and 700 V
Alternating current	0 ... 2 mA to 0 ... 200 mA and 0 ... 1 A 0 ... 5 A
Temperature	via Pt100 or via thermocouples type J, K, R and S
Resistance	0 ... 200 Ω to 0 ... 20 k Ω
Supply voltages	230 V / 115 V AC / 90 ... 260 V DC or 24 V AC / 18 ... 36 V DC
Outputs for limit value signallers	
2 relays	one changeover contact each
additional 2 relays	one NO contact each
Switching capacity	5 A / 250 V AC 5 A / 30 V DC
Switching time	max. 200 ms



Order information for DIALOG A 144 x 36 - A1400

Features	Item no.
bar graph indicator	A1400
Version	
single display / single Messcontacter	A1
double display	A2
single display with slave pointer	A3
double display with bar graph indicator	A4
Orientation	
landscape	B1
portrait	B2
Display type	
only bar graph indicator	BA0
bar graph indicator and digital display (only with portrait orientation)	BA1
Limit values (MESSCONTACTER functions)	
without limit values	C0
2 limit values (only for single Messcontacter)	C1
4 limit values (only for single Messcontacter)	C2
relay switching behaviour (only for limit indicators)	
pen-circuit current (relay switches on when an alarm is signalled)	CA1
quiescent current (relay switches off on alarm)	CA2
Function of limit values 1 and 2	
With min. contact, the alarm is triggered when the value falls below the limit value, with max. contact, the alarm signal is given when the limit value is exceeded	
min. - max. - contacts	CB1
min. - min. - contacts	CB2
max. - max. contacts	CB3
max. - min. - contacts	CB4
Function of limit values 3 and 4 (only for units with 4 limit values)	
min. - max. - contacts	CC1
min. - min. - contacts	CC2
max. - max. contacts	CC3
max. - min. - contacts	CC4
Measuring range / input variables (not for dual display)	
Direct current	
0 ... 20 mA	D001
4 ... 20 mA	D002
4 ... 20 mA with output 24 V / 20 mA for measuring transducer	D003
0 ... x mA (x= min. 0.2 mA; max. 300 mA)	D900
± x mA (x = min. 0.2 mA; max. 200 mA)	D901
Direct voltage	
0 ... 10 V	D010
0 ... 200 V	D013
0 ... x V (x= min. 2 V; max. 300 V)	D910
± x V (x = min. 2 V; max. 300 V)	D911
0 ... 60 mV	D015
0 ... 150 mV	D016
0 ... 200 mV	D017
0 ... 300 mV	D018

Order information for DIALOG A 144 x 36 - A1400

Features	Item no.
Alternating current, sinusoidal	
0 ... 1 A	D027
0 ... 5 A	D028
0 ... x mA (x= min. 2 mA; max. 200 mA)	D920
Alternating voltage, sinusoidal	
0 ... 200 V	D020
0 ... 700 V	D021
0 ... x V (x= min. 0.2 V; max. 300 V)	D921
Alternating current True RMS	
0 ... 1 A	D022
0 ... 5 A	D023
0 ... x mA (x= min. 2 mA; max. 200 mA)	D925
AC voltage True RMS	
0 ... 200 V	D025
0 ... 700 V	D026
0 ... x V (x= min. 0.2 V; max. 300 V)	D926
Temperature Pt100	
-200 ... 800 °C, 3-wire connection	D060
-200 ... 800 °C, 2 / 4-wire connection	D061
-99.9 ... 99.9 °C, 3-wire connection	D062
-99.9 ... 99.9 °C, 2 / 4-wire connection	D063
-328 ... 999 °F, 3-wire connection	D064
-328 ... 999 °F, 2 / 4-wire connection	D065
Temperature thermocouples	
type J -200 ... 999 °C	D070
type K -200 ... 999 °C	D071
Type R 0 ... 999 °C	D072
Type S 0 ... 999 °C	D073
type J -328 ... 999 °F	D074
type K -328 ... 999 °F	D075
Type R 0 ... 999 °F	D076
Type S 0 ... 999 °F	D077
Resistance	
0 ... 20 kΩ, 2-line terminal	D081
0 ... 20 kΩ, 3-line terminal	D082
0 ... 20 kΩ, 4-line terminal	D083
0 ... 2 kΩ, 2-line terminal	D084
0 ... 2 kΩ, 3-line terminal	D085
0 ... 2 kΩ, 4-line terminal	D086
0 ... 200 Ω, 2-line terminal	D087
0 ... 200 Ω, 3-line terminal	D088
0 ... 200 Ω, 4-line terminal	D089

**Order information for DINALOG A 144 x 36 - A1400**

Features	Item no.
Measuring range / input variables (for dual display)	
Direct current	
both measuring inputs 0 ... 20 mA	DD006
both measuring inputs 4 ... 20 mA	DD007
both measuring inputs 0 ... x mA (x = min. 0.2 mA; max. 200 mA)	DD900
both measuring inputs $\pm x$ mA (x = min. 0.2 mA; max. 200 mA)	DD901
Input 1: 0 ... x mA, Input 2: 0 ... y mA (x,y = min. 0.2 mA; max. 200 mA)	DD902
Direct voltage	
both inputs 0 ... 10 V	DD016
both inputs 0 ... x V (x = min. 2 V; max. 300 V)	DD912
both inputs $\pm x$ V (x = min. 2 V; max. 300 V)	DD913
Input 1: 0 ... x V, Input 2: 0 ... y V (x,y = min. 2 V; max. 300 V)	DD914
Display range of the digital display (not for dual displays)	
as measuring range with max. resolution (standard)	E00
$\pm x$ (x = min. 50; max. 999)	E91
0 ... x (x = min. 100; max. 999)	E92
x ... y (y - x = min. 100; y = max. 999)	E93
- x ... y (y - x = min. 100; x = min. -999)	E94
Display range of the digital display for dual displays	
as measuring range with max. resolution (standard)	E00
Input 1: 0 ... x, Input 2: 0 ... y (x,y = min. 100; max. 999)	E95
Input 1: $\pm x$, Input 2: $\pm y$ (x,y = min. 50; max. 999)	E96
Decimal point of the digital display for input 1	
as measuring range with max. resolution	ED0
no decimal point	ED1
Decimal point xx.x	ED2
Decimal point x.xx	ED3
Decimal point .xxx	ED4
Decimal point of the digital display for input 2 (double display)	
as measuring range with max. resolution	EE0
no decimal point	EE1
Decimal point xx.x	EE2
Decimal point x.xx	EE3
Decimal point .xxx	EE4

Order information for DIALOG A 144 x 36 - A1400

Features	Item no.
Scale	
like measuring range	F00
0 ... 100	F01
± 100	F02
0 ... x	F90
± x	F91
x ... y	F92
-x ... y	F93
0 ... x; 0 ... y (only dual display)	F94
± x; ± y (only dual display)	F95
± x; 0 ... y (only dual display)	F96
x1 ... y1; x2 ... y2 (only dual display)	F97
Start of bar graph indicator	
bar graph indicators start at 0 (standard)	FA0
bar graph indicators start at beginning of scale	FA1
bar graph indicators start at end of scale	FA2
bar graph indicators run counter to each other (only for dual displays with a bar graph indicator)	FA3
Measured variable for the bar graph indicator	
same as measuring range (standard)	FM0
no measured variable	FM1
Measured variable &	FM2
Measured variable as specified (max. 3 digits)	FM9
Measured variable for the second bar graph indicator (only for double display)	
same as measuring range (standard)	FN0
Measured variable &	FN1
Measured variable as specified (max. 3 digits)	FN9
Auxiliary voltage	
230 V / 115 V AC or 90 ... 260 V DC	H1
24 V AC or 18 ... 36 V DC	H2
Additional lettering on the scale	
without additional lettering (standard)	S0
with additional lettering	S9
Additional lettering variable for the second bar graph indicator (only for double display)	
without additional lettering (standard)	SA0
with additional lettering	SA9
Device identification on the rear	
without identification (standard)	T0
with identification as specified	T9