ISABELLENHÜTTE
Innovation by Tradition

ISA-WELD® // PRECISION RESISTORS

BKW



Features

- Independent from temperature because of lowest TCR-values
- Extremely good long-term stability, thus the energy meters do not require any recalibration
- Permanent current up to 100 A (0.3 mOhm)
- Qualified for 20 A-, 40 A-, 60 A- and 80 A-energy-meters
- Massive copper terminals
- Very high reproducibility of R-value and TCR
- Mounting: Screwed on terminals of kWh-meter

RoHS

Applications

- Ideal for single and three phase energy meters
- Battery current sensing

Technical data

Resistance values	**mOhm**	0.3 / 0.4 / 0.5
Tolerance	**%**	5
Temperature coefficient (20-60 °C)	**ppm/K**	<20
Applicable temperature range	**°C**	-55 to +140
Power rating	**W**	3
Internal heat resistance (R_{thi})	**K/W**	<10
Inductance	**nH**	<3
Stability (Nominal load) deviation after 2,000 h T_K = Terminal temperature		<0.5 % (T_K = 110 °C)

Ordering code

BKW - M - R0003 - 5.0

- Tolerance
- Resistance value [Ohm] / „R" represents decimal point
- Material (MANGANIN®)
- Type

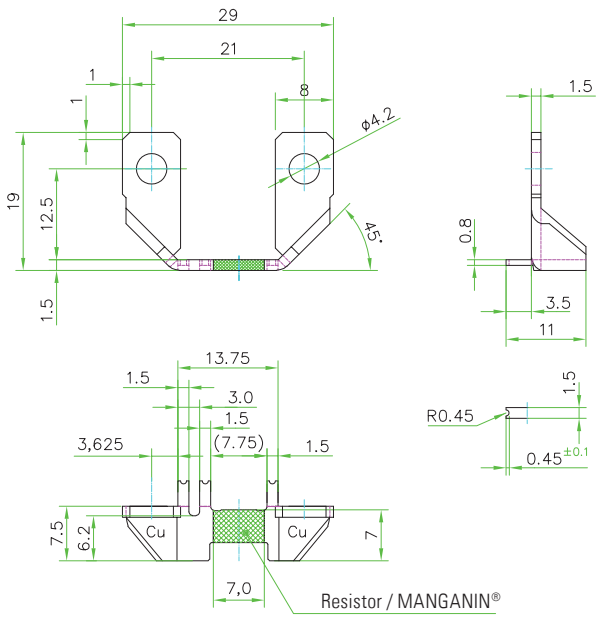
Packaging Information

500 pcs. sealed in plastic bags evacuated and refilled with dry nitrogen

Download from alldatasheet.com

BKW

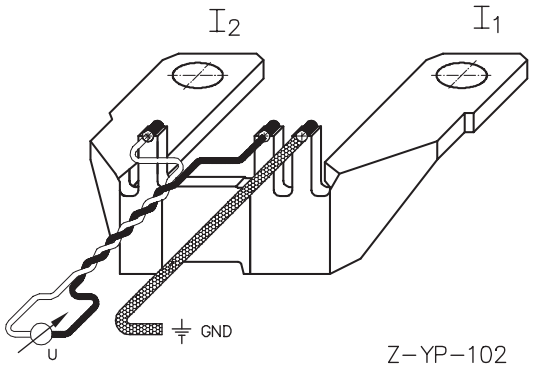
Mechanical dimensions [mm]



Z-DX-147

Connection diagram

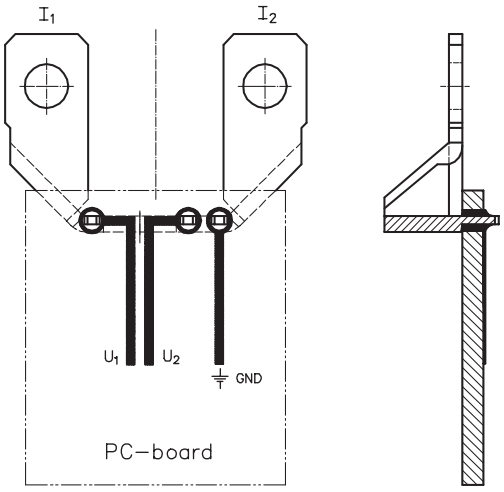
Connection diagram for sense leads



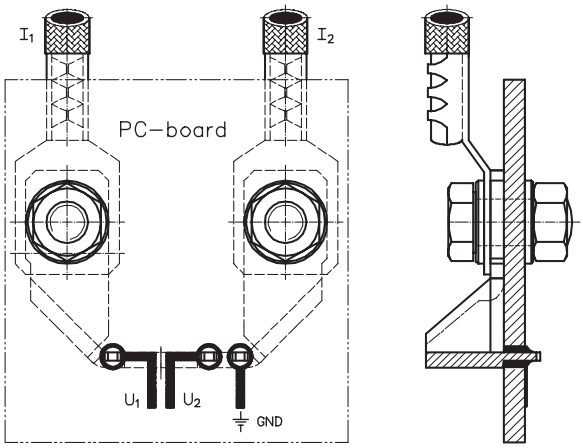
Z-YP-102

Connection diagram

Sense terminal connection on pc-board (bottom view)



Z-YP-102



Z-YP-102

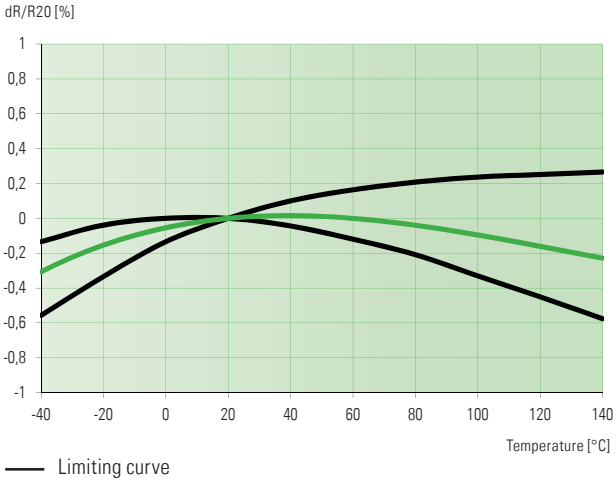
Recommended solder profile

Reflow-, IR-soldering, wave-soldering upon request			
Temperature [°C]	260	255	217
Time [s]	Peak	40	90

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BKW

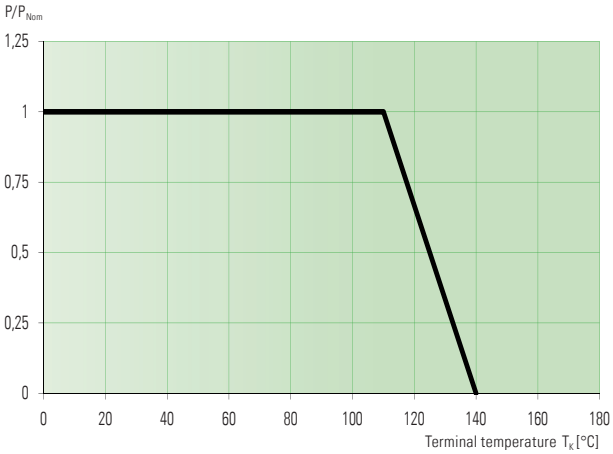
Temperature dependence of the electrical resistance



Limiting curve

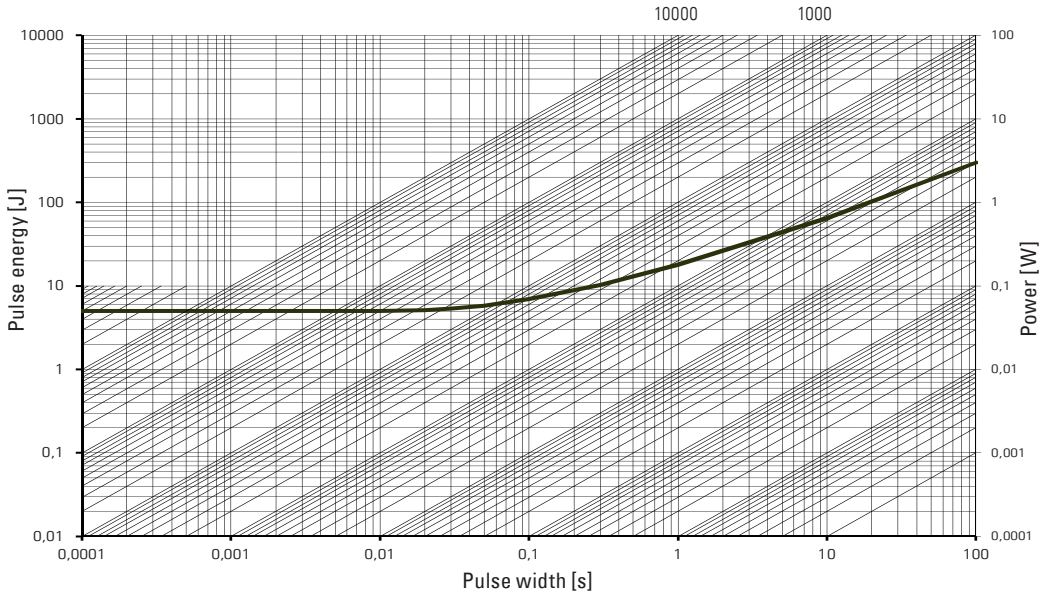
Typical temperature dependence of a BKW resistor

Power derating curve



Stability < 0.5 %

Maximum pulse energy respectively pulse power for permanent operation



This curve is only valid for the resistance value R0003. The progression of the curve in the lower range could be different for other resistance values. Therefore a separate qualification should be made in thresholds.

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