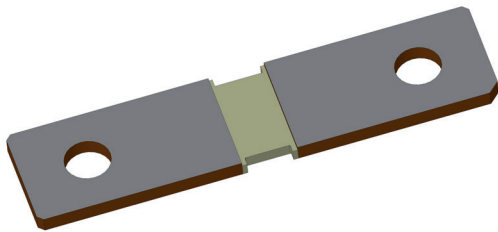




ISA-WELD® // PRECISION RESISTORS



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

Packaging Information

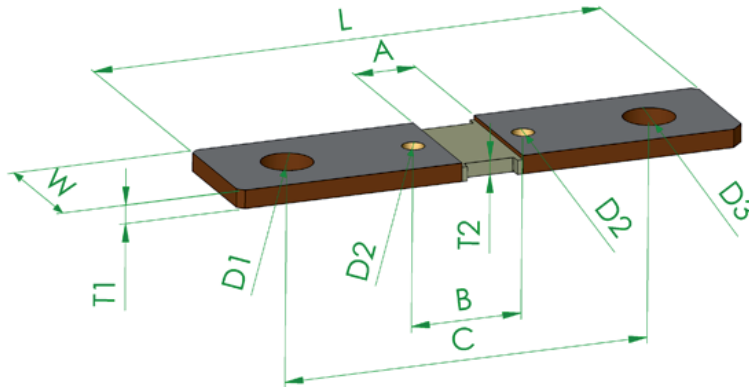
140 pcs. per tube for automotive version „A“

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	Ø8.3±0.1	-	Ø8.3±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	Ø8.3±0.1	-	Ø8.3±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	Ø8.3±0.1	-	Ø8.3±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	Ø8.3±0.1	3.62±0.08	Ø8.3±0.1	84±0.2	3±0.15	2.3±0.2	20±0.1

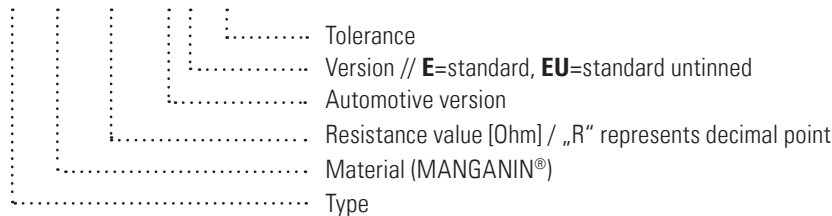
Further versions on request

Type	Value [mΩ]	R _{thi} [K/W]	TC [ppm/K]	P _{140°C} [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

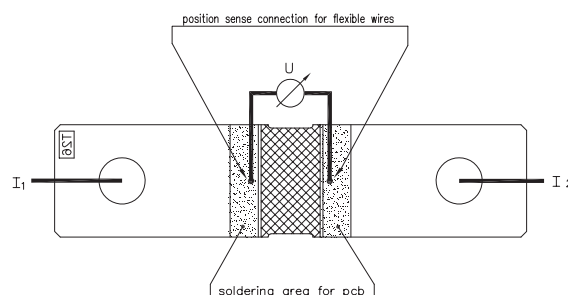
Abbreviation type: M=MANGANIN®, Z=ZERANIN®30

Ordering code example

BAS - M - R0001 - A E - 5.0



Connection diagram

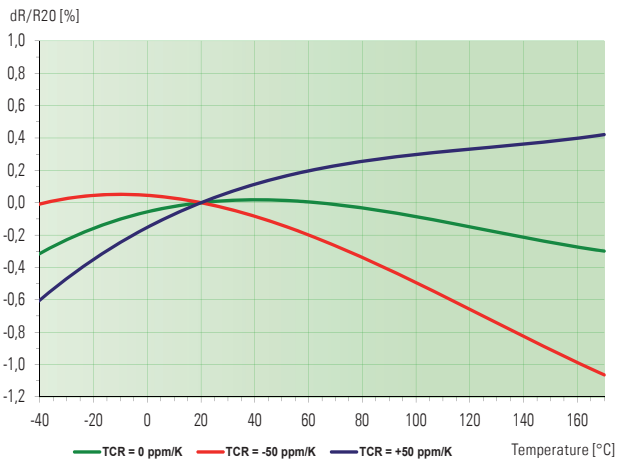


Z-DR-159a

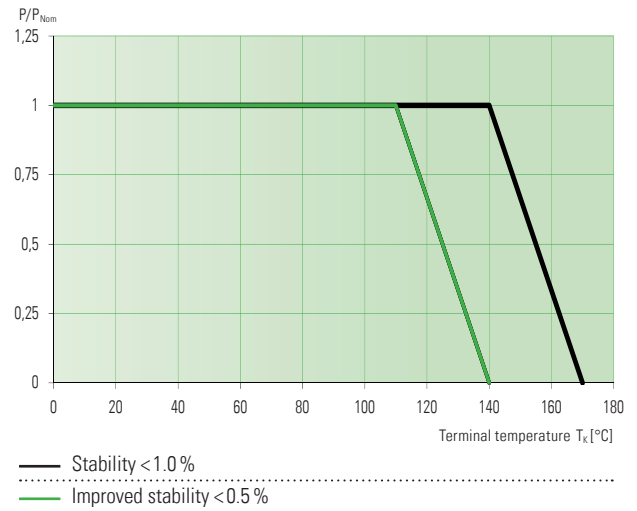


BAS // SIZE 8420 (METRIC)

Temperature dependence of the electrical resistance

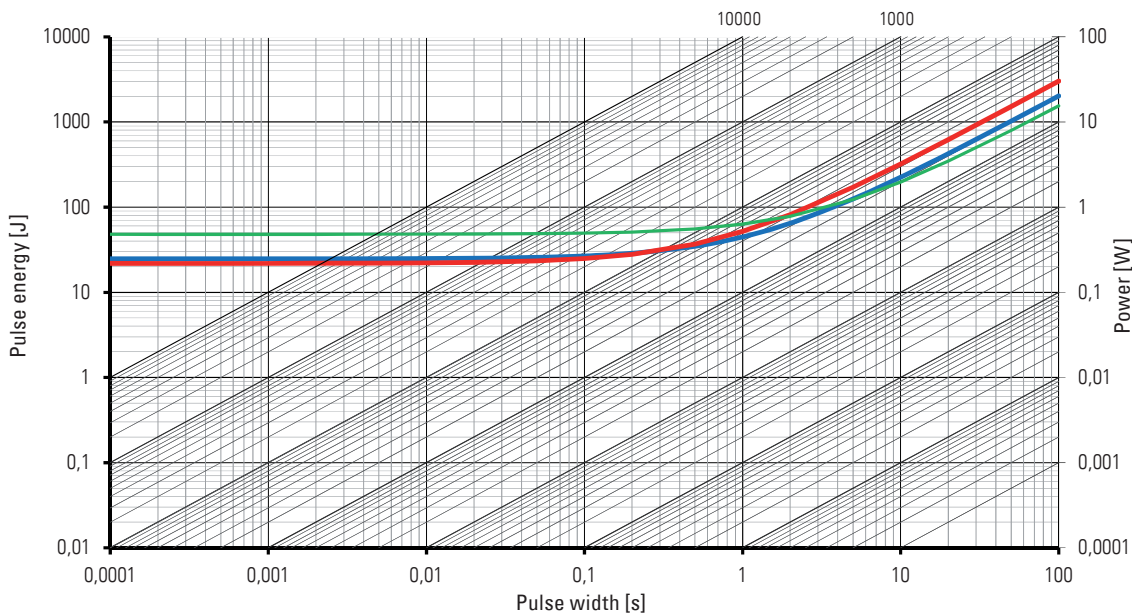


Power derating curve, R=0.1 mOhm



Maximum pulse energy respectively pulse power for permanent operation

BAS-Z-R000035, BAS-M-R00005, BAS-M-R0001
 Maximum pulse energy / power for continuous operation ($T_k = 140$ °C)



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