

# ALUMINUM HOUSED RESISTOR

## TYPE HCH SERIES

### INTRODUCTION

TE Connectivity (TE) is pleased to introduce this new wire wound power resistor. Designed and tested to absorb high power overloads they are ideally suited to braking applications.



### FEATURES

- High power overload capability
- IP54 ingress protection
- PTFE insulated Flying Leads for flexibility of connection

### ELECTRICAL CHARACTERISTICS

Feature	Specification
Power Rating	See Performance Specification
Tolerance	±5%, ±10%
Maximum Working Voltage*	1100 V
Insulation Resistance	>100 MΩ @ 1000 VDC
Dielectric Strength	3500 VAC for 1m Terminal - Aluminium Body
TCR	±200 ppm/°C
Resistor Element	Wire Wound
Flying Lead	300 mm Standard; PTFE Insulated 16 AWG; 1000 V; 200 °C
Resistor Body	Anodized extruded Aluminium Profile
Ingress Protection	IP54

\*Rated Continuous Working voltage (RCWV) =  $\sqrt{P \cdot R}$  unless this exceeds the stated Maximum Working Voltage, in which case the lower of the two should always be used.

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## ENVIRONMENTAL CHARACTERISTICS

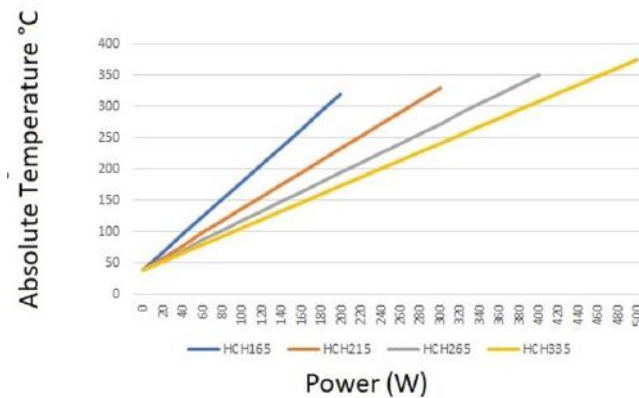
Characteristic	Requirement	Test Method
Load Life	$\Delta R \pm 5\%$	Resistors mounted in vertical orientation, leads downwards. RCWV 1000Hrs - 90 minutes on, 30 minutes off
Damp Heat Steady State	$\Delta R \pm 1\%$	Humidity chamber 40 °C / 95% humidity for 56 days
Insulation Resistance	>100 M $\Omega$	Tested for insulation resistance with a calibrated meter at 1000 V
Dielectric Strength	Leakage Current <500 $\mu$ A	3500 VAC for 1m Terminal - Aluminium Body
Pulse Overload	No Physical Damage $\Delta R \pm 5\%$	Resistors mounted as per load life test. Specified overload power applied for 1, 5, and 40 seconds within a 120 seconds cycle comprising of both on and off periods. Test cycle repeated 10,000 times
Ingress Protection	IP54	IP Testing carried out at a NABL accredited test lab. The resistors were tested for dust and moisture ingress resistance under clauses 13.5.1, 13.5.2 and 14.2.4 and 14.3. Resistors passed the test without any issues.

## PERFORMANCE SPECIFICATION

Type	HCH165	HCH215	HCH265	HCH335
Power Rating (W) @40°C	200	300	400	500
Max. Temperature °C	320	330	350	375
Resistance Range	6.8 $\Omega$ - 220 $\Omega$	6.8 $\Omega$ - 220 $\Omega$	10 $\Omega$ - 220 $\Omega$	10 $\Omega$ - 220 $\Omega$

For Higher / Lower Resistance Value please enquire

## TEMPERATURE RISE CHART



## OVERLOAD RATING

The resistors were tested by applying the specified overload power for 1 or 5 or 40 seconds within a 120 seconds cycle comprising of both on and off periods. These are equivalent to duty cycles of 0.83%, 4.16% and 33.3% which are typical braking cycles used in drive systems.

### HCH165

Type	Value ( $\Omega$ )	Power Rating (W) @ 40 °C	Pulse load (W) 40 °C 120 s Duty cycle		
			1 s Pulse	5 s Pulse	40 s Pulse
HCH165	6.8	200	7000	2200	450
	33		6200	2200	450
	82		6200	2000	450
	220		5800	2000	450

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## HCH215

Type	Value ( $\Omega$ )	Power Rating (W) @ 40 °C	Pulse load (W) 40 °C 120 s Duty cycle		
			1 s Pulse	5 s Pulse	40 s Pulse
HCH215	6.8	300	12000	4600	675
	22		12000	4600	675
	100		7500	4600	675
	220		7500	4600	675

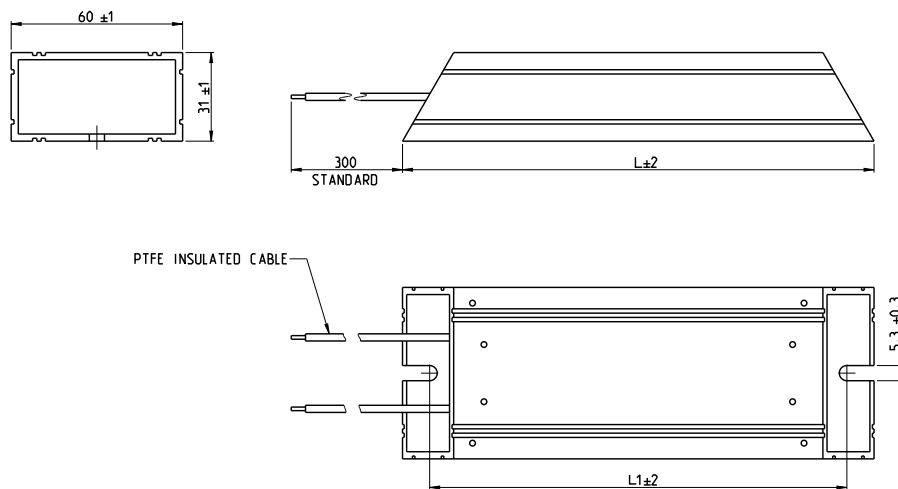
## HCH265

Type	Value ( $\Omega$ )	Power Rating (W) @ 40 °C	Pulse load (W) 40 °C 120 s Duty cycle		
			1 s Pulse	5 s Pulse	40 s Pulse
HCH265	10	400	15900	5800	900
	33		16200	5800	900
	100		10200	5800	900
	220		7500	5800	900

## HCH335

Type	Value ( $\Omega$ )	Power Rating (W) @ 40 °C	Pulse load (W) 40 °C 120 s Duty cycle		
			1 s Pulse	5 s Pulse	40 s Pulse
HCH335	10	500	23000	6200	1125
	33		23000	6200	1125
	100		15000	6200	1125
	220		12000	6200	1125

## DIMENSIONS (Unit:mm)



Type	L (mm)	L1 (mm)
HCH165	165	146
HCH215	215	196
HCH265	265	246
HCH335	335	316

## PACKAGING

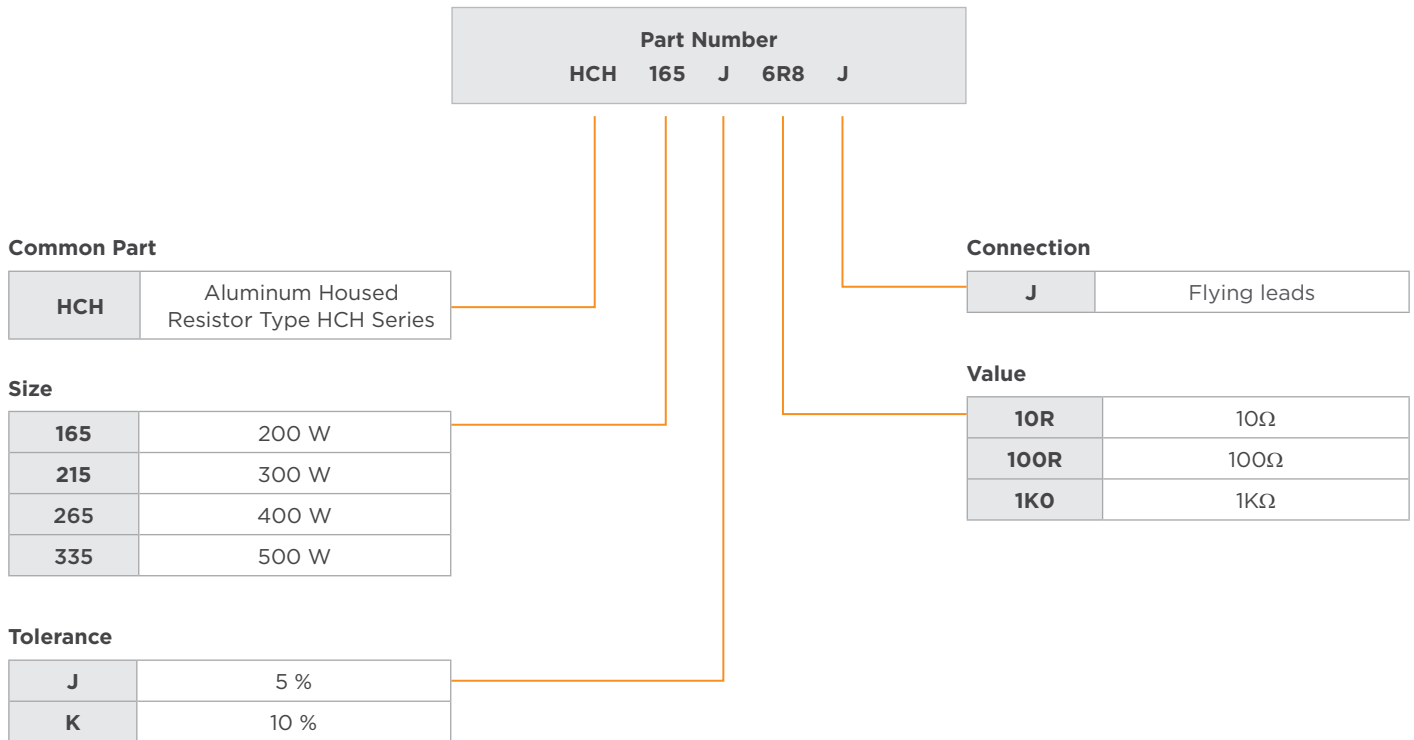
Resistors will be packaged individually in boxes.

## MARKING

Resistors will be marked with

- Type
- Resistance value
- Tolerance Code
- Date / Batch code

## ORDERING INFORMATION



[te.com](https://www.te.com)

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