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# **DIRECT**

## **Electronics Tech.**

# **(DST) Tubular Round Edge Wound Power Resistor**

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**▶ Product Introduction**

**Tubular edge-wound power resistor starter (DST) is suitable for application loads involving brief current surges.**

**(DST) Starter Construction:**

- A tubular ceramic insulator has a fixed number of windings and is wound with heavy alloy wire as a resistance element. The staggering wound is made according to the desired resistance value, followed by the placement of the component mounts.
- Metal parts are heavily plated to prevent oxidation at high operating temperatures and to prevent corrosion. DST's high power rating (500W~1000W) and low resistance value (0.5Ω-7Ω) provide applications high starter power and capacity.
- This power wirewound resistor is high temperature-resistant, dissipates heat well, has a low temperature coefficient that varies in direct proportion, and is suitable for application loads involving brief current surges.

**Applications:**

- Typical applications as motor starters, load measurements, industrial machinery resistor, electric distribution resistors, dynamic braking resistors, load dumping resistor, current limiting resistors, instrumentation, and automation control installations.
- Due to the set number of windings on the ceramic form, the resistance value range is relatively low. Tolerance is  $\pm 10\%$  and this product is available in various shapes or in resistance boxes.

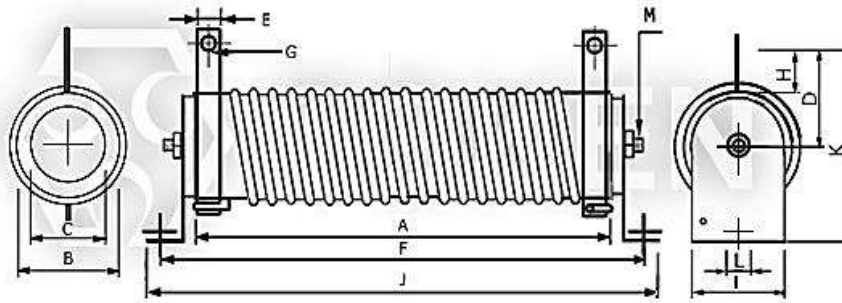
The (DST) Series is RoHS compliant and lead free. For non-standard technical requirements and special applications, please contact us. For more dynamic braking resistors, please link to Direct official website "[High Power Resistors](http://www.direct-token.com)" to get more information.



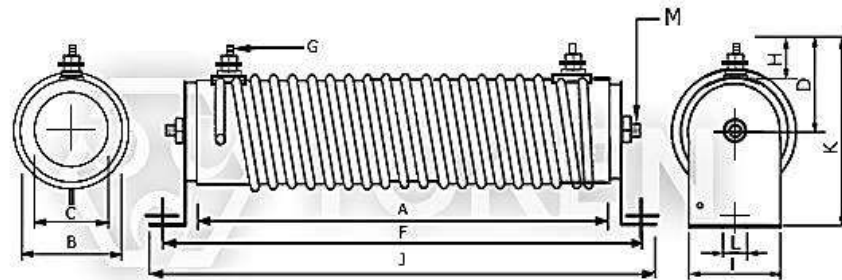
**► Dimensions**

**Power Starter Dimensions (DST)**

Wattage Rating	Dimensions (Unit: mm)												Resistance Range(Ω)	
	A	B	C	D	E	F	G	H	I	J	K	L		Weight
<b>500W</b>	280	40	23	45	15	326	6	22	34	346	85	8	970/g	3.5Ω-7Ω
<b>600W</b>	300	44	26	50	15	342	8	32	34	362	90	8	1277/g	0.5Ω-3Ω
<b>1000W</b>	420	48	30	56	15	470	8	32	40	490	105	9	1887/g	0.8Ω-3Ω



**Power Starter (DST 500W) Dimensions**



**Power Starter (DST 600W ~ 1000W) Dimensions**

● **Notice: All dimensions might be changed or modified, please refer to last updating specification.**

**► Order Codes**

**Order Codes (DST)**

DST	1000W	0.5R	K	G
Part Number	Rated Power (W)	Resistance Value (Ω)	Resistance Tolerance (%)	Assembly Method
DST	500W~1000W	Indicates resistance value in units of ohms.	K ±10%	C Clip Mount.
				G Horizontal Mount.
				N No Mount.
				Z Vertical Mount.



## ► General Information

### Benefits & Features

Providing design engineers with an economical resistor with high quality performance, Direct Electronics offers industry grade power wire wound devices.

Direct provide terminal blocks, thermal switches, fusing, fans, junction boxes, screened or solid bottom plates, conduit knockouts, and customer specified requirements. For large applications a welded frame construction is utilized to provide a robust design for power resistor mounting in both indoor and outdoor environments.

Products range from large capacity metal clad, nonflammable fixed and adjustable, wave ribbon wire-wound, slide, starter, box type, to nonflammable flat type. Direct extends a complete line for both military and commercial applications.

### Utilization Notes

1. Smoke emitted from non-flammable resistors on initial use in powered circuits is a normal phenomenon and the component can be safely utilized.
2. All resistors manufactured by Direct Electronics Industry Corporation comply with the U.S. UL-94 non- flammability test, Class V-0, a continuous combustion period of zero seconds.
3. Never use organic solvents to clean non-flammable resistors.
4. Non-flammable resistors cannot be utilized in oil.
5. Non-flammable resistors cannot be used in high frequency machinery because of the inductance produced by the windings. A suitable type of resistor must be selected. Contact us for details.
6. In applications where resistors are subject to intermittent current surges and spikes, be sure in advance that the components selected are capable of withstanding brief durations of increased load.
7. Do not exceed the recommended usable load. Resistors must use within the rated voltage range to prevent the shortening of service life and/or failure of the wound resistance elements.
8. Minimum load. Resistors must be utilized at 1/10 or more of the rated voltage to prevent poor conductance due to oxidation build-up.
9. Although the hardness exceeds that of a 3H pencil lead, do not nick the resistor coating with screw drivers or other pointed objects.
10. Avoid touching non-flammable resistors in operation; the surface temperature ranges from approximately 350°C ~ 400°C when utilized at the full rated value. Maintaining a surface temperature of 200°C or less will extend resistor service life.
11. Keep temperature from rising by choosing a resistor with a higher rated capacity; do not use a component having the exact load value required. For considerations of safety in extended period applications, the resistor rating should be more than four times higher than the actual wattage involved, but never use a resistor at less than 25% of its rated power.
12. Application and Placement: Wire-wound resistors use different gauges of wire as resistance elements. Sometimes the gauge is extremely thin (finer than a strand of human hair) and very susceptible to breakage in environments containing salts, ash, dust and corrosives. Avoid utilization in such environments. Do not install in dusty areas because the accumulation will cause shorts and poor conductance.

