

# TOUCH-SAFE PTC FAN HEATER

CSF 028 | 250 W, 400 W



CSF 028 with DIN clip



CSF 028 with screw mount tabs

- > Compact size
- > Integrated pre-set thermostat
- > Quiet operation
- > Heating power adjusts to ambient temperature
- > DIN rail or screw tab mount available

The CSF 028 fan heater prevents formation of condensation and provides evenly distributed interior air temperature in enclosures. The touch-safe plastic housing and the small size makes it ideal for use in enclosures with a high packing density. The heater is equipped with a fixed set point thermostat and is easily wired via external pressure clamps. Two different mounting options are available - DIN rail or screw tabs. The robust screw tab mounting is particularly suitable for applications with high vibration.



## TECHNICAL DATA

|                                    |                                                                                                                                    |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Heating element                    | PTC resistor - temperature limiting                                                                                                |
| Surface temperature                | 250 W: max. 122 °F (50 °C), 400 W: max. 149 °F (65 °C)<br>each except upper protective grille at 68 °F (20 °C) ambient temperature |
| Overheat protection                | built-in temperature limiter                                                                                                       |
| Axial fan, ball bearing            | service life 40,000 h at 104 °F (+40 °C)                                                                                           |
| Axial fan, free blowing            | 32 cfm (54 m³/h) @ AC 120 V; 26 cfm (45 m³/h) @ AC 230 V                                                                           |
| Connection                         | 2-pole dual pressure clamp for solid wire AWG 14 max. (2.5mm²),<br>stranded wire (with wire end ferrule) AWG 16 max. (1.5 mm²)     |
| Housing                            | plastic according to UL 94V-0, black                                                                                               |
| Mounting                           | clip for 35 mm DIN rail, EN 60715 or screw mount (Ø 5.5 mm),<br>clamping torque 2 Nm max., washers must be used                    |
| Mounting position                  | vertical airflow (air outlet up), horizontal airflow                                                                               |
| Dimensions                         | models with DIN clip: 4.13 x 3.35 x 4.65" (105 x 85 x 118 mm),<br>models w/ screw tabs: 4.13 x 4.53 x 4.25" (105 x 115 x 108 mm)   |
| Weight                             | 17.6 oz. (500 g)                                                                                                                   |
| Operating / Storage temperature    | -40 to +158 °F (-40 to +70 °C) / -49 to +158 °F (-45 to +70 °C)                                                                    |
| Operating / Storage                | max. 90 %RH (non-condensing)                                                                                                       |
| Protection class / Protection type | II (double insulated) / IP20                                                                                                       |
| Approvals                          | UL File No. E150057, VDE                                                                                                           |

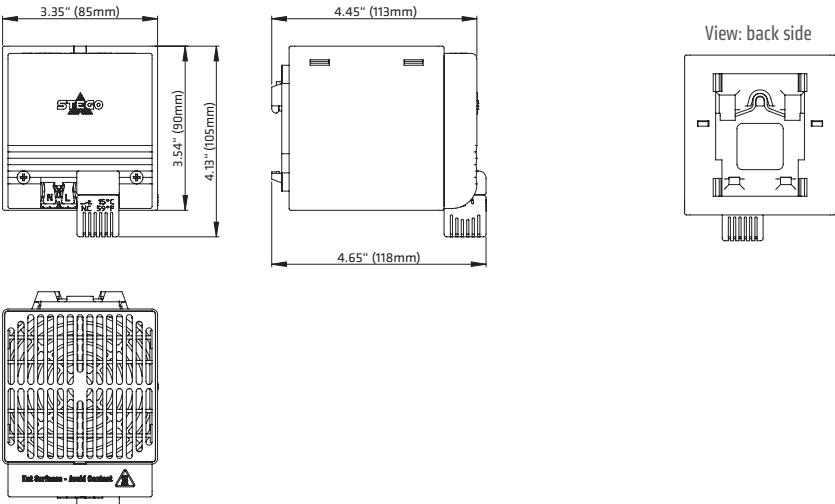
| Part No. -<br>DIN mount | Part No. -<br>screw tab mount | Operating voltage  | Heating<br>capacity <sup>1</sup> | Inrush current<br>max. | Pre-fuse T<br>(time-delay) | Switch-off temperature <sup>2</sup> | Switch-on temperature <sup>2</sup> |
|-------------------------|-------------------------------|--------------------|----------------------------------|------------------------|----------------------------|-------------------------------------|------------------------------------|
| 02821.9-06              | 02821.9-08                    | AC 120 V, 50/60 Hz | 250 W                            | 6 A                    | 10 A                       | 59 °F (15 °C)                       | 41 °F (5 °C)                       |
| 02821.9-09              | 02821.9-11                    | AC 120 V, 50/60 Hz | 250 W                            | 6 A                    | 10 A                       | 77 °F (25 °C)                       | 59 °F (15 °C)                      |
| 02820.9-06              | 02820.9-08                    | AC 120 V, 50/60 Hz | 400 W                            | 9 A                    | 10 A                       | 59 °F (15 °C)                       | 41 °F (5 °C)                       |
| 02820.9-09              | 02820.9-11                    | AC 120 V, 50/60 Hz | 400 W                            | 9 A                    | 10 A                       | 77 °F (25 °C)                       | 59 °F (15 °C)                      |
| 02821.0-06              | 02821.0-08                    | AC 230 V, 50/60 Hz | 250 W                            | 9 A                    | 10 A                       | 59 °F (15 °C)                       | 41 °F (5 °C)                       |
| 02821.0-09              | 02821.0-11                    | AC 230 V, 50/60 Hz | 250 W                            | 9 A                    | 10 A                       | 77 °F (25 °C)                       | 59 °F (15 °C)                      |
| 02820.0-06              | 02820.0-08                    | AC 230 V, 50/60 Hz | 400 W                            | 15 A                   | 16 A                       | 59 °F (15 °C)                       | 41 °F (5 °C)                       |
| 02820.0-09              | 02820.0-11                    | AC 230 V, 50/60 Hz | 400 W                            | 15 A                   | 16 A                       | 77 °F (25 °C)                       | 59 °F (15 °C)                      |

<sup>1</sup> at 68 °F (20 °C) ambient temperature; <sup>2</sup> tolerance of ±5 K

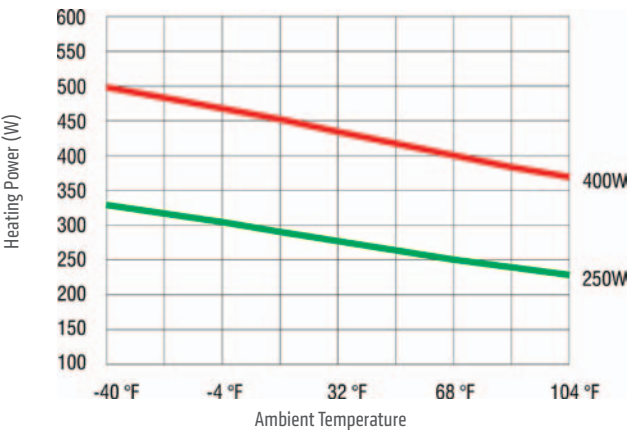
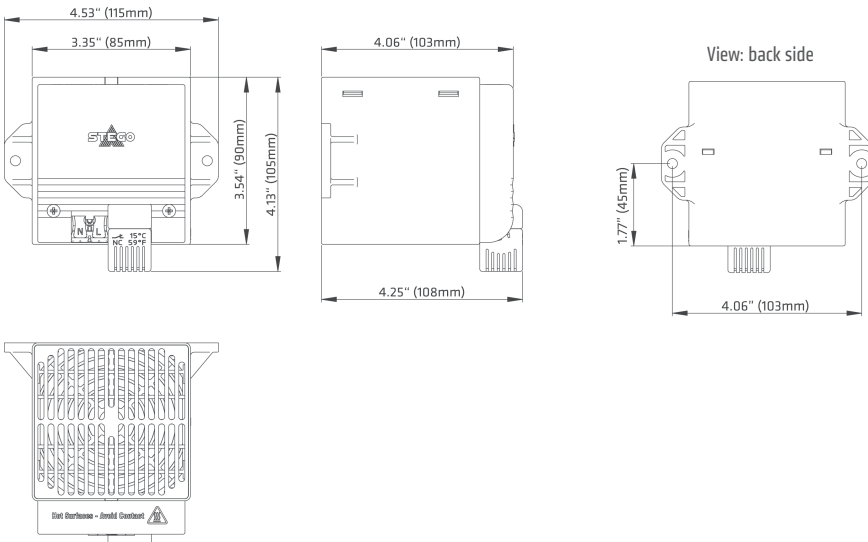
Note: Other Switch-off and Switch-on temperatures on request

TECHNICAL DRAWINGS

DIN RAIL MOUNT



SCREW TAB MOUNT



Wiring example  
Fan heater CSF 028

