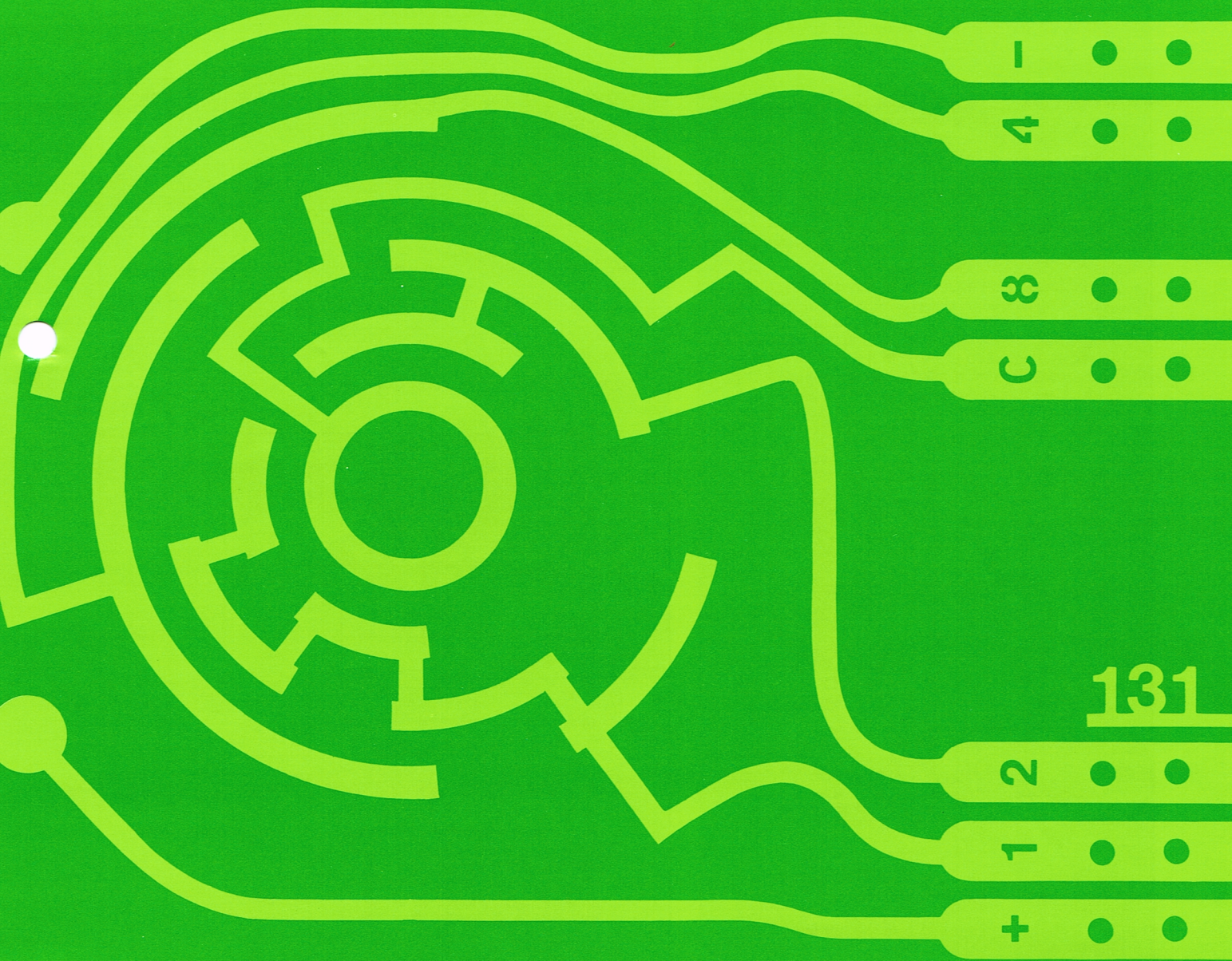


Hartmann Digital Voltage Divider



Modular Systems

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BarTender: CASA-100x30L-Address_2019R2.btw

Digital Voltage Dividers With Integrated Laser Trimmed Thickfilm Network

Both series, DIGIHART D5 and DIGIHART D9, with integrated laser trimmed thickfilm networks are very precise voltage dividers of an accuracy of $< 0.1\%$ of the input voltage.

They are the best solution where accuracy and linearity are required.

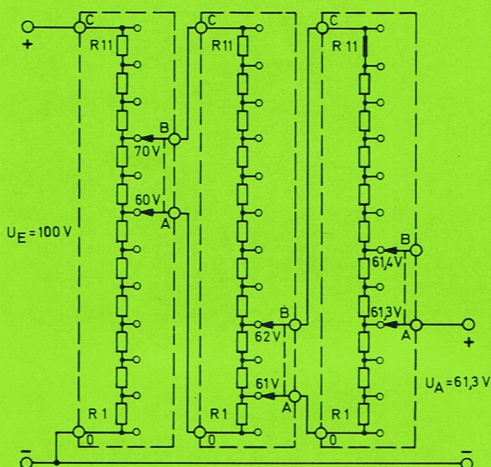
No additional indicator is necessary for showing the real value. Wrong setting is rendered impossible. The previous value can be exactly repeated without any problems.

Both series, DIGIHART D5 and DIGIHART D9, are available with 2....5 digits, with or without decimal point and with different values (see survey).

The voltage divider is completely wired and the side-covers are already mounted.

The plastic clips of the side-covers allow an easy mounting (snap-in) and guarantee a constant stability. The contact resistance is low and stable due to precious metal contacts and tested contact pressure. The thickfilm network assures very low temperature coefficient of $< 10 \text{ PPM}/^\circ\text{C}$.

Kelvin Varley code is used (see scheme). Each digit incorporates 11 values of the same size, except the individual digit with only 10 values and one shorting bridge. Two of these values are mechanically connected and are used as input to the next lower digit. This causes a parallel connection and value A-B is equal to the individual resistance of the digit.



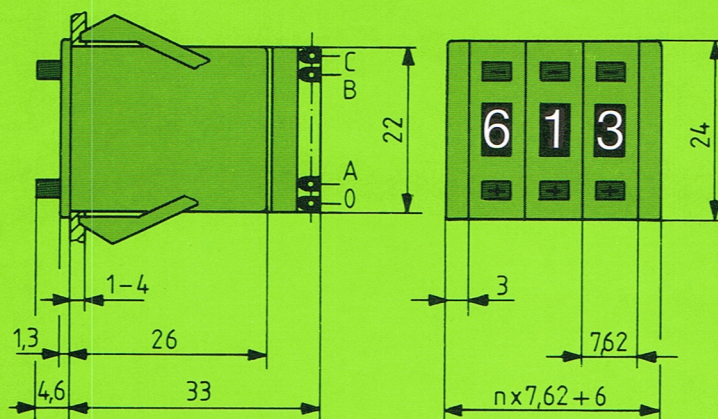
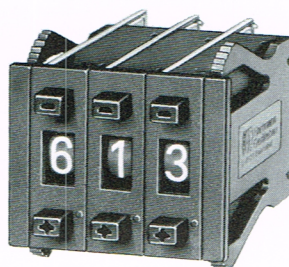
Any desired chain of digits can be arranged by this method. Input voltage U_E is connected to 0 and C of the left (from the front) and highest resistive digit. Output U_A is connected to 0 of the left and to A of the right digit.

The digits can be supplied with special resistors (minimum quantity 100 pieces).

If required, please use description "R" instead of "C".

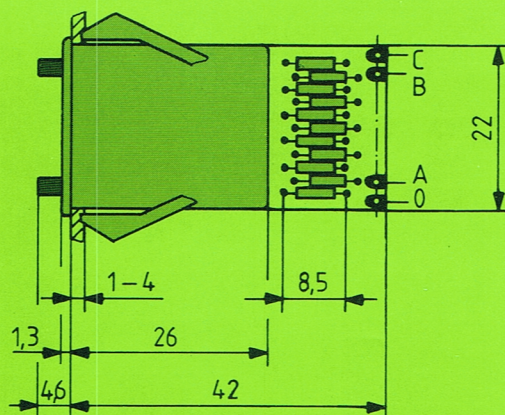
In order to complete our range we even offer individual digits for special resistor mounting. Description is D5-R-2 or D9-R-2.

Series: DIGIHART D5

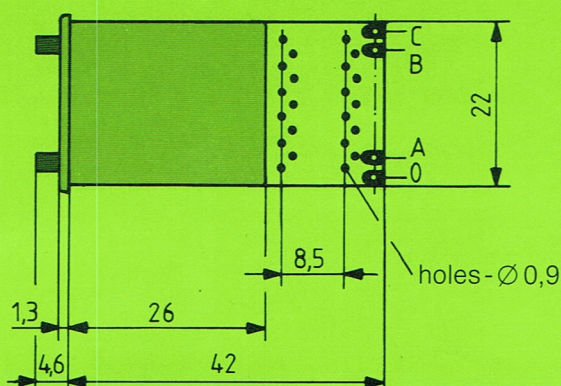


Cut-out H = 22.5 mm W = $n \times 7.62 + 3.5$ mm

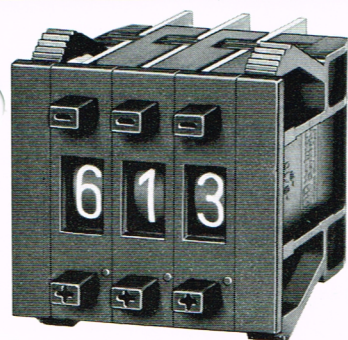
Digit with special resistors



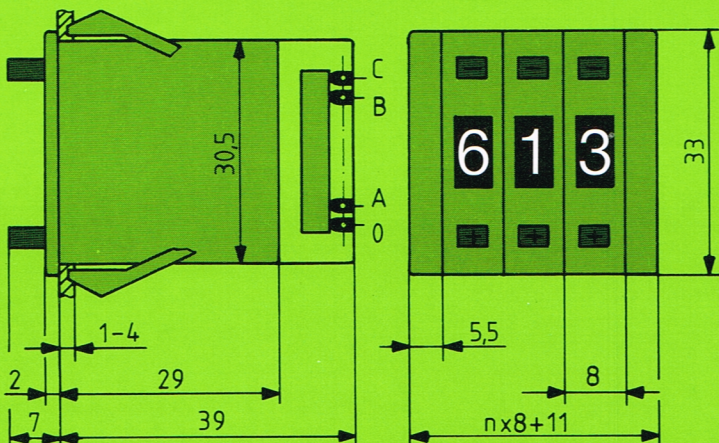
Individual digit for special resistor mounting series D5-R-2



Series: DIGIHART D9

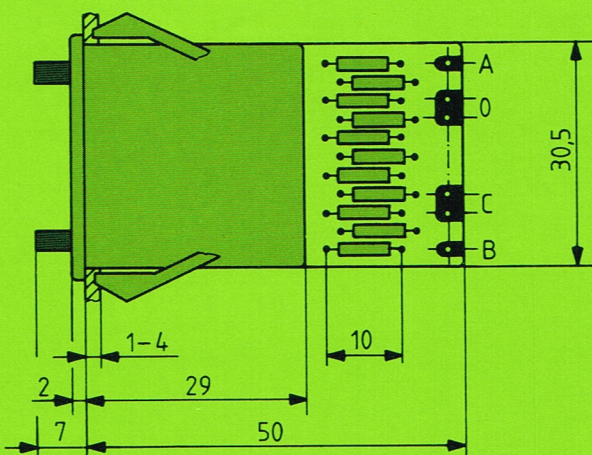


- High accuracy
- No indicator necessary
- Wrong setting impossible
- Accurate repetition
- Low temperature coefficient
- Short installed depth

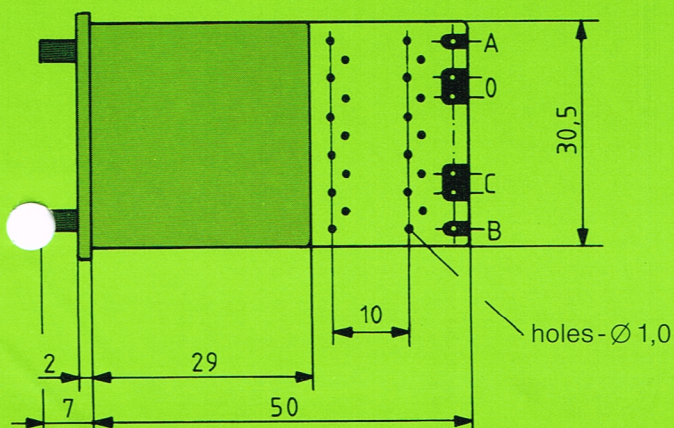


Cut-out H = 31 mm W = n x 8 + 9 mm

Digit with special resistors



Individual digit for special resistor mounting series D9-R-2



Technical Data

Permiss. ambient temperature $-20^{\circ}\text{C} \dots +80^{\circ}\text{C}$
Expected life (switching cycles) min. 10^5 cycles/digit
Actuating force approx. 4.5 N
Connection mode solder connection
Colour black housing/white printing

Electrical Data

Resistance tolerance $\pm 0.5\%$
Accuracy $< 0.1\%$ of input voltage
Temperature coefficient $< 10 \text{ PPM}/^{\circ}\text{C}$
Contact resistance $< 100 \text{ m}\Omega$
Permissible constant current 75 mA
Max. current 1 A, not switchable
Power rating 1 W at 25°C

Survey

Series	D5/D9	D5/D9	D5/D9	D5/D9
Digits	2	3	4	5
Resolution	1 %	0.1 %	0.01 %	0.001 %
Standard Resistance				
2 KOhm	•	•	•	•
10 KOhm	•	•	•	•
50 KOhm	•	•	•	•

Order examples

Description D5 - C10K - 3D - 2 - 0P
Series _____
Thickfilm network resistance 10 KOhm _____
3 Digits _____
Black housing/white printing _____
Without decimal point _____

Description D5 - R2M - 3D - 2 - 2P
Series _____
Resistor mounting resistance 2 MOhm _____
3 Digits _____
Black housing/white printing _____
Decimal point after 2nd digit _____

Note

All dimensions in this data sheet are given in mm. The tolerance range is in accordance with "DIN 7168 fine". We reserve the right to undertake modifications in the interest of technical progress.
The data sheet represents the latest level of technology on the day it was published. Please therefore investigate whether all details still apply if you want to stipulate your own requirements.
Issue 01

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