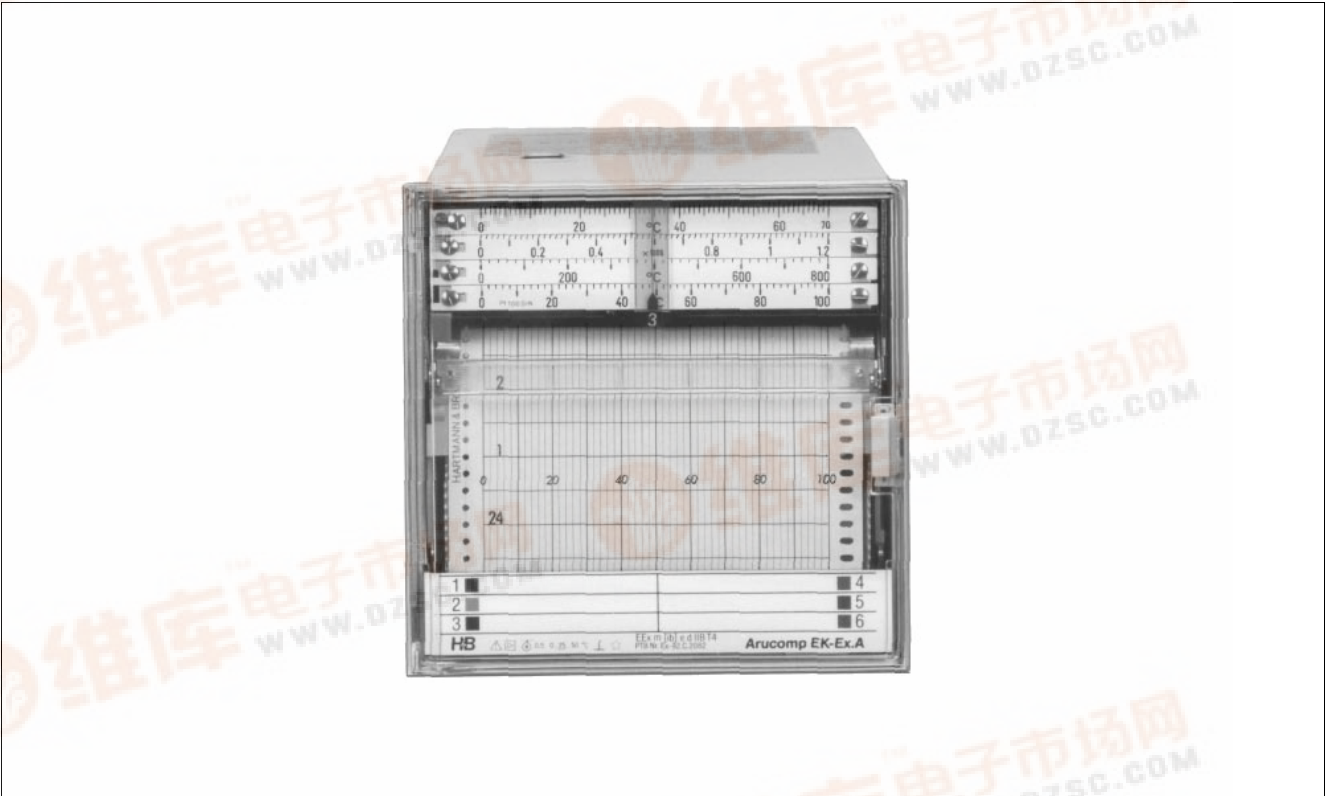


# Multipoint Recorder Arucomp EK-Ex. A



- Multipoint potentiometric recorder for 6 measuring points
- 1 to 6 measuring ranges for standard signals and direct sensor connection
- Last dot visible form front
- Roll or fanfold chart
- Format 144 mm x 144 mm
- Installed depth 305 mm
- Intrinsic safety for signal circuit protection
- Mounting within or outside the hazardous area



# Multipoint Recorder Arucomp EK-Ex. A

Data Sheet  
**40-1.10 EN**

## Technical data

Relative humidity  
≤ 75 % annual average; avoid condensation; max. relative humidity ≤ 80 % in operation; pay attention to influence of humidity on chart paper to DIN 16234

### Electrical safety tested to DIN VDE 0411 Part 1 / IEC 348

Class of protection I  
Measuring circuits; functional extra-low voltage with safe isolation to VDE 0110 Part 410

Test voltage  
1.5 kV power supply to case  
4 kV measuring circuit to power supply  
0.5 kV measuring circuits to case  
0.5 kV measuring circuits to measuring circuits  
Overvoltage category III } to DIN VDE 0110 Part 101  
Degree of contamination 3 }

### Electromagnetic compatibility

The safety requirements stated in the EMC directive 89/336/EWG, May 1989 shall be fulfilled with respect to immunity to electromagnetic interference to drafted EN 50082.2

Radio interference suppression  
Suppression class N to VDE 0875 or EN 55014

### Connection, case and mounting

Electrical connections  
Type of protection IP 20  
Tab connector A 6.3 × 0.8 or A 2.8 × 0.8 or  
MTP 2.4 × 0.8 or as accessory  
Screw terminal for 2 × 1.5 mm<sup>2</sup> wire

Power supply  
Type of protection IP 54  
Screw terminals for 1.5 mm<sup>2</sup> wire

Case  
Sheet metal for panel or mosaic panel field mounting  
Colour RAL 7032, Protection IP 54,  
Door made of polycarbonate

Operating orientation  
vertical ± 45 °

Mounting distance  
horizontal or vertical 0 mm,  
case door must be open also at 100 °

Weight  
approx. 5.5 kg

### Labelling facilities

On the measuring point designation plate in the door,  
31 characters per measuring point

### Parts supplied with the first unit

1 Operating manual  
2 Fastening elements to DIN 43834  
2 Roll or fanfold charts  
1 Ink holder (print star)

### Explosion protection

Manufacturer's code  
49/40-23 Ex  
Certificate of conformity  
PTB No. Ex-92.C.2082

Type of protection  
EEx m (ib) e d IIB T4

Mounting  
within the hazardous zone 1

Measuring circuits  
(Terminals 11, 12, 13; 21, 22, 23; 31, 32, 33; 41, 42, 43; 51, 52, 53; 61, 62, 63; 801, 901)  
in type of protection intrinsically safe EEx ib IIB or EEx ib IIC

1. Measuring circuits for current, voltage and resistance  
with range box Arucomp 4900/EK-Ex  
-Ex W21, -Ex W21KV, -Ex W22KV, -Ex W22K, -Ex W23 KV,  
-Ex W23K, -Ex W24K, -Ex W24K2, -Ex W25K, -Ex W25K2,  
-Ex W26K, -Ex W27K, -Ex W28, -Ex W28K

Max. values per measuring circuit:

U = 10 V

I<sub>k</sub> = 65 mA

P = 400 mW

The effective internal inductance is negligibly low.

The effective internal capacitance is 12 nF.

Max. permitted values of the connected intrinsically safe circuits:

	Group IIC	Group IIB
Max. external inductance L <sub>a</sub>	5 mH	20 mH
Max. external capacitance C <sub>a</sub>	4 µF	30 µF

1.2 Connection to certified **active** intrinsically safe circuits

Max values per circuit

U = 25 V

P = 600 mW

The maximum internal inductance L<sub>a</sub> and capacitance C<sub>a</sub> depending on the respective max. values of the connected intrinsically safe circuit can be taken from tables 1, 2 and 3 of the certificate of conformity.

2. Measuring circuits for current  
with range box Arucomp 4900/EK-Ex  
-Ex W28, -Ex W27K, -Ex W28K with input resistance R<sub>e</sub>  
≤ 7 Ω

Max. values per circuit

U = 0.5 V

I<sub>k</sub> = 65 mA

P = 8 mW

The effective internal inductance is negligibly low.

The effective internal capacitance is 12 nF.

Max. permitted values of the connected intrinsically safe circuits:

Max values per circuit

U = 20 V

I = 170 mA

The maximum internal inductance L<sub>a</sub> and capacitance C<sub>a</sub> depending on the respective max. values of the connected intrinsically safe circuit can be taken from tables 4 and 5 of the certificate of conformity.

The six measuring circuits are electrically isolated. The respective measuring circuit in operation and the circuit for the external reference junction are electrically coupled.

### Note:

The values mentioned above do not apply to a plug connection. Those values can be taken from the annex to the certificate of conformity.

# Multipoint Recorder Arucomp EK-Ex. A

Data Sheet  
**40-1.10 EN**

## Ordering information

Multipoint recorder Arucomp EK-Ex. A

Catalogue No.

**4 1 0 1 1** - **0** -

Basic unit<sup>1)</sup> . . . . . **05**  
Application circuit SW (one measuring range) . . . . . **06**  
Application circuit MW (one to six measuring ranges) . . . . . **07**

**0 0 1**

### Power supply

24 V 50 Hz . . . . . **1**  
115 V 50 Hz . . . . . **2**  
230 V 50 Hz . . . . . **3**  
24 V 60 Hz . . . . . **6**  
115 V 60 Hz . . . . . **7**  
230 V 60 Hz . . . . . **8**

**0 0 1**

### Recording

On roll chart . . . . . **1**  
On fanfold chart . . . . . **3**

**0 0 1**

Catalogue No.

**4 1 0 1 1** - **0** - **0 0 1**

For ordering the Catalogue No. suffices.  
If necessary suffix supplementary Nos. to the catalogue numbers.

<sup>1)</sup> Measuring basis 0...5 mV, without range box and scales

## Consumables

Catalogue No.

Ink holder 41081-4-0859569

### Chart paper

Roll chart (supplied in packs of 10)  
with hourly time imprint for 20 mm/h 40920-0-3000505  
without hour imprint, with baselines 40920-0-3000150  
Fanfold chart (supplied in packs of 20)  
with hourly time imprint for 20 mm/h 40926-0-3000502  
without hour imprint, with baselines 40926-0-3000003

Other charts paper see Data Sheet 49-9.10 EN.

# Multipoint Recorder Arucomp EK-Ex. A


Data Sheet  
**40-1.10 EN**

## Additional ordering information

At least one specification is necess. for every measuring range and group **Suppl. No.**

Specification for measuring range 1  
Specification for measuring range 2  
Specification for measuring range 3  
Specification for measuring range 4  
Specification for measuring range 5  
Specification for measuring range 6

1  
2  
3  
4  
5  
6

The following specification applies to measuring point(s) e.g. 2 and 5   <sup>1)</sup>

Measuring circuit designation depending on the measuring tasks ↓

Measuring circuit W2. or W2.K

5

Measuring circuit W2.KV (built-in reference junction correction)

6

  <sup>1)</sup>

Measuring range


Code according to Data Sheet 40-1.00 EN

1 ( ... )

As specified


2

 <sup>1)</sup>

↓  
 <sup>1)</sup>

Code for external reference junction temperature

With test resistor in dismantled form for °C Pt 100 IEC

↓  
 <sup>1)</sup>

## Scale specifications

Scale on wide scale plate

**506**

(for large digits with 1 or 2 graduations or max. 6 graduations)

1st graduation

1

2nd graduation

2

3rd graduation

3

4th graduation

4

5th graduation (only applies in connection with Suppl. No. 506)

5

6th graduation (only applies in connection with Suppl. No. 506)

6

Without graduation, scale start and end marked (for 1st graduation only)

1

Graduation 0...100 (for 1st graduation only)


2

Graduation as specified (enter only clear text)

5

Graduation according to Data Sheet 40-1.00 EN (enter code No.)

3 ( ... )

↓  
 <sup>1)</sup>

↓

With ruler for ... graduation



## Labelling of the measuring point designation plate

Inscription for measuring point 1

**580**

Inscription for measuring point 2

**582**

Inscription for measuring point 3

**584**

Inscription for measuring point 4

**586**

Inscription for measuring point 5

**588**

Inscription for measuring point 6

**590**

With dismantled dust-proof bracket for top of door

**621**

with ... packs of 10 blade sleeves

**603**

with ... packs of 10 clip-on screw terminals

**604** ( ... pcs.)

with four dismantled mounting brackets for rack mounting

**605**

Operating Manual (state how many)<sup>2)</sup>

German (no specification required for 1 copy)

**Z2D** ( ... cps.)

English (always state Suppl. No.)

**Z2E** ( ... cps.)

French (always state Suppl. No.)

**Z2F** ( ... cps.)

At this symbol add clear text to the Suppl. No.

( ... ) At this symbol add a code No. to this Suppl. No.

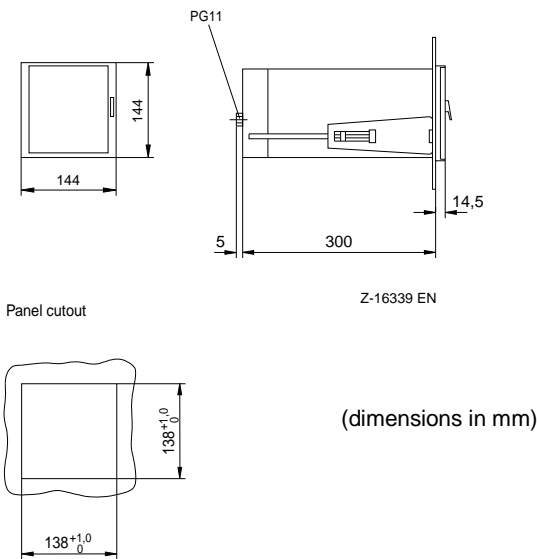
<sup>1)</sup> At least one Suppl. No. per scale and group

<sup>2)</sup> 1 copy at no extra charge

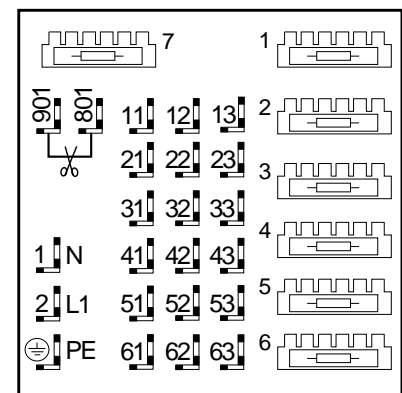
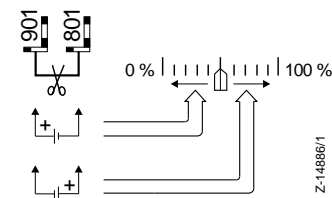
Multipoint Recorder Arucomp EK-Ex. A

Data Sheet  
40-1.10 EN

Dimensional drawings and connection diagrams



Connection diagram



Channel 1	11 12	11 12	11 12	11 12 13	11 12 13
Channel 2	21 22	21 22	21 22	21 22 23	21 22 23
Channel 3	31 32	31 32	31 32	31 32 33	31 32 33
Channel 4	41 42	41 42	41 42	41 42 43	41 42 43
Channel 5	51 52	51 52	51 52	51 52 53	51 52 53
Channel 6	61 62	61 62	61 62	61 62 63	61 62 63

