



CRN TECNOPART, S.A.

Sant Roc 30
08340 VILASSAR DE MAR (Barcelona)
Tel 902 404 748 - 937 591 484 Fax 937 591 547
e-mail: crn@crntp.com [http:// www.crntecnopart.com](http://www.crntecnopart.com)



HS- 050.33E

hotspring® COIL HEATERS HOTSET

hotspring® / Q/ 3.0 x 3.0 (WRPQ 3.0 x 3.0)

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3.0 x 3.0

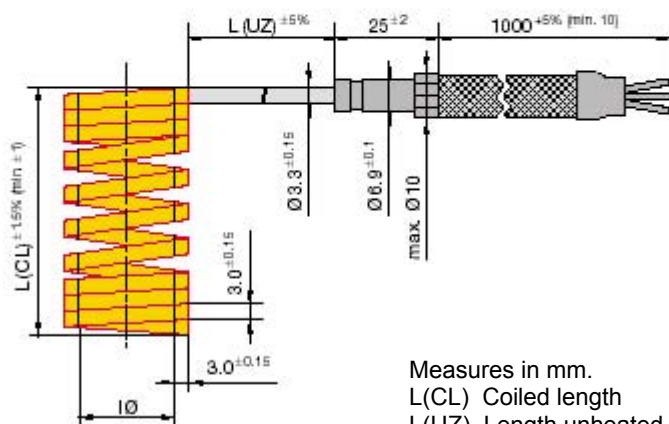


TECHNICAL DATA

- humidity-resistant hotspring® coil heater with square cross-section 3.0 x 3.0 mm
- Sheath material: Stainless Steel or Nickel
- Insulation sheath: high-compressed MgO
- Heating conductor compound: NiCr 8020
- Sheath temperature of heating element: max. 750 °C
- Voltage: max. 250 V, Standard: 230 V
- Power tolerance (cold): $\pm 10\%$ (< on request)
- High voltage strength (cold): min. 800 V-AC
- Insulation resistance (cold): $\geq 5 \text{ M}\Omega$ at 500 V-DC
- Leakage current (cold): $\leq 0.5 \text{ mA}$ at 253 V-AC
- Exit axial, radial or tangential,
- max. total length straight: 3000 mm
- min. length of unheated zone L_{UZ} : 25 mm plus connection head 25 mm
- length tolerance: heated zone: $\pm 1\%$
unheated zone: $\pm 5\%$
- Inner diameter tolerances without reflection tube:
up to $\varnothing 12 \text{ mm}$ -0.05/-0.20
up to $\varnothing 30 \text{ mm}$ -0.10/-0.30
up to $\varnothing 50 \text{ mm}$ -0.20/-0.40
> $\varnothing 50 \text{ mm}$ on request
with reflection tube: +0.05/+0.15
- Sheath surface load according to operating temperature and heat dissipation, max.
- minimum bending radius (internal):
heated zone: 4 mm
unheated zone: 4 mm
- Connection versions see page 2
- for connection-temperatures max. 260 °C
- deliverable with or without integrated thermocouple Fe-CuNi (type J, Standard) or NiCr-Ni (type K) (IEC 60584) ungrounded (standard) or grounded)
- deliverable with reflection tube
- deliverable with clamping band or clamping element

Approximate formula for calculation the stretched heated length of coiled heaters [mm]

$(\varnothing + 3.0) \cdot \pi \cdot \text{number of windings} = \text{heated length straight}$



Measures in mm.
L(CL) Coiled length
L(UZ) Length unheated zone

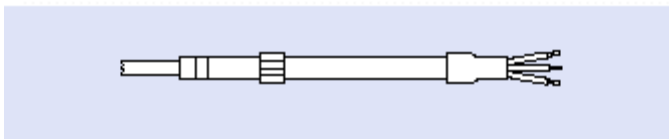
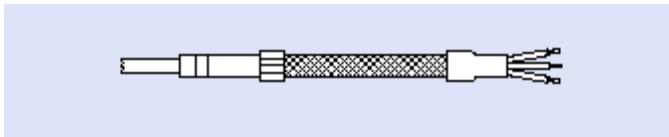
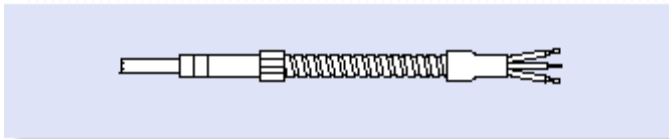
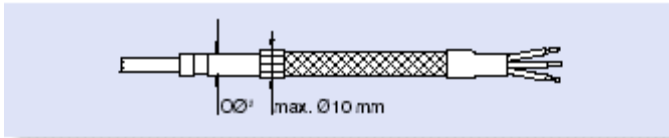
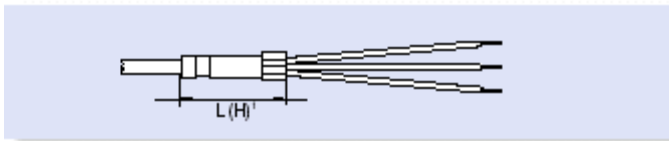
STANDARD MODELS

W a 230V	Length mm	Heated length mm	Thermocouple TCJ
215	390	300	
215	390	300	X
325	540	450	
325	540	450	X
470	740	650	
470	740	650	X
610	940	850	
610	940	850	X
630	1140	1050	
630	1140	1050	X
950	1400	1310	
950	1400	1310	X

Other dimensions and product varieties on request.

We reserve the right to change technical details.

CONNECTION VERSIONS hotspring® / Q/ 3.0 x 3.0



Type N

- PTFE insulated Cu-nickel plated leads, multistranded (Standard)
- with ground wire

Type NG

- PTFE insulated Cu-nickel plated leads, multistranded (Standard) with glass silk insulated protective sleeving
- with ground wire

Type NM

- PTFE insulated Cu-nickel plated leads, multistranded (Standard) with flexible metal sleeving
- with ground wire

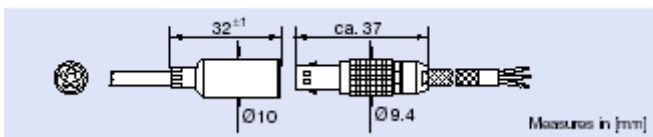
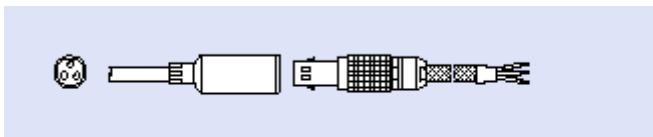
Type ND

- PTFE insulated Cu-nickel plated leads, multistranded (Standard) with braided metal sleeving
- with ground wire

Type NT

- PTFE insulated Cu-nickel plated leads, multistranded (Standard) with PTFE-sleeving
- with ground wire

(1) length of head L = 25 mm (Standard) or 20 mm
(2) other types on request



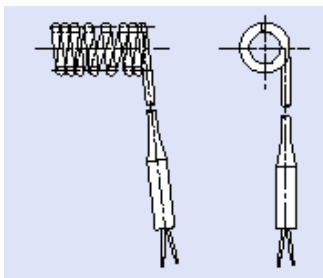
Plug connection, with 3 pins

maximum current at 20 °C max. 8,0 A

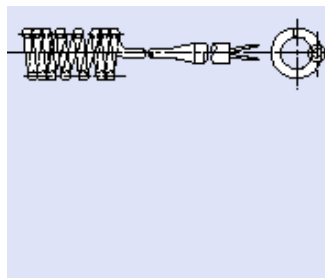
Plug connection, with 5 pins

maximum current at 20 °C max. 6,5 A

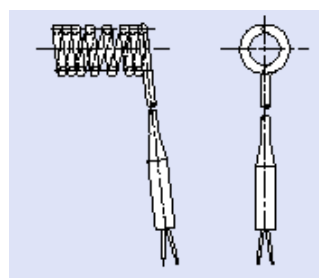
EXITS



Tangential



Axial



Radial