

### MANIFATTURE TECNOLEGNO HARTZ S.r.I.

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Società soggetta all'attività di direzione e al coordinamento esercitati da IN.CA. S.r.l.



REFRIGERATING SYSTEM

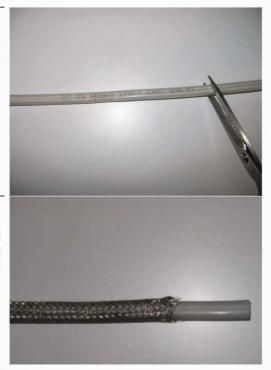
TYPE OF PRODUCT: CONSTANT POWER CABLE

SPECIFIC DISSIPATED POWER 30W/m ±2 POWER SUPPLY 230v ±10% (50 Hz) DIAMETER 4,0 mm COMPLIES WITH IEC EN60335-1

## **APPLICATION**

### Phase 1

Individuate (if necessary unsheathing the metal braid) the electric contact of the heating cable (the distance between the successive contacts is 0,25mt); cut therefore the cable approximately at 80 millimetres from the point of contact.



## Phase 2

Unsheathe the metal braid to a length of approximately 30 millimetres. Such operation must be executed after you have verified the exact point of contact, retracting the metal braid (see previous phase)



Slit longitudinally the insulation by inserting the scissors in the extremity of the cable approximately for 20 millimetres. Cut the slitted part of the insulation, making sure that the distance between the metal braid and the end of the insulation will be at least 10 millimetres. If the threads of the metallic shielding will be too long; they must be trimmed.



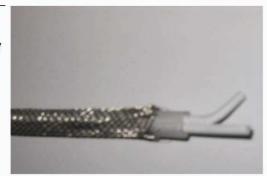
#### Phase 4

Remove the resistive wire, wrapped around supply cables. The resistive wire must be cut at the end of the unsheathed edge.



## Phase 5

To separate the supply cables (flat twin cable) approximately for 10mm.



#### Phase 6

Cut one of two supply cables at 10 millimetres from the extremity, in order to avoid the contact between the lead wire.



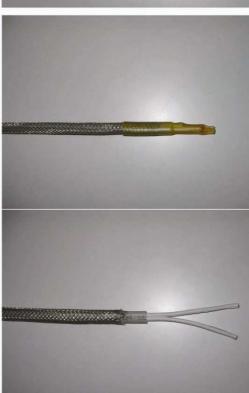
#### Phase 7

Insert the heat shrink cap to the extremity of the cable, being sure that the metal braid will be covered at least 10mm.



#### Phase 8

Using an hot air blower or a bunsen burner, proceed closing of the heat-shrinking hood, paying much attention not to burn the insulation. It is recommended to heat the interested part placing the hot air blower approximately at 150 millimetre from the cable, therefore, approaching slowly until the moment in which the heat shrink cap begins to withdraw itself.



## Phase 9

Proceed the preparation of the opposite extremity. Make sure that the distance between the extremity (that must to be cut) and the contact point will be at least 100 millimetres. Unsheathe the extremity like the indications cited on phases 2-3-4-5, with the difference of the length of exit cables (at least 60 millimetres).

#### Phase 10

Insert the heat shrink sleeve of blocking (9,0 millimetres diameter ,  $40 \div 50$  millimetres long), blocking it at least  $10 \div 15$  millimetres over the metal braid. Proceeding like the phase 8, close the heat shrink sleeve until the complete reduction (it must be adapted completely to the insulating parts). Scrape the extremity of the supply cable , with the aim to predispose them to the connection with the supply. It is advised the insertion of a metal pin or fastons.

## Phase 11

**Grounding**. The grounding of the element can be executed tinning the appropriate yellow/green cable at whichever point of the metal braid. Over the tinning point, close a heat shrink tube approximately 20 millimetres long ,for the protection of the contact.

## Phase 12

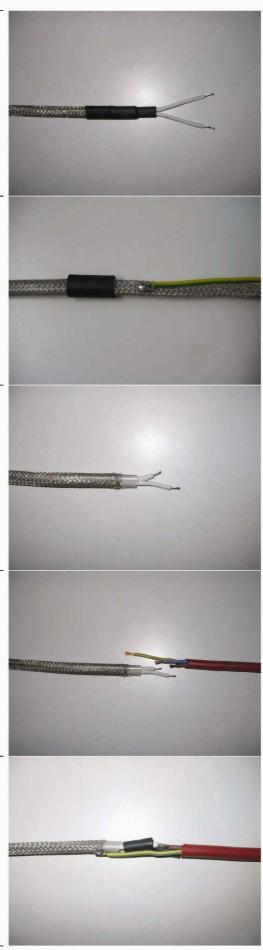
**Grounding with supply cable**. Proceed like phases 1-2-3-4-5-6. Scrape the extremity of the supply cable approximately for 4mm. Make sure that the metal braid of protection will be approximately 10 millimetres from the edge of the unsheathed part (cropping eventual jutting wires).

#### Phase 13

Following the same method described on phase 12, prepare the supply cable, unshreathing approximately for 45÷50 millimetres. Leave intact the length of the yellow/green cable, while the two supply cables (brown and blue) must turn out separated (see figure on the right), with the aim to facilitate the connection of the cables with the resistance.

## Phase 14

Thread two heat shrink tube (4,8 millimetres diameter ,10 millimetres length) to the longer extremities of the respective cables; proceed therefore the connection of cables by means of tinning like on figure. It is possible, in alternative to the tinning ,use appropriate pre-isolate connectors (making attention to the maximum temperature of exercise of the insulators of the connectors). Tin yellow/green cable directly on the metal braid.



## Phase 15

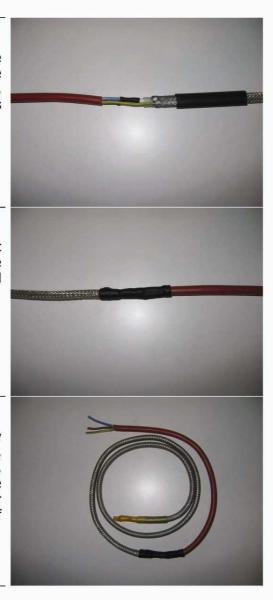
Position the heat shrink sleeve 10 millimetres long in the centre of the tinning, therefore proceed the closing like described on phase 8. Prepare threaded ,in one of two cables, the heat shrink tube (70 millimetres long; 9,0 millimetres diameter), for the waterproof closing of the connection zone.

#### Phase 16

Like described on phase 8 proceed the closing of the heat shrink tube, previously centred on the connection zone (the tube must cover at least 10 millimetres the supply cable and the metal braid).



The implantation on installation phase, can be executed by means adhesive aluminium foil, adhesive fiber-glass tape, metallic wrappers etc. Before proceeding to the application, make sure that the work temperatures are not exceeded to the permissible working temperatures of respective tapes or implantation wrappers (consult the technical detailed lists of the materials).



Notes: all the phases over described are applicable also for the resistances without metallic stocking; the phases of preparation previewed for the connections of the earth cable will be obviously omitted.

# ACCESSORIES



