

A versatile range of adjustable resistor elements ideal for both continuous and high energy short time duties.

Manufactured from an edgewound strip of stainless steel supported on ceramic insulators ZC coils offer an adjustable solution for medium current applications. Available in two different lengths and seven different resistance strips, the ZC coil provides a modular resistor solution ideal for motor control or load testing applications.

Units are supplied with mounting feet and adjustable tapping clamps to allow easy selection of a range of resistance values.

Features and Benefits

- Stable high temperature resistance alloy for reliability.
- Includes mounting hardware, support rods and adjustable tapping clamps..
- Rated for repetitive duties and high short term overloads.



Applications

- Dynamic braking of inverters
- Test loads
- Current limiting
- Equipment discharge
- Motor starting/stopping

Standard Ratings

ZC Reference	Resistance Range ($\Omega \pm 10\%$)		Current for 500°C temperature rise (A)
	Min	Max	
ZC3/5-FT	0.10	0.49	32
ZC3/6-FT	0.13	0.65	28
ZC3/8-FT	0.17	0.84	21
ZC3/9-FT	0.26	1.26	18
ZC3/10-FT	0.40	1.98	16
ZC3/11-FT	0.44	2.20	15
ZC3/12-FT	0.53	2.64	12
ZC6/5-FT	0.10	0.98	32
ZC6/6-FT	0.13	1.31	28
ZC6/8-FT	0.17	1.68	21
ZC6/9-FT	0.26	2.53	18
ZC6/10-FT	0.40	3.96	16
ZC6/11-FT	0.44	4.40	15
ZC6/12-FT	0.51	5.29	12

Technical Specifications

Resistance alloy	Iron /Chrome/Aluminium/ Stainless Steel
Temperature coefficient of resistance	0.0104%/°C
Construction	Edgewound stainless steel ribbon supported on ceramic spacers.
Terminations	M6
Maximum operating voltage	1000V (DC or AC rms)
Inductance	50 - 40µH ±30% at 100Hz (depending on resistance and power)
Insulation resistance (500V DC)	>100MΩ
Operating temperature range	-25°C to +50°C

Installation

It is essential to allow a free flow of air around the resistor element, air leaving the resistor element can exceed 200°C.

The minimum recommended clearance to other equipment is 250mm vertically above and 150mm horizontally.

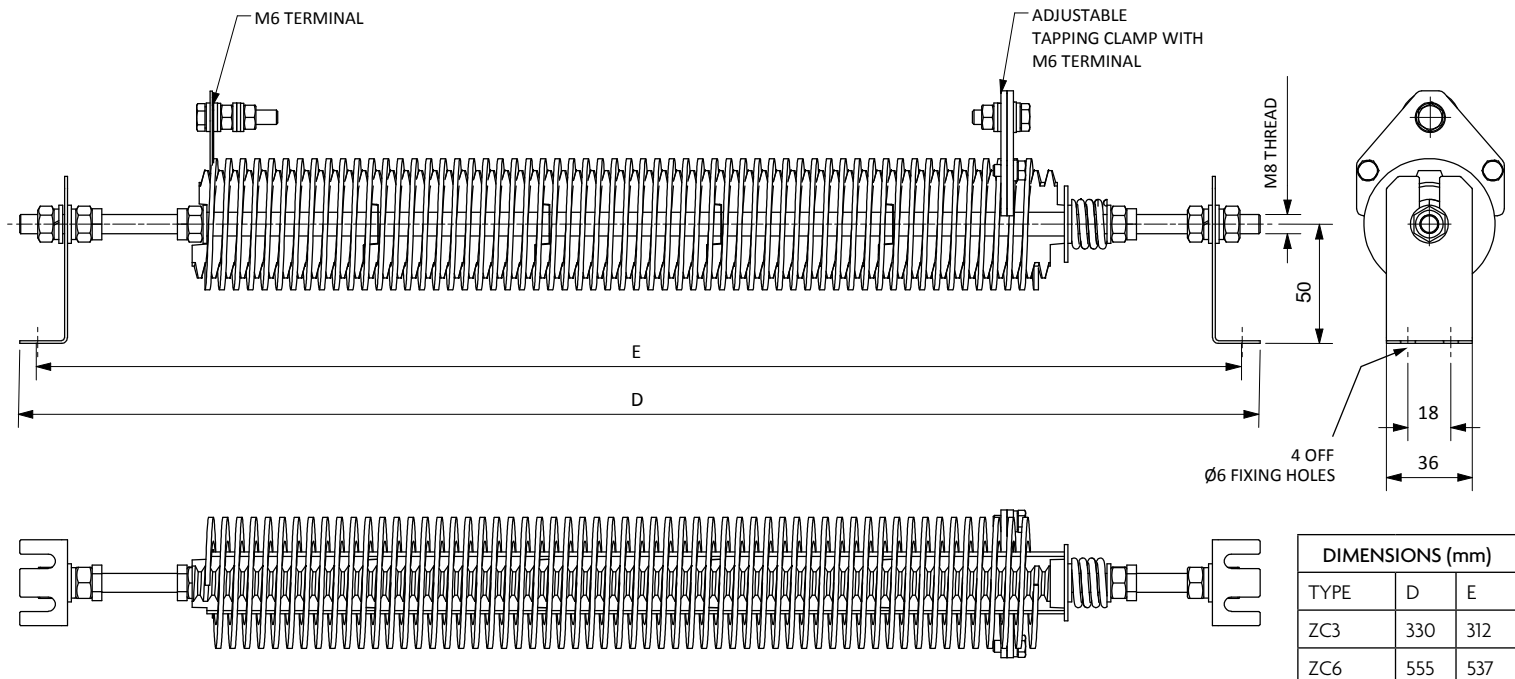
The assigned power ratings are for elements mounted horizontally in free air, for elements mounted vertically apply a derating factor of 20% to the values shown.

Resistor elements get hot when in operation ensure any adjacent surfaces are non-flammable.

Cable crimps should be uninsulated and cable should be rated for a 155°C

Any cables should be positioned to the side and below the element (out of the hot air path).

Minimum horizontal spacing 90mm.



DERATING TABLE

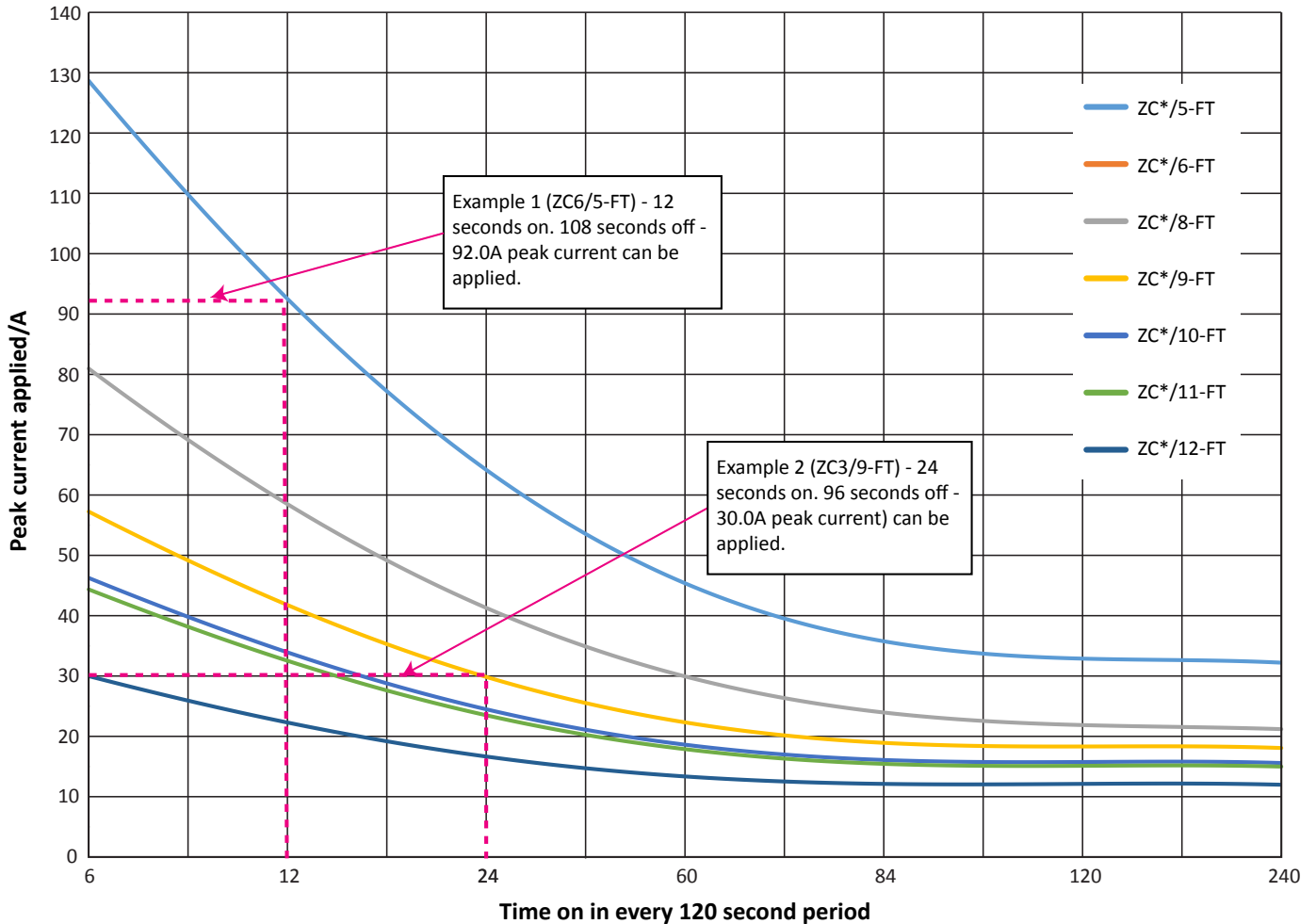
The following graph shows the permissible repetitive current that can be applied to a resistor element based on a total time in circuit of 120 seconds:

For example:

1. The maximum current that can be applied on a repeating cycle to a ZC6/5-FT which is in circuit for 12 seconds and then off for 108 seconds (10%) is 92A.

2. The maximum current that can be applied on a repeating cycle to a ZC3/9-FT which is in circuit for 24 seconds and then off for 96 seconds (20%) is 30.0 A.

ZC MAXIMUM CURRENTS



Other Cressall resistor products available through RS Components

ES Braking Resistors

Suitable for applications needing high power in a small space. Open wire wound construction makes them particularly suitable for repetitive short term power overloads.



HP Coils

A versatile range of resistor elements for continuous and high energy short time duties. They are ideal for motor control and load testing.



Cressall is Britain's leading power resistor manufacturer. The advanced design and technology we use to produce them mean that Cressall Resistors are an essential component of the power generation, electric vehicle, rail traction, defense, renewable energy, marine and offshore industries.

To find out more about the full range of our resistor types and their fields of application, [email our sales office](mailto:sales@cressall.com), visit our website www.cressall.com or ring us today for a copy of our latest catalogue.