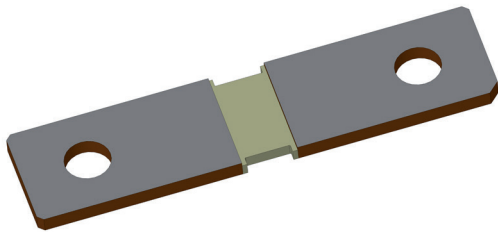




## ISA-WELD® // PRECISION RESISTORS

**BAS** // SIZE 8420 (METRIC)**Features**

- Up to 30 W permanent power
- Continuous current load up to 350 A (0.1 mOhm)
- High pulse power rating
- Max. fastening torque 10 Nm
- Shunt available with tinned or untinned terminals
- Further versions with various dimensions upon request
- AEC-Q200 qualified (automotive version "A")

**Applications**

- Current sensor for EBM (Electronic Battery Management) in motorcars, trucks, forklifts, hybrid and electric vehicles
- Current sensing in bus bars
- Current sensing in welding equipments

**Technical data**

Resistance values	<b>mOhm</b>	0.035 / 0.05 / 0.1 / 0.2 / 0.5
Tolerance	<b>%</b>	5
Temperature coefficient (20-60 °C)	<b>ppm/K</b>	50
Applicable temperature range	<b>°C</b>	-40 to +170
Power rating	<b>W</b>	<b>30</b> (0.035 mΩ)
Internal heat resistance (R <sub>thi</sub> )	<b>K/W</b>	see table on page 2
Thermal EMV (0-100 °C)	<b>µV/K</b>	<b>0.6</b> (MANGANIN®) / <b>1</b> (ZERANIN®30)
Inductance	<b>nH</b>	<3
Stability (Nominal load) deviation after 2,000 h		<0.5% (T <sub>k</sub> = 110 °C)
T <sub>k</sub> = Terminal temperature		<1.0% (T <sub>k</sub> = 140 °C)

**Packaging Information**

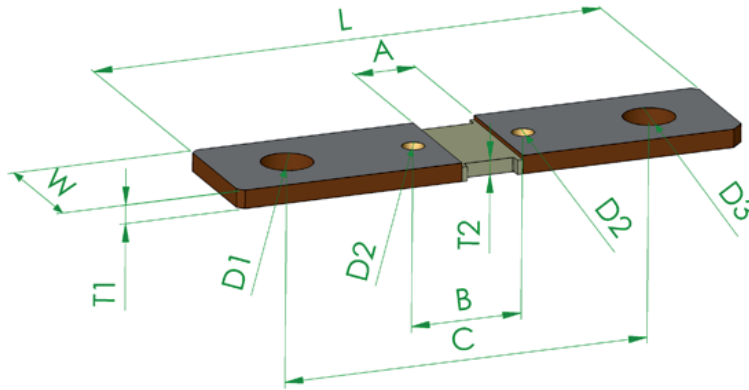
140 pcs. per tube for automotive version „A“

100 pcs. sealed in plastic bags evacuated and refilled with dry nitrogen for non automotive version



BAS // SIZE 8420 (METRIC)

Mechanical dimensions [mm] // Z-YJ-328



type	A	B	C	D1	D2	D3	L	T1	T2	W
BAS-M-R0001-E-5.0	10.1±0.5	-	60±0.2	∅8.3±0.1	-	∅8.3±0.1	84±0.2	3±0.15	2.3±0.2	20±0.1
BAS-M-R0001-AE-5.0	10.1±0.5	-	60±0.2	∅8.3±0.1	-	∅8.3±0.1	84±0.2	3±0.15	2.3±0.2	20±0.1
BAS-M-R0001-L-5.0	10.1±0.5	-	51±0.2	∅8.3±0.1	-	∅8.3±0.1	68±0.2	3±0.15	2.3±0.2	20±0.1
BAS-M-R0001-R-5.0	10.1±0.5	18.2±0.1	60±0.2	∅8.3±0.1	3.62±0.08	∅8.3±0.1	84±0.2	3±0.15	2.3±0.2	20±0.1

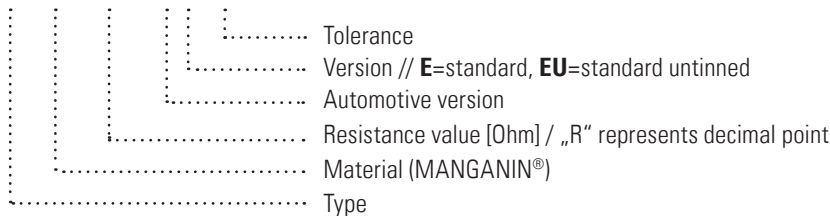
Further versions on request

Type	Value [mΩ]	R <sub>thi</sub> [K/W]	TC [ppm/K]	P <sub>110°C</sub> [W]
BAS-Z-R000035	0.035	1.0	100	30
BAS-M-R00005	0.05	1.5	100	20
BAS-M-R0001	0.1	2.0	50	15
BAS-M-R0002	0.2	3.0	50	10
BAS-M-R0005	0.5	7.0	50	4

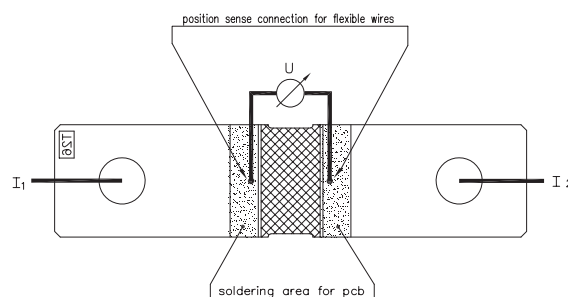
Abbreviation type: M=MANGANIN®, Z=ZERANIN®30

Ordering code example

BAS - M - R0001 - A E - 5.0



Connection diagram

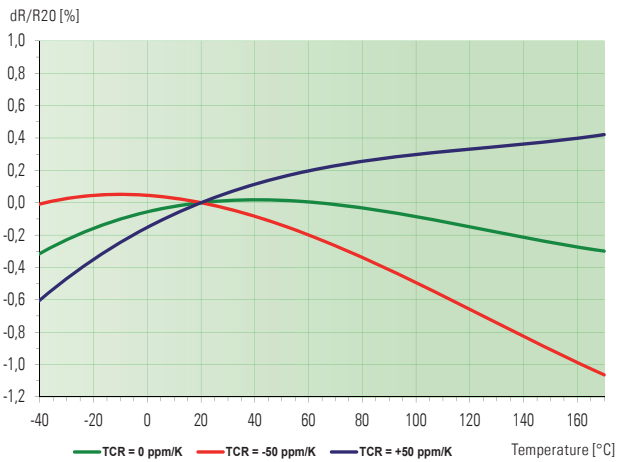


Z-DR-159a

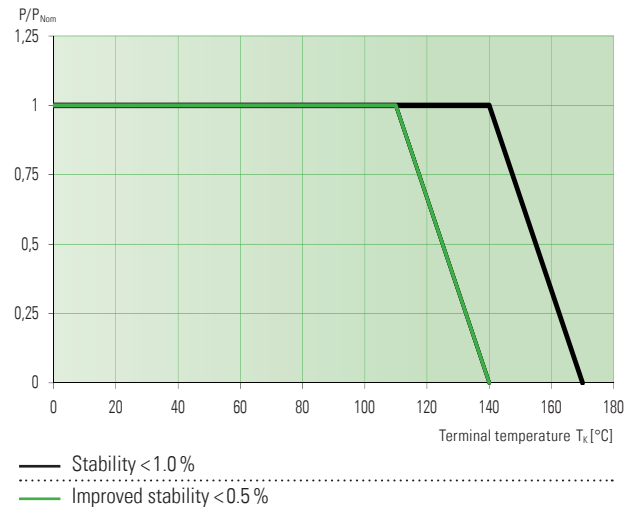


BAS // SIZE 8420 (METRIC)

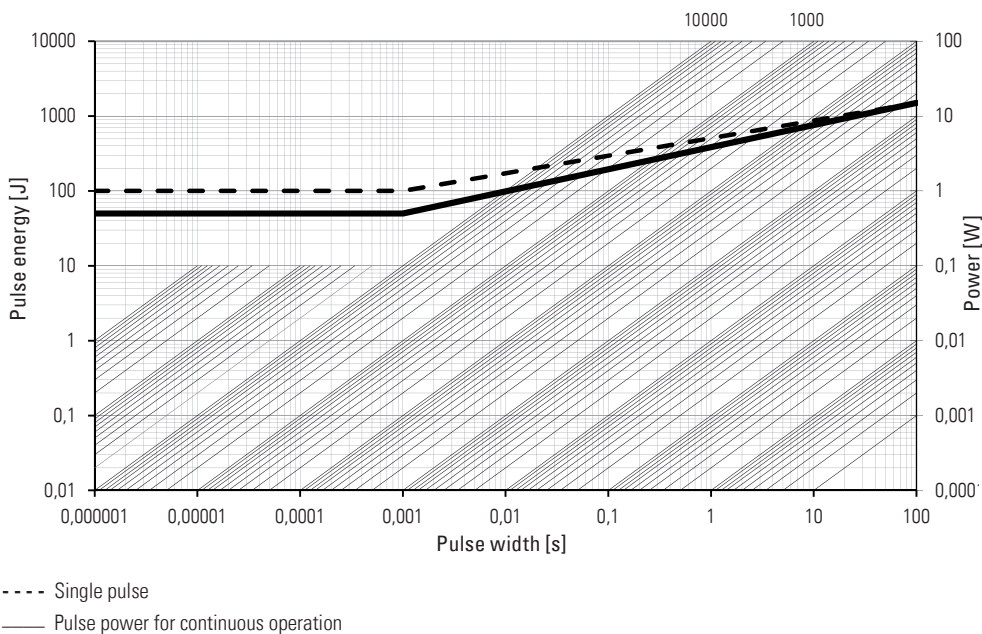
Temperature dependence of the electrical resistance



Power derating curve,  $R=0.1$  mOhm



Maximum pulse energy respectively pulse power for permanent operation



This curve is only valid for the resistance value R0001. The shape of the curve in the range below 0.1 sec will be different for other resistance values. Therefore a separate qualification should be made for pulse power close to the above curve.

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