



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)

hotset

HS- 050.32E

hotspring® COIL HEATERS HOTSET

hotspring® F/1.8 x 3.2 y hotspring® F/2.2 x 4.2 (WRPF 2.2 x 4.2)

hotspring®/F/
1.8 x 3.2

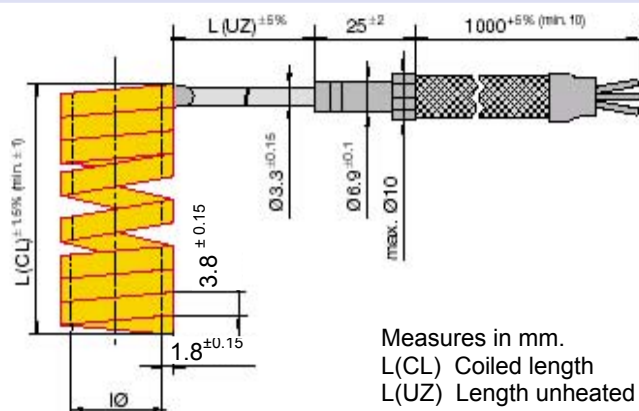


TECHNICAL DATA

- humidity-resistant hotspring® coil heater with flat cross-section 1.8 x 3.2 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, see page 6
- max. total length straight: 3000 mm
- min. length of unheated zone
Luz: 5 mm plus connection head 25 mm
- Length tolerance heated zone: $\pm 1\%$
unheated zone: $\pm 5\%$
- Inner diameter tolerance 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,
- minimum bending radius (internal): heated zone: 4 mm
unheated zone: 4 mm
- Connection versions see page 20
- 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)
- deliverable with reflection tube
- can be delivered with clamping band and clamping element
- optional IP 68 water-immersion-protected with water proof connection zone, for connection-temperatures max. 300 °C, connection leads PTFE insulated Ni-leads on request

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

$(\varnothing + 1.8) \cdot \pi \cdot \text{number of windings} = \text{heated length straight}$



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

STANDARD MODELS

W a 230V	Length mm	Heated length mm
130	340	250
160	390	300
190	440	350
220	490	400
250	540	450
275	590	500
330	690	600
400	840	750

hotspring®/F/ 2.2 x 4.2

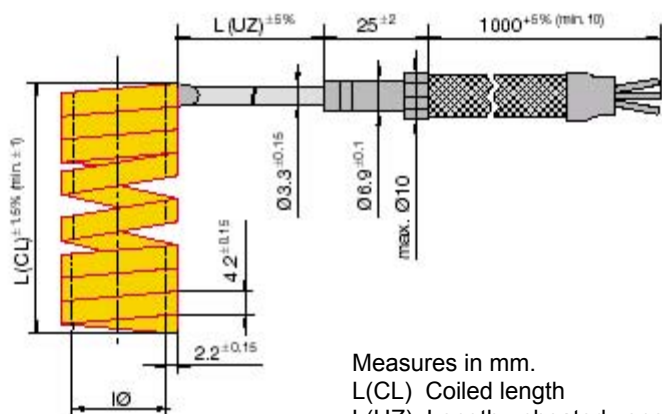


TECHNICAL DATA

- humidity-resistant hotspring® coil heater with flat cross-section 1.8 x 3.2 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, see page 6
- max. total length straight: 3000 mm
- min. length of unheated zone
Luz: 5 mm plus connection head 25 mm
- Length tolerance heated zone: $\pm 1\%$
unheated zone: $\pm 5\%$
- Inner diameter tolerance 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,
- minimum bending radius (internal): heated zone: 4 mm
unheated zone: 4 mm
- Connection versions see page 20
- 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)
- deliverable with reflection tube
- can be delivered with clamping band and clamping element
- optional IP 68 water-immersion-protected with water proof connection zone, for connection-temperatures max. 300 °C, connection leads PTFE insulated Ni-leads on request

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

$(\varnothing + 2.2) \cdot \pi \cdot \text{number of windings} = \text{heated length straight}$



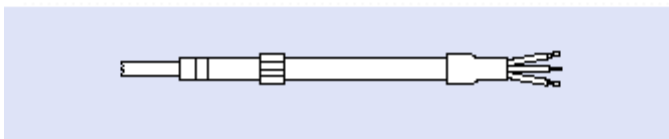
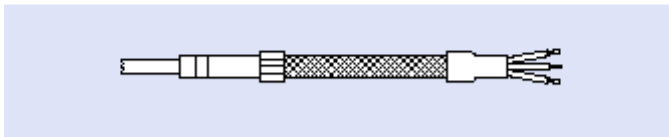
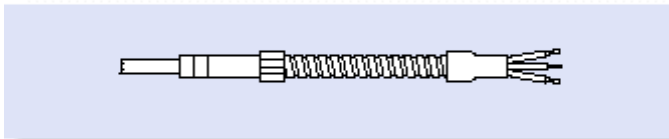
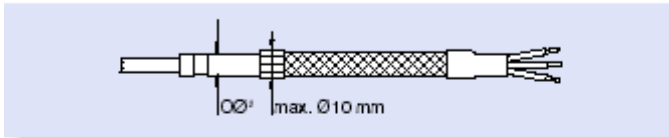
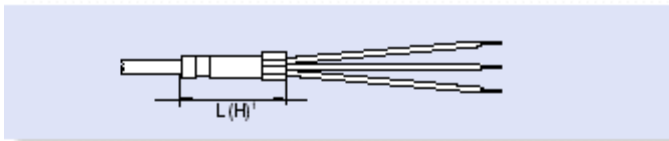
STANDARD MODELS

W a 230V	Length mm	Heated length mm	Thermocouple TCJ
195	340	250	
195	340	250	X
215	370	280	
215	370	280	X
240	425	335	
240	425	335	X
295	475	385	
295	475	385	X
350	550	460	
350	550	460	X
400	610	520	
400	610	520	X
460	690	600	
460	690	600	X
610	850	760	
610	850	760	X
690	990	900	
690	990	900	X
850	1200	1110	
850	1200	1110	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® F/1.8 x 3.2 y F/2.2 x 4.2 (WRP)



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

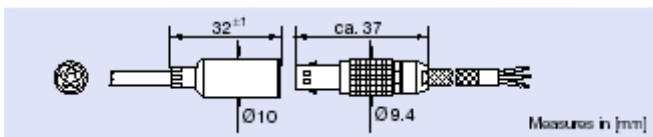
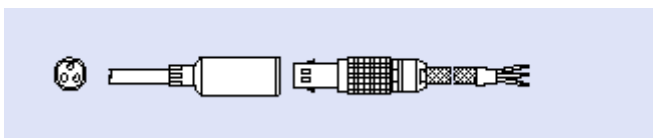
Type ND

- 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



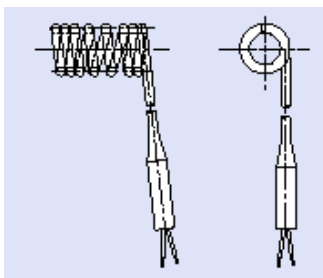
Plug connection, with 3 pins

maximum current at 20 °C max. 8,0 A

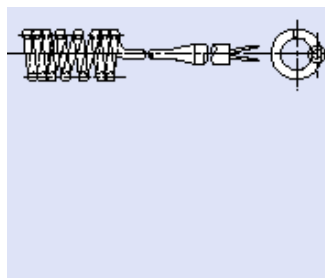
Plug connection, with 5 pins

* maximum current at 20 °C max. 6,5 A

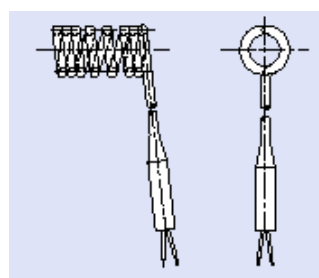
EXITS



Tangential



Axial



Radial