



Priročnik za grelce

Heater Handbook



KAKO NAROČITI
GRELEC
HOW TO ORDER



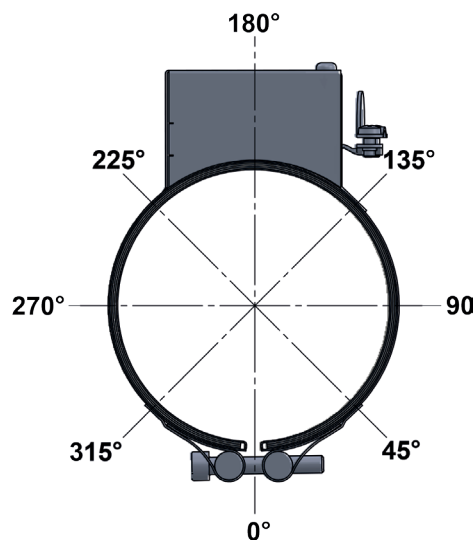
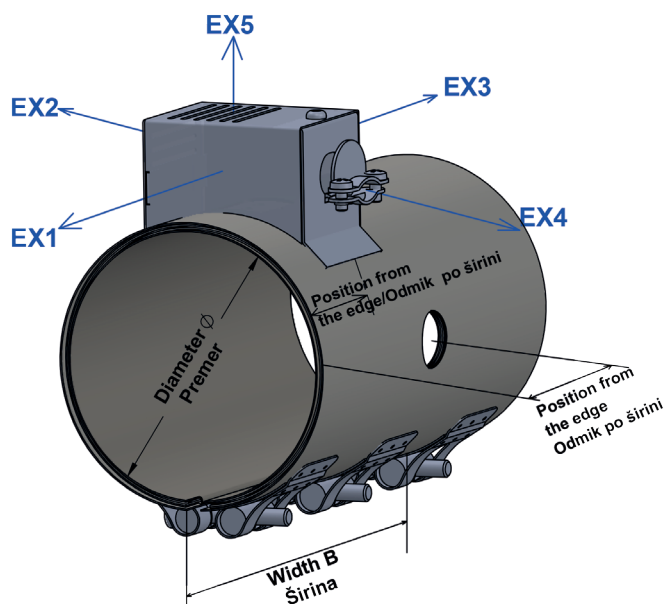
1. KAKO NAROČITI GRELEC GM.12 GM.50 GM.60

Prosimo, navedite pozicijo električnih priključkov in lukenj, v obliki stopinj. Pri tem naj bi imel grelec spajanje (španer) pri 0°. Določiti je potrebno tudi pozicijo luknje in priključka glede na širino grelca. Prosimo, uporabite ustrezne predlogo (Slika1).

1. HOW TO ORDER GM.12 GM.50 GM.60

Please indicate the location of electrical connections and holes in the form of degrees. When doing so, the heater clamping system should be assumed to be at 0°. The location of holes and connections should also be indicated in relation to the width of heater. Please use the appropriate template. (Drawing1).

Slika1/Drawing1



Tip grelca/Model:

Premer Ø/Diameter Ø:

Širina B/Width B:

Napetost V/ Voltage V:

Moč W/Wattage W:

Vezava/El. Connection:

Priključna škatla/Connection box:

Tip škatle(glej brošuro)/Type: (see brochure connections):

Odmik priključka po obodu/Position in degrees:

Odmik priključka po širini/Position from the edge:

Smer priključka/Cable direction:

Dolžina kabla/Cable lenght:

Luknje in izbitine/Holes and cutouts:

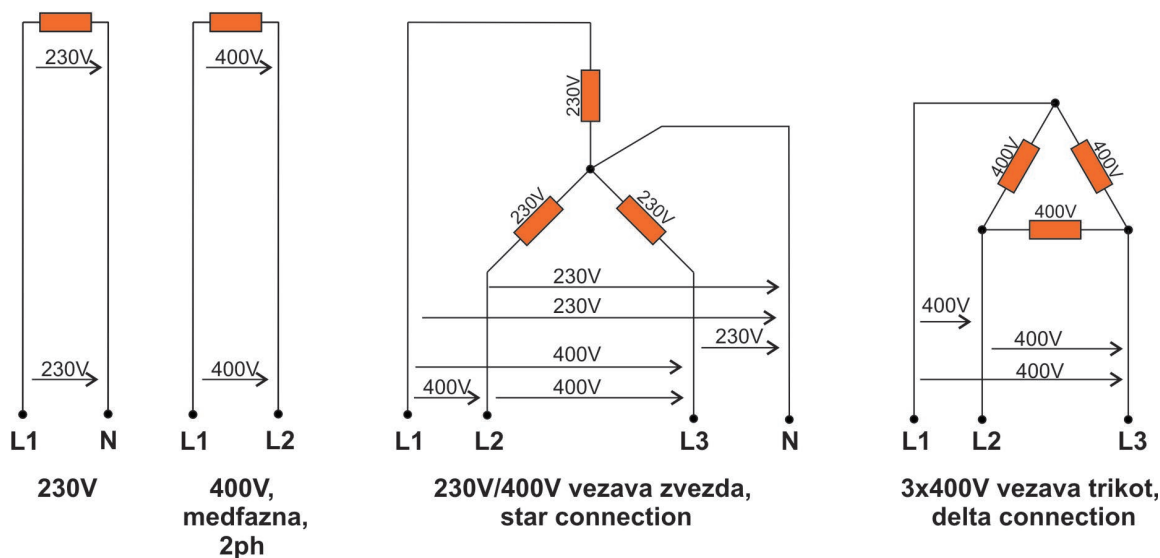
Premer luknje Ø/Hole diameter Ø:

Odmik luknje po obodu/Position in degrees:

Odmik luknje po širini/Position from the edge:

Nosilec sonde/TC Holder:

Dodatna temperaturna izolacija: DA / NE/Additional thermal insulation:



Najenostavneje je grelec naročiti prek našega spletnega konfiguratorja/The easiest way to order heater, is to subscribe on our WEBSHOP.

2. KAKO NAROČITI GRELEC / TIP GM.55, GM.65

2. HOW TO ORDER / TIP GM.55, GM.65

Tip grelca/Model:

.....

.....

Dolžina A/Lenght A:

.....

.....

Širina B/Width B:

Napetost V/Voltage V:

.....

.....

Moč W/Wattage W:

Priključna škatla/Connection box:

.....

.....

Tip škatle(glej brošuro)/Type: (see brochure connections)

Odmik priključka po dolžini/Position from the edge Lenghtside

.....

.....

Odmik priključka po širini/Position from the edge Widthside

Smer priključka/Cable direction:

.....

.....

Dolžina kabla/Cable lenght:

Luknje in izbitine/Holes and cutouts

.....

.....

Premer luknje Ø/Hole diameter Ø:

Odmik luknje po dolžini/Position from the edge Lenghtside

.....

.....

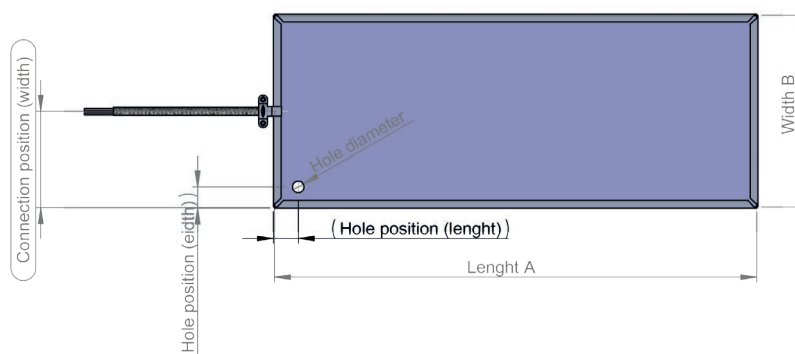
Odmik luknje po širini/Position from the edge Widthside

Nosilec sonde/TC Holder

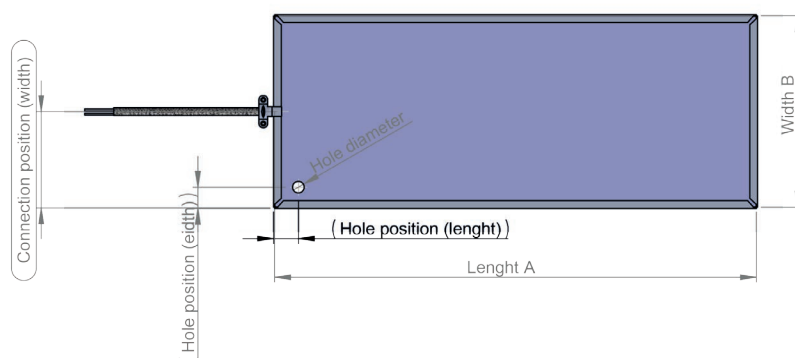
.....

.....

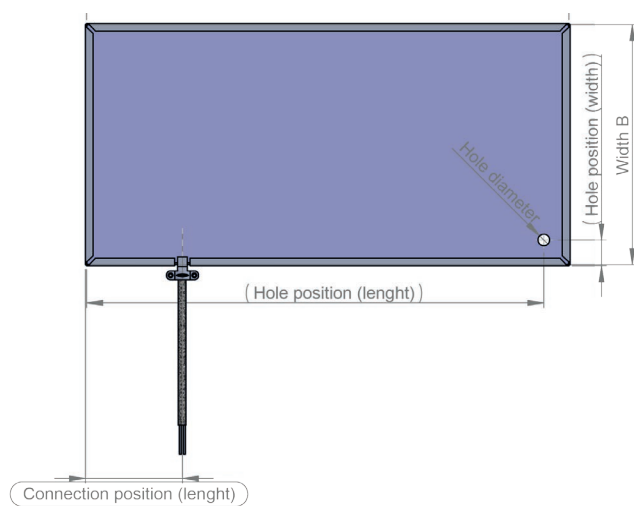
CT-502



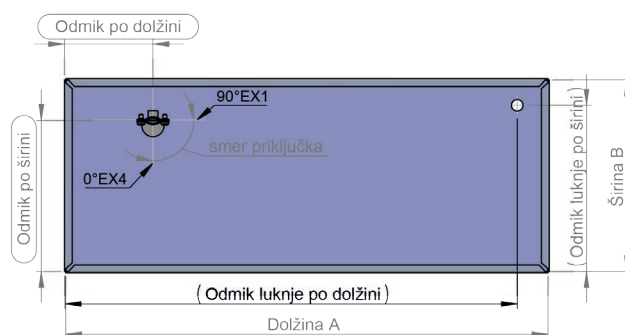
CT-504



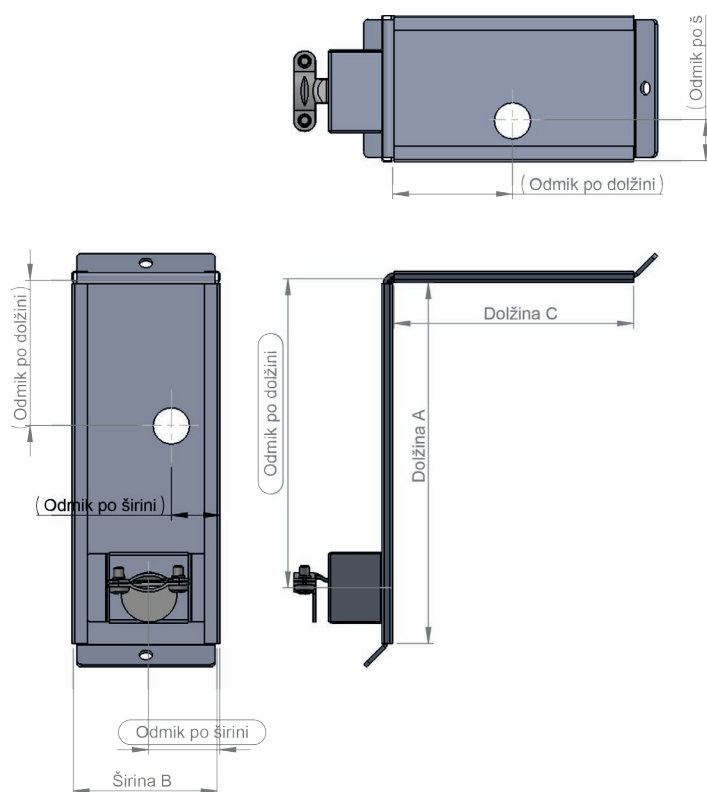
CT-506



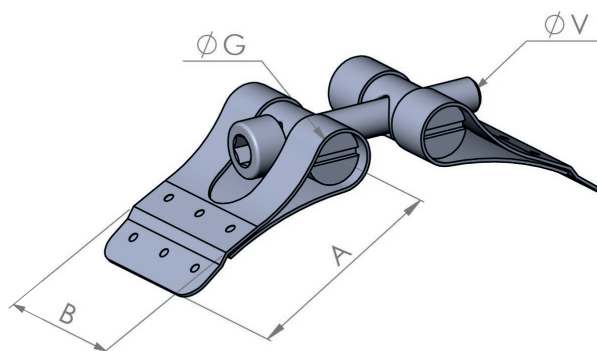
CT-508



CT-550



CT-505

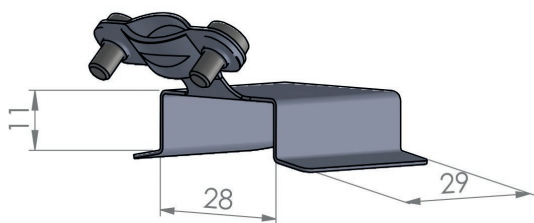


Slika: SESTAV ŠPANNER

Španer/Clamp	G	V	A	B
S	8	M5	31	20
M	8	M5	31	25
L	10	M6	45	30

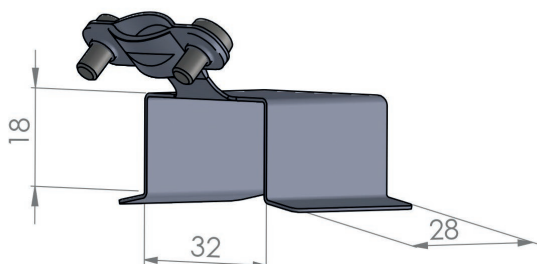
PRIKLJUČNE ŠKATLE

C-10 AXIAL Priključna skatla / Connection box



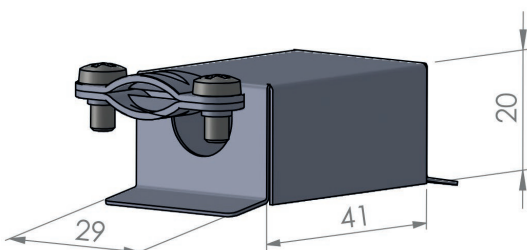
- Sheet metal housing
- Cable gland
- 230V/400V/10A
- Cable direction EX1, EX3
- GM.12 GM.50 GM.55 GM.60
- Pločevinasto ohišje
- Uvodnica
- 230V/400V/10A
- Smer kabla EX1, EX3
- GM.12 GM.50 GM.55 GM.60

C-20 AXIAL Priključna skatla / Connection box



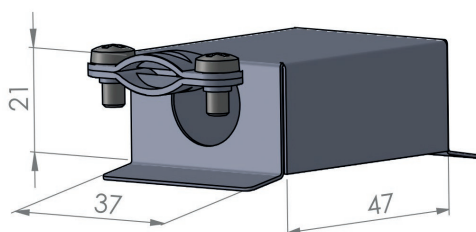
- Sheet metal housing
- Cable gland
- 230V/400V/16A
- Cable direction EX1, EX3
- GM.50 GM.55 GM.60
- Pločevinasto ohišje
- Uvodnica
- 230V/400V/16A
- Smer kabla EX1, EX3
- GM.50 GM.55 GM.60

CT-10 TANGENTIAL Priključna skatla / Connection box



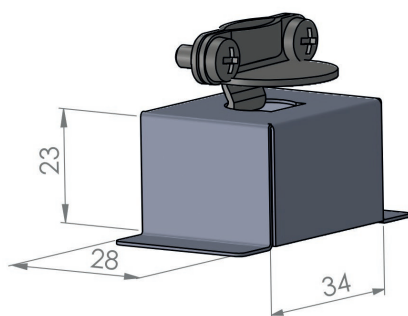
- Sheet metal housing
- Cable gland
- 230V/400V/8A
- Cable direction EX2, EX4
- GM.50 GM.55 GM.60
- Pločevinasto ohišje
- Uvodnica
- 230V/400V/8A
- Smer kabla EX2, EX4
- GM.50 GM.55 GM.60

CT-15 TANGENTIAL Priključna skatla / Connection box



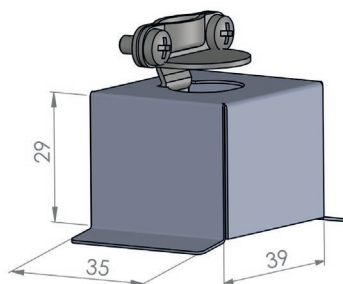
- Sheet metal housing
- Cable gland
- 230V/400V/12A
- Cable direction EX2, EX4
- GM.50 GM.55 GM.60
- Pločevinasto ohišje
- Uvodnica
- 230V/12A
- Smer kabla EX2, EX4
- GM.50 GM.55 GM.60

CV-10 RADIAL Priključna skatla / Connection box



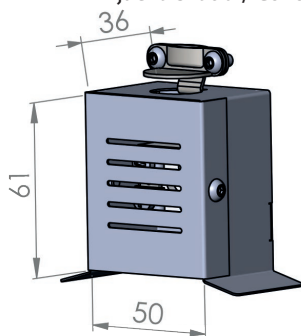
- Sheet metal housing
- Cable gland
- 230V/400V/12A
- Cable direction EX5
- GM.50 GM.55 GM.60
- Pločevinasto ohišje
- Uvodnica
- 230V/400V/12A
- Smer kabla EX5
- Sheet metal housing
- GM.50 GM.55 GM.60

CV-15 RADIAL Priključna skatla / Connection box



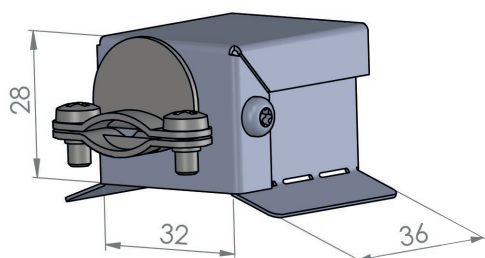
- Sheet metal housing
- Cable gland
- 230V/400V/15A
- Cable direction EX5
- GM.50 GM.55 GM.60
- Pločevinasto ohišje
- Uvodnica
- 230V/12A
- Smer kabla 15A, EX5
- GM.50 GM.55 GM.60

CV-15 RADIAL Priključna skatla / Connection box



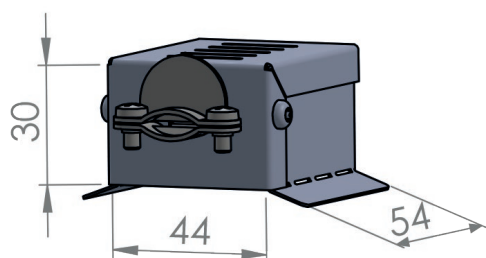
- Sheet metal housing
- Cable gland
- 230V/400V/12A
- Cable direction EX5
- GM.50 GM.60
- Pločevinasto ohišje
- Uvodnica
- 230V/400V/12A
- Smer kabla EX5
- GM.50 GM.60

CA-10 AXIAL Priključna skatla / Connection box



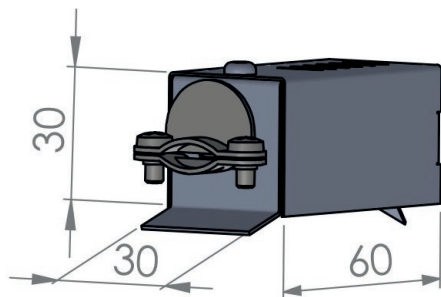
- Sheet metal housing
- Cable gland
- 230V/400V/12A
- Cable direction EX5
- GM.50 GM.55 GM.60
- Pločevinasto ohišje
- Uvodnica
- 230V/400V/12A
- Smer kabla EX5
- GM.50 GM.55 GM.60

CA-20 AXIAL Priključna skatla / Connection box



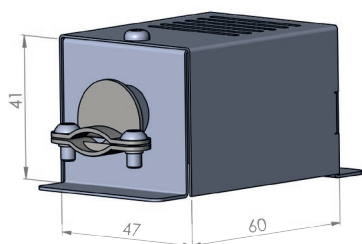
- Sheet metal housing
- Cable gland
- 230V/400V/15A
- Cable direction EX5
- GM.50 GM.55 GM.60
- Pločevinasto ohišje
- Uvodnica
- 230V/400V/15A
- Smer kabla EX5
- GM.50 GM.55 GM.60

CB-10 TANGENTIAL Priključna skatla / Connection box



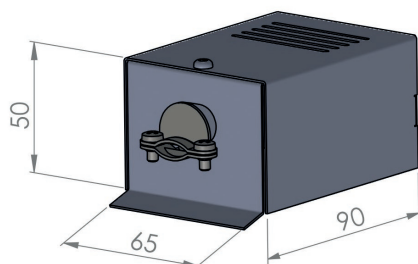
- Sheet metal housing
- Cable gland
- Priključna sponka RIKO 2P10A
- 230V/400V/8A
- Cable direction EX2, EX4
- GM.50 GM.55 GM.60
- Pločevinasto ohišje
- Uvodnica
- Terminal block RIKO 2P10A
- 230V/400V/8A
- Smer kabla EX2, EX4
- GM.50 GM.55 GM.60

CB-15 TANGENTIAL Priključna skatla / Connection box



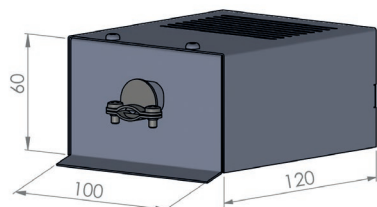
- Sheet metal housing
- Cable gland
- Priključna sponka ALFA 2P15A
- 230V/400V/15A
- Cable direction EX2, EX4
- GM.50 GM.55 GM.60
- Pločevinasto ohišje
- Uvodnica
- Terminal block ALFA 2P15A
- 230V/400V/15A
- Smer kabla EX2, EX4
- GM.50 GM.55 GM.6

CB-20 TANGENTIAL Priključna skatla / Connection box



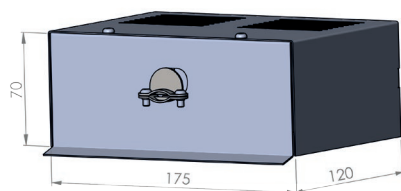
- Sheet metal housing
- Cable gland
- Priključna sponka
- 230V/400V/18A
- Cable direction EX2, EX4
- GM.50 GM.55 GM.60
- Pločevinasto ohišje
- Uvodnica
- Terminal block
- 230V/400V/18A
- Smer kabla EX2, EX4
- GM.50 GM.55 GM.60

CB-30 TANGENTIAL Priključna skatla / Connection box



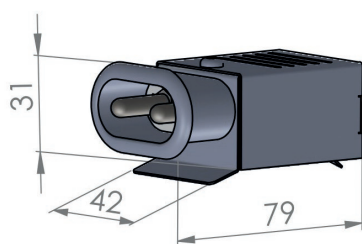
- Sheet metal housing
- Cable gland
- Priključna sponka TRIFIX 3P16
- 230V/400V/3x20A
- Cable direction EX2, EX4
- GM.50 GM.60
- Pločevinasto ohišje
- Uvodnica
- Terminal block TRIFIX 3P16
- 230V/400V/3x20A
- Smer kabla EX2, EX4
- GM.50 GM.60

CB-40 TANGENTIAL Priključna skatla / Connection box



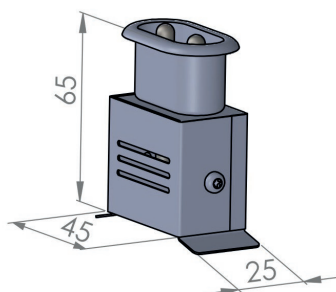
- Sheet metal housing
- Cable gland
- Priključna sponka TOKA
- 230V/400V/3x40A
- Cable direction EX2, EX4
- GM.50 GM.60
- Pločevinasto ohišje
- Uvodnica
- Terminal block TOKA
- 230V/400V/3x40A
- Smer kabla EX2, EX4
- GM.50 GM.60

SA-EURO RADIAL Priključna skatla / Connection box



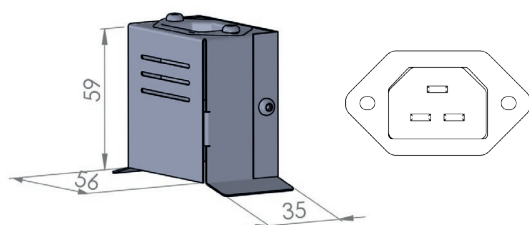
- Sheet metal housing
- 230V/400V/15A
- Cable direction EX5
- Pločevinasto ohišje
- 230V/400V/15A
- Smer kabla EX5

SA-5 RADIAL Priključna skatla / Connection box



- Sheet metal housing
- 230V/400V/15A
- Cable direction EX5
- Pločevinasto ohišje
- 230V/400V/15A
- Smer kabla EX5

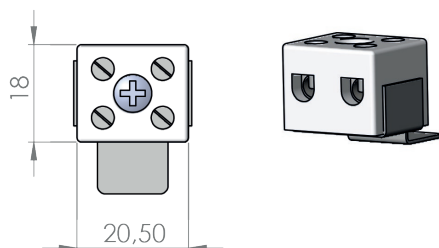
SA-EURO RADIAL priključna škatla / Connection box



- Sheet metal housing
- Built in socket T155
- 230V/400V/16A
- Cable direction EX2, EX4
- Pločevinasto ohišje
- Vgrajena vtičnica T155
- 230V/400V/16A
- Smer kabla EX2, EX4

PRIKLJUČNE KERAMIKE / TERMINAL BLOCK

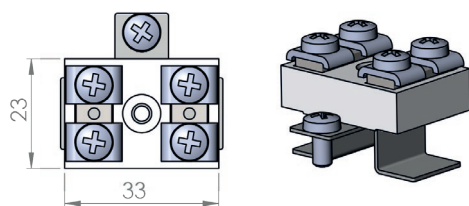
RIKO 2P8A



230V/400/8A

1ph, 2ph

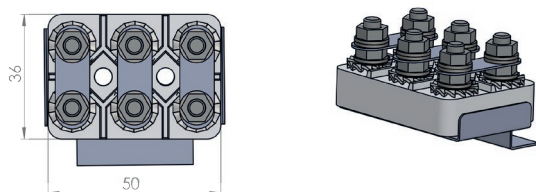
ALFA 2P15A



230V/400V/15A

1ph, 2ph

TRIFIX 3P20A

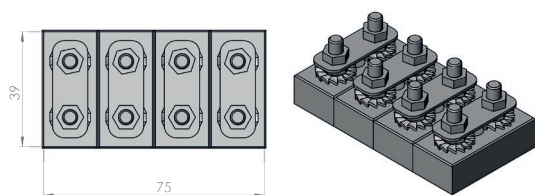


230 V/400V/20A

3 ph

trikot/delta

TOKA 4P30A



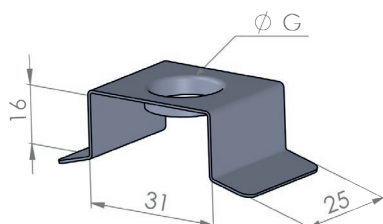
230V/400V/30A

3ph

trikot/delta

zvezda/star

NOSILEC ZA SONE / THERMOCOUPLE CONNECTOR NS



Tip / type

Navoj / Thread G

NS-10 - M10

NS-12 - M12

NS-3/8 - R3/8

NS-1/4 - R1/4

3. Splošni podatki / Basic information

Grelce lahko uporabljamo samo na strojih ali napravah s temperaturno regulacijo.

Preprečiti je potrebno vdor vode, olja ali drugih medijev. V primeru, da grelec zalije plastika, ga je potrebno nemudoma očistiti, saj na ta način podaljšamo njegovo življenjsko dobo.

Priporočamo, da se za grelce s skupno močjo več kot 5000W uporabi tip grelca GM.60 s keramičnimi elementi. Za premere večje od 200 mm priporočamo uporabo jeklenih vzmeti. Tako boste dosegli enakomerno zategnjen grelec okoli cilindra pri vseh temperaturah.

Pri premerih večjih od 400 mm, dobavljamo grelce sestavljene iz dveh segmentov.

Montaža:

Življenjska doba grelcev je odvisna od tega, ali so grelci pravilno montirani na cilinder ali orodje.

Objemni grelci tipa GM.50 in GM.60 lahko pri montaži razširite do velikosti notranjega premera, tako da se ga lahko potisne preko cilindra.

Pomembno je, da je grelec popolnoma zategnjen oz. oprijet okoli cilindra ali orodja.

Če nima zadostnega stika s cilindrom, ne more odvajati dovolj toplote v objekt katerega segreva, kar privede do pregretja grelca in posledično uničenja grelnega elementa.

Opomba: Vijake grelca med prvim zagonom postopno zategujte, dokler grelec ne doseže delovne temperature in šele takrat ga dokončno zategnite.

Demontaža:

Pri demontaži grelnih elementov, kateri so namenjeni za ponovno uporabo, se izogibajte večjih deformacij grelca. Vse zat egovalne vijaki, je potrebno namazati s posebno visokotemperaturno mastjo NSB-4, da bi preprečili korozijo, tako da lahko demontaža poteka brez težav.

Kontrola kakovosti po standardu DIN EN 60204-(

Vsi grelci so testirani na različnih stopnjah preden zapustijo proizvodnjo.

Standardne meritve

- Upornost grelca $\pm 5\%$
- Prebojna trdnost 1500V
- Izolacijska upornost $M_{rzel} \geq 1 \text{ MOhm}$ pri 500 V DC
- Ozemljitvena žica

3. Basic information

Heating elements should only be used on machines or devices with temperature control equipment. Penetration of oil, water or other media must be avoided.

In case that plastic is injected over the heater, it has to be cleaned immediately, so we can prolong heaters working life.

We recommend that the heater elements with a total power of more than 5000W should be produced with ceramic elements, type GM.60.

For diameters higher than 200 mm , we recommend the use of steel springs in order to guarantee constantly a perfect fitting over cylinder.

With diameters larger than 400 mm , we supply heaters that consist of two or more segments.

Fitting:

Lifetime expectances of the heaters are dependent whether a heater is correctly mounted on cylinder or tool.

Band heaters type GM.50 and GM.60 can be during assembly spread to the size of the inner diameter, so that it can be pushed over the cylinder.

In order to ensure long and reliable working life it is necessary that the heaters are perfectly fit with the cylinder, by tightening the fastening screws.

Important: The retightening of the nuts and bolts must be done frequently starting from the initial heat up until it reaches to the set operating temperature.

Disassembly:

When disassembling heating elemets which are suitable for reuse, avoid major deformation of the heater.

All the tightening screws must be lubricated by a special high temperature grease NSB-4 in order to prevent corrosion, so that the disassembly is carried out easily.

Quality control according to DIN EN 60204- (

All heaters are tested at various stages before leaving the production.

Standard measurements

- Ohmic + - 5%
- Dielectric strength 1500V
- Insulation Resistance ≥ 1 MOhm at 500 V DC
- Ground wire



GRENCI MARAS d.o.o.

Jevčeva pot 2

1351 Brezovica pri Ljubljani

Slovenija / Slovenia

T: +386 1 365 3 518

F: +386 1 365 73 72

E: info@grenci-maras.si

www.grenci-maras.si

