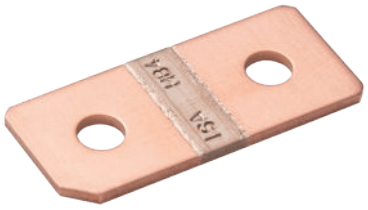
ISABELLENHÜTTE
Innovation by Tradition

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

RoHS

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 $P_{70\,°C}$	**W**	7	10
Power rating $P_{120\,°C}$	**W**	5	7
Internal heat resistance (R_{thi})	**K/W**	<4	<3
Inductance	**nH**	<5	<5
Stability (at rated power) deviation after 2000h, T_K = Terminal temperature		<0.5% (T_K=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*

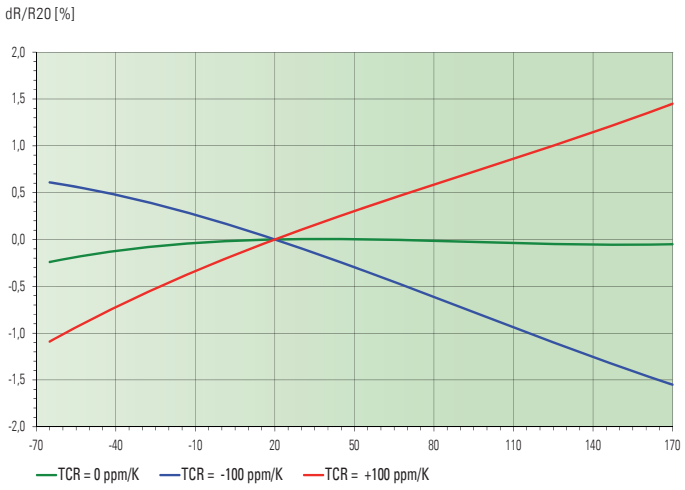
Ordering code

KVM - M - R0001 - 5.0

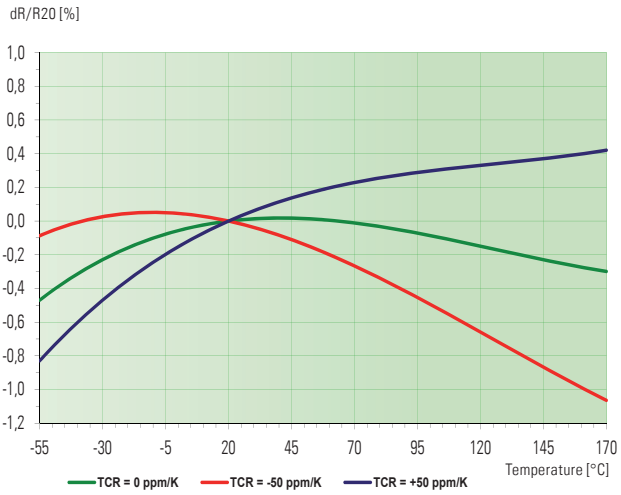
- Tolerance
- Resistance value [Ohm] / „R" represents decimal point
- Material (MANGANIN®)
- Type

KVM

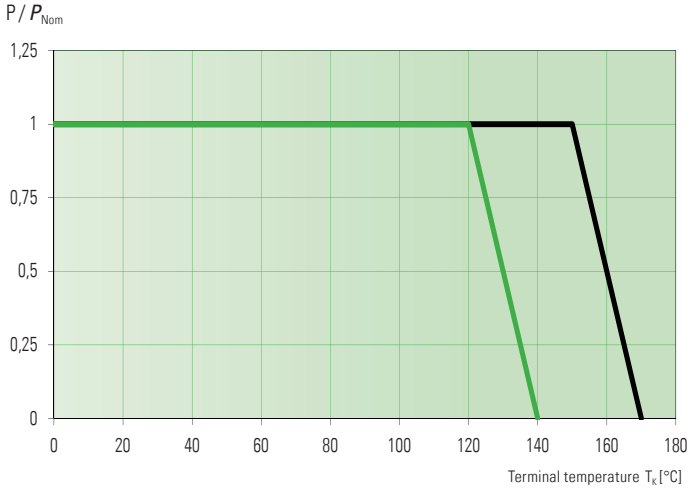
Temperature dependence of the electrical resistance of ZERANIN® resistors



Temperature dependence of the electrical resistance of MANGANIN® resistors



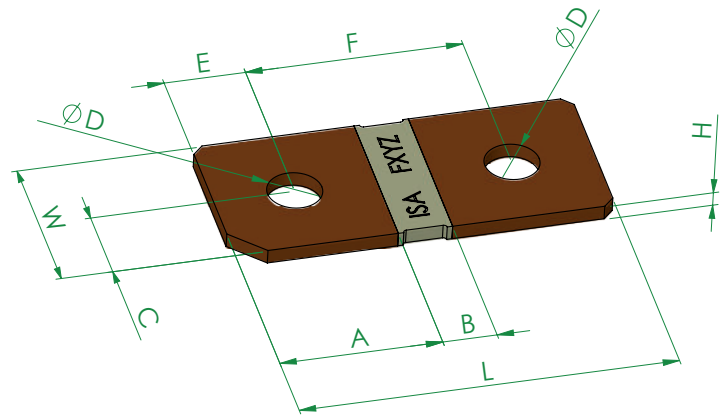
Power derating curve, KVM-M-R0001



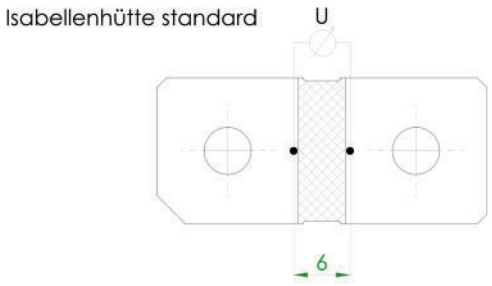
Stability < 1.0 %

Improved stability < 0.5 %

Mechanical dimensions [mm]



Position of sense terminals for TC measurement



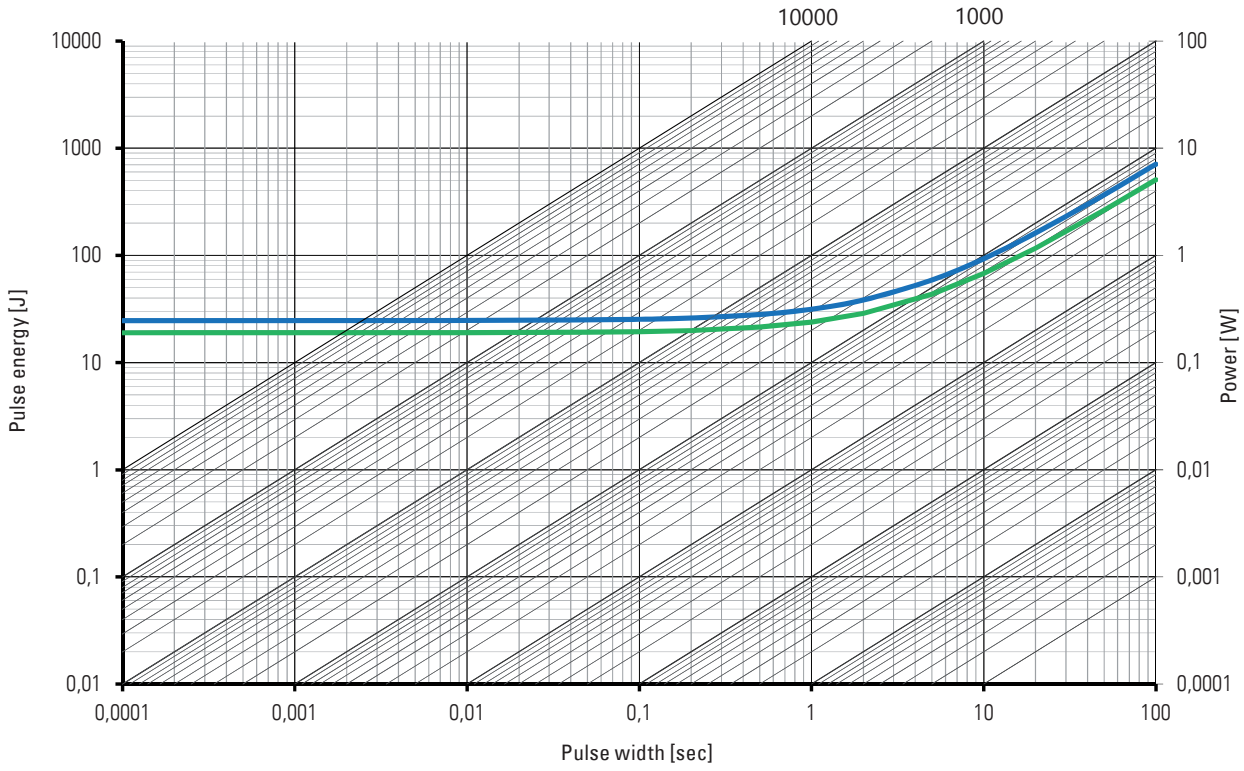
	A	B	C	D	E	F	H	L	W
KVM-Z-R00005-5.0	15.1 ±0.3	4.8 ±0.3	7.75 ±0.1	Ø5 ±0.1	7.5 ±0.25	20 ±0.2	2 +0.2/-0.1	35 ±0.15	15.5 ±0.1
KVM-M-R0001-5.0	15 ±0.3	5 ±0.3	7.75 ±0.1	Ø5 ±0.1	7.5 ±0.25	20 ±0.2	1.42 +0.2/-0.1	35 ±0.15	15.5 ±0.1

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_K max at nominal load	±0.5%, T_K = 120 °C
High Temperature Exposure	2000 h / 170 °C	±1.0%
Bias Humidity	+85 °C, 85 r.F., 1000 h	±0.2%

ISABELLENHÜTTE