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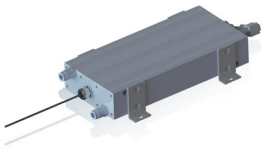
REOHM series D 158

Max. continous power: 60.000 W



Unique Selling Point

- Very compact construction
- Suitable for use with high ambient temperatures
- Specific and optimised cooling for high capacities
- Very low temperature of enclosure (<50°C)
- Suitable for standard cooling liquids (water/glycol)
- High protection rating up to IP66 possible
- Operating pressure of the cooling circuit up to 4 bar (test pressure 10 bar)
- Small space requirement

Description

The series D 158 can be used as braking or load resistor for drive technology, industrial applications, test fields, E-Mobility and railway engineering with integrated water cooling. Thanks to localised, optimised cooling, high outputs can be generated in the smallest space with low heat generation. It is also possible to deploy it in areas with high ambient temperatures.

The resistors are available as braking-, load-, or highvolt resistors.

Applications:

- Drive technology, frequency converters
- Railway
- E-Mobility
- Test systems

Maximum energy with minimum space

- Protection IP20 up to IP66
- Test voltage 2,5 kV AC
- Ambient temperature: -15 to +80°C
- Other fixing points or power ratings on request

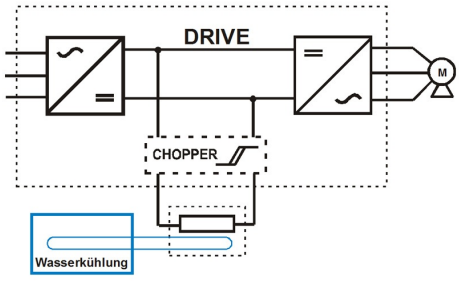
Optional

- With temperature switch

Technical Data

- Resistance values : 2 - 850 Ohm
- Continuous power : 1000 - 60000 W
- max. operating voltage : 1000 V

Circuit example



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Technical data

Type	Resistance value R [Ohm]	Continous power P [W]	max. operation voltage [V]
D 158 / 1000	2,5 - 100	1.000	
D 158 / 2000	50 - 200	2.000	
D 158 / 3000	10 - 200	3.000	
D 158 / 5000	10 - 200	5.000	
D 158 / 6000	10 - 200	6.000	
D 158 / 10000	6 - 500	10.000	1000
D 158 / 15000	4 - 600	15.000	
D 158 / 20000	3 - 600	20.000	
D 158 / 30000	2,1 - 750	30.000	
D 158 / 45000	2,1 - 800	45.000	
D 158 / 60000	2 - 850	60.000	

Higher power ratings on request

In general: Is the ambient temperature higher than 40 °C, the continuous power must be reduced by 5 % per 10 K temperature rise.

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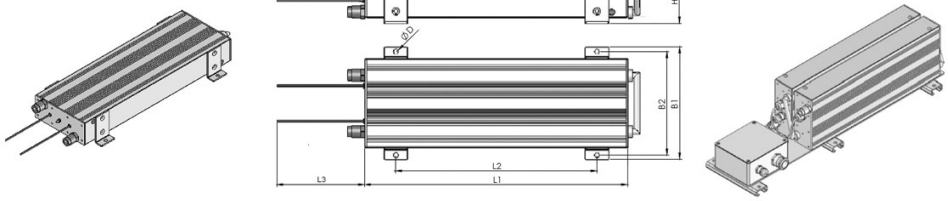
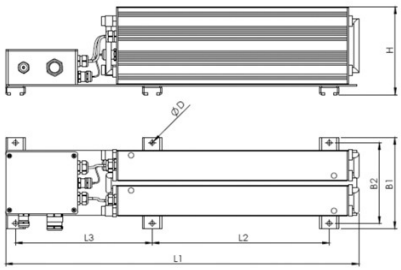
Dimension drawings

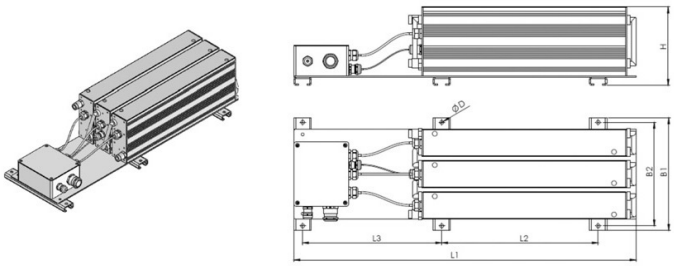
Design 1



Design 2



Design 3



Dimensions

Type	Dimensions						Connections		Design
	L1 [mm]	L2 [mm]	L3 [mm]	B1 [mm]	B2 [mm]	H [mm]	Cable gland	Clamps	
D 158 / 3000	320	213	500	190	175	68	M20	6 mm²	BF1
D 158 / 5000	450	343	500	190	175	68	M20	6 mm²	BF1
D 158 / 6000	550	443	500	190	175	68	M20	6 mm²	BF1
D 158 / 10000	680	343	265	176	156	170	M25	10 mm²	BF2
D 158 / 15000	680	343	265	245	225	170	M32	10 mm²	BF3
D 158 / 20000	680	343	265	2x176	2x156	170	M32	10 mm²	2xBF2
D 158 / 30000	680	343	265	2x245	2x225	170	M32	10 mm²	2xBF3
D158 / 45000	680	343	265	3x245	3x225	170	M32	16 mm²	3xBF3
D158 / 60000	680	343	265	4x245	4x225	170	M32	16 mm²	4xBF3

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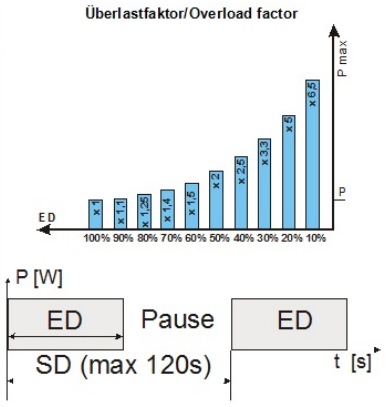
Load diagram

The power ratings apply for continuous duty. The power ratings can be increased in short-time operation in function of duty cycle by multiplication with the relevant factor from the diagram below or according to the formula as follows.

$P_{max}=P*F_0$	
P_{max} =	maximale Impulsleistung maximum pulse power
P =	Dauerleistung bei ED=100% Continuous power with duty cycle = 100 %
F_0=	Überlastfaktor
$ED[\%]=\frac{ED[s]}{SD[s]}*100$	
ED =	Einschaltdauer Duty cycle
SD =	Zykluszeit max. 120 Sek. Cycle time max. 120 sec.



Resistance value in function of temperature

The resistance values refer to standard products with a standard tolerance of +/- 10 % with an ambient temperature of 20 °C. The resistance value insignificantly changes in function of the winding temperature. Therefore, resistance changes of approx. +10 % in comparison to the cooled-down conditions may occur.

Cooling liquid/Refroidissement

The aluminium cooling pipes used are suitable for most of the standard cooling liquids and oils. In order to ensure safe operation of the units it is most important to comply with the VBG-cooling water regulations (VBG-R 455 P). Cooling channels: Aluminium (AlMgSi 0,5) Di = 10,5mm; G1/4" inside thread

Cooling medium: for example water with anti-corrosion agent for closed cycle cooling system; oils

The cooling pipes are not suitable for industrial and potable water, aggressive liquids, sea-water or de-ionised water. The maximum inlet temperature is + 25 °C and the maximum drain temperature + 45 °C.

The resistors are designed with a flow rate of 10 l/min. This should preferably not be gone below. A lower flow rate may result in reduction of the power. This is to be checked.

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