

Compact semiconductor Fan Heater

CS 028 / CSL 028 Series

150W to 400W



Photo: Fan Heater CSL 028

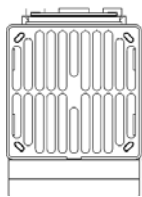
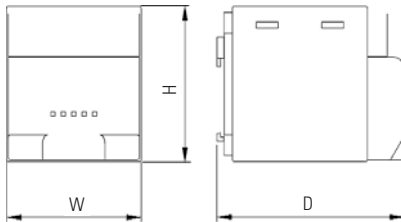
- Small, compact design
- Quiet in operation
- Dynamic heating up
- Clip or screw fixing

Fan heater prevents formation of condensation and frost and provides an evenly distributed interior air temperature in enclosures with electric/electronic components. The heater is connected using the internal terminal connectors. The small size of the CS 028 / CSL 028 makes it ideal for use in enclosures where space is at a premium.



Technical Data

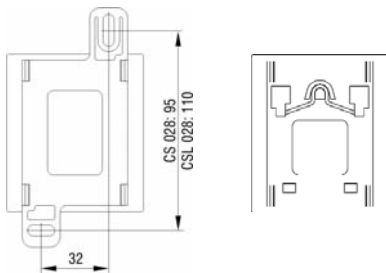
Heating element	PTC resistor - temperature limiting
Surface temperature	150W/250W: max. 50°C (122°F), except upper protective grille 400W: max. 65°C (149°F), except upper protective grille at 20°C (68°F) ambient temperature
Axial fan, ball bearing	air flow, free flow: CS 028: 13.8m³/h CSL 028: 45m³/h (230VAC), 54m³/h (120VAC) service life 40,000h at 40°C (104°F)
Connection	2-pole clamp max. 2.5mm² (CSL 028 with strain relief), clamping screw torque 0.8Nm max.
Casing	plastic according to UL94-0, black
Mounting	clip for 35 mm DIN rail, EN 60715 or screw fixing (Ø 5.3mm)
Fitting position	vertical airflow (air outlet up)
Operating / Storage temperature	-45 to +70°C (-49 to +158°F)
Operating / Storage humidity	max. 90% RH (non-condensing)
Protection type / Protection class	IP20 / II (double insulated)
Approvals	UL File No. E150057 (according to UL 499, intended for the use within an enclosure in accordance with UL 508A)
Note	230V versions: VDE other voltages on request



View: back side

Screw fixing

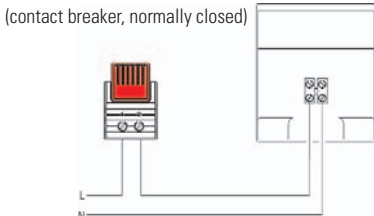
Clip fixing



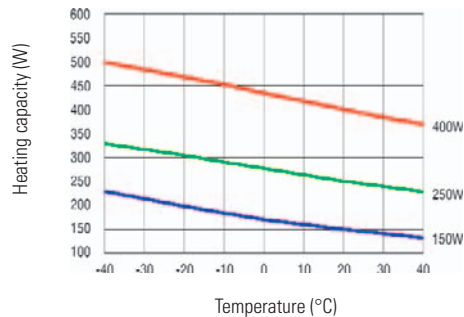
Example of connection

Thermostat FTO 011

Fan Heater CS(L) 028



Heating capacity / Ambient temperature diagram
CS 028 / CSL 028



Art. No. Clip fixing	Art. No. Screw fixing	Series	Operating voltage	Heating capacity*	Inrush current max.	Pre-fuse T (time-delay)	Dimensions	Weight approx.
02800.0-00	02800.0-01	CS 028	230VAC, 50/60Hz	150W	12A	6.3A	75 x 65 x 90mm	0.3kg
02811.0-00	02811.0-01	CSL 028	230VAC, 50/60Hz	250W	9A	6.3A	90 x 85 x 111mm	0.5kg
02810.0-00	02810.0-01	CSL 028	230VAC, 50/60Hz	400W	15A	10A	90 x 85 x 111mm	0.5kg
02800.9-00	02800.9-01	CS 028	120VAC, 50/60Hz	150W	6A	6.3A	75 x 65 x 90mm	0.3kg
02811.9-00	02811.9-01	CSL 028	120VAC, 50/60Hz	250W	6A	6.3A	90 x 85 x 111mm	0.5kg
02810.9-00	02810.9-01	CSL 028	120VAC, 50/60Hz	400W	9A	6.3A	90 x 85 x 111 mm	0.5kg

*at 20°C (68°F) ambient temperature

Specifications are subject to change without notice. Errors and omissions excepted. Suitability of this product for its intended use and any associated risks must be determined by the end customer/ buyer in its final application. 02.05.2011

Heating