

## DATA SHEET FOR DYNAMIC BRAKING RESISTORS


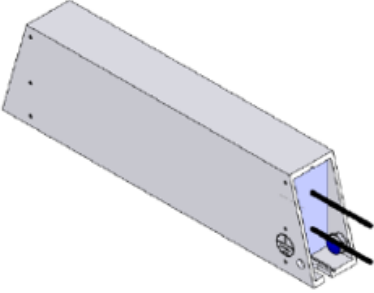

### 1. Part description

This data sheet provides technical information for the following types of dynamic braking resistor supplied by Fairfield:

RFD 200	(100 W)
RFP V 300	(300 W)
RFP V 500	(500 W)

### 2. Warnings

Please observe the following warnings.

 <p><b>WARNING</b></p>	<p><b>High temperatures – Risk of burn</b>            Braking resistors can reach high temperatures.            Do not mount the resistor on a combustible surface.            Locate the braking resistor so that inadvertent contact is not possible.            Provide adequate ventilation            Use cable with insulation capable of withstanding high temperatures</p>	
 <p><b>WARNING</b></p>	<p><b>Thermal overload protection must be used</b>            The thermal switch must be incorporated into the overload protection circuit.            The thermal protection circuit must disconnect the AC supply to the drive if the resistor becomes overloaded due to a fault.</p>	

### 3. Resistor selection

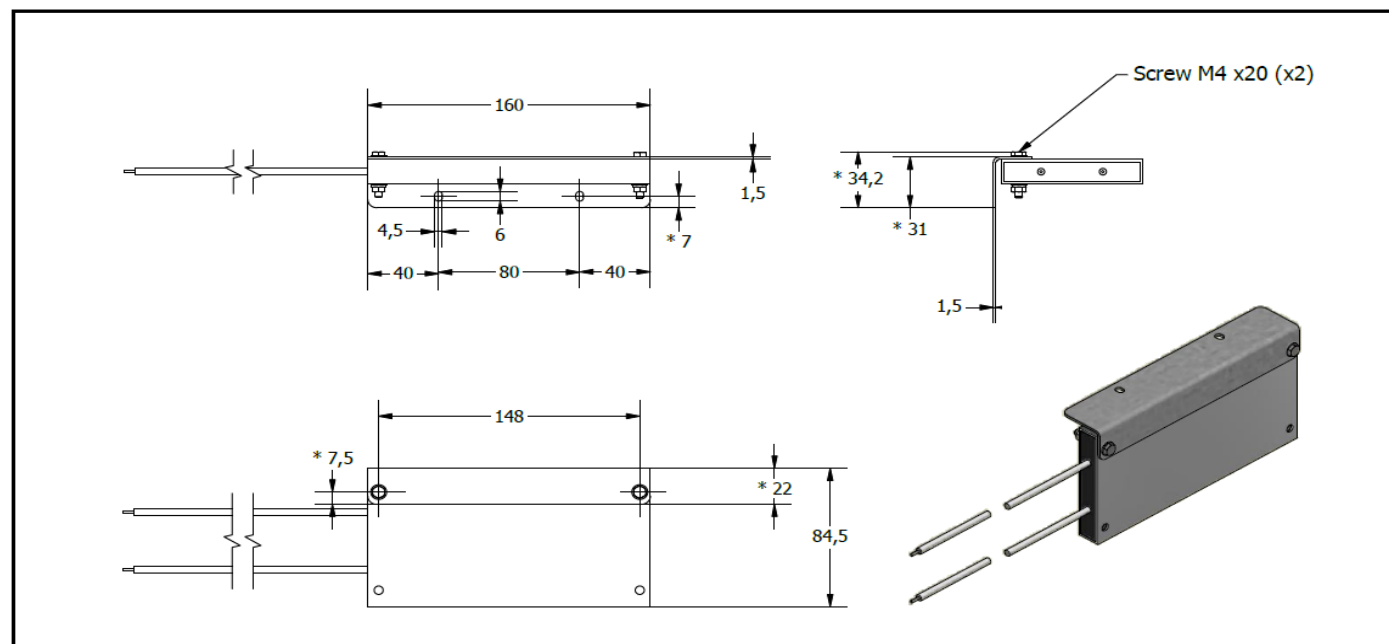
The resistance of the braking resistor must be higher than the minimum resistance specified in the drive *User Guide*.  
 The required Pulse Power rating must be calculated to suit the application. Refer to the Drive *User Guide*.

### 4. Installation

The resistor must be mounted as shown in the data table below.  
 The resistor housing must be grounded.  
 The cable between the resistor and the drive must be shielded if the cable is not fully enclosed inside a metal enclosure. The cable does not need to be screened if the braking resistor and drive are both fully enclosed inside the same metal enclosure.

### 5. Installation bracket for RFD 200

An optional installation bracket is available for use with the RFD 200 resistor, part number 6541-0305-00. The dimensions are shown below.



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#### 6. RFD 200 data

RFD 200 (100 W)									
CT Part number		1220-2201	1220-2401	1220-2501	1220-2681	1220-2801	1220-3101	1220-3131	1220-3271
Pulse Power (W) Ta ~ 40 °C. Referred to a cycle duration of 120 s. Approximate value (depending on resistance)	ED 6 %	900							
	ED 15 %	500							
	ED 25 %	300							
	ED 40 %	200							
Resistance values at 20 °C		20 Ω	40 Ω	50 Ω	68 Ω	80 Ω	100 Ω	135 Ω	270 Ω
Degree of protection (EN 60529)		IP54							
Nominal continuous power (W) Ta ~ 40 °C		100 W							
Tolerance of resistance at 20 °C		± 10 %							
Cooling		Natural convection							
Housing temperature at nominal continuous power Ta ~ 40 °C		~ 250 °C							
Minimum distance to other equipment		> 20 mm							
Electrical connection		2 x AWG 14 / L = 50 cm							
Operating temperature range		-25 to +40 °C							
Maximum permissible operating voltage		UL 1000 V / CE 1000 VDC							
Thermal switch operating temperature		150 °C							
Testing voltage		4 kV AC (1 s)							
Approvals / marking		UL file E228809							
Mounting positions									
Dimensions		<p><b>Resistor Cables:</b>            SINGLE CORE CABLE WITH FLEXIBLE CONDUCTOR SILICONE RUBBER INSULATED WITH FIBERGLASS BRAID GSFV AWG 14 White UL STYLE 3071-200°C 600V</p>							

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### 7. RFP V 300 data

#### RFP V 300 (300 W)

CT part number	1220-2206	1220-2508	1220-2686	1220-2802	1220-3108	1220-3136	1220-3276	
Pulse Power (W) Ta ~ 40 °C. Referred to a cycle duration of 120 s. Approximate value (depending on resistance)	ED 6 %							UL 2250 W / CE 2700 W
	ED 15 %							UL 1250 W / CE 1500 W
	ED 25 %							UL 750 W / CE 900 W
	ED 40 %							UL 500 W / CE 600 W
Resistance values at 20 °C	20 Ω	50 Ω	68 Ω	80 Ω	100 Ω	135 Ω	270 Ω	
Degree of protection (EN 60529)	IP54							
Nominal continuous power (W) Ta ~ 40 °C	UL240 W / CE 300 W							
Tolerance of resistance at 20 °C	± 10 %							
Cooling	Natural convection							
Housing temperature at nominal continuous power Ta ~ 40 °C	UL ~300 °C / CE ~ 360 °C							
Minimum distance to other equipment	> 20 mm							
Electrical connection	PTFE single core AWG14 360°C 1000 V style 10724 long 300 mm ± 5 mm							
Operating temperature range	-25 to +40 °C							
Maximum permissible operating voltage	UL 1000 V / CE 1000 VDC							
Thermal switch operating temperature	150 °C							
Thermal switch rated voltage AC/ DC	AC: 250 V (VDE) 277 V (UL) / DC: 12 V							
Testing voltage	4 kV AC (1 s)							
Approvals / marking	UL File: E228809							
Mounting positions								
Dimensions	<p><b>Resistor Cables:</b> PTFE Single Core Cable AWG14 Style 10724 300°C 1000V</p>							

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### 8. RFP V 500 data

RFP V 500 (500 W)						
CT Part number	1220-2208	1220-2509	1220-2688	1220-2803	1220-3107	1220-3278
Pulse Power (W) Ta ~ 40 °C. Referred to a cycle duration of 120 s. Approximate value (depending on resistance)	ED 6 %	UL 3600 W / CE 4500 W				
	ED 15 %	UL 2000 W / CE 2500 W				
	ED 25 %	UL 1200 W / CE 1500 W				
	ED 40 %	UL 800 W / CE 1000 W				
Resistance values at 20 °C	20 Ω	50 Ω	68 Ω	80 Ω	100 Ω	270 Ω
Degree of protection (EN 60529)	IP54					
Nominal continuous power (W) Ta ~ 40 °C	UL 370 W / CE 500 W					
Tolerance of resistance at 20 °C	± 10 %					
Cooling	Natural convection					
Housing temperature at nominal continuous power Ta ~ 40 °C	UL ~300 °C / CE ~ 360 °C					
Minimum distance to other equipment	> 20 mm					
Electrical connection	PTFE single core AWG14 360°C 1000 V style 10724 long 300 mm ± 5 mm					
Operating temperature range	-25 to +40 °C					
Maximum permissible operating voltage	UL 1000 V / CE 1000 VDC					
Thermal switch operating temperature	150 °C					
Thermal switch rated voltage AC/ DC	AC: 250 V (VDE) 277 V (UL) / DC: 12 V					
Testing voltage	4 kV AC (1 s)					
Approvals / marking	UL File: E228809					
Mounting positions						
Dimensions	<p>Resistor Cables: PTFE Single Core Cable AWG14 Style 10724 300°C 1000V</p>					