

# Digital Indicator DS 96/24



This indicator is suitable for measuring direct voltage or direct current. By using potentiometers, the digital display can be assigned to any input signal. The main application is therefore the display of process variables produced as transmitter signal.

**Technical data**

**Description**

The indicator can be built into any conventional grid system. After removing the front mask, the entire range of the numerical final value and the initial numerical value within the  $\pm 25\%$  range can be changed from the front.

The initial signal 0...20 mA to 4...20 mA and vice versa can also be changed over from the front by using a solder jumper.

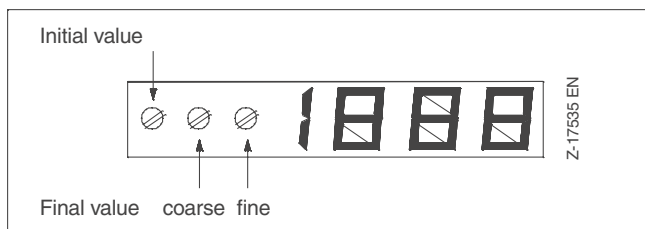
**Readout**

- Display  
LED, 10 mm high, colour red
- Maximum reading  
 $\pm 1999$  digits
- Minimum reading  
200 digit
- Deviation (23 °C)  
0.05 % of measured value  $\pm 1$  digit
- Temperature coefficient  
0.01 % / of final value / °C
- Overflow indication „-1“
- Segment test
- Retrace display blanking
- Display storage

**Input**

- Measuring method  
Dual slope, measuring sequence 2.5 /s
- Limits of measuring range  
Direct voltage  $\pm 2$  V min.;  $\pm 40$  V max.  
Direct current  $\pm 1$  mA min.;  $\pm 50$  mA max.
- Input resistance  
 $> 1$  M $\Omega$  at 2 V; 100  $\Omega$  at 20 mA
- Overload rating  
100 V at  $> 2$  V; 5 V at  $\leq 2$  V
- Suppression of parasitic voltage  
SMR  $> 40$  dB (50 Hz)  
CMR  $> 100$  dB (0...50 Hz)

**Modification of the display range using potentiometer**



<b>Adjustment limits</b>	Initial value:	$\pm 25\%$
	End value:	$\pm 1999$ digits
<b>Example:</b>	<b>Readout</b>	<b>Setting range</b>
Start	400 °C	300...500 °C
End	1200 °C	$\pm 1999$ °C

**Power supply**

- Direct voltage  
24 V (18...32 V) with electrical isolation  
Ripple 1 V max. (peak-to-peak)
- Alternating voltage  
24 V  $\pm 10\%$   
Frequency range 48...62 Hz
- Power consumption  
Approx. 2.8 W at 24 V DC  
Approx. 2.8 W at 24 V AC

**General and safety data**

- Test voltage  
As per DIN VDE 0411/IEC 384
- Insulation group  
C, acc. to DIN VDE 0110

**Environmental capabilities**

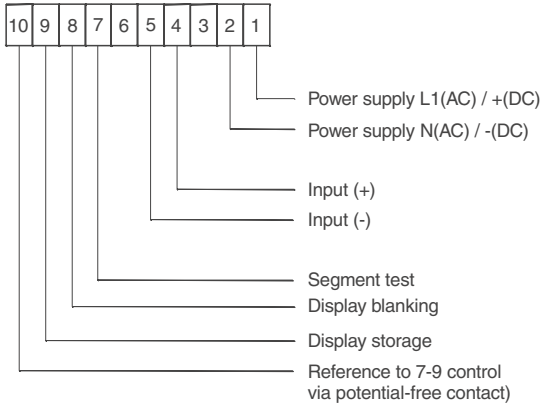
- Category  
KWF acc. to DIN 40040
- Operating temperature  
0...50 °C
- Transportation and storage temperature  
-40...+75 °C
- Relative humidity  
 $\leq 75\%$  on annual average, no condensation

**Case and mounting**

- Dimensions  
See dimensional drawing
- Mounting  
Panel or grid  
(H&B unibloc, Kreutzenbeck, Mauell, Subklev, Siemens)
- Close-packed assembly is not permitted without external ventilation**
- Material  
Plastic
- Colour of bezel  
black
- Type of protection  
Case IP 50; terminals IP 20
- Weight  
Approx. 0.25 kg

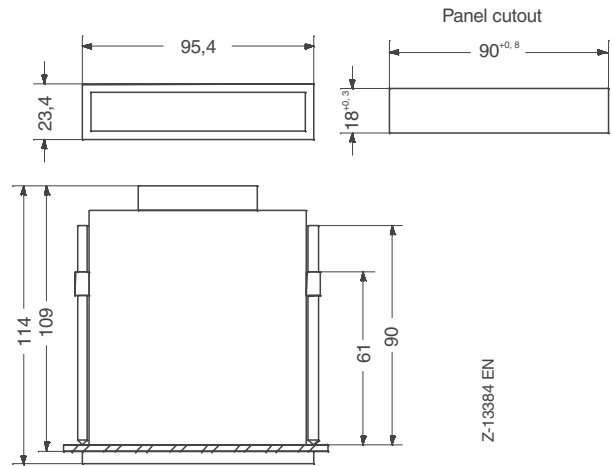
**Connection diagram, dimensional drawing**

**Connection diagram**



Z-13408 EN

**Dimensional drawing (dimensions in mm)**



Z-13384 EN

Ordering information																		
										Catalog No.		Code						
<b>Digital indicator DS 96/24</b>										V33142A-	1					0	0	
<b>Measuring input</b>																		
0...20 mA resolderable to 4...20 mA										1								
4...20 mA resolderable to 0...20 mA										2								
0...2 V										3								
0...20 V										4								
other (Code No. 326)										0								
<b>specify readout range using Code No. 361</b>																		
<b>Decimal point position</b>																		
.000										1								
0.00										2								
00.0										3								
without										4								
externally adjustable										9								
<b>Power supply</b>																		
24 V DC										1								
24 V AC										3								
<b>Display control</b>																		
without										0								
Display storage										1								
Retrace blanking display										2								
additional permanent zero behind										3								
<b>Specialities</b>																		
<b>other measuring range</b> (consider alarm data)										(clear text)		326						
<b>Display range other than measuring range</b>										(clear text)		361						
<b>Dimension according to table</b>										(clear text)		368						
<b>Dimension as required</b> (max. 5 characters)										(clear text)		369						
<b>reduced measuring rate</b> (1...10 s)										(clear text)		533						
<b>special lettering</b> (max. 10 characters)										(clear text)		566						
<b>Bezel grey RAL 7037</b>												568						
<b>Rack mounting</b>																		
H&B Unibloc												571						
Mauell												572						
Kreutzenbeck												573						
Subklew												574						
Siemens												575						
<b>Operating Manual<sup>1)</sup></b>																		
German												Z1D						
English												Z1E						

<sup>1)</sup> 1 copy in German included in the basic supply; no specification required; extra Operating Manuals must be paid (please specify number)

Dimensional labelling													
	Code		Code		Code		Code		Code		Code		Code
none	400	kW	406	A	412	MN	418	m <sup>3</sup>	424	N	430	ppm	436
V	401	MW	407	mA	413	%	419	g	425	bar	431	K	437
mV	402	Ω	408	μA	414	‰	420	kg	426	m/min	432	l/h	438
kV	403	mΩ	409	°C	415	cm	421	t	427	U/min	433	t/h	439
mW	404	kΩ	410	°∠	416	mm	422	m <sup>3</sup> /h	428	δ	434	Hz	440
W	405	MΩ	411	kN	417	m	423	ph	429	mbar	435		







# Contact us

## **ABB Ltd.**

### **Process Automation**

Howard Road, St. Neots  
Cambridgeshire, PE19 8EU  
UK

Phone: +44 (0)1480 475321

Fax: +44 (0)1480 217948

## **ABB Inc.**

### **Process Automation**

125 E. County Line Road  
Warminster PA 18974  
USA

Phone: +1 215 674 6000

Fax: +1 215 674 7183

## **ABB Automation Products GmbH**

### **Process Automation**

Borsigstr. 2  
63755 Alzenau  
Germany

Phone: +49 551 905-534

Fax: +49 551 905-555

[www.abb.com](http://www.abb.com)

## Note

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB.

Copyright© 2011 ABB

All rights reserved

3KXJ300001R1001

10/33-2.11-EN.01.2011