## CD - CDD series

## **CD** series

It is a multipole connector series for crimped connections made with removable crimp contacts **CD** series.

- There are 5 different sizes available (6 polarities):
- "21.21" with two inserts, respectively **CD 07** (7 P +  $\oplus$ ) and **CD 08** (8 P) for SELV applications;

**NOTE** – These two polarities are coded to avoid their incorrect cross-mating. **CD 07**, being equipped with a pass-through PE connection that does not serve as equipotential bonding of a metal enclosure, is suitably safety-coded to avoid mismatch with a metal enclosure of this size.

- "49.16" with **CD 15** (15 P + ⊕) provided by 3 rows of 5 contact seats each;
- "66.16" with **CD 25** (25 P + ⊕) provided by 2 outer rows of 9 contact seats each and 1 inner row with 7 contact seats;
- "77.27" with **CD 40** (40 P + ) provided by 4 rows of 10 contact seats each;
- "104.27" with **CD 64** (64 P +  $\oplus$ ) provided by 4 rows of 16 contact seats each.

It is also possible to mount **two inserts side-by-side in a connector enclosure** is also given:

- for inserts size "66.16" (CD 25 + CD 25 Z) to get a 50 P + ⊕ connector with connector enclosures size "66.40";
- for inserts size "77.27" (CD 40 + CD 40) to get an 80 P + ⊕ connector with connector enclosures size "77.62";
- for inserts size "104.27" (CD 64 + CD 64) to get a 128 P + ⊕ connector with connector enclosures size "104.62".

The last four sizes of the first list are described in

**EN 175 301-801:2006** European standard, which derives from the old German standard **DIN 43 652**, whose first edition dates back to the Seventies of last century. This standard provides dimensional standardization for these four sizes of connector inserts as well as for **CD series crimp contacts**, solid, machined, used by these connectors, and of the main types (and sizes) of relevant **connector enclosures**, including interface dimensions between the connector inserts and the relevant connector hood or housing, overall dimensions of locking levers and pegs, etc. This standard provides ground for the dimensional standardization of the other connector sizes (e.g. "44.27", "57.27") for all series of connector inserts with the same size and for all connector enclosure series with these sizes.

As for any series of connector inserts for crimped connections, the polarity is to be intended as "*up to*", being always possible to fit a connector insert with a reduced number of crimped connections, suiting the specific application. In this regard, see e.g. next page for use of **CD** series connector inserts at special (higher) voltages.

These connectors cover applications for rated voltage up to **250V AC/DC in pollution degree 3** (industrial environment) when connectors are fully equipped with contacts, and for rated currents up to **10A** per pole (derating diagram show actual current carrying capacity as a function of number of poles, conductor size and ambient temperature). The PE connection for size "21.21" **CD 07** is a pass-through (crimp) connection that does not provide equipotential bonding to earth to a possible metal connector enclosure, hence the safety coding implemented in inserts **CDM 07** and **CDF 07** to avoid mismatch with metal enclosures.

The PE connection for the other sizes is provided by a screw terminal on the side of pole #1, and by lateral mating contacts. The PE terminal of the inserts provide earthing to the metal enclosures.

## **CDD** series

It is the high density evolution of **CD** series. It provides choice of **5 different sizes** (5 polarities) of multipole connector inserts for crimped connections made with removable crimp contacts **CD** series:

- "44.27" with CDD 24 (24 P + ) provided by 6 rows of 4 contact seats each;
- "66.16" with **CDD 38** (38 P + ⊕) provided by 2 outer rows of 10 contact seats each and 2 inner rows with 9 contact seats each;
- "57.27" with **CDD 42** (42 P + ) provided by 6 rows of 7 contact seats each;
- "77.27" with CDD 72 (72 P + ⊕) provided by 6 rows of 12 contact seats each;
- "104.27" with **CDD 108** (108 P + ⊕) provided by 6 rows of 18 contact seats each.

It is also possible to mount two inserts side-by-side in a connector enclosure is also provided:

- for inserts size "66.16" (CDD 38 + CDD 38) to get
- a **76 P** + ⊕ connector with connector enclosures size "66.40"; - for inserts size "77.27" (**CDD 72** + **CDD 72**) to get
- a **144 P** + ⊕ connector with connector enclosures size "77.62"; - for inserts size "104.27" (**CDD 108** + **CDD 108**) to get
- a 216 P + (a) connector with connector enclosures size "104.62".

These connectors cover applications for rated voltage up to **250 VAC/DC in pollution degree 2** (suitable for industrial environment once used inside enclosures >IP54) when connectors are fully equipped with contacts, and for rated currents up to 10A per pole (derating diagram show actual current carrying capacity as a function of number of poles, conductor size and ambient temperature).

The PE connection for all sizes is provided by a screw terminal on the side of pole #1, and lateral mating contacts. The PE terminal of the inserts provide earthing to the metal enclosures.

Even when the coding function is not required, it is highly recommended to use CRM and CRF coding pins (see pages 685, 686 in this catalogue) with CD and CDD connector inserts, to reduce movements when mating and unmating the connectors, to avoid contact damage. To this aim, standard EN 175 301-801:2006 specifies a max allowed angular longitudinal fluctuation of  $\pm$  5°.

Legend:

## Special voltages for CD series

If all the contacts are used, CD connector inserts may be used with voltage up to 250V (first column) pollution degree 3 in accordance with standard EN 61984.

If the number of contacts is reduced and the contacts assigned accordingly, these connectors may be used at higher voltages. This is possible because the decrease in the number of contacts



leads to an increase in clearences (insulating distances in air) and creepage distances (insulating distances along the surface).

When the contacts are arranged as shown below, the inserts may be used at rated voltage of 500V (second column) pollution degree 3 in accordance with standard EN 61984.

