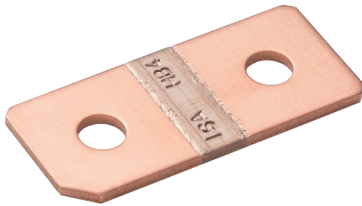




## ISA-WELD® // PRECISION RESISTORS FOR HIGH CURRENT APPLICATIONS



### KVM



#### Features

- 10 W power rating
- Continuous current load up to 250 A
- Heavy copper connectors
- Excellent long-term stability
- Low inductance value
- Max. solder temperature up to 350 °C / 30 sec or 250 °C / 10 min
- RoHS 2011/65/EU compliant
- AEC-Q200 qualification



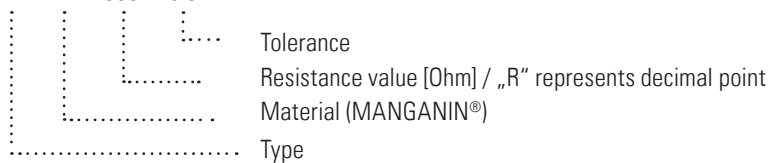
#### Technical data

Resistance values	mOhm	0.1	0.05*
Material		MANGANIN®	ZERANIN®30
Tolerance	%	5	5
Temperature coefficient (20-60 °C)	ppm/K	<50	<100
Applicable temperature range	°C	-55 to +170	
Power rating <b>P<sub>70°C</sub></b>	<b>W</b>	7	10
Power rating <b>P<sub>120°C</sub></b>	<b>W</b>	5	7
Internal heat resistance (R <sub>thi</sub> )	<b>K/W</b>	<4	<3
Inductance	<b>nH</b>	<5	<5
Stability (at rated power) deviation after 2000h, T <sub>k</sub> = Terminal temperature		<0.5% (T <sub>k</sub> =120 °C)	
Packaging		Stack tubes, quantity/tube to be decided. Plastic bag sealed and filled with dry nitrogen.	

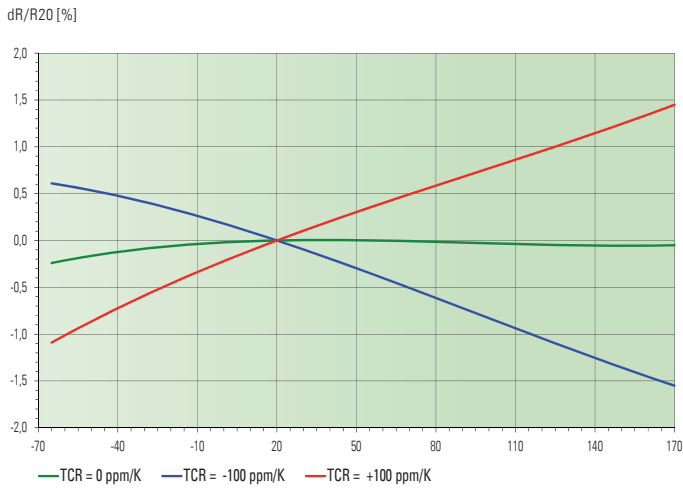
\*KVM-Z-R00005 under development, B-samples available

#### Ordering code

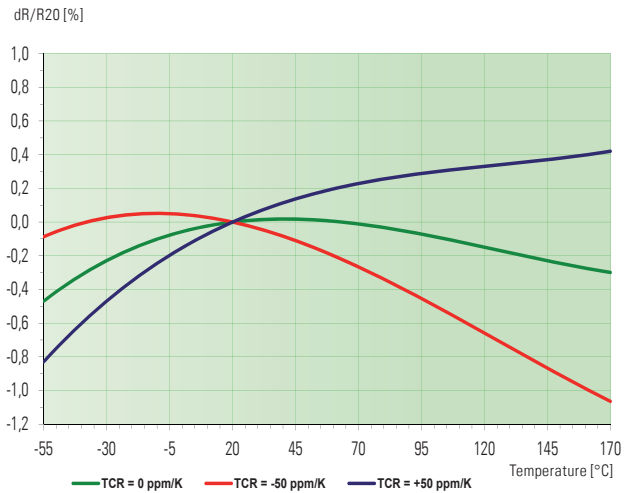
KVM - M - R0001 - 5.0



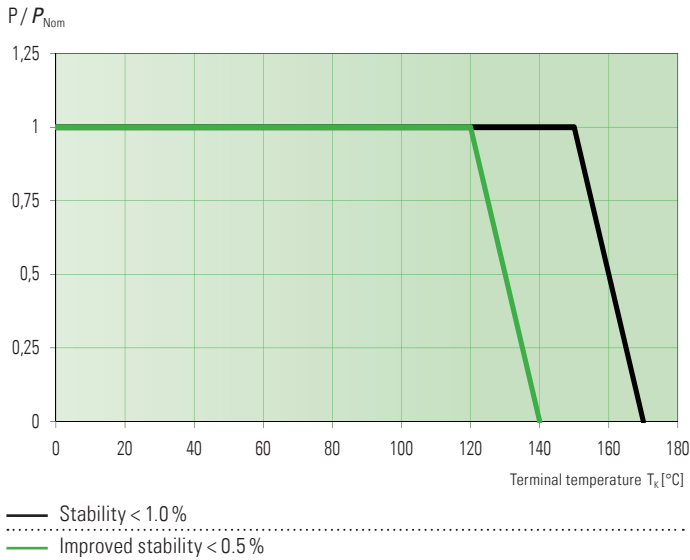
## Temperature dependence of the electrical resistance of ZERANIN® resistors



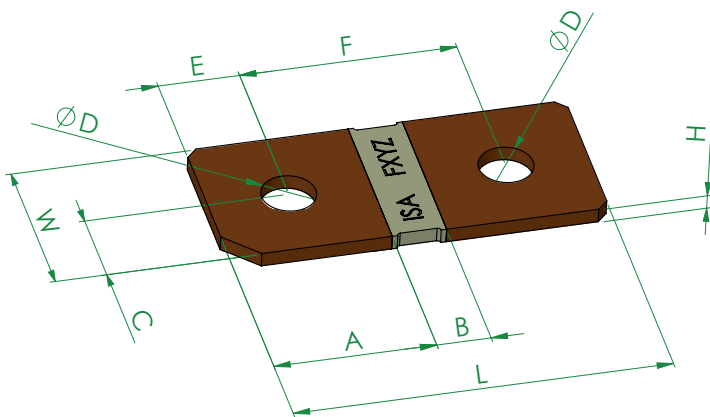
## Temperature dependence of the electrical resistance of MANGANIN® resistors



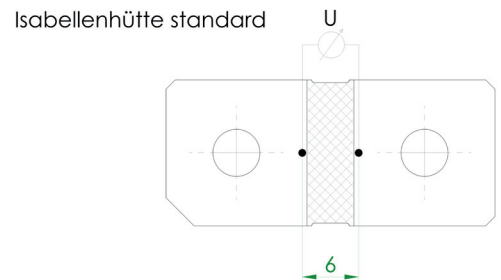
## Power derating curve, KVM-M-R0001



## Mechanical dimensions [mm]



## Position of sense terminals for TC measurement



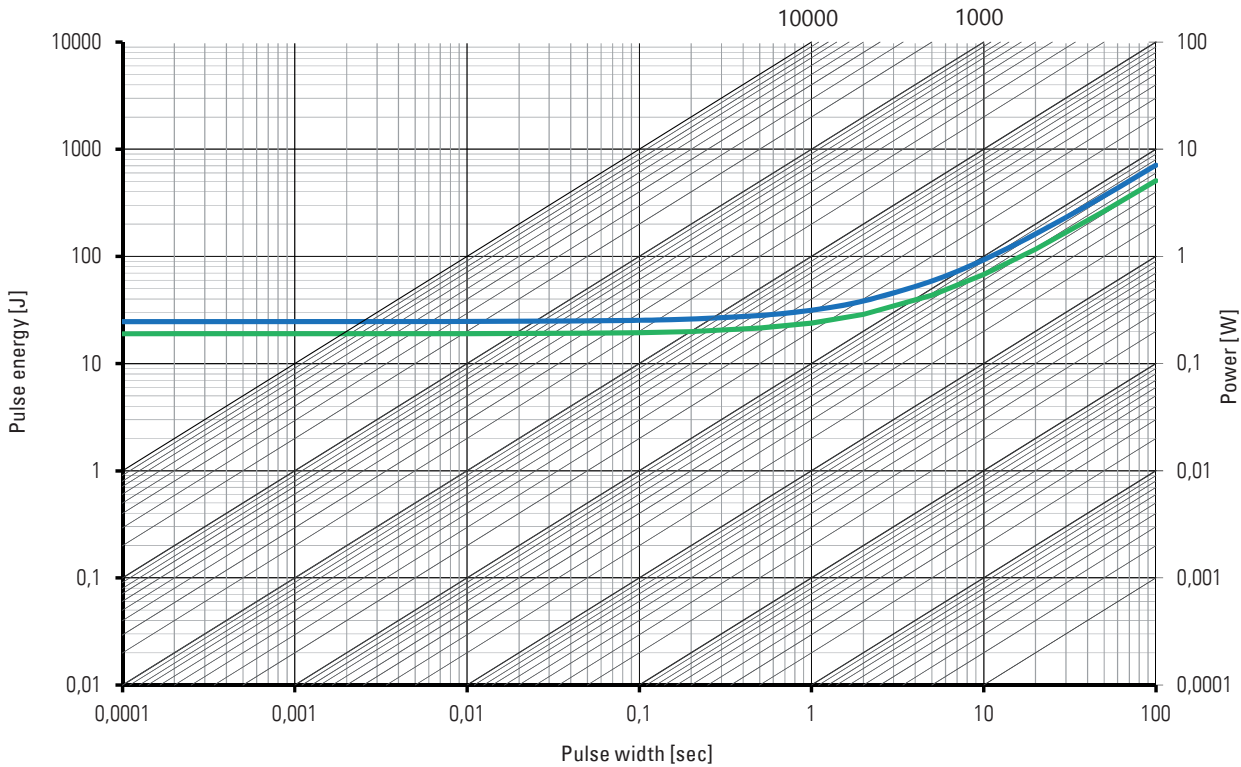
	A	B	C	D	E	F	H	L	W
KVM-Z-R00005-5.0	15.1 ± 0.3	4.8 ± 0.3	7.75 ± 0.1	∅5 ± 0.1	7.5 ± 0.25	20 ± 0.2	2 + 0.2 / - 0.1	35 ± 0.15	15.5 ± 0.1
KVM-M-R0001-5.0	15 ± 0.3	5 ± 0.3	7.75 ± 0.1	∅5 ± 0.1	7.5 ± 0.25	20 ± 0.2	1.42 + 0.2 / - 0.1	35 ± 0.15	15.5 ± 0.1



# KVM

## Maximum pulse energy respectively pulse power for permanent operation

**KVM-Z-R00005; KVM-M-R0001**  
Maximum pulse energy / power continuous operation



### Specification

Parameters	Test conditions	Specified values
Temperature Cycling	1000 cycles (-55 °C to +150 °C)	±0.5%
Low Temperature Storage and Operation	-55 °C for 250 h	±0.2%
Resistance to Soldering Heat	235 °C for 10 sec / 4h steam aging	n.a.
Operational Life	2000 h, T <sub>K</sub> max at nominal load	±0.5%, T <sub>K</sub> = 120 °C
High Temperature Exposure	2000 h / 170 °C	±1.0%
Bias Humidity	+85 °C, 85 r.F., 1000 h	±0.2%

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