

CQEE series

Main features

The new connector inserts series **CQEE** are the logical extension of the existing series CQE for removable crimp contacts series CC (16A max, available both in gold plated and in silver plated version) that include the CC...AN pin contacts with anticipated opening (first-to-break) and delayed closing (last-to-make).

Compared with the connector inserts of the same size of series CQE, the new inserts series **CQEE** provide a sensibly higher number of contacts: 64P+⊕ instead of 46P+⊕ for size 104.27 (+39%), 40P+⊕ instead of 32P+⊕ for size 77.27 (+25%).

With the same number of circuits, it is conversely possible to reduce the size of the connector inserts and of the related hood and housing, thus reducing the overall cost.

The new connector inserts series **CQEE** may replace in the same size (77.27, 104.27) and with the same contact density (40P+⊕ and 64P+⊕) the corresponding inserts of series CD for removable crimp contacts series CD (10A max).

This may be particularly useful when, as a function of the intended use, it is required:

- to use the connector at a higher rated voltage: CQEE covers use at 500V / 6kV / 3 where CD stops at 250V / 4kV / 3;
- to assign a larger current-carrying capacity, both due to the lower contact resistance (1 mΩ instead of 3 mΩ) and the larger wire size available for series CC compared with series CD contacts;
- to use wires with the larger cross-sectional area of 4 mm² / AWG 12, in order to contain the percent voltage drop [%] in circuits fed with extra-low voltage and with comparatively high currents, or in circuits of considerable length;
- to use crimp contacts with inherently higher mechanical robustness;
- to use anticipated pin contacts CC...AN (e.g. for the remote signaling of the "OPEN" or "CLOSED" status of the connector).

Inserts series		CQEE
No. of poles	main contact	40 + ⊕; 64 + ⊕
rated current ¹⁾		16A
EN 61984 pollution degree 3	rated voltage	500V
	rated impulse withstand voltage	6kV
	pollution degree	3
contact resistance		≤ 1 mΩ
insulation resistance		≥ 10 GΩ
ambient temperature limit (°C)	min	-40 °C
	max	+125 °C
degree of protection	with enclosures (according to version)	IP65, IP66, IP67, IP68, IP69K
	without enclosures	IP20
conductor connections		crimp
conductor cross-section (CC contact series)	mm ²	0,14 4,0
	AWG	26 - 12
stripping length	mm	7,5
mechanical endurance (rating cycles)		≥ 500

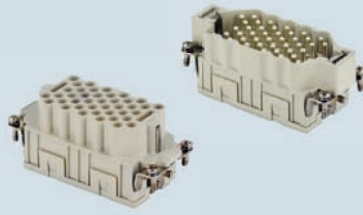
1) Please check the insert load curves to establish the actual maximum operating current according to the ambient temperature.

enclosures:
size "77.27" page:

C-TYPE IP65/IP66 250 - 256
C7 IP67, two levers 276
V-TYPE IP65/IP66, single lever 282/292 - 295
BIG hoods 312 - 315
T-TYPE IP65 insulating 330 - 331
T-TYPE / W IP66 insulating 340 - 341
HYGIENIC T-TYPE / H IP66/IP69 354 - 355
HYGIENIC T-TYPE / C IP66/IP69, -50 °C 362 - 363
W-TYPE for aggressive environments 375
EMC 394
central lever 408 - 409
IP68 428 - 431
LS-TYPE 454 - 455

panel supports: page:
COB 462 - 463

inserts, crimp connections



NEW

16A crimp contacts normal and for advanced opening silver and gold plated



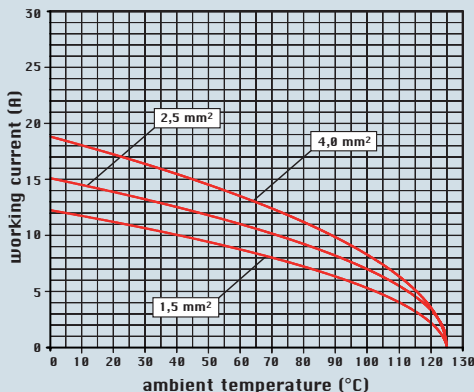
description	part No.	part No.	part No.
without contacts (to be ordered separately) female inserts for female contacts male inserts for male contacts	CQEEF 40 CQEEM 40		
16A female contacts 0,14-0,37 mm ² AWG 26-22 three grooves 0,5 mm ² AWG 20 with no grooves 0,75 mm ² AWG 18 one groove (back side) 1 mm ² AWG 18 one groove 1,5 mm ² AWG 16 two grooves 2,5 mm ² AWG 14 three grooves 3 mm ² AWG 12 one wide groove 4 mm ² AWG 12 with no grooves		CCFA 0.3 CCFA 0.5 CCFA 0.7 CCFA 1.0 CCFA 1.5 CCFA 2.5 CCFA 3.0 CCFA 4.0	CCFD 0.3 CCFD 0.5 CCFD 0.7 CCFD 1.0 CCFD 1.5 CCFD 2.5 CCFD 3.0 CCFD 4.0
16A male contacts 0,14-0,37 mm ² AWG 26-22 three grooves 0,5 mm ² AWG 20 with no grooves 0,75 mm ² AWG 18 one groove (back side) 1 mm ² AWG 18 one groove 1,5 mm ² AWG 16 two grooves 2,5 mm ² AWG 14 three grooves 3 mm ² AWG 12 one wide groove 4 mm ² AWG 12 with no grooves		CCMA 0.3 CCMA 0.5 CCMA 0.7 CCMA 1.0 CCMA 1.5 CCMA 2.5 CCMA 3.0 CCMA 4.0	CCMD 0.3 CCMD 0.5 CCMD 0.7 CCMD 1.0 CCMD 1.5 CCMD 2.5 CCMD 3.0 CCMD 4.0
16A male crimp contacts for advanced opening 0,5 mm ² AWG 20 with no grooves 0,75 mm ² AWG 18 one groove (back side) 1 mm ² AWG 18 one groove 1,5 mm ² AWG 16 two grooves 2,5 mm ² AWG 14 three grooves		CC 0.5 AN CC 0.7 AN CC 1.0 AN CC 1.5 AN CC 2.5 AN	

silver plated

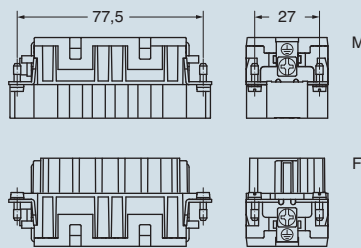
gold plated 1)

- characteristics according to EN 61984: **16A 500V 6kV 3**
- certifications: cUL - UL for USA and Canada, (CSA), (GL), (EAC); the certifications shown in brackets are being applied for.
- rated voltage according to UL/CSA: 600V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 1 mΩ
- for maximum current load, see the following load curves inserts, for more information see page 561

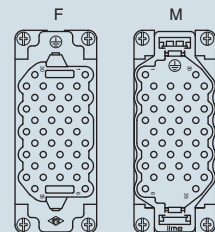
diagram CQEE 40 poles



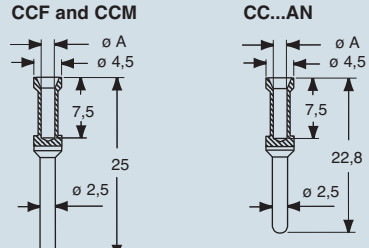
dimensions in mm



contacts side (front view)



dimensions in mm



CCF, CCM and CC..AN contacts

conductor section	conductor slot	conductors stripping length
mm ²	ø A (mm)	(mm)
0,14-0,37	0,9	7,5
0,5	1,1	7,5
0,75	1,3	7,5
1,0	1,45	7,5
1,5	1,8	7,5
2,5	2,2	7,5
3	2,55	7,5
4	2,85	7,5

1) basic or high thickness gold plating page 481

coding pins CR CPQ, see page 491



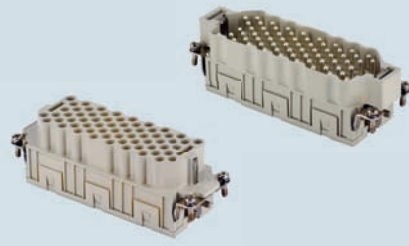
- for contact crimping instructions, please see the crimping tool section (16A contacts, CCF, CCM and CC..AN series) on pages 534, 538, 544, 546, 548

enclosures:
size "104.27" page:

C-TYPE IP65/IP66 258 - 266
C7 IP67, two levers 277
V-TYPE IP65/IP66, single lever 283296 - 299
BIG hoods 316 - 319
T-TYPE IP65 insulating 332 - 333
T-TYPE / W IP66 insulating 342 - 343
HYGIENIC T-TYPE / H IP66/IP69 356 - 357
HYGIENIC T-TYPE / C IP66/IP69, -50 °C 364 - 365
W-TYPE for aggressive environments 376
EMC 395
central lever 410 - 412
IP68 432 - 435
LS-TYPE 456 - 457

panel supports: page:
COB 462 - 463

inserts, crimp connections



NEW

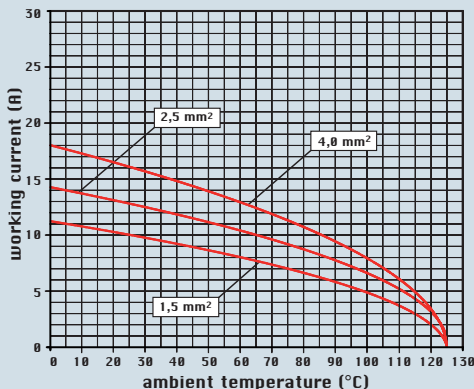
16A crimp contacts normal and for advanced opening silver and gold plated



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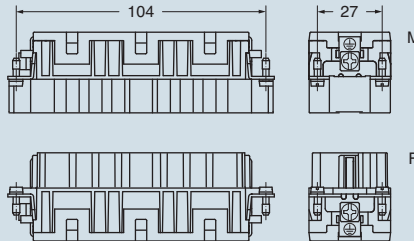
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- rated voltage according to UL/CSA: 600V
- insulation resistance: ≥ 10 GΩ
- ambient temperature limit: -40 °C ... +125 °C
- are made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- contact resistance: ≤ 1 mΩ
- for maximum current load, see the following load curves inserts, for more information see page 561

diagram CQEE 64 poles

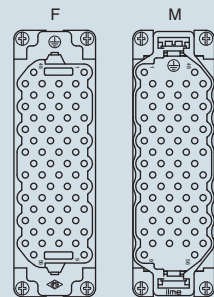


dimensions shown are not binding and may be changed without notice

dimensions in mm



contacts side (front view)

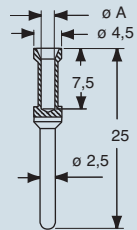


coding pins CR CPQ, see page 491

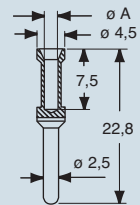


dimensions in mm

CCF and CCM



CC...AN



CCF, CCM and CC..AN contacts

conductor section	conductor slot	conductors stripping length
mm ²	ø A (mm)	(mm)
0,14-0,37	0,9	7,5
0,5	1,1	7,5
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1) basic or high thickness gold plating page 481

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