

## Han E® / Han® ES / Han® ESS / Han® EE

|   | Page         |
|---|--------------|
| Technical characteristics Han E® .....      | <b>03.10</b> |
| Technical characteristics Han® EE .....     | <b>03.11</b> |
| Technical characteristics Han® ES .....     | <b>03.12</b> |
| Technical characteristics Han® ESS .....    | <b>03.13</b> |
| <br>Han® 6 E / Han® 6 ES / Han® 6 ESS ..... | <b>03.14</b> |
| Han® 10 EE .....                            | <b>03.15</b> |
| Han® 10 E / Han® 10 ES / Han® 10 ESS .....  | <b>03.18</b> |
| Han® 18 EE .....                            | <b>03.19</b> |
| Han® 16 E / Han® 16 ES / Han® 16 ESS .....  | <b>03.22</b> |
| Han® 32 EE .....                            | <b>03.23</b> |
| Han® 24 E / Han® 24 ES / Han® 24 ESS .....  | <b>03.26</b> |
| Han® 46 EE .....                            | <b>03.27</b> |
| Han® 32 E / Han® 32 ES / Han® 32 ESS .....  | <b>03.30</b> |
| Han® 64 EE .....                            | <b>03.31</b> |
| Han® 48 E / Han® 48 ES / Han® 48 ESS .....  | <b>03.33</b> |
| Han® 92 EE .....                            | <b>03.34</b> |
| Modified contact arrangements .....         | <b>03.36</b> |

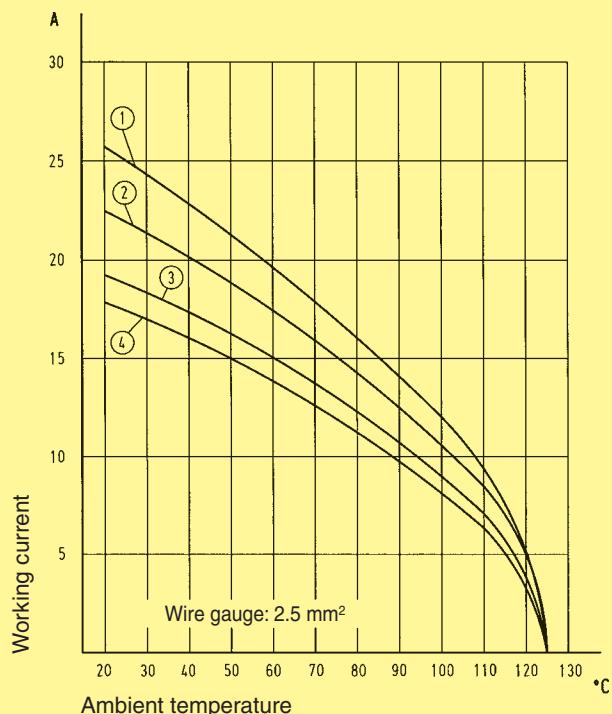
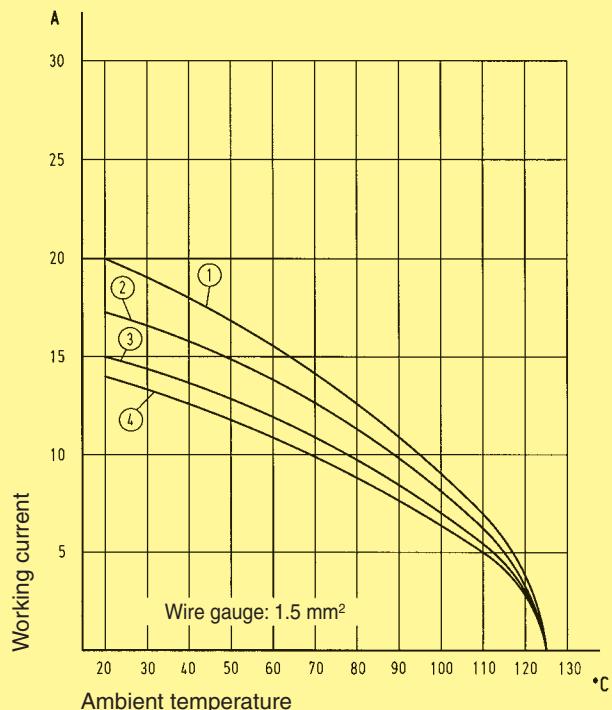
Han  
E/EE

|  |   |
|--|---|
| Specifications   | DIN VDE 0627<br>DIN VDE 0110<br>DIN EN 61984    |
| Approvals  |   |
| Inserts  |   |
| Number of contacts   | 6, 10, 16, 24, 32 (2 x 16),<br>48 (2 x 24) + PE |
| Electrical data<br>acc. to DIN EN 61984                                |   |
| Working current  | 16 A  |
| Working voltage  | 500 V   |
| Rated impulse voltage  | 6 kV  |
| Pollution degree   | 3   |
| – Pollution degree 2 also  | 16 A 400/690 V 6 kV 2                           |
| Working voltage<br>acc. to UL/CSA                                      | 600 V   |
| Insulation resistance  | $\geq 10^{10} \Omega$                           |
| Material   | Polycarbonate                                   |
| Limiting temperatures  | - 40 °C / +125 °C                               |
| Flammability acc. to UL 94   | V 0   |
| Mechanical working life<br>- Mating cycles                             | $\geq 500$                                      |
| Contacts   |   |
| Material   | copper alloy                                    |
| Surface  |   |
| - hard-silver plated   | 3 µm Ag   |
| - hard-gold plated   | 2 µm Au over 3 µm Ni                            |
| Contact resistance   | $\leq 1 \text{ m}\Omega$                        |
| Crimp terminal   |   |
| - mm <sup>2</sup>  | 0.5 - 4.0 mm <sup>2</sup>                       |
| - AWG  | 20 - 12   |
| - Stripping length   | 7.5 mm  |
| Screw terminal   |   |
| - mm <sup>2</sup>  | 1.0 - 2.5 mm <sup>2</sup>                       |
| - AWG  | 18 - 14   |
| - Tightening/test torque   | 0.5 Nm  |
| - Stripping length   | 7.0 mm  |
| Hoods/Housings   |   |
| Material   | die cast aluminium                              |
| Surface  | powder-coated<br>RAL 7037                       |
| Locking element  | Han-Easy Lock®                                  |
| Hoods/Housings seal  | NBR   |
| Limiting temperatures  | - 40 °C / +125 °C                               |
| Degree of protection<br>acc. to DIN EN 60 529<br>for coupled connector | IP 65   |
| Further selection<br>of hoods/housings                                 | chapter 30 and chapter 31                       |
| Accessories  |   |
| Crimping tools   | chapter 99                                      |
| Cable clamps   | chapter 40                                      |
| Coding of Hoods/Housings   | chapter 40                                      |
| Label acc. to CSA-approval   | chapter 40                                      |
| Han-Snap®  | chapter 11                                      |
| Special insert fixing screws   | chapter 40                                      |

**Current carrying capacity**

The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity-curve is valid for continuous, not interrupted current-loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60512-5.



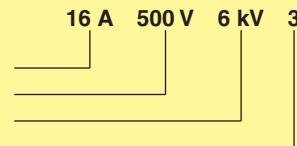
- ① Han® 6 E
- ② Han® 10 E
- ③ Han® 16 E
- ④ Han® 24 E

**Specifications**

DIN VDE 0627  
DIN VDE 0110  
DIN EN 61 984

**Approvals****Inserts**

Number of contacts

10, 18, 32, 46, 64 (2 x 32),  
92 (2 x 46) + PEElectrical data  
acc. to DIN EN 61 984

Working current  
Working voltage  
Rated impulse voltage  
Pollution degree

– Pollution degree 2 also

16 A 830 V 8 kV 2

Working voltage  
acc. to UL/CSA

600 V

Insulation resistance  
Material  
Limiting temperatures  
Flammability acc. to UL 94  
Mechanical working life  
- Mating cycles

$\geq 10^{10} \Omega$   
Polycarbonate  
- 40 °C / +125 °C

V 0

 $\geq 500$ **Contacts**

Material  
Surface  
- hard-silver plated  
- hard-gold plated  
Contact resistance  
Crimp terminal  
- mm<sup>2</sup>  
- AWG  
- Stripping length

copper alloy  
3 µm Ag  
2 µm Au over 3 µm Ni  
 $\leq 1 \text{ m}\Omega$   
0.5 - 4.0 mm<sup>2</sup>  
20 - 12  
7.5 mm

**Hoods/Housings**

Material  
Surface  
Locking element  
Hoods/Housings seal  
Limiting temperatures  
Degree of protection  
acc. to DIN EN 60 529  
for coupled connector

die cast aluminium  
powder-coated  
RAL 7037  
Han-Easy Lock®  
NBR  
- 40 °C / +125 °C

IP 65

Further selection  
of hoods/housings

chapter 30 / chapter 31

**Accessories**

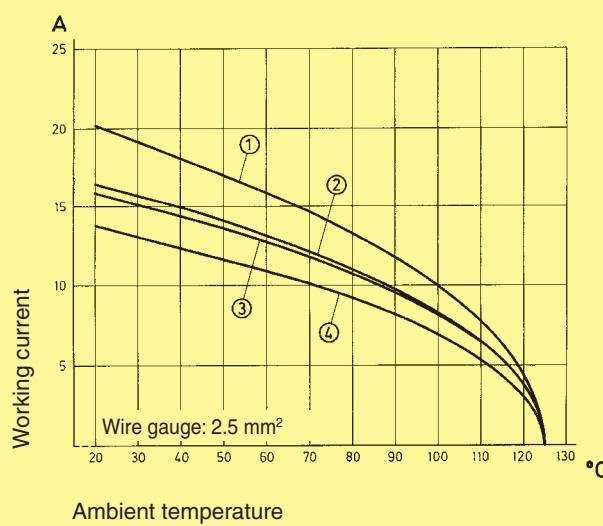
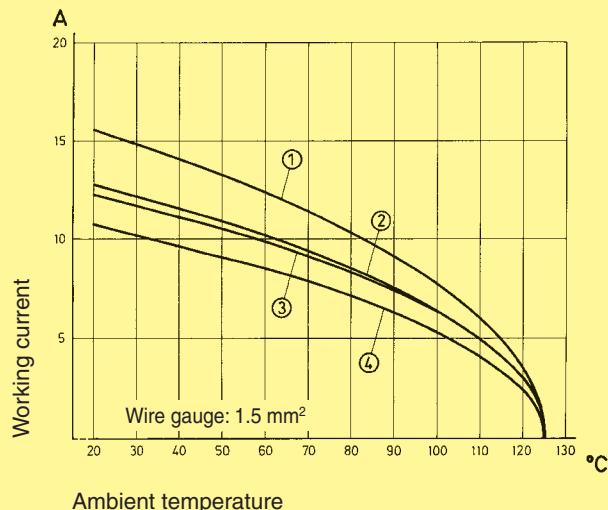
Crimping tools  
Cable clamps  
Coding of Hoods/Housings  
Label acc. to CSA-approval  
Han-Snap®  
Special insert fixing screws

chapter 99  
chapter 40  
chapter 40  
chapter 40  
chapter 11  
chapter 40

**Current carrying capacity**

The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity-curve is valid for continuous, not interrupted current-loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60512-5.



- ① Han® 10 EE  
② Han® 18 EE  
③ Han® 32 EE  
④ Han® 46 EE

## Specifications

DIN VDE 0627  
DIN VDE 0110  
DIN EN 61 984

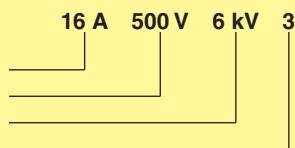
## Approvals



## Inserts

## Number of contacts

6, 10, 16, 24, 32 (2 x 16),  
48 (2 x 24) + PE

Electrical data  
acc. to DIN EN 61 984

Working current  
Working voltage  
Rated impulse voltage  
Pollution degree

- Pollution degree 2 also

16 A 400/690 V 6 kV 2

Working voltage  
acc. to UL/CSA

600 V

Insulation resistance  
Material  
Limiting temperatures  
Flammability acc. to UL 94  
Mechanical working life  
- Mating cycles

$\geq 10^{10} \Omega$   
Polycarbonate

-40 °C / +125 °C

V 0

$\geq 500$

## Contacts

Material  
Surface  
- hard-silver plated  
Contact resistance  
Cage-clamp terminal  
- mm<sup>2</sup>  
- AWG  
Stripping length

copper alloy

3 µm Ag  
 $\leq 3 \text{ m}\Omega$

0.14 - 2.5 mm<sup>2</sup>  
26 - 14

7 - 9 mm

## Hoods/Housings

Material  
Surface  
Locking element  
Hoods/housings seal  
Limiting temperatures  
Degree of protection  
acc. to DIN EN 60 529  
for coupled connector

die cast aluminium  
powder-coated  
RAL 7037

Han-Easy Lock®  
NBR  
-40 °C / +125 °C

IP 65

Further selection  
of hoods/housings

chapter 30 / chapter 31

## Accessories

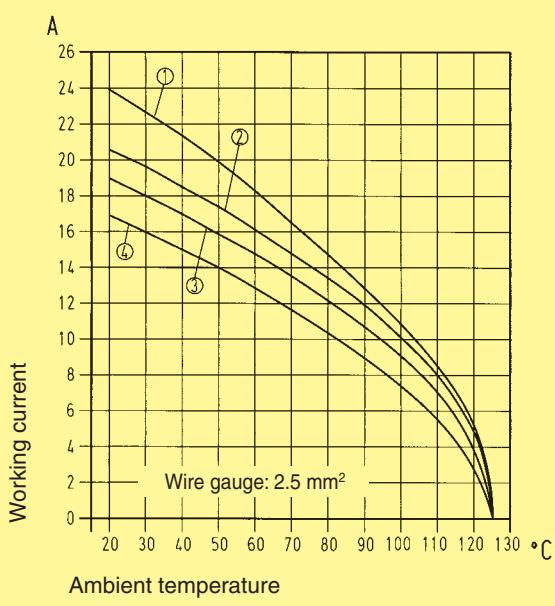
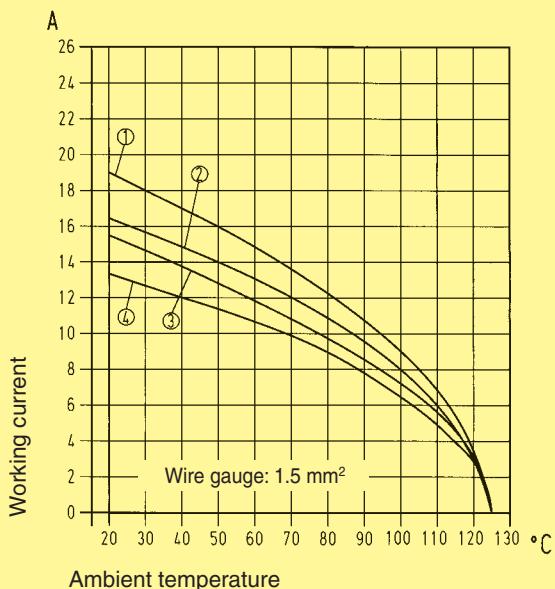
Cable clamps  
Coding of hoods/housings  
Label acc. to CSA-approval  
Han-Snap®  
Special insert fixing screws

chapter 40  
chapter 40  
chapter 40  
chapter 11  
chapter 40

## Current carrying capacity

The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity-curve is valid for continuous, not interrupted current-loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60512-5.



① Han® 6 ES

② Han® 10 ES

③ Han® 16 ES

④ Han® 24 ES

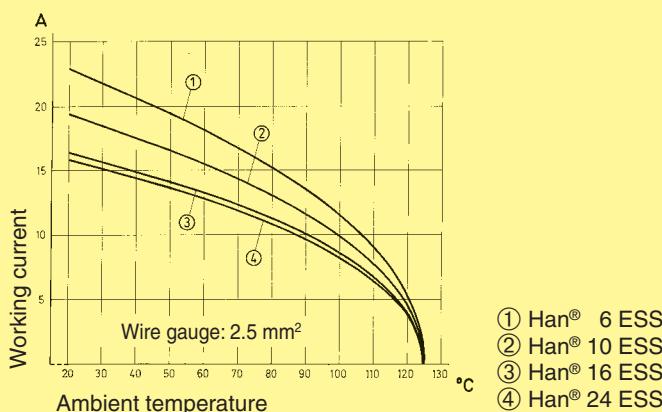
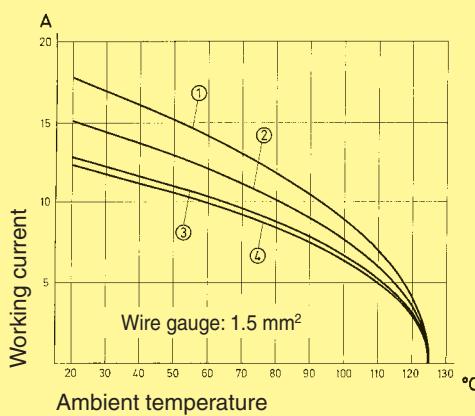
**Features:**

- 2 termination points per contact
- Termination: Cage-clamp
- Suitable for standard hoods/housings size B
- High construction hoods/housings are necessary
- No special tools necessary
- Bridges are made by using a simple screw driver
- Vibration resistant
- Ideal as motor connector as it offers the possibility to create star and delta bridges
- Testing is possible in the screwdriver aperture

**Current carrying capacity**

The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity-curve is valid for continuous, not interrupted current-loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60512-5.

**Specifications**

DIN VDE 0627  
DIN VDE 0110  
DIN EN 61 984

**Approvals****Inserts**

Number of contacts

6, 10, 16, 24, 32 (2 x 16),  
48 (2 x 24) + PE

Electrical data  
acc. to DIN EN 61 984

Working current  
Working voltage  
Rated impulse voltage  
Pollution degree

16 A 500 V 6 kV 3

– Pollution degree 2 also

16 A 400/690 V 6 kV 2

Working voltage  
acc. to UL/CSA

600 V

Test voltage  $U_{rms}$

3 kV

Insulation resistance

$\geq 10^{10} \Omega$

Material

Polycarbonate

Limiting temperatures

-40 °C / +125 °C

Flammability acc. to UL 94

V 0

Mechanical working life

- Mating cycles

$\geq 500$

**Contacts**

Material copper alloy

Surface

- hard-silver plated  
 $3 \mu\text{m Ag}$   
 $\leq 3 \text{ m}\Omega$

Contact resistance

$\leq 3 \text{ m}\Omega$

Cage-clamp terminal

- mm<sup>2</sup>

- AWG

0.14 - 2.5 mm<sup>2</sup>

- Stripping length

26 - 14

9 - 11 mm

**Hoods/Housings**

Material

die cast aluminium

Surface powder-coated

RAL 7037

Han-Easy Lock®

NBR

-40 °C / +125 °C

Locking element

IP 65

Hoods/Housings seal

Further selection

Limiting temperatures

of hoods/housings

Degree of protection

acc. to DIN EN 60 529

for coupled connector

chapter 30 / chapter 31

**Accessories**

Cable clamps

chapter 40

Coding of hoods/housings

chapter 40

Label acc. to CSA-approval

chapter 40

Han-Snap®

chapter 11

Special insert fixing screws

chapter 40

Number of contacts

6 +



## Inserts

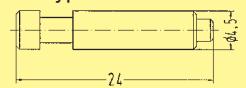
Han  
E / EE

| Identification                                | Series  | Male insert (M)   | Female insert (F)   | Drawing | Dimensions in mm   |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
|---|---|---|---|---------|--|--|---|---|---|---|--------------|----|----|----|----|----------------------|----|----|----|----|---------|----|----|----|----|
| Screw terminal with wire protection           | Han E®  | 09 33 006 2601  | 09 33 006 2701  |         | 1) Distance for contact max. 21 mm   |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Cage-clamp terminal                           | Han® ES   | 09 33 006 2616  | 09 33 006 2716  |         | <table border="1"> <tr> <th></th><th>a</th><th>b</th><th>c</th><th>d</th></tr> <tr> <td>Han E® screw</td><td>18</td><td>33</td><td>18</td><td>35</td></tr> <tr> <td>Han® ES/Han E® crimp</td><td>19</td><td>34</td><td>19</td><td>36</td></tr> <tr> <td>Han ESS</td><td>34</td><td>49</td><td>32</td><td>49</td></tr> </table> |  | a | b | c | d | Han E® screw | 18 | 33 | 18 | 35 | Han® ES/Han E® crimp | 19 | 34 | 19 | 36 | Han ESS | 34 | 49 | 32 | 49 |
|   | a   | b   | c   | d       |  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Han E® screw                                  | 18  | 33  | 18  | 35      |  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Han® ES/Han E® crimp                          | 19  | 34  | 19  | 36      |  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Han ESS                                       | 34  | 49  | 32  | 49      |  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Cage-clamp terminal two terminals per contact | Han® ESS  | 09 33 006 2672  | 09 33 006 2772  |         | Contact arrangement View from termination side   |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Crimp terminal Order contacts separately      | Han E®  | 09 33 006 2602  | 09 33 006 2702  |         | Panel cut out for inserts for use without hoods/ housings  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Identification                                | Wire gauge (mm²)  | Male contacts   | Female contacts   | Drawing | Dimensions in mm   |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Crimp contacts Power contacts silver plated   | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6127*<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6227*<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 |         | Operating contact Identification Relay contact   |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| gold plated                                   | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>4.0    | 09 33 000 6117*<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119                   | 09 33 000 6217*<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221                   |         |  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Relay contact silver plated                   | 0.75-1<br>1.5<br>2.5                                    | 09 33 000 6109<br>09 33 000 6110<br>09 33 000 6111  |   |         |  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Coding Pin                                    |   |   | 09 33 000 9954  |         |  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |

\* on the back crimp collar

Use of the coding pin prevents incorrect mating to other connectors of the same type.

The male pin should be omitted from the opposing cavity in the male insert.

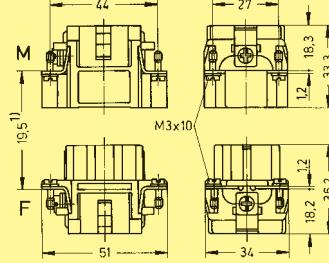
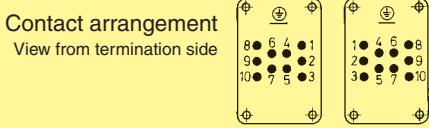


Stock items in bold type

Number of contacts

10 + 

## Inserts

| Identification                              | Series  | Part No.        |                   | Drawing   | Dimensions in mm   |
|---|---------|-----------------|-------------------|---|--|
|   |         | Male insert (M) | Female insert (F) |   |  |
| Crimp terminal<br>Order contacts separately | Han® EE | 09 32 010 3001  | 09 32 010 3101    |  <p>1) Distance for contact max. 21 mm</p> |  <p>Contact arrangement<br/>View from termination side</p> |

| Identification                         | Wire gauge (mm²) | Part No.        |                 | Drawing | Dimensions in mm |
|--|------------------|-----------------|-----------------|---------|------------------|
|  |                  | Male contacts   | Female contacts |         |                  |
| Crimp contacts                         |                  |                 |                 |         |                  |
| Power contacts                         | 0.14-0.37        | 09 33 000 6127* | 09 33 000 6227* |         |                  |
|  | 0.5              | 09 33 000 6121  | 09 33 000 6220  |         |                  |
|  | 0.75             | 09 33 000 6114  | 09 33 000 6214  |         |                  |
|  | 1.0              | 09 33 000 6105  | 09 33 000 6205  |         |                  |
| silver plated                          | 1.5              | 09 33 000 6104  | 09 33 000 6204  |         |                  |
|  | 2.5              | 09 33 000 6102  | 09 33 000 6202  |         |                  |
|  | 3                | 09 33 000 6106  | 09 33 000 6206  |         |                  |
|  | 4                | 09 33 000 6107  | 09 33 000 6207  |         |                  |
|  | 0.14-0.37        | 09 33 000 6117* | 09 33 000 6217* |         |                  |
|  | 0.5              | 09 33 000 6122  | 09 33 000 6222  |         |                  |
|  | 0.75             | 09 33 000 6115  | 09 33 000 6215  |         |                  |
| gold plated                            | 1.0              | 09 33 000 6118  | 09 33 000 6218  |         |                  |
|  | 1.5              | 09 33 000 6116  | 09 33 000 6216  |         |                  |
|  | 2.5              | 09 33 000 6123  | 09 33 000 6223  |         |                  |
|  | 4.0              | 09 33 000 6119  | 09 33 000 6221  |         |                  |
| FOC contacts<br>for 1 mm plastic fibre |                  | 20 10 001 3311  | 20 10 001 3321  |         |                  |
| Coding Pin                             |                  | 09 33 000 9954  |                 |         |                  |

\* only to be used with BUCHANAN crimping tool 09 99 000 0001  
and adjustment gauge 09 99 000 0203

Stock items in bold type

|             |  | Part No.         |                   | M  | Drawing  | Dimensions in mm |  |
|-------------|--|------------------|-------------------|--|----------|------------------|--|
|             | Identification                                       | Low construction | High construction |  |          |                  |  |
| Han<br>E/EE | Hoods<br>side-entry                                  |                  |                   | 19 30 006 1540<br><b>19 30 006 1541</b>                          | 20<br>25 |                  |  |
|             | Hoods<br>top-entry                                   |                  |                   | <b>19 30 006 1440</b><br>19 30 006 0546<br><b>19 30 006 0547</b> | 25<br>32 |                  |  |
|             | Protection covers<br>for hoods<br>metal              |                  |                   | 09 30 006 5401<br><b>09 30 006 5423</b>                          |          |                  |  |
|             | Hoods<br>cable to cable                              |                  |                   | <b>19 30 006 1750</b><br>19 30 006 0756                          | 20<br>25 |                  |  |
|             | Protection cover<br>for cable to cable hood<br>metal |                  |                   | <b>09 30 006 5427</b>  |          |                  |  |

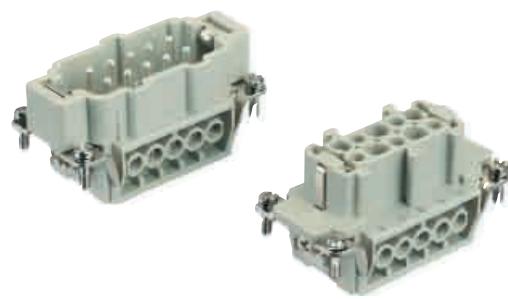
Stock items in bold type

| Identification                | Part No.  |  | M  | Drawing                  | Dimensions in mm |
|-------------------------------|---|--|--|--------------------------|------------------|
| Housings<br>bulkhead mounting | Low construction<br><b>09 30 006 0301</b><br>with thermo-<br>plastic cover<br><b>09 30 006 0302</b><br>with metal<br>cover<br><b>09 30 006 0318</b> | High construction  | M  | Panel cut out 48 x 35 mm |                  |
| Housings<br>surface mounting  | 19 30 006 1250<br>19 30 006 1290<br><br>19 30 006 1255<br>19 30 006 1295<br><br>19 30 006 2255<br>19 30 006 2295                                    | 19 30 006 0291<br>19 30 006 0292<br><br>19 30 006 0296<br>19 30 006 0297<br><br>19 30 006 7296 | 1 x 20<br>2 x 20<br>2 x 25<br>2 x 32<br><br>1 x 20<br>2 x 20<br>2 x 25<br>2 x 32<br><br>1 x 20<br>2 x 20<br>2 x 25 |                          |                  |
| Protection covers             | plastic<br><b>09 30 006 5404</b><br><br>metal<br><b>09 30 006 5425</b>  |  |  |                          |                  |

Han  
E/EE03  
17

Number of contacts

10 +



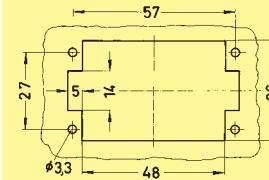
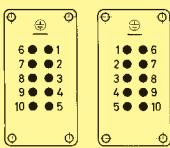
## Inserts

Han  
E / EE

| Identification                                | Series  | Male insert (M)   | Female insert (F)   | Drawing | Dimensions in mm                 |
|---|---|---|---|---------|----------------------------------|
| Screw terminal with wire protection           | Han E®  | <b>09 33 010 2601</b>   | <b>09 33 010 2701</b>   |         |                                  |
| Cage-clamp terminal                           | Han® ES   | <b>09 33 010 2616</b>   | <b>09 33 010 2716</b>   |         |                                  |
| Cage-clamp terminal two terminals per contact | Han® ESS  | <b>09 33 010 2672</b>   | <b>09 33 010 2772</b>   |         |                                  |
| Crimp terminal Order contacts separately      | Han E®  | <b>09 33 010 2602</b>   | <b>09 33 010 2702</b>   |         |                                  |
| Identification                                | Wire gauge (mm²)  | Part No.  |   | Drawing | Dimensions in mm                 |
| Identification                                |   | Male contacts   | Female contacts   |         |                                  |
| Crimp contacts Power contacts silver plated   | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>3<br>4 | <b>09 33 000 6127*</b><br><b>09 33 000 6121</b><br><b>09 33 000 6114</b><br><b>09 33 000 6105</b><br><b>09 33 000 6104</b><br><b>09 33 000 6102</b><br><b>09 33 000 6106</b><br><b>09 33 000 6107</b> | <b>09 33 000 6227*</b><br><b>09 33 000 6220</b><br><b>09 33 000 6214</b><br><b>09 33 000 6205</b><br><b>09 33 000 6204</b><br><b>09 33 000 6202</b><br><b>09 33 000 6206</b><br><b>09 33 000 6207</b> |         | Operating contact identification |
| gold plated                                   | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>4.0    | <b>09 33 000 6117*</b><br><b>09 33 000 6122</b><br><b>09 33 000 6115</b><br><b>09 33 000 6118</b><br><b>09 33 000 6116</b><br><b>09 33 000 6123</b><br><b>09 33 000 6119</b>                          | <b>09 33 000 6217*</b><br><b>09 33 000 6222</b><br><b>09 33 000 6215</b><br><b>09 33 000 6218</b><br><b>09 33 000 6216</b><br><b>09 33 000 6223</b><br><b>09 33 000 6221</b>                          |         | Relay contact                    |
| Relay contact silver plated                   | 0.75-1<br>1.5<br>2.5                                    | <b>09 33 000 6109</b><br><b>09 33 000 6110</b><br><b>09 33 000 6111</b>   |   |         |                                  |
| Coding Pin                                    |   |   | <b>09 33 000 9954</b>   |         |                                  |

1) Distance for contact max. 21 mm

|                      | a  | b  | c  | d  |
|----------------------|----|----|----|----|
| Han E® screw         | 18 | 33 | 18 | 35 |
| Han® ES/Han E® crimp | 19 | 34 | 19 | 36 |
| Han ESS              | 34 | 49 | 32 | 49 |

Contact arrangement  
View from termination side

Panel cut out for inserts for use without hoods/housings

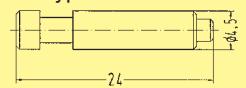
## Crimp contact identification

| Identification | Wire gauge    | Stripping length |
|----------------|---------------|------------------|
| no groove      | 0.14-0.37 mm² | AWG 26-22        |
| no groove      | 0.5 mm²       | AWG 20           |
| 1 groove*      | 0.75 mm²      | AWG 18           |
| 1 groove       | 1 mm²         | AWG 18           |
| 2 grooves      | 1.5 mm²       | AWG 16           |
| 3 grooves      | 2.5 mm²       | AWG 14           |
| wide groove    | 3.0 mm²       | AWG 12           |
| no groove      | 4 mm²         | AWG 12           |

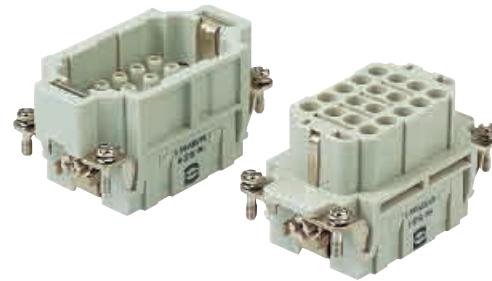
\* on the back crimp collar

Use of the coding pin prevents incorrect mating to other connectors of the same type.

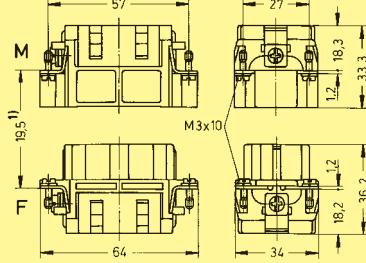
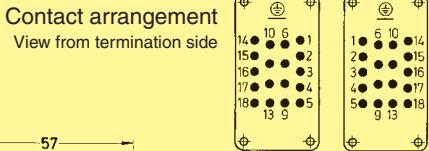
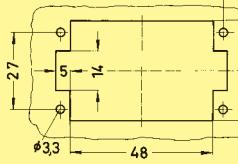
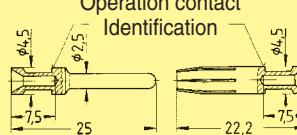
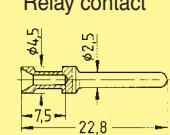
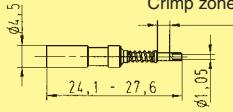
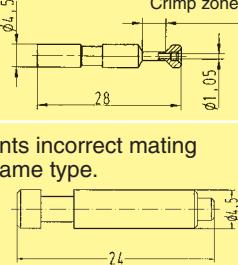
The male pin should be omitted from the opposing cavity in the male insert.



Number of contacts

18 + 

## Inserts

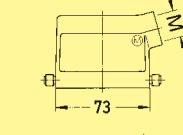
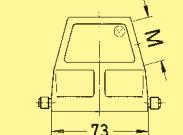
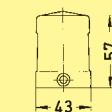
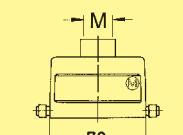
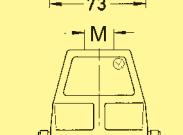
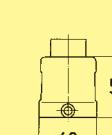
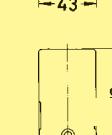
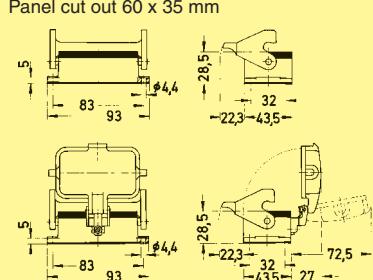
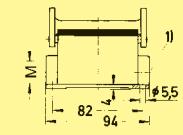
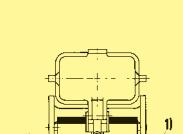
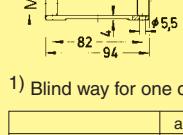
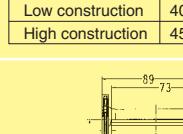
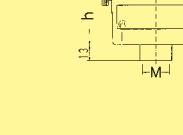
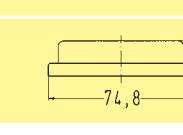
| Identification                              | Series  | Part No.  |   | Drawing   | Dimensions in mm   |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
|---|---|---|---|---|--|----|---|---|----|----|---|---|---|----|----|---|---|---|----|----|---|---|---|----|----|---|---|---|----|----|---|---|---|----|---|---|---|---|---|---|
|   |   | Male insert (M)   | Female insert (F)   |   |  |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| Crimp terminal<br>Order contacts separately | Han® EE   | 09 32 018 3001  | 09 32 018 3101  |  <p>1) Distance for contact max. 21 mm</p>   | Dimensions in mm: M: 57, 27, 19.5, 11, 64, 34; F: 36.2, 18.2, 12, 33.3, 18.3, 12, 36.2, 34. Note: 1) Distance for contact max. 21 mm   |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
|   |   |   |   |  <p>Contact arrangement<br/>View from termination side</p> <table border="1"> <tr><td>14</td><td>10</td><td>6</td><td>1</td><td>14</td></tr> <tr><td>15</td><td>●</td><td>2</td><td>●</td><td>15</td></tr> <tr><td>16</td><td>●</td><td>3</td><td>●</td><td>16</td></tr> <tr><td>17</td><td>●</td><td>4</td><td>●</td><td>17</td></tr> <tr><td>18</td><td>●</td><td>5</td><td>●</td><td>18</td></tr> <tr><td>13</td><td>9</td><td>●</td><td>●</td><td>13</td></tr> <tr><td>1</td><td>●</td><td>●</td><td>●</td><td>1</td></tr> </table> <p>M      F</p> | 14   | 10 | 6 | 1 | 14 | 15 | ● | 2 | ● | 15 | 16 | ● | 3 | ● | 16 | 17 | ● | 4 | ● | 17 | 18 | ● | 5 | ● | 18 | 13 | 9 | ● | ● | 13 | 1 | ● | ● | ● | 1 | Contact arrangement: View from termination side<br>M: 14, 10, 6, 1, 14, 15, 2, 15, 16, 3, 16, 17, 4, 17, 18, 5, 18, 13, 9, 13, 1. F: 1, 6, 10, 14, 15, 16, 17, 18, 13, 13, 1. |
| 14  | 10  | 6   | 1   | 14  |  |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| 15  | ●   | 2   | ●   | 15  |  |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| 16  | ●   | 3   | ●   | 16  |  |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| 17  | ●   | 4   | ●   | 17  |  |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| 18  | ●   | 5   | ●   | 18  |  |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| 13  | 9   | ●   | ●   | 13  |  |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| 1   | ●   | ●   | ●   | 1   |  |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
|   |   |   |   |  <p>Panel cut out for inserts for use without hoods/ housings</p>   | Panel cut out for inserts for use without hoods/ housings: 57, 27, 5, 12, 36, 48, 33.3, 4.8  |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| Identification                              | Wire gauge (mm²)  | Part No.  |   | Drawing   | Dimensions in mm   |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| Identification                              | Male contacts   | Female contacts   |   |   |  |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| Crimp contacts                              |   |   |   |   |  |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| Power contacts                              |   |   |   |   |  |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| silver plated                               | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6127*<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6227*<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 |  <p>Operation contact<br/>Identification</p>  | Operation contact identification: 44.5, 25, 75, 22.2, 75, 22.2, 22.8, 22.8   |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| gold plated                                 | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>4.0    | 09 33 000 6117*<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119                   | 09 33 000 6217*<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221                   |  <p>Relay contact</p>  | Relay contact: 44.5, 7.5, 25, 22.2, 75, 22.2, 22.8, 22.8   |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| FOC contacts<br>for 1 mm plastic fibre      |   | 20 10 001 3311  | 20 10 001 3321  |  <p>Crimp zone</p>  | Crimp contact identification: 24.1 - 27.6, 1.05, 28  |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |
| Coding Pin                                  |   | 09 33 000 9954  |   |   |  <p>Use of the coding pin prevents incorrect mating to other connectors of the same type.<br/>The male pin should be omitted from the opposing cavity in the male insert.</p> |    |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |    |   |   |   |    |   |   |   |   |   |   |

\* only to be used with BUCHANAN crimping tool 09 99 000 0001 and adjustment gauge 09 99 000 0203

Stock items in bold type

| Identification |  | Part No.   |                                  | M                                | Drawing | Dimensions in mm |
|----------------|--|--|----------------------------------|----------------------------------|---------|------------------|
|                | Han E/EE   | Low construction                                 | High construction                |                                  |         |                  |
| Hoods          | Hoods side-entry   | 19 30 010 1520<br>19 30 010 1521                 | 19 30 010 0527                   | 20<br>25<br>32                   |         |                  |
|                | Hoods top-entry  | 19 30 010 1420<br>19 30 010 1421                 | 19 30 010 0427                   | 20<br>25<br>32                   |         |                  |
|                | Protection covers for hoods thermoplastic/metal                              | 09 30 010 5401<br>09 30 010 5423                 |                                  |                                  |         |                  |
| Housings       | Housing bulkhead mounting  | 09 30 010 0301                                   |                                  | —                                |         |                  |
|                | Housings surface mounting  | 1 side-entry<br>19 30 010 1230<br>19 30 010 1231 | 2 side-entries<br>19 30 010 1270 | 20<br>25<br>32<br>20<br>25<br>32 |         |                  |
|                | Protection covers for housings bulkhead/surface mounting thermoplastic/metal | 09 30 010 5407<br>09 30 010 5425                 |                                  |                                  |         |                  |
|                | Hoods cable to cable   |  |                                  | 20<br>25<br>32                   |         |                  |
|                | Protection cover for hoods cable to cable metal                              | 09 30 010 5427                                   |                                  |                                  |         |                  |

Stock items in bold type

| Identification |                            | Part No.   |                                  | M              | Drawing  | Dimensions in mm   |
|----------------|----------------------------|--|----------------------------------|----------------|--|--|
|                |                            | Low construction   | High construction                |                |  |  |
| Hoods          | Hoods side-entry           | 19 30 010 1540<br>19 30 010 1541   | 19 30 010 0547                   | 20<br>25<br>32 | <br> | <br> |
|                | Hoods top-entry            | 19 30 010 1440<br>19 30 010 1441   | 19 30 010 0447                   | 20<br>25<br>32 | <br> | <br> |
| Housings       | Housings bulkhead mounting | 09 30 010 0305<br>with thermoplastic cover<br>09 30 010 0303<br>with metal cover<br>09 30 010 0318 |                                  | —              |    |  |
|                | Housings surface mounting  | 19 30 010 1250   |                                  | 20             |   |  |
|                |                            | 19 30 010 1290   | 19 30 010 0291<br>19 30 010 0292 | 20<br>25<br>32 |   |  |
|                | Housings surface mounting  | 19 30 010 1255   |                                  | 20             |   |  |
|                |                            | 19 30 010 1295   | 19 30 010 0296<br>19 30 010 0297 | 20<br>25<br>32 |   |  |
|                | Hoods cable to cable       | 19 30 010 2295   |                                  | 20             |   |  |
|                |                            | 19 30 010 7296   | 19 30 010 0756<br>19 30 010 0757 | 20<br>25       |   |  |
|                | Dust protection cover      | 09 30 010 5406   |                                  |                |   |  |

Stock items in bold type

Number of contacts

16 +



## Inserts

Han  
E/EE

| Identification                                | Series  | Male insert (M)   | Female insert (F)   | Drawing | Dimensions in mm                       |
|---|---|---|---|---------|--|
| Screw terminal with wire protection           | Han E®  | <b>09 33 016 2601</b>   | <b>09 33 016 2701</b>   |         | 1) Distance for contact max. 21 mm<br> |
| Cage-clamp terminal                           | Han® ES   | <b>09 33 016 2616</b>   | <b>09 33 016 2716</b>   |         |  |
| Cage-clamp terminal two terminals per contact | Han® ESS  | <b>09 33 016 2672</b>   | <b>09 33 016 2772</b>   |         |  |
| Crimp terminal Order contacts separately      | Han E®  | <b>09 33 016 2602</b>   | <b>09 33 016 2702</b>   |         |  |
| Identification                                | Wire gauge (mm²)  | Part No.  |   | Drawing | Dimensions in mm                       |
| Identification                                |   | Male contacts   | Female contacts   |         |  |
| Crimp contacts Power contacts silver plated   | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>3<br>4 | <b>09 33 000 6127*</b><br><b>09 33 000 6121</b><br><b>09 33 000 6114</b><br><b>09 33 000 6105</b><br><b>09 33 000 6104</b><br><b>09 33 000 6102</b><br><b>09 33 000 6106</b><br><b>09 33 000 6107</b> | <b>09 33 000 6227*</b><br><b>09 33 000 6220</b><br><b>09 33 000 6214</b><br><b>09 33 000 6205</b><br><b>09 33 000 6204</b><br><b>09 33 000 6202</b><br><b>09 33 000 6206</b><br><b>09 33 000 6207</b> |         | Operating contact<br>Identification    |
| gold plated                                   | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>4.0    | <b>09 33 000 6117*</b><br><b>09 33 000 6122</b><br><b>09 33 000 6115</b><br><b>09 33 000 6118</b><br><b>09 33 000 6116</b><br><b>09 33 000 6123</b><br><b>09 33 000 6119</b>                          | <b>09 33 000 6217*</b><br><b>09 33 000 6222</b><br><b>09 33 000 6215</b><br><b>09 33 000 6218</b><br><b>09 33 000 6216</b><br><b>09 33 000 6223</b><br><b>09 33 000 6221</b>                          |         | Relay contact                          |
| Relay contact silver plated                   | 0.75-1<br>1.5<br>2.5                                    | <b>09 33 000 6109</b><br><b>09 33 000 6110</b><br><b>09 33 000 6111</b>   |   |         |  |
| Coding Pin                                    |   |   | <b>09 33 000 9954</b>   |         |  |

\* on the back crimp collar

Use of the coding pin prevents incorrect mating to other connectors of the same type.

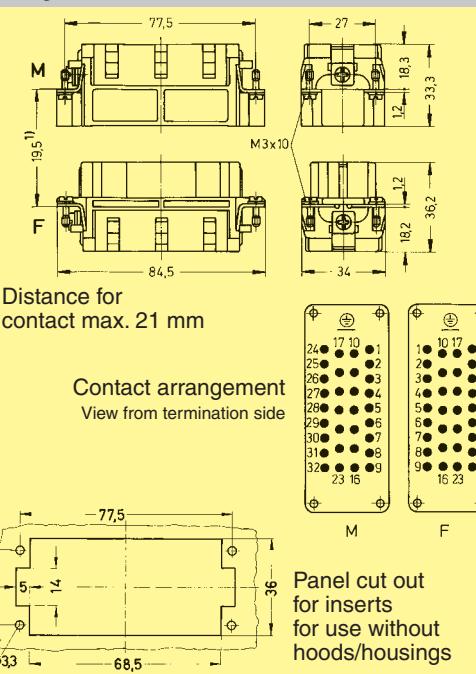
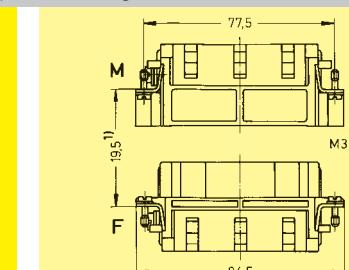
The male pin should be omitted from the opposing cavity in the male insert.  

Stock items in bold type

Number of contacts

32 + 

## Inserts

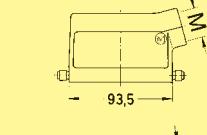
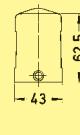
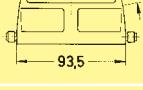
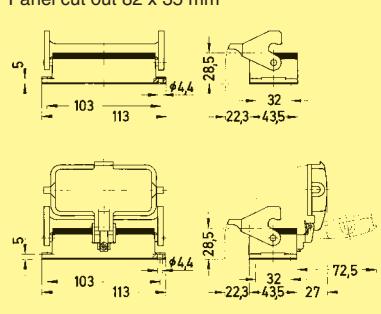
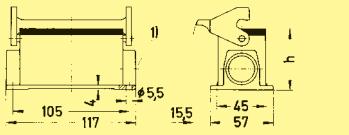
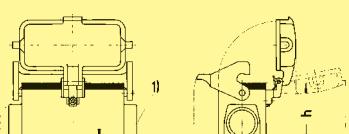
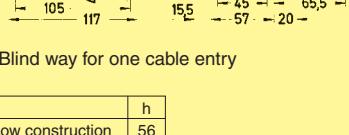
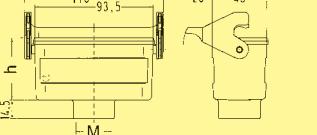
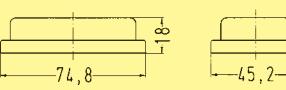
| Identification                              | Series           | Part No.        |                   | Drawing   | Dimensions in mm   |
|---|------------------|-----------------|-------------------|---|--|
|   |                  | Male insert (M) | Female insert (F) |   |  |
| Crimp terminal<br>Order contacts separately | Han® EE          | 09 32 032 3001  | 09 32 032 3101    |  <p>1) Distance for contact max. 21 mm</p> <p>Contact arrangement View from termination side</p> <p>M F</p> <p>Panel cut out for inserts for use without hoods/housings</p> |  |
| Identification                              | Wire gauge (mm²) | Part No.        |                   | Drawing   | Dimensions in mm   |
| Crimp contacts                              |                  | Male contacts   | Female contacts   |   |  |
| Power contacts                              | 0.14-0.37        | 09 33 000 6127* | 09 33 000 6227*   |   |  |
| silver plated                               | 0.5              | 09 33 000 6121  | 09 33 000 6220    |   |  |
|   | 0.75             | 09 33 000 6114  | 09 33 000 6214    |   |  |
|   | 1.0              | 09 33 000 6105  | 09 33 000 6205    |   |  |
|   | 1.5              | 09 33 000 6104  | 09 33 000 6204    |   |  |
|   | 2.5              | 09 33 000 6102  | 09 33 000 6202    |   |  |
|   | 3                | 09 33 000 6106  | 09 33 000 6206    |   |  |
|   | 4                | 09 33 000 6107  | 09 33 000 6207    |   |  |
| gold plated                                 | 0.14-0.37        | 09 33 000 6117* | 09 33 000 6217*   |   |  |
|   | 0.5              | 09 33 000 6122  | 09 33 000 6222    |   |  |
|   | 0.75             | 09 33 000 6115  | 09 33 000 6215    |   |  |
|   | 1.0              | 09 33 000 6118  | 09 33 000 6218    |   |  |
|   | 1.5              | 09 33 000 6116  | 09 33 000 6216    |   |  |
|   | 2.5              | 09 33 000 6123  | 09 33 000 6223    |   |  |
|   | 4.0              | 09 33 000 6119  | 09 33 000 6221    |   |  |
| FOC contacts<br>for 1 mm plastic fibre      |                  | 20 10 001 3311  | 20 10 001 3321    |   |  |
| Coding Pin                                  |                  | 09 33 000 9954  |                   |   |  |

\* only to be used with BUCHANAN crimping tool 09 99 000 0001 and adjustment gauge 09 99 000 0203

Stock items in bold type

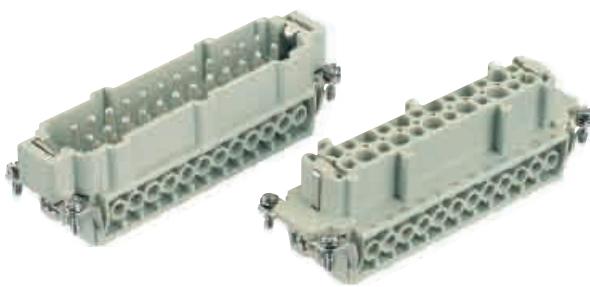
| Identification |  | Part No.                             |  |                      | Drawing | Dimensions in mm                                |
|----------------|--|--------------------------------------|--|----------------------|---------|---|
|                | Han E/EE   | Low construction                     | High construction                                  | M                    |         |   |
| Hoods          | Hoods side-entry   | 19 30 016 1521<br>19 30 016 1522     | 19 30 016 0527<br>19 30 016 0528                   | 25<br>32<br>32<br>40 |         |   |
|                | Hoods top-entry  | 19 30 016 1421<br>19 30 016 1422     | 19 30 016 0427<br>19 30 016 0428                   | 25<br>32<br>32<br>40 |         |   |
|                | Protection covers for housings thermoplastic/metal                   | 09 30 016 5401<br><br>09 30 016 5422 |  |                      |         |   |
| Housings       | Housing bulkhead mounting  | 09 30 016 0301                       |  | —                    |         | Panel cut out 82 x 35 mm                        |
|                | Housings surface mounting  | 19 30 016 1231                       | 19 30 016 0232                                     | 25<br>32             |         | Blind way for one cable entry                   |
|                |  | 19 30 016 1271                       | 19 30 016 0271<br>19 30 016 0272<br>19 30 016 0273 | 25<br>32<br>40       |         | Low construction 56<br>High construction 81     |
|                | Protection covers for housings bulkhead mounting thermoplastic/metal | 09 30 016 5405<br><br>09 30 016 5425 |  |                      |         |   |
|                | Hoods cable to cable   | 19 30 016 1731                       | 19 30 016 0736<br>19 30 016 0737                   | 25<br>32             |         | Low construction 47.5<br>High construction 78.5 |
|                | Protection cover for hoods cable to cable metal                      | 09 30 016 5426                       |  |                      |         |   |

Stock items in bold type

| Identification        |   | Part No.   |  | Drawing       | Dimensions in mm   |
|-----------------------|---|--|--|---------------|--|
| Hoods                 | Hoods side-entry  | Low construction<br><b>19 30 016 1541</b><br>19 30 016 1542  | High construction<br><b>19 30 016 0547</b><br>19 30 016 0548 | M<br>25<br>32 | <br> |
|                       |   |  |  | 40            |  |
| Hoods                 | Hoods top-entry   | Low construction<br><b>19 30 016 1441</b><br>19 30 016 1442  | High construction<br><b>19 30 016 0447</b><br>19 30 016 0448 | M<br>25<br>32 | <br> |
|                       |   |  |  | 40            |  |
| Housings              | Housings bulkhead mounting  | 09 30 016 0307<br><br>with thermoplastic cover<br><b>09 30 016 0306</b><br><br>with metal cover<br><b>09 30 016 0318</b> |  | —             |    |
|                       | 1 side-entry  | <b>19 30 016 1251</b>  | <b>19 30 016 0252</b>  | 25<br>32      |   |
|                       | 2 side-entries  | <b>19 30 016 1291</b><br><br>with thermoplastic cover<br><b>19 30 016 1256</b>   | <b>19 30 016 0291</b><br><b>19 30 016 0292</b>               | 25<br>32      |   |
|                       | 1 side-entry  |  |  | 25            |  |
|                       | 2 side-entries  |  |  | 25<br>32      |   |
|                       | 2 side-entries  |  |  | 25            |  |
|                       | 2 side-entries  |  |  | 25<br>32      |  |
|                       |   |  |  | 25            |  |
| Hoods                 | Hoods cable to cable  | <b>19 30 016 1751</b>  | <b>19 30 016 0757</b>  | 25<br>32      |   |
|                       |   |  |  |               |  |
| Dust protection cover |  | <b>09 30 016 5406</b>  |  |               |   |

Number of contacts

24 +



## Inserts

Han  
E/EE

| Identification                                | Series  | Male insert (M)   | Female insert (F)   | Drawing | Dimensions in mm   |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
|---|---|---|---|---------|--|--|---|---|---|---|--------------|----|----|----|----|----------------------|----|----|----|----|---------|----|----|----|----|
| Screw terminal with wire protection           | Han E®  | <b>09 33 024 2601</b>   | <b>09 33 024 2701</b>   |         | 1) Distance for contact max. 21 mm   |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Cage-clamp terminal                           | Han® ES   | <b>09 33 024 2616</b>   | <b>09 33 024 2716</b>   |         | <table border="1"> <thead> <tr> <th></th><th>a</th><th>b</th><th>c</th><th>d</th></tr> </thead> <tbody> <tr> <td>Han E® screw</td><td>18</td><td>33</td><td>18</td><td>35</td></tr> <tr> <td>Han® ES/Han E® crimp</td><td>19</td><td>34</td><td>19</td><td>36</td></tr> <tr> <td>Han ESS</td><td>34</td><td>49</td><td>32</td><td>49</td></tr> </tbody> </table> <p>Contact arrangement<br/>View from termination side</p> |  | a | b | c | d | Han E® screw | 18 | 33 | 18 | 35 | Han® ES/Han E® crimp | 19 | 34 | 19 | 36 | Han ESS | 34 | 49 | 32 | 49 |
|   | a   | b   | c   | d       |  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Han E® screw                                  | 18  | 33  | 18  | 35      |  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Han® ES/Han E® crimp                          | 19  | 34  | 19  | 36      |  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Han ESS                                       | 34  | 49  | 32  | 49      |  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Cage-clamp terminal two terminals per contact | Han® ESS  | <b>09 33 024 2672</b>   | <b>09 33 024 2772</b>   |         |  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Crimp terminal Order contacts separately      | Han E®  | <b>09 33 024 2602</b>   | <b>09 33 024 2702</b>   |         |  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Identification                                | Wire gauge (mm²)  | Part No.  |   | Drawing | Dimensions in mm   |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
|   |   | Male contacts   | Female contacts   |         |  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Crimp contacts Power contacts                 | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>3<br>4 | <b>09 33 000 6127*</b><br><b>09 33 000 6121</b><br><b>09 33 000 6114</b><br><b>09 33 000 6105</b><br><b>09 33 000 6104</b><br><b>09 33 000 6102</b><br><b>09 33 000 6106</b><br><b>09 33 000 6107</b> | <b>09 33 000 6227*</b><br><b>09 33 000 6220</b><br><b>09 33 000 6214</b><br><b>09 33 000 6205</b><br><b>09 33 000 6204</b><br><b>09 33 000 6202</b><br><b>09 33 000 6206</b><br><b>09 33 000 6207</b> |         | Operating contact<br>Identification  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| silver plated                                 |   |   |   |         | Relay contact  |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| gold plated                                   | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>4.0    | <b>09 33 000 6117*</b><br><b>09 33 000 6122</b><br><b>09 33 000 6115</b><br><b>09 33 000 6118</b><br><b>09 33 000 6116</b><br><b>09 33 000 6123</b><br><b>09 33 000 6119</b>                          | <b>09 33 000 6217*</b><br><b>09 33 000 6222</b><br><b>09 33 000 6215</b><br><b>09 33 000 6218</b><br><b>09 33 000 6216</b><br><b>09 33 000 6223</b><br><b>09 33 000 6221</b>                          |         | Crimp contact identification   |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Relay contact silver plated                   | 0.75-1<br>1.5<br>2.5                                    | <b>09 33 000 6109</b><br><b>09 33 000 6110</b><br><b>09 33 000 6111</b>   |   |         | * on the back crimp collar   |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |
| Coding Pin                                    |   |   | <b>09 33 000 9954</b>   |         | Use of the coding pin prevents incorrect mating to other connectors of the same type.<br>The male pin should be omitted from the opposing cavity in the male insert.   |  |   |   |   |   |              |    |    |    |    |                      |    |    |    |    |         |    |    |    |    |

\* only to be used with BUCHANAN crimping tool 09 99 000 0001 and adjustment gauge 09 99 000 0203

Stock items in bold type

Number of contacts

46 +



## Inserts

| Identification                              | Series  | Part No.        |                   | Drawing | Dimensions in mm |
|---|---------|-----------------|-------------------|---------|------------------|
|   |         | Male insert (M) | Female insert (F) |         |                  |
| Crimp terminal<br>Order contacts separately | Han® EE | 09 32 046 3001  | 09 32 046 3101    |         |                  |

| Identification                         | Wire gauge<br>(mm²) | Part No.        |                 | Drawing | Dimensions in mm |
|--|---------------------|-----------------|-----------------|---------|------------------|
|  |                     | Male contacts   | Female contacts |         |                  |
| Crimp contacts                         |                     |                 |                 |         |                  |
| Power contacts                         | 0.14-0.37           | 09 33 000 6127* | 09 33 000 6227* |         |                  |
|  | 0.5                 | 09 33 000 6121  | 09 33 000 6220  |         |                  |
|  | 0.75                | 09 33 000 6114  | 09 33 000 6214  |         |                  |
| silver plated                          | 1.0                 | 09 33 000 6105  | 09 33 000 6205  |         |                  |
|  | 1.5                 | 09 33 000 6104  | 09 33 000 6204  |         |                  |
|  | 2.5                 | 09 33 000 6102  | 09 33 000 6202  |         |                  |
|  | 3                   | 09 33 000 6106  | 09 33 000 6206  |         |                  |
|  | 4                   | 09 33 000 6107  | 09 33 000 6207  |         |                  |
| gold plated                            | 0.14-0.37           | 09 33 000 6117* | 09 33 000 6217* |         |                  |
|  | 0.5                 | 09 33 000 6122  | 09 33 000 6222  |         |                  |
|  | 0.75                | 09 33 000 6115  | 09 33 000 6215  |         |                  |
|  | 1.0                 | 09 33 000 6118  | 09 33 000 6218  |         |                  |
|  | 1.5                 | 09 33 000 6116  | 09 33 000 6216  |         |                  |
|  | 2.5                 | 09 33 000 6123  | 09 33 000 6223  |         |                  |
|  | 4.0                 | 09 33 000 6119  | 09 33 000 6221  |         |                  |
| FOC contacts<br>for 1 mm plastic fibre |                     | 20 10 001 3311  | 20 10 001 3321  |         |                  |
| Coding Pin                             |                     | 09 33 000 9954  |                 |         |                  |

\* only to be used with BUCHANAN crimping tool 09 99 000 0001  
and adjustment gauge 09 99 000 0203

Stock items in bold type

| Identification |  | Part No.                         |                                  |                | Drawing | Dimensions in mm |
|----------------|--|----------------------------------|----------------------------------|----------------|---------|------------------|
|                | Han E/EE   | Low construction                 | High construction                | M              |         |                  |
| Hoods          | Hoods side-entry   | 19 30 024 1521<br>19 30 024 1522 | 19 30 024 0527<br>19 30 024 0528 | 25<br>32<br>40 |         |                  |
|                | Hoods top-entry  | 19 30 024 1422                   | 19 30 024 0427<br>19 30 024 0428 | 32<br>40       |         |                  |
|                | Protection covers for hoods thermoplastic/metal                              | 09 30 024 5401                   | 09 30 024 5422                   |                |         |                  |
| Housings       | Housing bulkhead mounting  | 09 30 024 0301                   |                                  | —              |         |                  |
|                | Housings surface mounting  | 1 side-entry  19 30 024 1231     | 2 side-entries  19 30 024 1271   | 25<br>32<br>40 |         | <br>             |
|                | Protection covers for housings bulkhead/surface mounting thermoplastic/metal | 09 30 024 5405<br>09 30 024 5425 |                                  |                |         |                  |
|                | Hoods cable to cable   |                                  | 19 30 024 0737<br>19 30 024 0738 | 32<br>40       |         |                  |
|                | Protection cover for hoods metal   |                                  | 09 30 024 5426                   |                |         |                  |

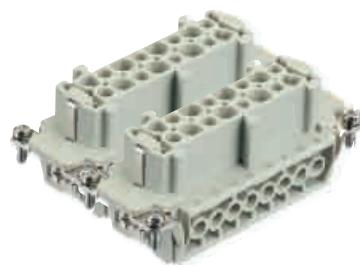
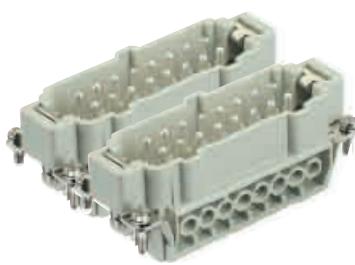
Stock items in bold type

| Identification |                            | Part No.   |  | M  | Drawing | Dimensions in mm |
|----------------|----------------------------|--|--|--|---------|------------------|
|                |                            | Low construction   | High construction  |  |         |                  |
| Hoods          | Hoods side-entry           | 19 30 024 1541<br>19 30 024 1542   | 19 30 024 0547<br>19 30 024 0548                           | 25<br>32   |         |                  |
|                | Hoods top-entry            | 19 30 024 1442   | 19 30 024 0447<br>19 30 024 0448                           | 32<br>40   |         |                  |
| Housings       | Housings bulkhead mounting | 09 30 024 0307<br><br>with thermo-plastic cover<br>09 30 024 0304<br><br>with metal cover<br>09 30 024 0318  |  | —<br>—<br>—  |         |                  |
|                | Housings surface mounting  | 19 30 024 1251<br><br>19 30 024 1291<br><br>with thermo-plastic cover<br>19 30 024 1256<br><br>with thermo-plastic cover<br>19 30 024 1296<br><br>with metal cover<br>19 30 024 2296 | 19 30 024 0292<br><br>19 30 024 0297<br><br>19 30 024 7297 | 25<br>25<br>25<br>25<br>25<br>25<br>32<br>32<br>32 |         |                  |
| Hoods          | Hoods cable to cable       | 19 30 024 1752   | 19 30 024 0757   | 32   |         |                  |
|                | Dust protection cover      | 09 30 024 5406   |  |  |         |                  |

Stock items in bold type

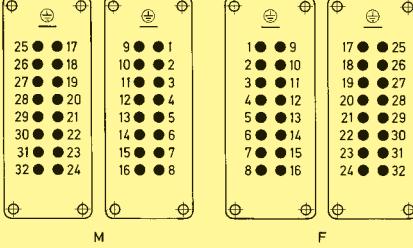
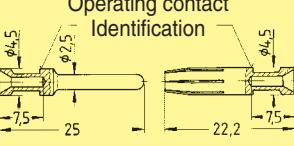
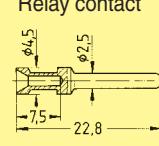
Number of contacts

32 +



## Inserts

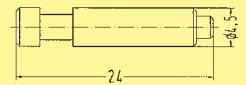
Han  
E/EE

| Identification                                   | Series  | Part No.  | Drawing   | Dimensions in mm  |                                     |               |
|--|---|---|---|---|-------------------------------------|---------------|
| Screw terminal<br>with wire protection           | Han E®<br>1–16<br>17–32                                 | <b>09 33 016 2601</b><br><b>09 33 016 2611</b>  | <b>09 33 016 2701</b><br><b>09 33 016 2711</b>  | Dimensions for inserts see page 03.22   |                                     |               |
| Cage-clamp terminal                              | Han® ES<br>1–16<br>17–32                                | <b>09 33 016 2616</b><br>09 33 016 2626   | <b>09 33 016 2716</b><br>09 33 016 2726   | Contact arrangement View from termination side  |                                     |               |
| Cage-clamp terminal<br>two terminals per contact | Han® ESS<br>1–16<br>1–16                                | <b>09 33 016 2672</b><br><b>09 33 016 2672</b>  | <b>09 33 016 2772</b><br><b>09 33 016 2772</b>  |   |                                     |               |
| Crimp terminal<br>Order contacts separately      | Han E®<br>1–16<br>17–32                                 | <b>09 33 016 2602</b><br>09 33 016 2612   | <b>09 33 016 2702</b><br>09 33 016 2712   | Panel cut out for inserts<br>for use without hoods/housings   |                                     |               |
| Identification                                   | Wire gauge<br>(mm²)                                     | Part No.  | Drawing   | Dimensions in mm  |                                     |               |
| Crimp contacts<br>Power contacts                 | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>3<br>4 | <b>09 33 000 6127*</b><br><b>09 33 000 6121</b><br><b>09 33 000 6114</b><br><b>09 33 000 6105</b><br><b>09 33 000 6104</b><br><b>09 33 000 6102</b><br><b>09 33 000 6106</b><br><b>09 33 000 6107</b> | <b>09 33 000 6227*</b><br><b>09 33 000 6220</b><br><b>09 33 000 6214</b><br><b>09 33 000 6205</b><br><b>09 33 000 6204</b><br><b>09 33 000 6202</b><br><b>09 33 000 6206</b><br><b>09 33 000 6207</b> | <br> | Operating contact<br>Identification | Relay contact |
| silver plated                                    | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>3<br>4 | <b>09 33 000 6117*</b><br><b>09 33 000 6122</b><br><b>09 33 000 6115</b><br><b>09 33 000 6118</b><br><b>09 33 000 6116</b><br><b>09 33 000 6123</b><br><b>09 33 000 6119</b>                          | <b>09 33 000 6217*</b><br><b>09 33 000 6222</b><br><b>09 33 000 6215</b><br><b>09 33 000 6218</b><br><b>09 33 000 6216</b><br><b>09 33 000 6223</b><br><b>09 33 000 6221</b>                          | Operating contact<br>Identification   | Relay contact                       |               |
| gold plated                                      | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>4.0    | <b>09 33 000 6109</b><br><b>09 33 000 6110</b><br><b>09 33 000 6111</b>   |   |   |                                     |               |
| Relay contact<br>silver plated                   | 0.75-1<br>1.5<br>2.5                                    | <b>09 33 000 6109</b><br><b>09 33 000 6110</b><br><b>09 33 000 6111</b>   |   |   |                                     |               |
| Coding Pin                                       |   | <b>09 33 000 9954</b>   |   |   |                                     |               |

\* on the back crimp collar

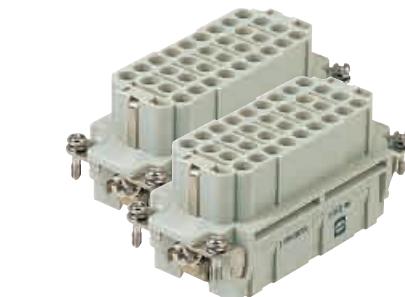
Use of the coding pin prevents incorrect mating to other connectors of the same type.

The male pin should be omitted from the opposing cavity in the male insert.

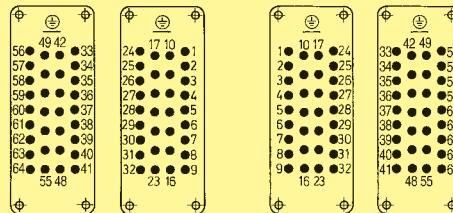
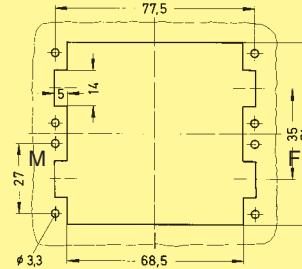
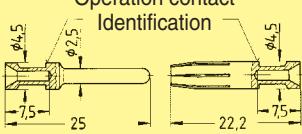
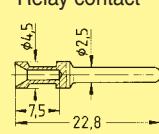
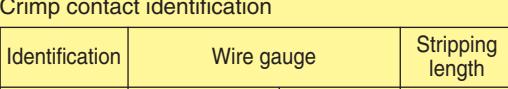
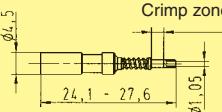
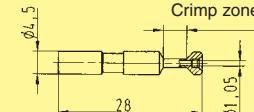


Stock items in bold type

Number of contacts

64 + 

## Inserts

| Identification                                 | Series   | Part No.   |  | Drawing   | Dimensions in mm  |
|--|--|--|--|---|---|
| Crimp terminal<br>Order contacts<br>separately | Han® EE  | Male insert (M)  | Female insert (F)  | Dimensions for inserts see page 03.23   |   |
|  |  |  |  | Contact arrangement view from termination side  |   |
|  |  | 1–32<br>33–64  | <b>09 32 032 3001</b><br>09 32 032 3011  | <b>09 32 032 3101</b><br>09 32 032 3111   |    |
|  |  |  |  | Panel cut out for inserts<br>for use without hoods/housings   |   |
|  |  |  |  |   |   |
| Identification                                 | Wire gauge<br>(mm <sup>2</sup> )                     | Part No.   |  | Drawing   | Dimensions in mm  |
| Crimp contacts                                 |  | Male contacts  | Female contacts  |   |   |
| Power contacts                                 | 0.14-0.37  | <b>09 33 000 6127*</b>   | <b>09 33 000 6227*</b>   |   |  |
| silver plated                                  | 0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>3<br>4           | <b>09 33 000 6121</b><br><b>09 33 000 6114</b><br><b>09 33 000 6105</b><br><b>09 33 000 6104</b><br><b>09 33 000 6102</b><br><b>09 33 000 6106</b><br><b>09 33 000 6107</b>  | <b>09 33 000 6220</b><br><b>09 33 000 6214</b><br><b>09 33 000 6205</b><br><b>09 33 000 6204</b><br><b>09 33 000 6202</b><br><b>09 33 000 6206</b><br><b>09 33 000 6207</b>  |   |   |
| gold plated                                    | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>4.0 | <b>09 33 000 6117*</b><br><b>09 33 000 6122</b><br><b>09 33 000 6115</b><br><b>09 33 000 6118</b><br><b>09 33 000 6116</b><br><b>09 33 000 6123</b><br><b>09 33 000 6119</b> | <b>09 33 000 6217*</b><br><b>09 33 000 6222</b><br><b>09 33 000 6215</b><br><b>09 33 000 6218</b><br><b>09 33 000 6216</b><br><b>09 33 000 6223</b><br><b>09 33 000 6221</b> |   |   |
| FOC contacts<br>for 1 mm plastic fibre         |  | 20 10 001 3311   | 20 10 001 3321   | <br> |   |
| Coding Pin                                     |  |  | <b>09 33 000 9954</b>  | Use of the coding pin prevents incorrect mating<br>to other connectors of the same type.<br>The male pin should be omitted from the opposing<br>cavity in the male insert.    |   |

\* only to be used with BUCHANAN crimping tool 09 99 000 0001  
and adjustment gauge 09 99 000 0203

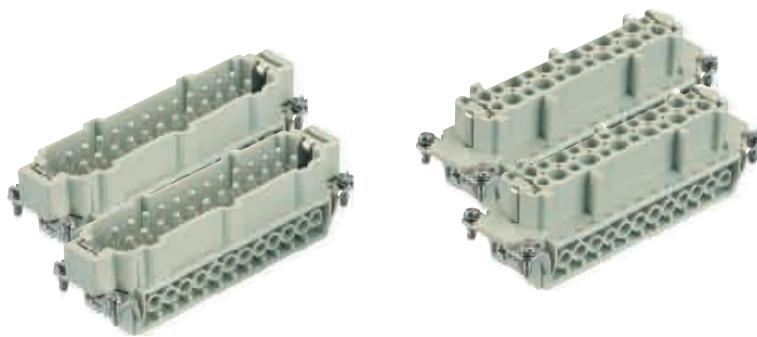
Stock items in bold type

|             | Identification                    | Part No. | M  | Drawing                    | Dimensions in mm |
|-------------|-----------------------------------|----------|--|----------------------------|------------------|
| Han<br>E/EE | Hoods<br>side-entry               |          | 19 30 032 0527<br>19 30 032 0528<br>19 30 032 0529 | 32<br>40<br>50             |                  |
|             | Hoods<br>top-entry                |          | 19 30 032 0427<br>19 30 032 0428<br>19 30 032 0429 | 32<br>40<br>50             |                  |
|             | Protection cover<br>for hoods     |          | 09 30 032 5420                                     | —                          |                  |
| Housings    | Housing<br>bulkhead mounting      |          | 09 30 032 0301                                     | —                          |                  |
|             | Housings<br>surface mounting      |          | 19 30 032 0232<br>19 30 032 0272<br>19 30 032 0273 | 1 x 32<br>2 x 32<br>2 x 40 |                  |
|             | Hoods<br>cable to cable           |          | 19 30 032 0738                                     | 1 x 40                     |                  |
|             | Protection covers<br>for housings |          | 09 30 032 5425                                     | —                          |                  |

Stock items in bold type

Number of contacts

48 +



## Inserts

| Identification                                | Series  | Part No.   |  | Drawing   | Dimensions in mm  |   |  |
|---|---|--|--|---|---|---|--|
| Screw terminal with wire protection           | Han E®<br>1–24<br>25–48                                 | Male insert (M)<br><b>09 33 024 2601</b><br>09 33 024 2611   | Female insert (F)<br><b>09 33 024 2701</b><br>09 33 024 2711   | Dimensions for inserts see page 03.26   | Dimensions in mm  |   |  |
| Cage-clamp terminal                           | Han® ES<br>1–24<br>25–48                                | Male insert (M)<br><b>09 33 024 2616</b><br>09 33 024 2626   | Female insert (F)<br><b>09 33 024 2716</b><br>09 33 024 2726   | Contact arrangement view from termination side  |   |   |  |
| Cage-clamp terminal two terminals per contact | Han® ESS<br>1–24<br>1–24                                | Male insert (M)<br><b>09 33 024 2672</b><br>09 33 024 2672   | Female insert (F)<br><b>09 33 024 2772</b><br>09 33 024 2772   | Panel cut out for inserts for use without hoods/housings  |   |   |  |
| Crimp terminal<br>Order contacts separately   | Han E®<br>1–24<br>25–48                                 | Male contacts<br><b>09 33 024 2602</b><br>09 33 024 2612   | Female contacts<br><b>09 33 024 2702</b><br>09 33 024 2712   | Operating contact identification  |   |   |  |
| Identification                                | Wire gauge<br>(mm²)                                     | Part No.   |  | Relay contact   | Dimensions in mm  |   |  |
| Crimp contacts<br>Power contacts              | 0.14–0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>3<br>4 | Male contacts<br><b>09 33 000 6127*</b><br><b>09 33 000 6121</b><br><b>09 33 000 6114</b><br><b>09 33 000 6105</b><br><b>09 33 000 6104</b><br><b>09 33 000 6102</b><br><b>09 33 000 6106</b><br><b>09 33 000 6107</b> | Female contacts<br><b>09 33 000 6227*</b><br><b>09 33 000 6220</b><br><b>09 33 000 6214</b><br><b>09 33 000 6205</b><br><b>09 33 000 6204</b><br><b>09 33 000 6202</b><br><b>09 33 000 6206</b><br><b>09 33 000 6207</b> | Crimp contact identification  |   |   |  |
| silver plated                                 | 0.14–0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>3<br>4 | Male contacts<br><b>09 33 000 6117*</b><br><b>09 33 000 6122</b><br><b>09 33 000 6115</b><br><b>09 33 000 6118</b><br><b>09 33 000 6116</b><br><b>09 33 000 6123</b><br><b>09 33 000 6119</b>                          | Female contacts<br><b>09 33 000 6217*</b><br><b>09 33 000 6222</b><br><b>09 33 000 6215</b><br><b>09 33 000 6218</b><br><b>09 33 000 6216</b><br><b>09 33 000 6223</b><br><b>09 33 000 6221</b>                          | Identification  | Wire gauge  | Stripping length  |  |
| gold plated                                   | 0.14–0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>4.0    | Male contacts<br><b>09 33 000 6117*</b><br><b>09 33 000 6122</b><br><b>09 33 000 6115</b><br><b>09 33 000 6118</b><br><b>09 33 000 6116</b><br><b>09 33 000 6123</b><br><b>09 33 000 6119</b>                          | Female contacts<br><b>09 33 000 6217*</b><br><b>09 33 000 6222</b><br><b>09 33 000 6215</b><br><b>09 33 000 6218</b><br><b>09 33 000 6216</b><br><b>09 33 000 6223</b><br><b>09 33 000 6221</b>                          | no groove<br>no groove<br>1 groove*<br>1 groove<br>2 grooves<br>3 grooves<br>wide groove<br>no groove | 0.14–0.37 mm²<br>0.5 mm²<br>0.75 mm²<br>1 mm²<br>1.5 mm²<br>2.5 mm²<br>3.0 mm²<br>4 mm² | AWG 26–22<br>AWG 20<br>AWG 18<br>AWG 18<br>AWG 16<br>AWG 14<br>AWG 12<br>AWG 12 | 7.5 mm<br>7.5 mm<br>7.5 mm<br>7.5 mm<br>7.5 mm<br>7.5 mm<br>7.5 mm<br>7.5 mm |
| Relay contact silver plated                   | 0.75–1<br>1.5<br>2.5                                    | Male contacts<br><b>09 33 000 6109</b><br><b>09 33 000 6110</b><br><b>09 33 000 6111</b>   | Female contacts<br><b>09 33 000 6217*</b><br><b>09 33 000 6222</b><br><b>09 33 000 6215</b><br><b>09 33 000 6218</b><br><b>09 33 000 6216</b><br><b>09 33 000 6223</b><br><b>09 33 000 6221</b>                          | * on the back crimp collar  | Use of the coding pin prevents incorrect mating to other connectors of the same type.   | The male pin should be omitted from the opposing cavity in the male insert.     |  |
| Coding Pin                                    |   |  | <b>09 33 000 9954</b>  |   |   |   |  |

\* only to be used with BUCHANAN crimping tool 09 99 000 0001 and adjustment gauge 09 99 000 0203

Stock items in bold type

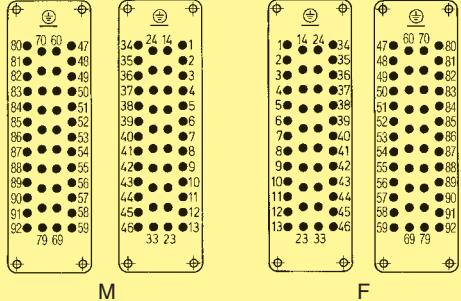
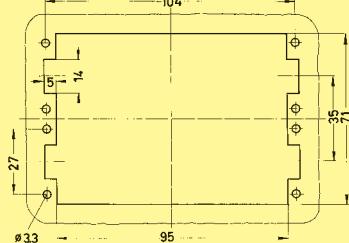
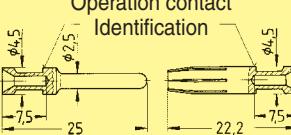
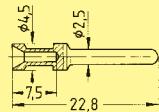
Number of contacts

92 +



## Inserts

Han  
E/EE

| Identification                              | Series  | Male insert (M)   | Female insert (F)   | Drawing  | Dimensions in mm  |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
|---|---|---|---|--|---|------------|------------------|-----------|---------------------------|-----------|-----------|---------------------|--------|-----------|----------------------|--------|----------|-------------------|--------|-----------|---------------------|--------|-----------|---------------------|--------|-------------|---------------------|--------|-----------|-------------------|--------|--|
| Crimp terminal<br>Order contacts separately | Han® EE   |   |   | Dimensions for inserts see page 03.27<br><br>Contact arrangement View from termination side  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
|   | 1–46<br>47–92   | <b>09 32 046 3001</b><br>09 32 046 3011   | <b>09 32 046 3101</b><br>09 32 046 3111   |    |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
|   |   |   |   | Panel cut out for inserts for use without hoods/housings   |  |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| Identification                              | Wire gauge<br>(mm <sup>2</sup> )  | Male contacts   | Female contacts   | Drawing  | Dimensions in mm  |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| Crimp contacts                              |   |   |   |  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| Power contacts                              | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>3<br>4                             | <b>09 33 000 6127*</b><br><b>09 33 000 6121</b><br><b>09 33 000 6114</b><br><b>09 33 000 6105</b><br><b>09 33 000 6104</b><br><b>09 33 000 6102</b><br><b>09 33 000 6106</b><br><b>09 33 000 6107</b> | <b>09 33 000 6227*</b><br><b>09 33 000 6220</b><br><b>09 33 000 6214</b><br><b>09 33 000 6205</b><br><b>09 33 000 6204</b><br><b>09 33 000 6202</b><br><b>09 33 000 6206</b><br><b>09 33 000 6207</b> |  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| silver plated                               |  |   |   | <br>  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| gold plated                                 |  |   |   | Crimp contact identification   |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
|   | 0.14-0.37<br>0.5<br>0.75<br>1.0<br>1.5<br>2.5<br>4.0                                | <b>09 33 000 6117*</b><br><b>09 33 000 6122</b><br><b>09 33 000 6115</b><br><b>09 33 000 6118</b><br><b>09 33 000 6116</b><br><b>09 33 000 6123</b><br><b>09 33 000 6119</b>                          | <b>09 33 000 6217*</b><br><b>09 33 000 6222</b><br><b>09 33 000 6215</b><br><b>09 33 000 6218</b><br><b>09 33 000 6216</b><br><b>09 33 000 6223</b><br><b>09 33 000 6221</b>                          | <table border="1"> <thead> <tr> <th>Identification</th><th>Wire gauge</th><th>Stripping length</th></tr> </thead> <tbody> <tr> <td>no groove</td><td>0.14-0.37 mm<sup>2</sup></td><td>AWG 26-22</td></tr> <tr> <td>no groove</td><td>0.5 mm<sup>2</sup></td><td>AWG 20</td></tr> <tr> <td>1 groove*</td><td>0.75 mm<sup>2</sup></td><td>AWG 18</td></tr> <tr> <td>1 groove</td><td>1 mm<sup>2</sup></td><td>AWG 18</td></tr> <tr> <td>2 grooves</td><td>1.5 mm<sup>2</sup></td><td>AWG 16</td></tr> <tr> <td>3 grooves</td><td>2.5 mm<sup>2</sup></td><td>AWG 14</td></tr> <tr> <td>wide groove</td><td>3.0 mm<sup>2</sup></td><td>AWG 12</td></tr> <tr> <td>no groove</td><td>4 mm<sup>2</sup></td><td>AWG 12</td></tr> </tbody> </table> | Identification  | Wire gauge | Stripping length | no groove | 0.14-0.37 mm <sup>2</sup> | AWG 26-22 | no groove | 0.5 mm <sup>2</sup> | AWG 20 | 1 groove* | 0.75 mm <sup>2</sup> | AWG 18 | 1 groove | 1 mm <sup>2</sup> | AWG 18 | 2 grooves | 1.5 mm <sup>2</sup> | AWG 16 | 3 grooves | 2.5 mm <sup>2</sup> | AWG 14 | wide groove | 3.0 mm <sup>2</sup> | AWG 12 | no groove | 4 mm <sup>2</sup> | AWG 12 |  |
| Identification                              | Wire gauge  | Stripping length  |   |  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| no groove                                   | 0.14-0.37 mm <sup>2</sup>   | AWG 26-22   |   |  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| no groove                                   | 0.5 mm <sup>2</sup>   | AWG 20  |   |  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| 1 groove*                                   | 0.75 mm <sup>2</sup>  | AWG 18  |   |  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| 1 groove                                    | 1 mm <sup>2</sup>   | AWG 18  |   |  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| 2 grooves                                   | 1.5 mm <sup>2</sup>   | AWG 16  |   |  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| 3 grooves                                   | 2.5 mm <sup>2</sup>   | AWG 14  |   |  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| wide groove                                 | 3.0 mm <sup>2</sup>   | AWG 12  |   |  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| no groove                                   | 4 mm <sup>2</sup>   | AWG 12  |   |  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| FOC contacts<br>for 1 mm plastic fibre      |   | <b>20 10 001 3311</b>   | <b>20 10 001 3321</b>   |  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |
| Coding Pin                                  |  |   | <b>09 33 000 9954</b>   |  |   |            |                  |           |                           |           |           |                     |        |           |                      |        |          |                   |        |           |                     |        |           |                     |        |             |                     |        |           |                   |        |  |

\* only to be used with BUCHANAN crimping tool 09 99 000 0001 and adjustment gauge 09 99 000 0203

Stock items in bold type

| Identification                | Part No.  | M                              | Drawing | Dimensions in mm |
|-------------------------------|---|--------------------------------|---------|------------------|
| Hoods<br>side-entry           | <b>19 30 048 0548</b><br>19 30 048 0549                                     | 40<br>50                       |         |                  |
| Hoods<br>top-entry            | <b>19 30 048 0448</b><br>19 30 048 0449                                     | 40<br>50                       |         |                  |
| Housings<br>bulkhead mounting | <b>09 30 048 0301</b><br><br><b>09 30 048 0317</b>                          | —<br>—                         |         |                  |
| Housings<br>surface mounting  | <b>19 30 048 0292</b><br><b>19 30 048 0293</b><br><br><b>19 30 048 0298</b> | 2 x 32<br>2 x 40<br><br>2 x 40 |         | <br><br>         |

## Modified contact arrangement up to 1000 V

The connector series Han® EE equipped with all contacts may be used for voltages up to 500 V ~ pollution degree 3. A modified contact loading arrangement permits use up to 1000 V ~ pollution degree also in pollution degree C.

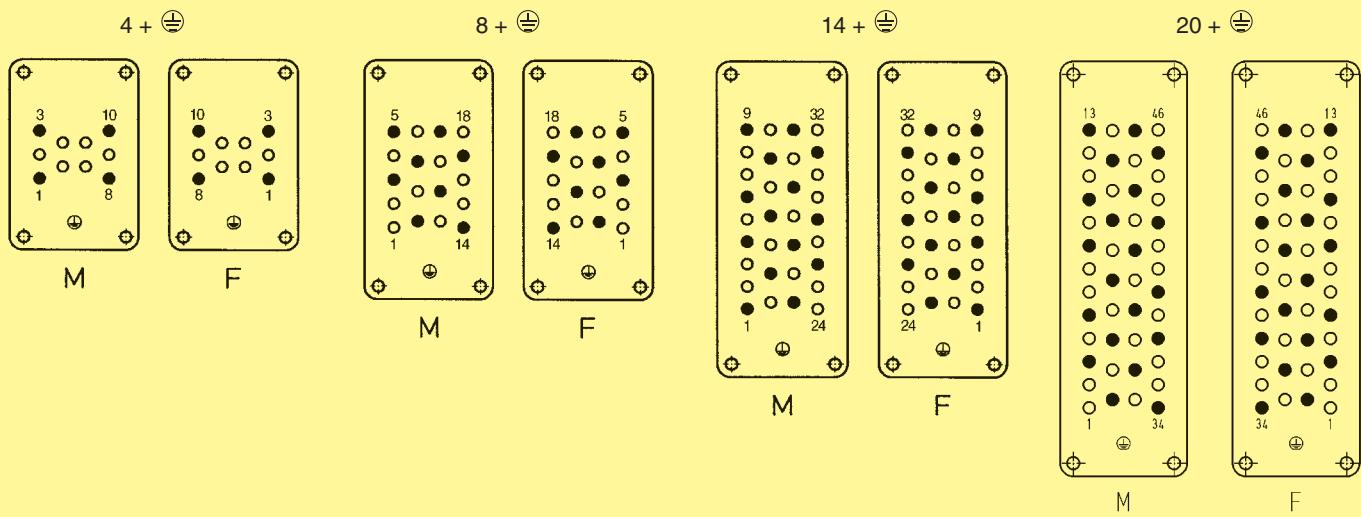
Fully equipped connectors may also be used up to 1000 V ~ but in a lower pollution degree. See page 00.17.

According to DIN EN 61 984 connectors should not be coupled or decoupled under electrical load.

Han  
E/EE

### 690 V Pollution degree 3

Contact arrangement View from termination side

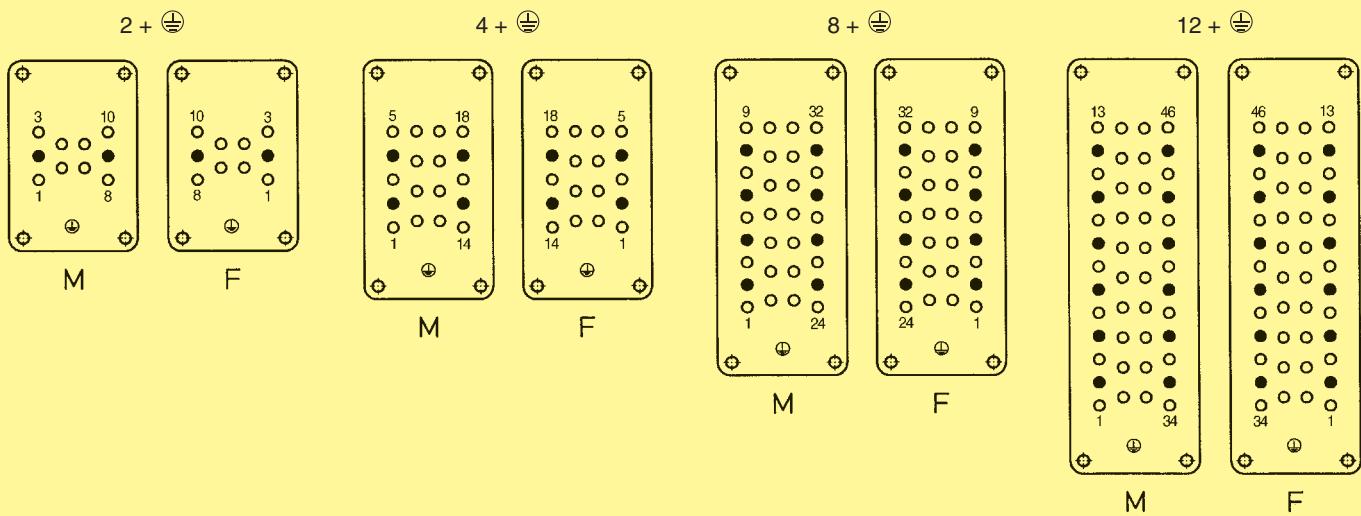


● Operating contact  
○ Without contact

M – Male insert  
F – Female insert

### 1 000 V Pollution degree 3

Contact arrangement View from termination side



● Operating contact  
○ Without contact

M – Male insert  
F – Female insert