

DIGEM f 48 x 24 AK

3-349-005-03
1/7.98

- Display range: ± 1999 digits
optionally: ± 19990 digits
- Standard fastener for all rack types
- Suitable for mounting to all common rack systems
- Easy installation
- Power supply electrically isolated from measuring circuit,
test voltage: 500 V
- Bright LED display with 8 mm characters



Applications

The DIGEM f 48 x 24 AK has been designed for use in racks and mosaic panels.

Thanks to its minimal installation depth, it can also be installed to control panels.

Description

The DIGEM f 48 x 24 AK digital rack mount measuring instrument is a 3 1/2 place display meter whose housing has been especially developed for rack applications.

The fastener included with the instrument allows for installation to all known 24 mm systems.

The display range encompasses ± 1999 digits, and can be optionally expanded to ± 19990 digits with an additional character which is permanently set to "zero".

The display range can be adjusted with a potentiometer at the instrument's rear panel.

Decimal points are permanently set in accordance with the entries on the serial plate by means of solder bridges at the display inside the instrument.

Supply voltage ranges from 18 to 36 V DC and is electrically isolated from the measuring circuit.

Clearances and creepage distances are laid out for test voltages of up to 500 V.

DIGEM f 48 x 24 AK

Characteristic Values

Display

Type	7 segment LED
Display Color	red / option: green
Character Height	approx. 8 mm
Display Range	- 1999 ... 1999 option: \pm 19990
Polarity	"-" is automatically displayed
Decimal Point	permanently set, see features E94 through E96
Overflow Display	"1 ...", if display > 1999

Input

DC Ranges Depending upon Model	see entries on serial plate
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Error Limits

	\pm (0.05 % + 2 digits) [optionally \pm 19990 \pm (0.05 % + 20 digits)]
Temperature Drift	< 100 ppm / °C
Offset Drift	< 0.2 digits / °C
Warm-Up Time	approx. 1 minute

Control Commands

as option by means of push-on jumpers inside instrument, can be preset for: display value storage, segment test or blanking	externally controlled
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Power Supply

Power Consumption	18 ... 36 V DC / 24 V AC \pm 10% max. 1.6 W
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A-D Conversion

Conversion Method	dual slope
Integration Time	approx. 100 ms
Measurements per Second	typically 3, response time for the entire instrument is longer due to the filter at the measure- ment input: approx. 1 second

Ambient Conditions

Operating Temperature Range	0 ... + 50 °C
Storage Temperature Range	- 20 ... + 70 °C
Relative Humidity	max. 85%

Housing

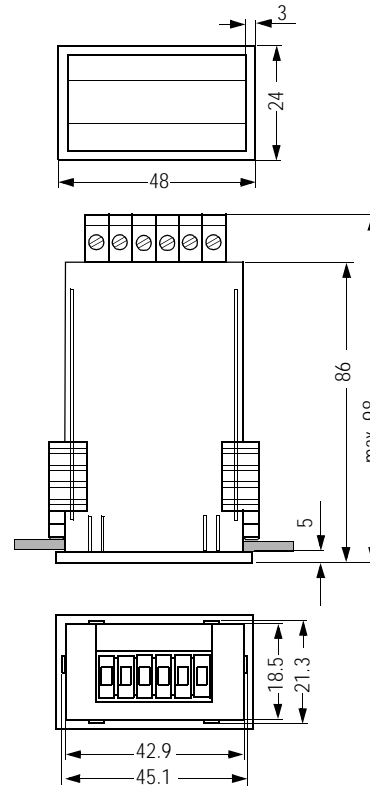
Material	polycarbonate
Front Dimensions	48 x 24 mm
Bezel Color	black, matt options: gray, pebble gray or light gray
Bezel Height	5 mm
Installation Depth	max. 81 mm (without plug)
Weight	approx. 0.2 kg
Terminal Connectors	screw terminal blocks

Compliance with Regulations

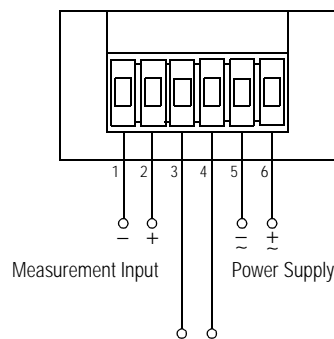
All Models	per IEC 1010-1.1 / 91
Protection Class	III
Protection Front Panel	IP 40 per DIN 60529
Terminals	IP 00 per DIN 60529
EMC Interference Immunity	IEC 801-4
Interference Suppression	EN 55022

Dimensional Drawing

Panel Cutout: $45 +^{0.6} \times 22.2 +^{0.3}$



Connector Pin Assignments



Option: = control inputs for display value storage,
segment test or blanking

Observe specifications at serial plate!

Order Information

Features		ID Number	
DIGEM f 48 x 24 AK	Measuring Instrument	A1122	
	Measuring Instrument for Measuring Transducer		A1123
LED Display	red (standard)	•	•
	green	A1	A1
Input Quantities			
	± 200 µA	D01	–
	± 2 mA	D02	–
	± 20 mA	D03	–
	± 200 mA	D04	–
	4 ... 20 mA	–	D05
	0 ... 20 mA	D06	D06
	0 ... xxx mA (min. 200 µA max. 200 mA)	D90	–
	... ± 200 mV	D10	–
	... ± 2 V	D11	–
	... ± 20 V	D12	–
	0 ... 10 V	D13	–
	0 ... 10 V	–	D14
	2 ... 10 V	D15	D15
	0 ... xx V (min. 60 mV; max. 50 V)	D91	–
Shunt Resistor, DC	± 60 mV	D17	–
	± 150 mV	D18	–
	± 300 mV	D19	–
Display Range			
Same as input quantity at max. resolution		•	–
Preset to 0 ... approx. 1000		–	•
± xxxx, as requested		E91	–
0 ... xxxx, as requested		E92	E92
xxx ... xxx, as requested		–	E93
± xxx0, as requested		E94	–
0 ... xxx0, as requested		E95	E95
xx0 ... xxx0, as requested		–	E96
Decimal Points			
Same as input quantity at max. resolution		•	•
no decimal point		F1	F1
xxx . X and xxx.X0		F2	F2
xx . XX and xx.XX0		F3	F3
x . XXX and x.XXX0		F4	F4
xxxx. and xxxx.0		F5	F5
Measured Quantity Designation			
Same as input quantity		•	•
no measured quantity		EM1	EM1
select measured quantity from table EM (page 3)		EM . .	EM . .
as requested		EM90	EM90
Control Inputs			
Display value storage		•	•
blinking		K1	K1
segment test		K2	K2

Features		ID Number	
Bezel			
black, matt (standard)		•	•
gray, matt RAL 7037		P6	P6
pebble gray, RAL 7032		P2	P2
light gray, RAL 7035		P3	P3
Front Panel			
GOSSEN-METRAWATT design (white with black lettering)		•	•
black with white lettering		L200	L200
as requested		L..	L..
Rear Panel Identification			
No identification		•	•
with identification (enter in clear text)		T9	T9
Additional Labelling			
No additional labelling		•	•
with additional labelling		U9	U9
Operating Instructions			
German / English / French (standard)		•	•

Measured Quantity Designations: Table EM

Measured Quantity	Order No.
%	EM 11
mV	EM 12
V	EM 13
kV	EM 14
mA	EM 15
A	EM 16
Hz	EM 17
µA	EM 19
°C	EM 18
W	EM 21
kW	EM 22
MW	EM 23
var	EM 24
ms	EM 31
min ⁻¹	EM 32

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