Channel Strip Heaters
Ceramic Insulated

- A Reliable Heat Source
  with Seamless Stainless Steel Sheath
- Flat Surface Mounting Installations
- Used in Hundreds of Industrial and Commercial
  Heating Applications

Typical Applications
- Ovens
- Hot Plates
- Dies
- Molds
- Drying
- Melting
- Baking
- Incubators
- Platens
- Food Warmers
- Welding Preheating
- Air Heating
- Sealing Bars
- Thermoforming
- Tank Heating

A Type 304 Stainless Steel sheath provides the best combination of physical strength and resistance to high temperatures and chemical corrosion. Dependable at sheath temperatures of up to 650°C (1200°F).

B Stainless Steel 10-32 threaded screws are standard and are securely fastened. Various termination configurations and options are available.

C Specially selected and designed ceramic insulator houses the resistance wire coil, insulating it from the outer sheath.

D Helically wound resistance wire coil made from nickel-chrome wire is evenly stretched and precisely strung through the ceramic insulator, providing uniform heat. Resistance wire is then mechanically connected to screw terminals or lead wires for a strong positive joint.

E A custom mixture of several high purity magnesium oxide grain sizes, chosen to increase thermal conductivity and dielectric strength, are used to fill all remaining space inside and around the ceramic insulator. Voids are densely packed.

F Channel strip heaters are available with or without mounting tabs. If without, the ends are silver soldered shut to prevent moisture and contaminants from entering the heater. Tabs are not available on 6.35 thick x 16 mm wide (¼ x ⁵⁄₈”) heaters.

Agency Approvals
Channel Strip Heaters have been certified as Recognized Components by Underwriters Laboratories (File Number E65652) under CCN KSOT2/8 to meet UL standard 499 and Canadian Standard C22.2, No 72.

This file specifies the end use limitations and conditions of acceptability for the use of this type of heater. For additional information consult OMEGA.

If you require UL, CSA, or other NRTL Agency Approvals, please specify when ordering.
Channel Strip Heaters
Ceramic Insulated

Channel Strip Heaters have proven to be extremely efficient and dependable as a heat source for surface heating in hundreds of industrial and commercial applications. The rectangular tube gives full surface contact when used in a milled slot to provide maximum heat transfer area.

For surface mounting installations, channel strip heaters must be securely clamped along their entire length to a smooth metal surface. When supported by mounting tabs, the terminal end should be secured firmly. Opposite end should be loose to allow for thermal expansion.

PERFORMANCE RATINGS
Maximum Sheath Temperature: 650°C (1200°F)
Nominal Watt Density: 20 Watts/in² (3.1 Watts/cm²)
Maximum Watt Density: 45 Watts/in² (dependent on design parameters)

ELECTRICAL SPECIFICATIONS
Maximum Voltage: 480 Vac (dependent on design parameters)
Maximum Recommended Voltage with Leads: 480V
Maximum Amperage:
Lead Wire Termination: 10 amp
Screw Terminations: 10-32UNF—25 amp
Resistance Tolerance: 10%, -5%
Wattage Tolerance: 5%, -10%

PHYSICAL SIZE CONSTRUCTION LIMITATIONS
Width:
16 mm (⅜") Wide Heaters: +0.000, -0.005"
25 mm and 38 mm (1 and 1½") Wide Heaters: +0.000, -0.010"
Thickness:
6 mm (¼") Thick Heaters: +0.000, -0.005"
8 and 10 mm (⅛ and ⅜") Thick Heaters: +0.000, -0.008" [10 mm (¾") thick heaters have radius corners]

Length:
Up to 24": ±¼"
Over 24": ±½"
Mounting Slot Size: Standard 8 x 13 mm (⅜ x ½"
Special Bushings: 13 x 16 mm (⅞ x ⅜"

OMEGA Offers Channel Strip Heaters in Four Rectangular Sizes

16 W x 6 mm thick (¼" x ⅜"), Available without mounting tabs only.

25 W x 8 mm thick (1" x ⅜"), Available with or without mounting tabs. When supplied with Type L lead wire termination, mounting tabs are not available.

38 W x 8 mm thick (1½" x ⅜"), Available with or without mounting tabs. When supplied with Type L lead wire termination, mounting tabs are not available.

38 W x 10 mm thick (1½" x ⅜"), Available with or without mounting tabs. When supplied with Type L lead wire termination, mounting tabs are not available. [10 mm (¾") thick heaters have radius corners]

Standard Specifications and Tolerances of Channel Strip Heaters If tighter tolerances are required, consult OMEGA.
Channel Strip Heaters
Screw Terminal Terminations

**Type T1** 10-32 Screw Terminals at each end
Available on 25 and 38 mm (1 and 1½") wide heaters

**Type T2** 10-32 Screw Terminals (Tandem) at one end
Available on 25 and 38 mm (1 and 1½") wide heaters

**Type T3** 10-32 Screw Terminals (Parallel) at one end
Available on 38 mm (1½") wide heaters only

**Type T4** 10-32 Terminals offset at one end
Available on 38 mm (1½") wide heaters only

To order, call 1-800-826-6342 or shop online at omega.com
Channel Strip Heaters
Lead Wire Terminations

Type L
Flexible lead wires exit from end of heater. 254 mm (10") long leads standard; if longer leads are required, specify. Recommended only for tight quarters or where flexibility of the lead wire is required. Not available on heaters with tabs.

Maximum Amps: 10 at 240 Vac  Maximum Volts: 480

Type L1
Flexible lead wires exit from top of heater. 254 mm (10") long leads standard; if longer leads are required, specify.

Maximum Amps: 10 at 240 Vac  Maximum Volts: 480

Type W1
Wire braid provides strength and protection to the lead wire insulation, offering sharp bending not possible with armor cable. 254 mm (10") of wire braid over 12" long leads is standard; if longer leads or braid are required, specify.

Maximum Amps: 10 at 240 Vac  Maximum Volts: 480

Type W2
Stainless steel braid over each lead wire offers sharp bending not possible with armor cable, as well as abrasion protection. 254 mm (10") long leads standard; if longer leads are required, specify. Not available on heaters with tabs.

Maximum Amps: 10 at 240 Vac  Maximum Volts: 480

Type R1
Armor cable provides strength and prevents contamination from getting into the heater. 254 mm (10") of armor over 305 mm (12") long leads are standard; if longer leads or armor are required, please specify.

Maximum Amps: 10 at 240 Vac  Maximum Volts: 480

Type R1A: Galvanized cable  Type R2A: Stainless steel cable
Strip Heaters

Channel Strip Heaters
Lead Wire Terminations

Type R2
Right-angle armor cable prevents contamination from getting into the heater. 254 mm (10") of armor over 305 mm (12") long leads is standard; if longer leads or armor are required, please specify.

Maximum Amps: 10 at 240 Vac  Maximum Volts: 480

Type R2A  Galvanized cable
Type R2B  Stainless steel cable
Type R2C  Elbow and leads only (no cable)

Maximum Volts: 250

Type P
High-Temperature Quick Disconnect Plug. If armor protected lead wires are required, specify armor and lead length. Available on 38 mm (1 1/2") wide heaters only.

Maximum Amps: 10 at 240 Vac  Maximum Volts: 250

Type P1A  Cup only (UT900)
Type P1B  Cup and straight plug (H900)
Type P1C  Cup and 90° plug (HW900)
Type P1D  Cup, straight plug and galvanized cable
Type P1G  Cup, 90° plug and galvanized cable

Terminal Protection

Caution: Exposed electrical wiring on Strip Heaters is a violation of electrical safety codes, including OSHA.
**Channel Strip Heaters**

**Terminal Protection**

**Type C**
Terminal box has a 13 mm (1/2") trade size knockout (actual diameter 22 mm (7/8"). Box provides excellent protection to exposed terminals. If armor-protected lead wires are required, specify armor and lead length. Available on 25 and 38 mm (1 and 11/2") wide heaters.

- **Type CA** No cable or braid
- **Type CB** Galvanized cable
- **Type CC** Stainless steel cable
- **Type CD** Wire braid

**Type MP**
Specially designed box is welded to the Channel Strip Heater and potted with epoxy. The ends of the heater are also welded. Leads exit through a 1/2 NPT nut that can be located at the top or in the front of the box. Armor cable can be supplied with the male fitting, providing a completely sealed channel strip. Available on 38 mm (11/2") wide heaters only.

- 254 mm (10") long leads standard; if longer leads are required, specify.

**Maximum Amps:** 25  **Maximum Volts:** 480

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**Ceramic Covers for Insulating Terminals**

Igloo™ Ceramic terminal covers consist of two individual ceramic parts. With a tight-fitting cap and a solid base, an Igloo cover will fully insulate any standard 10-32 terminal lug used for electrical wiring hookups. Igloo covers can be assembled on all Channel Strip heaters with Type 1 and Type 4 screw terminals.

- **Type C6** Double Port In-Line
  - Part Number: CER-101-104

- **Type C7** Double Port 90°
  - Part Number: CER-101-106

- **Type C8** Single Port
  - Part Number: CER-101-107

Three different types of Igloo bases are available for your wiring convenience. Double Port In-Line, Double Port 90° and Single Port.

When ordering, specify the type of Igloo.
To order, call 1-800-826-6342 or shop online at omega.com

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Part numbers shown are for heaters with T2 Terminals and Mounting Tabs.

Part numbers shown are for heaters with T1 Terminals and Mounting Tabs.