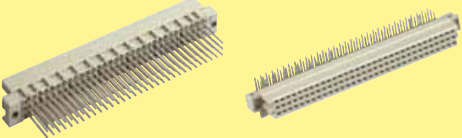


Types B, 2B, C, 2C, M, Q, 2Q, R, R (HE 11), 2R

Page

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|------------------------------------|--------------------------------------------------------------------------------------|-------|
| Technical characteristics .....    |                                                                                      | 01.10 |
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| Coding systems .....               |                                                                                      | 01.42 |

|                                                                                                                                           |                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Number of contacts                                                                                                                        | 16-96                                                                               |
| Contact spacing (mm)                                                                                                                      | 2.54                                                                                |
| Working current<br>see current carrying capacity chart                                                                                    | 2 A max.<br>1 A with insulation displacement<br>40 A max. type M                    |
| Clearance                                                                                                                                 | ≥ 1.2 mm                                                                            |
| Creepage                                                                                                                                  | ≥ 1.2 mm                                                                            |
| Working voltage<br>The working voltage also depends on the clearance and creepage dimensions of the pcb itself, and the associated wiring | according to the safety regulations of the equipment<br>Explanations see chapter 00 |
| Test voltage $U_{r.m.s.}$                                                                                                                 | 1 kV                                                                                |
| Contact resistance                                                                                                                        | ≤ 15 mΩ for wire wrap connection<br>≤ 20 mΩ including crimp connection              |
| Insulation resistance                                                                                                                     | ≥ 10 <sup>12</sup> Ω                                                                |
| Temperature range<br>The higher temperature limit includes the local ambient and heating effects of the contacts under load               | - 55 °C ... + 125 °C                                                                |
| Degree of protection for crimp terminal IP 20<br>according to DIN 40 050                                                                  |                                                                                     |

|                               |                                                                                                                                                                                                                                                                                    |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Electrical termination</b> |                                                                                                                                                                                                                                                                                    |
| Male connector                | Solder pins for pcb connections<br>Ø 1.0 ± 0.1 mm<br>according to IEC 60 326-3<br>For pcb connection<br>Ø 0.8 + 0.3 mm on request<br>wrap posts 0.6 x 0.6 mm<br>diagonal 0.79-0.86 mm                                                                                              |
| Female connector              | wrap posts 0.6 x 0.6 mm<br>diagonal 0.79-0.86 mm<br>Solder pins for pcb connections<br>Ø 1.0 ± 0.1 mm<br>according to IEC 60 326-3<br>For pcb connection<br>Ø 0.8 + 0.3 mm on request<br>Crimp terminal 0.09-0.5 mm <sup>2</sup><br>Insulation displacement<br>connection AWG 28/7 |

|                                |                                                                              |
|--------------------------------|------------------------------------------------------------------------------|
| Insertion and withdrawal force | 16way ≤ 15 N<br>32way ≤ 30 N<br>48way ≤ 45 N<br>64way ≤ 60 N<br>96way ≤ 90 N |
|--------------------------------|------------------------------------------------------------------------------|

|                        |                                                                 |
|------------------------|-----------------------------------------------------------------|
| <b>Materials</b>       |                                                                 |
| Mouldings              | Thermoplastic resin,<br>glass-fibre filled, UL 94-V0            |
| Contacts               | Copper alloy                                                    |
| <b>Contact surface</b> |                                                                 |
| Contact zone           | Selectively plated according to performance level <sup>1)</sup> |

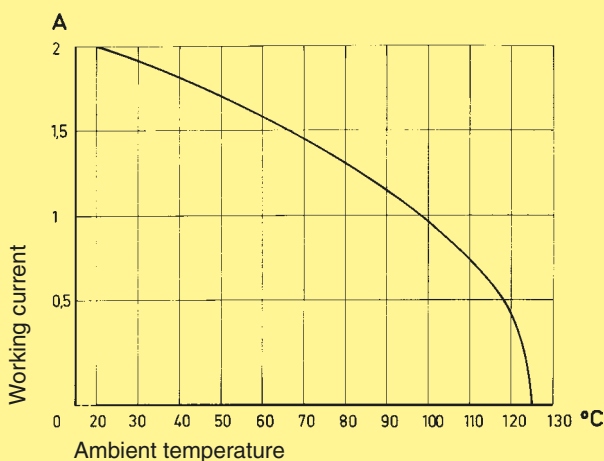
<sup>1)</sup> Explanation performance levels see chapter 00

Mating conditions see chapter 00

## 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, non 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 60 512



## Pin shroud for female connectors with 0.6 x 0.6 mm pins

A secure interfacing system for signals from the rear of 19" racks to connectors with wrap posts 0.6 x 0.6 mm is possible with the use of a pin shroud.

The pin shroud protects the wrap posts on the rear side of the rack and can be screwed to the printed circuit board.

After assembly the rear ends of the wire wrap posts become the mating areas of the type C male connector.

This system can now accept:

- female connectors type C
- female connectors type R

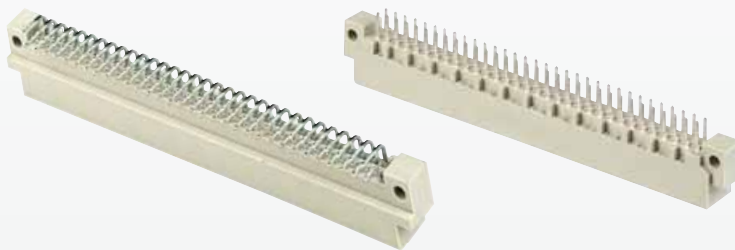
The locking levers provide security for the mated connectors. Fast and simple disconnection is possible.

## Fitting and removing crimp contacts

see technical characteristics chapter 02

Number of contacts

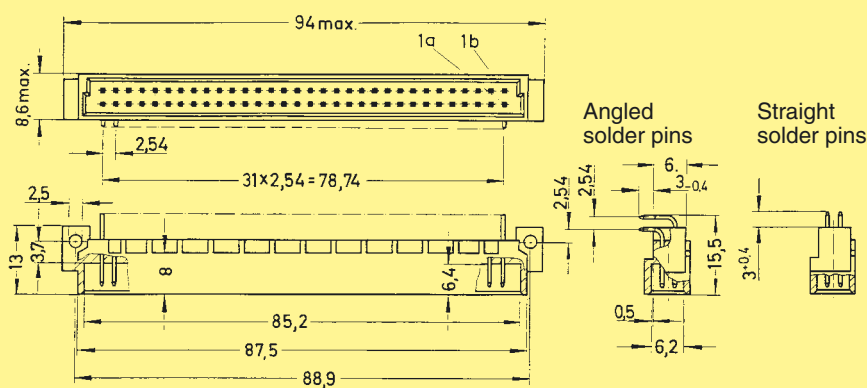
64, 32



## Male connectors

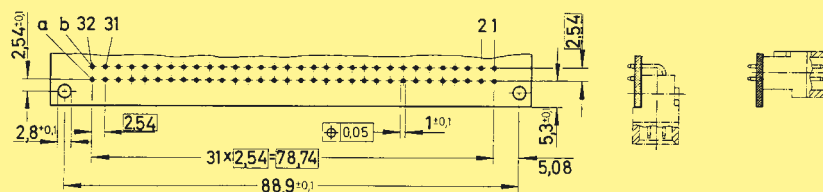
| Identification                           | Number of contacts  | Contact arrangement | Part No.       | Performance levels according to IEC 60 603-2. Explanation chapter 00           |                |
|------------------------------------------|---------------------|---------------------|----------------|--------------------------------------------------------------------------------|----------------|
|                                          |                     |                     | 3              | 2                                                                              | 1              |
| Male connector with angled solder pins   | 64                  |                     | 09 02 164 7921 | 09 02 164 6921<br>09 02 364 6921 <sup>b)</sup><br>09 02 664 6921 <sup>c)</sup> | 09 02 164 2921 |
|                                          | 32                  |                     | 09 02 132 7921 | 09 02 132 6921                                                                 | 09 02 132 2921 |
|                                          | 32                  |                     | 09 02 132 7931 | 09 02 132 6931                                                                 | 09 02 132 2931 |
|                                          | 62 + 2 <sup>▲</sup> |                     | 09 02 164 7951 | 09 02 164 6951                                                                 | 09 02 164 2951 |
| Male connector with straight solder pins | 64                  |                     | 09 02 164 7922 | 09 02 164 6922                                                                 | 09 02 164 2922 |
|                                          | 32                  |                     | 09 02 132 7922 | 09 02 132 6922                                                                 | 09 02 132 2922 |
|                                          | 32                  |                     | 09 02 132 7932 | 09 02 132 6932                                                                 | 09 02 132 2932 |
|                                          | 62 + 2 <sup>▲</sup> |                     | 09 02 164 7952 | 09 02 164 6952                                                                 | 09 02 164 2952 |

## Dimensions



## Board drillings

Mounting side



Dimensions in mm

▲ Male connectors with 2 leading contacts [(0.8 mm) pos. a1 and a32]

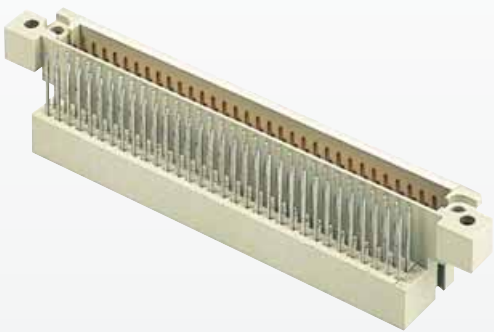
Other contact arrangements on request

<sup>b)</sup> Connectors with snap-in clips see chapter 00

<sup>c)</sup> Connectors with coding see page 01.42

Number of contacts

64



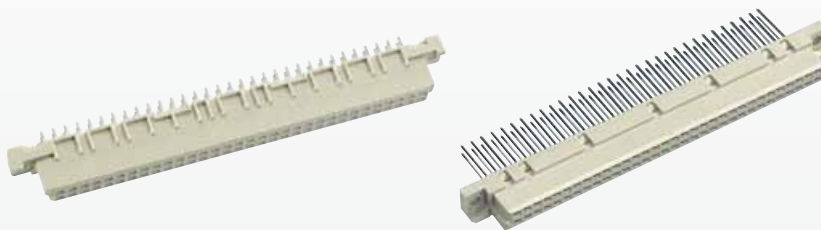
Interface connector U

| Identification                                     | Number of contacts | Part No.                                                   | Drawing                        | Dimensions in mm |
|----------------------------------------------------|--------------------|------------------------------------------------------------|--------------------------------|------------------|
| Interface connector U with wrap posts 0.6 x 0.6 mm | 64                 | Performance level 1 acc. to IEC 60 603-2<br>09 02 064 2981 |                                |                  |
| Locking screw                                      |                    | 09 02 000 9923 <sup>1)</sup>                               | <br>M 2.5 x 22 DIN EN ISO 1207 |                  |
| Mounting example                                   |                    |                                                            |                                |                  |

DIN Signal  
to 2 A

Number of contacts

64



## Female connectors

| Identification                           | Number of contacts                                                                                                                                                              | Contact arrangement | Part No.                       | Performance levels according to IEC 60 603-2. Explanation chapter 00           |                                |   |  |     |             |     |             |    |            |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------|--------------------------------------------------------------------------------|--------------------------------|---|--|-----|-------------|-----|-------------|----|------------|
|                                          |                                                                                                                                                                                 |                     | 3                              | 2                                                                              | 1                              |   |  |     |             |     |             |    |            |
| Female connector with solder pins 2.9 mm | 64                                                                                                                                                                              |                     | Performance level 3 on request | 09 02 264 6824<br>09 02 464 6824 <sup>b)</sup><br>09 02 764 6824 <sup>c)</sup> | Performance level 1 on request |   |  |     |             |     |             |    |            |
| Female connector with solder pins 4.5 mm | 64                                                                                                                                                                              |                     |                                | 09 02 264 6825                                                                 |                                |   |  |     |             |     |             |    |            |
| Female connector with wrap posts 13 mm   | 64                                                                                                                                                                              |                     |                                | 09 02 264 6821                                                                 |                                |   |  |     |             |     |             |    |            |
| Female connector with press-in pins      | Part Nos. and variants see chapter 04                                                                                                                                           |                     |                                |                                                                                |                                |   |  |     |             |     |             |    |            |
| Dimensions                               | <div><table><tr><th>a</th><th></th></tr><tr><td>2.9</td><td>Solder pins</td></tr><tr><td>4.5</td><td>Solder pins</td></tr><tr><td>13</td><td>Wrap posts</td></tr></table></div> |                     |                                |                                                                                |                                | a |  | 2.9 | Solder pins | 4.5 | Solder pins | 13 | Wrap posts |
| a                                        |                                                                                                                                                                                 |                     |                                |                                                                                |                                |   |  |     |             |     |             |    |            |
| 2.9                                      | Solder pins                                                                                                                                                                     |                     |                                |                                                                                |                                |   |  |     |             |     |             |    |            |
| 4.5                                      | Solder pins                                                                                                                                                                     |                     |                                |                                                                                |                                |   |  |     |             |     |             |    |            |
| 13                                       | Wrap posts                                                                                                                                                                      |                     |                                |                                                                                |                                |   |  |     |             |     |             |    |            |
| Panel cut out                            |                                                                                                                                                                                 |                     |                                |                                                                                |                                |   |  |     |             |     |             |    |            |
| Board drillings<br>Mounting side         |                                                                                                                                                                                 |                     |                                |                                                                                |                                |   |  |     |             |     |             |    |            |

Identification strips for female connectors with wrap posts 09 02 000 9939

Dimensions in mm

Identification strips for female connectors with wrap posts 09 02 000 9939

Dimensions in mm

Wrap posts selectively gold plated on request

Other contact arrangements on request

<sup>b)</sup> Connectors with snap-in clips see chapter 00<sup>c)</sup> Connectors with coding see page 01.42

Number of contacts

64



## Female connectors

| Identification                                                                                                            | Number of contacts | Part No.                                                                                                       | Drawing                                                                                                                                                                                                                              | Dimensions in mm |
|---------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Female connector for insulation displacement                                                                              | 64                 | Performance level 2 <sup>1)</sup><br>09 02 264 6828<br><br>Performance level 3 <sup>1)</sup><br>09 02 264 7828 | <p>Cable 1 to contact 1 b</p> <p>Contact arrangement View from termination side</p>                                                                                                                                                  |                  |
| Panel cut out                                                                                                             |                    |                                                                                                                |                                                                                                                                                                                                                                      |                  |
| Flat cable<br>AWG 28/7<br><br>grey 50.00 m<br>grey 150.00 m<br>colour coded 30.48 m<br>twisted pair <sup>1)</sup> 30.48 m | 64                 | 09 18 064 7001<br>09 18 064 7004<br>09 18 064 7005<br>09 18 064 7006                                           | <p>1) Termination area spacing = 508 mm</p> <p><b>Important: always store reels vertically</b></p> <p>Wire (tinned) Cu<br/>           Gauge AWG 28/7 0.089 mm<sup>2</sup><br/>           Insulation material as per UL style PVC</p> |                  |
| Round flat cable <sup>2)</sup><br>with screening 30 m<br>150 m<br>without screening 30 m<br>150 m                         | 64                 | 09 18 064 7007<br>09 18 064 7010<br>09 18 064 7008<br>09 18 064 7011                                           | <p>2) Termination area spacing = 100 mm</p>                                                                                                                                                                                          |                  |
| Bench press                                                                                                               |                    | 09 99 000 0114                                                                                                 |                                                                                                                                                                                                                                      |                  |
| Base plate                                                                                                                |                    | 09 99 000 0150                                                                                                 |                                                                                                                                                                                                                                      |                  |
| Cable cutter                                                                                                              |                    | 09 99 000 0116                                                                                                 |                                                                                                                                                                                                                                      |                  |
| Spare parts                                                                                                               |                    |                                                                                                                |                                                                                                                                                                                                                                      |                  |
| Blade                                                                                                                     |                    | 09 99 000 0179                                                                                                 |                                                                                                                                                                                                                                      |                  |
| Cutting plate                                                                                                             |                    | 09 99 000 0180                                                                                                 |                                                                                                                                                                                                                                      |                  |

Further components and accessories for insulation displacement see interface catalogue, chapter 40

<sup>1)</sup> acc. to IEC 60 603-2

Number of contacts

max. 64

Female connectors

DIN Signal  
to 2 A

| Identification                                                          | Number of contacts | Part No.       | Drawing                                                                                                                                                  | Dimensions in mm |
|-------------------------------------------------------------------------|--------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Female connector for crimp contacts</b><br>Order contacts separately | 64                 | 09 02 064 3214 | <p> <b>Contact arrangement</b> View from termination side<br/> </p> <p> <b>Shell housing</b> 09 02 064 0501 / 09 02 064 0502 see chapter 20         </p> |                  |

| Identification                                                                                                                                                               | Part No.                                                                                                 | Performance levels according to IEC 60 603-2. Explanation chapter 00                                                                                          |                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
|                                                                                                                                                                              |                                                                                                          | 2                                                                                                                                                             | 1                                                          |
| <b>Female crimp contacts BC</b><br><br>Bandoliered contacts (approx. 5,000 pieces)<br><br>Bandoliered contacts (approx. 500 pieces)<br><br>Individual contacts <sup>1)</sup> |                                                                                                          | 09 02 000 6484<br><br>09 02 000 8434<br><br>09 02 000 8484                                                                                                    | 09 02 000 6474<br><br>09 02 000 8444<br><br>09 02 000 8474 |
|                                                                                                                                                                              | Wire gauge<br>mm <sup>2</sup><br>0.09 - 0.5<br><br>AWG<br>28 - 20<br><br>Insulation ø<br>mm<br>0.7 - 1.5 | <p>Bandoliered contacts</p> <p>Individual contacts</p> <p>3.5 + 0.5 mm of insulation is stripped<br/>Insertion, removal and crimping tools see chapter 30</p> |                                                            |

<sup>1)</sup> Packaging unit 1,000 pieces

Number of contacts

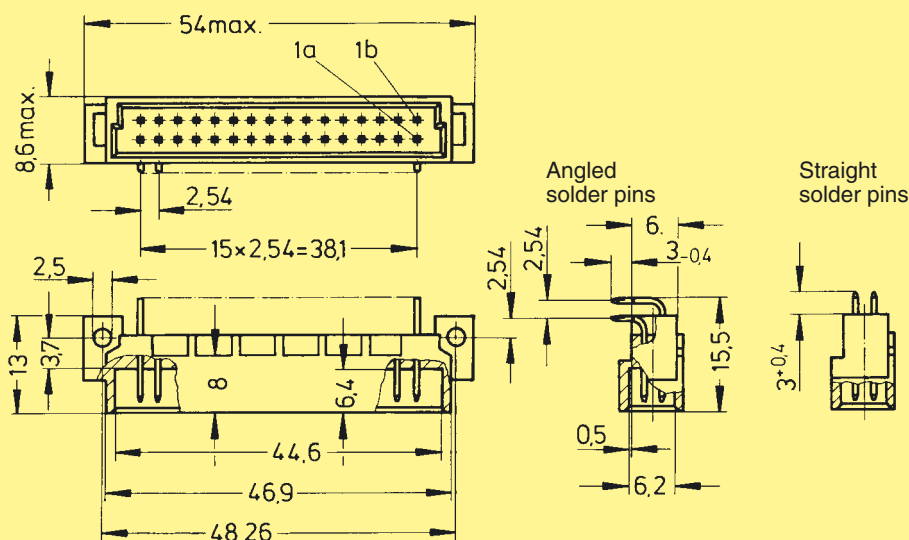
32, 16



## Male connectors

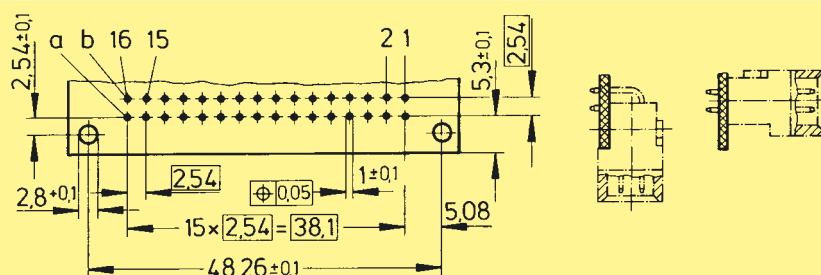
| Identification                           | Number of contacts  | Contact arrangement | Part No.       | Performance levels according to IEC 60 603-2. Explanation chapter 00 |                |
|------------------------------------------|---------------------|---------------------|----------------|----------------------------------------------------------------------|----------------|
|                                          |                     |                     | 3              | 2                                                                    | 1              |
| Male connector with angled solder pins   | 32                  |                     | 09 22 132 7921 | 09 22 132 6921<br>09 22 332 6921 <sup>b)</sup>                       | 09 22 132 2921 |
|                                          | 16                  |                     | 09 22 116 7931 | 09 22 116 6931                                                       | 09 22 116 2931 |
|                                          | 30 + 2 <sup>▲</sup> |                     | 09 22 132 7951 | 09 22 132 6951                                                       | 09 22 132 2951 |
| Male connector with straight solder pins | 32                  |                     | 09 22 132 7922 | 09 22 132 6922                                                       | 09 22 132 2922 |
|                                          | 16                  |                     | 09 22 116 7932 | 09 22 116 6932                                                       | 09 22 116 2932 |
|                                          | 30 + 2 <sup>▲</sup> |                     | 09 22 132 7952 | 09 22 132 6952                                                       | 09 22 132 2952 |

## Dimensions



## Board drillings

Mounting side



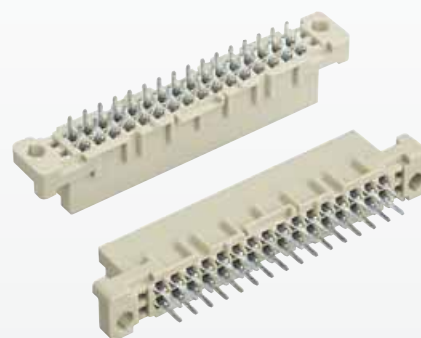
Dimensions in mm

▲ Male connectors with 2 leading contacts [(0.8 mm) pos. a1 and a16]

Other contact arrangements on request

<sup>b)</sup> Connectors with snap-in clips see chapter 00

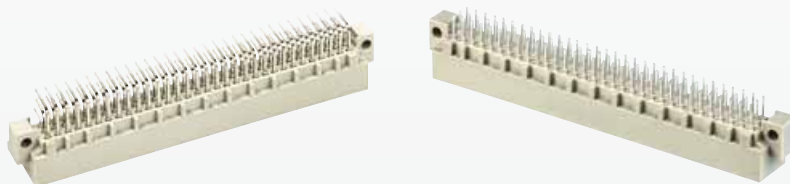
32

DIN Signal  
to 2 A

Dimensions in mm

Number of contacts

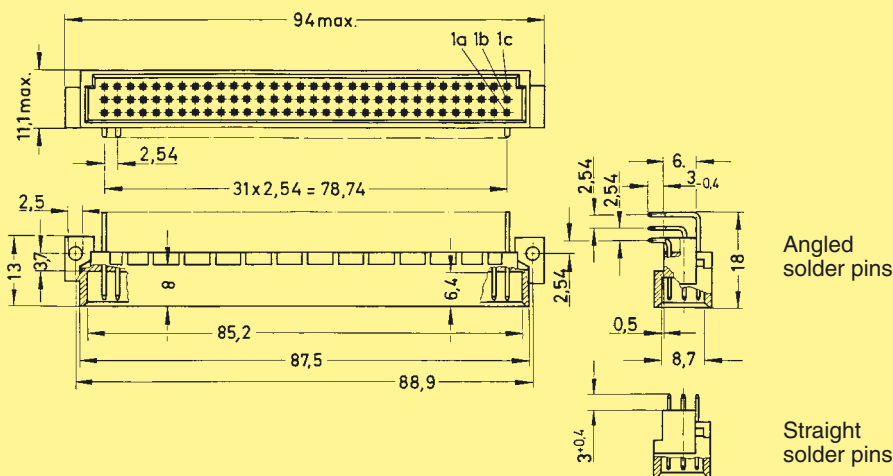
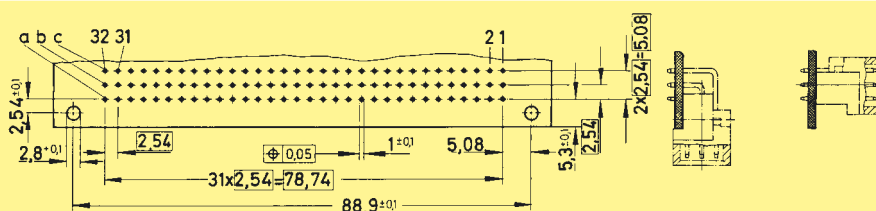
96, 64, 32



## Male connectors

| Identification                           | Number of contacts  | Contact arrangement | Part No.                                       | Performance levels according to IEC 60 603-2.                                  | Explanation chapter 00                                                         |
|------------------------------------------|---------------------|---------------------|------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
|                                          |                     |                     | 3                                              | 2                                                                              | 1                                                                              |
| Male connector with angled solder pins   | 96                  |                     | 09 03 196 7921<br>09 03 396 7921 <sup>b)</sup> | 09 03 196 6921<br>09 03 396 6921 <sup>b)</sup><br>09 03 696 6921 <sup>c)</sup> | 09 03 196 2921<br>09 03 396 2921 <sup>b)</sup><br>09 03 696 2921 <sup>c)</sup> |
|                                          | 64                  |                     | 09 03 164 7921<br>09 03 364 7921 <sup>b)</sup> | 09 03 164 6921<br>09 03 364 6921 <sup>b)</sup><br>09 03 664 6921 <sup>c)</sup> | 09 03 164 2921<br>09 03 364 2921 <sup>b)</sup><br>09 03 664 2921 <sup>c)</sup> |
|                                          | 32                  |                     | 09 03 132 7921<br>09 03 332 7921 <sup>b)</sup> | 09 03 132 6921<br>09 03 332 6921 <sup>b)</sup>                                 | 09 03 132 2921<br>09 03 332 2921 <sup>b)</sup>                                 |
|                                          | 94 + 2 <sup>▲</sup> |                     | 09 03 196 7951                                 | 09 03 196 6951<br>09 03 396 6951 <sup>b)</sup>                                 | 09 03 196 2951                                                                 |
|                                          | 62 + 2 <sup>▲</sup> |                     | 09 03 164 7951                                 | 09 03 164 6951                                                                 | 09 03 164 2951                                                                 |
| Male connector with straight solder pins | 96                  |                     | 09 03 196 7922                                 | 09 03 196 6922                                                                 | 09 03 196 2922                                                                 |
|                                          | 64                  |                     | 09 03 164 7922                                 | 09 03 164 6922                                                                 | 09 03 164 2922                                                                 |

## Dimensions

Board drillings  
Mounting side

Dimensions in mm

▲ Male connectors with 2 leading contacts [(0.8 mm) pos. a1 and a32]

High temperature connectors see chapter 05

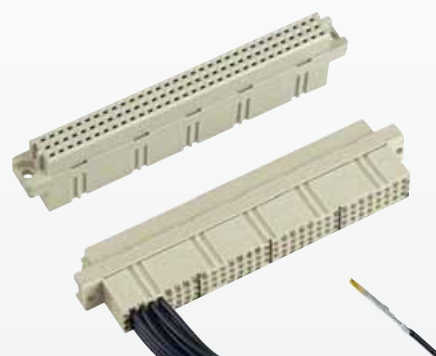
<sup>b)</sup> Connectors with snap-in clips see chapter 00

<sup>c)</sup> Connectors with coding see page 01.42

Number of contacts

max. 96

Female connectors

DIN Signal  
to 2 A

| Identification                                                          | Number of contacts | Part No.                                       | Drawing                                                                                                                | Dimensions in mm |
|-------------------------------------------------------------------------|--------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Female connector for crimp contacts</b><br>Order contacts separately | 96                 | 09 03 096 3214<br>09 03 596 3214 <sup>c)</sup> | <p> <b>Contact arrangement</b> View from termination side<br/> </p> <p>Shell housing 09 03 096 0501 see chapter 20</p> |                  |

| Identification                                                                                                                                                               | Part No.                                                   | Performance levels according to IEC 60 603-2.              | Explanation chapter 00                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                              | 2                                                          |                                                            | 1                                                                                                                                                                                                                                 |
| <b>Female crimp contacts BC</b><br><br>Bandoliered contacts (approx. 5,000 pieces)<br><br>Bandoliered contacts (approx. 500 pieces)<br><br>Individual contacts <sup>1)</sup> | 09 02 000 6484<br><br>09 02 000 8434<br><br>09 02 000 8484 | 09 02 000 6474<br><br>09 02 000 8444<br><br>09 02 000 8474 | <p> <b>Bandoliered contacts</b><br/> </p> <p> <b>Individual contacts</b><br/> </p> <p>3.5 + 0.5 mm of insulation is stripped from the wires to be crimped<br/>           Insertion, removal and crimping tools see chapter 30</p> |

<sup>c)</sup> Connectors with coding see page 01.42<sup>1)</sup> Packaging unit 1,000 pieces

Number of contacts

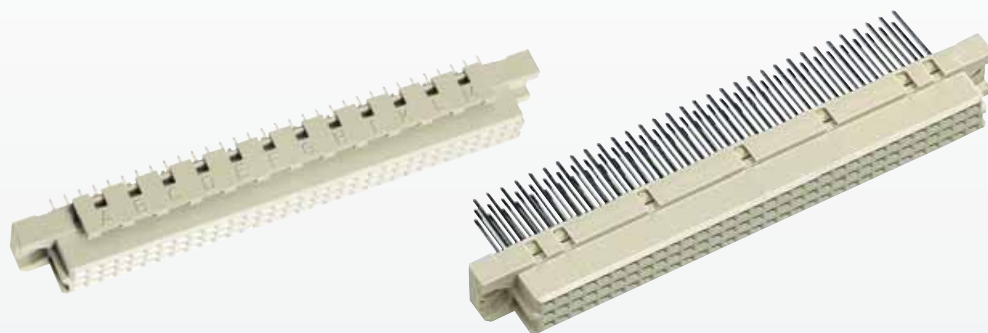
96, 64, 32



## Female connectors

| Identification                                                | Number of contacts | Contact arrangement                                                                 | Part No.                                       | Performance levels according to IEC 60 603-2.                                  | Explanation chapter 00                         |
|---------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------|------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------|
|                                                               |                    |                                                                                     | 3                                              | 2                                                                              | 1                                              |
| Female connector with solder pins 2.9 mm                      | 96                 |    | 09 03 296 7824                                 | 09 03 296 6824<br>09 03 496 6824 <sup>b)</sup><br>09 03 796 6824 <sup>c)</sup> | 09 03 296 2824<br>09 03 496 2824 <sup>b)</sup> |
|                                                               | 64                 |    | 09 03 264 7824                                 | 09 03 264 6824<br>09 03 464 6824 <sup>b)</sup><br>09 03 764 6824 <sup>c)</sup> | 09 03 264 2824<br>09 03 464 2824 <sup>b)</sup> |
|                                                               | 32                 |    | 09 03 232 7824                                 | 09 03 232 6824                                                                 | 09 03 232 2824                                 |
| Female connector with kinked solder pins <sup>1)</sup> 2.9 mm | 96                 |    | 09 03 296 7855                                 | 09 03 296 6855                                                                 | 09 03 296 2855                                 |
|                                                               | 64                 |   | 09 03 264 7855                                 | 09 03 264 6855                                                                 | 09 03 264 2855                                 |
|                                                               | 32                 |  | 09 03 232 7855                                 | 09 03 232 6855                                                                 | 09 03 232 2855                                 |
| Female connector with solder pins 4.5 mm                      | 96                 |  | 09 03 296 7825<br>09 03 496 7825 <sup>b)</sup> | 09 03 296 6825<br>09 03 496 6825 <sup>b)</sup><br>09 03 796 6825 <sup>c)</sup> | 09 03 296 2825                                 |
|                                                               | 64                 |  | 09 03 264 7825<br>09 03 464 7825 <sup>b)</sup> | 09 03 264 6825<br>09 03 464 6825 <sup>b)</sup><br>09 03 764 6825 <sup>c)</sup> | 09 03 264 2825                                 |
|                                                               | 32                 |  | 09 03 232 7825                                 | 09 03 232 6825                                                                 | 09 03 232 2825                                 |
| Female connector with kinked solder pins <sup>1)</sup> 4.5 mm | 96                 |  | 09 03 296 7845                                 | 09 03 296 6845                                                                 | 09 03 296 2845                                 |
|                                                               | 64                 |  | 09 03 264 7845                                 | 09 03 264 6845                                                                 | 09 03 264 2845                                 |
|                                                               | 32                 |  | 09 03 232 7845                                 | 09 03 232 6845                                                                 | 09 03 232 2845                                 |
| Female connector with wrap posts 13 mm                        | 96                 |  |                                                | 09 03 296 6821<br>09 03 796 6821 <sup>c)</sup><br>09 03 296 6878 <sup>2)</sup> |                                                |
|                                                               | 64                 |  |                                                | 09 03 264 6821<br>09 03 264 6878 <sup>2)</sup>                                 |                                                |
| Female connector with solder lugs<br>a + c 5.2 mm<br>b 7.7 mm | 96                 |  |                                                | 09 03 296 6823                                                                 |                                                |
|                                                               | 64                 |  |                                                | 09 03 264 6823                                                                 |                                                |
| Female connector with press-in pins                           |                    |                                                                                     | Part Nos. and variants<br>see chapter 04       |                                                                                |                                                |

<sup>1)</sup> Kinked pins for fixing the connector onto the pcb see chapter 00<sup>2)</sup> Wrap posts for interfacing, selectively gold-plated (performance level 3)<sup>b)</sup> Connectors with snap-in clips see chapter 00<sup>c)</sup> Connectors with coding see page 01.42

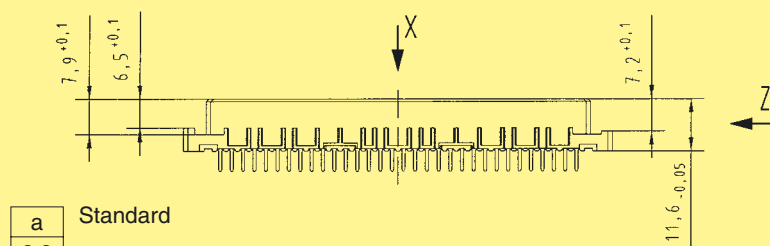


## Identification

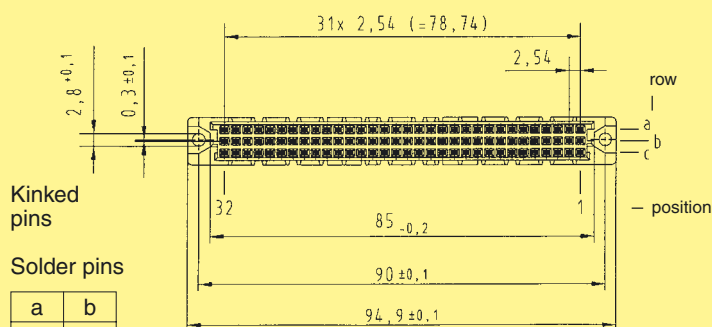
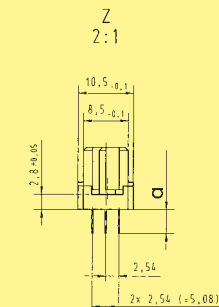
Female connectors  
type C  
DIN 41 612

## Drawing

## Dimensions in mm



|     |             |
|-----|-------------|
| a   | Standard    |
| 2.9 | Solder pins |
| 4.5 | Wrap posts  |

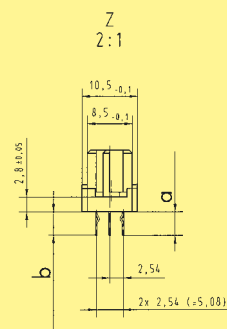


Kinked pins

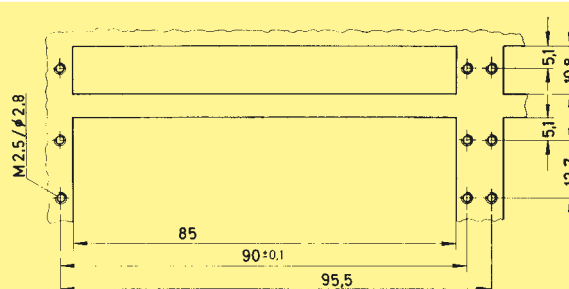
Solder pins

|     |      |
|-----|------|
| a   | b    |
| 2.9 | 2.75 |
| 4.5 | 4.35 |

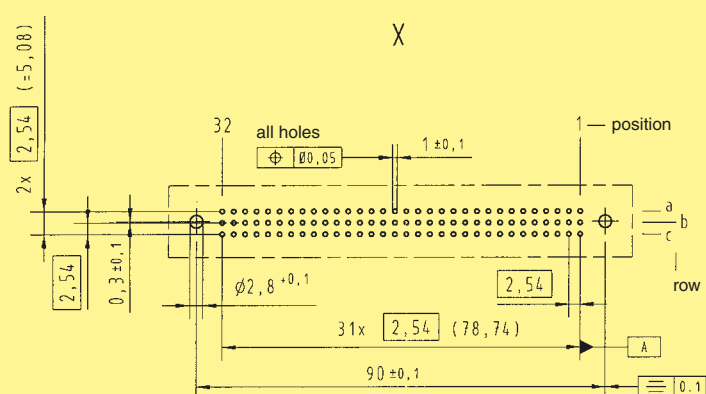
b  $\triangleq$  Length of kinked pins



## Panel cut out

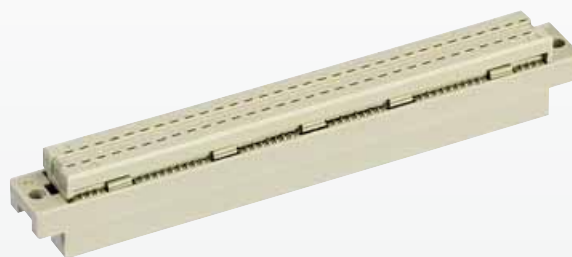


## Board drillings Mounting side



Identification strips for female connectors with wrap posts 09 03 000 9939

64



**DIN Signal  
to 2 A**

01  
22

<sup>1)</sup> acc. to IEC 60 603-2



DIN Signal  
to 2 A

Complicated shapes are injected with upmost precision.

Integrated handling robots guarantee that new injected parts are not damaged.

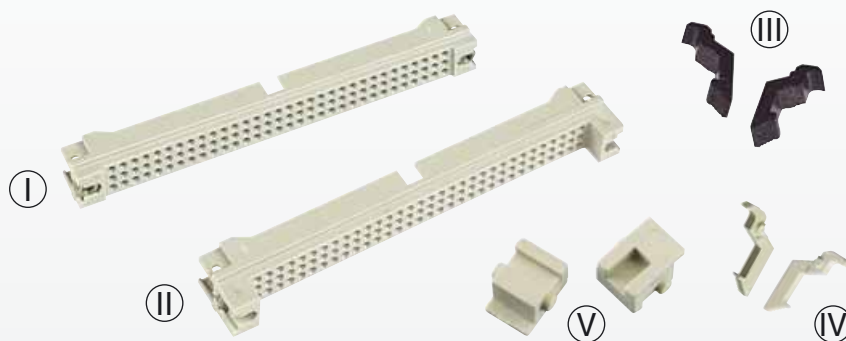


# Pin shroud



Number of contacts

# 96

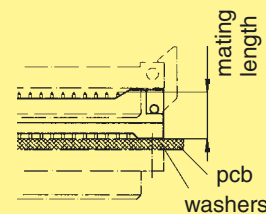


Pin shrouds/Locking levers  
for 0.6 x 0.6 mm wrap posts

| Identification                                                                                                                                                    | Part No.                                                             | Drawing                                                            | Dimensions in mm                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------|
| <b>Pin shroud</b><br>I for 13 mm wrap posts<br>II for 17 mm wrap posts<br>III Locking lever for female connector type C*                                          | 09 03 000 9912<br>09 03 000 9915<br>09 03 000 9914                   | <b>for 13 mm wrap posts</b><br><br><b>for 17 mm wrap posts</b><br> | <br>M 2.5<br>DIN EN<br>ISO<br>4036 |
| <b>Pin shroud</b><br>I for 13 mm wrap posts<br>II for 17 mm wrap posts<br>IV Locking lever for female connector type R*<br>V Fixing brackets for shell housing C* | 09 03 000 9912<br>09 03 000 9915<br>09 03 000 9913<br>09 03 000 9921 | <b>for 13 mm wrap posts</b><br><br><b>for 17 mm wrap posts</b><br> | <br>M 2.5<br>DIN EN<br>ISO<br>4036 |

Height adjustment of the pin shroud for different pcb thickness with washers is possible.  
The mating length can be calculated as follows:

Mating length = 8.4 mm – pcb thickness – washers thickness

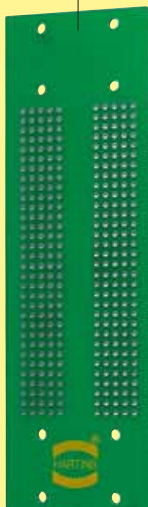


## Application 1

Female connector  
09 03 296 6861



Backplane



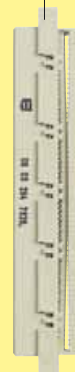
Pin shroud  
09 03 000 9912



Locking lever  
09 03 000 9914



Female connector  
09 03 264 6828



Female connector  
09 03 096 3214



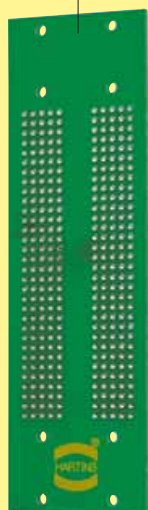
DIN Signal  
to 2 A

## Application 2

Female connector  
09 03 296 6862



Backplane



Pin shroud  
09 03 000 9915



Locking lever  
09 03 000 9913



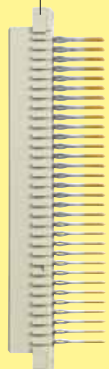
Female connector  
09 73 296 6801



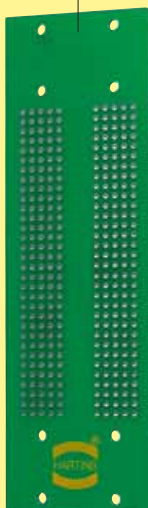
Daughtercard

## Application 3

Female connector  
09 03 296 6861



Backplane



Pin shroud  
09 03 000 9912



Fixing brackets  
09 03 000 9921



Female connector  
09 03 096 3214

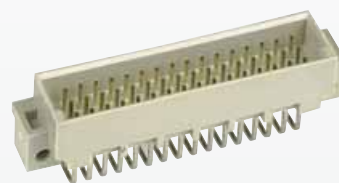


Locking levers  
left 09 02 000 9902  
right 09 02 000 9903

Shell housing C  
09 03 096 0501

Number of contacts

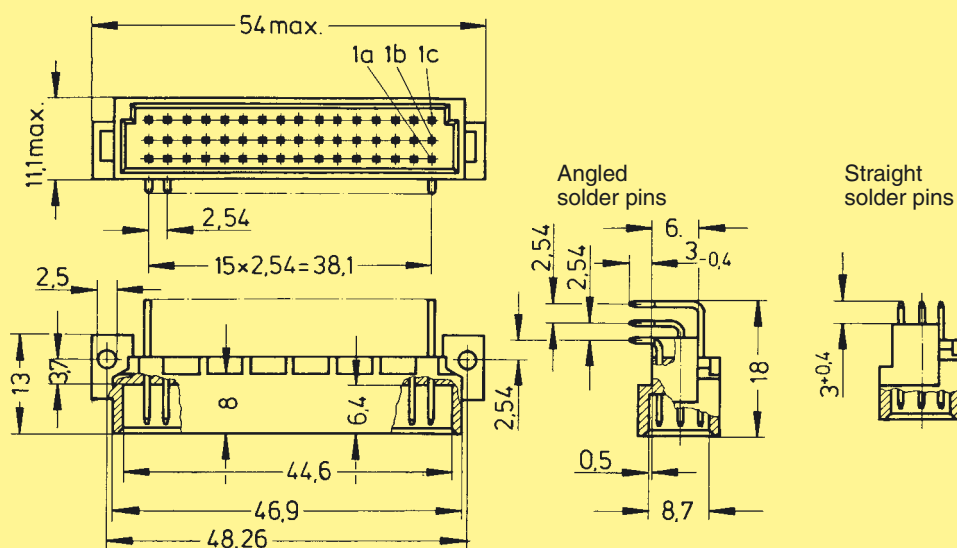
48, 32, 16



## Male connectors

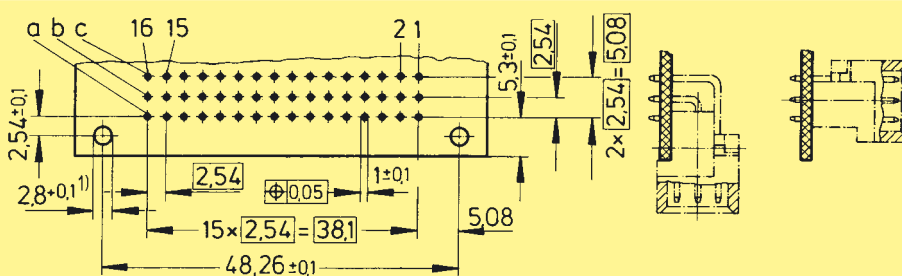
| Identification                           | Number of contacts  | Contact arrangement | Part No.                                       | Performance levels according to IEC 60 603-2.  | Explanation chapter 00 |
|------------------------------------------|---------------------|---------------------|------------------------------------------------|------------------------------------------------|------------------------|
|                                          |                     |                     | 3                                              | 2                                              | 1                      |
| Male connector with angled solder pins   | 48                  |                     | 09 23 148 7921<br>09 23 348 7921 <sup>b)</sup> | 09 23 148 6921<br>09 23 348 6921 <sup>b)</sup> | 09 23 148 2921         |
|                                          | 32                  |                     | 09 23 132 7921<br>09 23 332 7921 <sup>b)</sup> | 09 23 132 6921<br>09 23 332 6921 <sup>b)</sup> | 09 23 132 2921         |
|                                          | 16                  |                     | 09 23 116 7931                                 | 09 23 116 6931                                 | 09 23 116 2931         |
|                                          | 46 + 2 <sup>▲</sup> |                     | 09 23 148 7951                                 | 09 23 148 6951                                 | 09 23 148 2951         |
| Male connector with straight solder pins | 48                  |                     | 09 23 148 7922                                 | 09 23 148 6922                                 | 09 23 148 2922         |
|                                          | 32                  |                     | 09 23 132 7922                                 | 09 23 132 6922                                 | 09 23 132 2922         |

## Dimensions



## Board drillings

Mounting side



Dimensions in mm

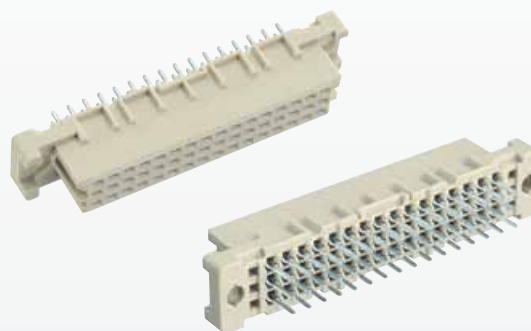
▲ Male connectors with 2 leading contacts [(0.8 mm) pos. a1 and a16]

Other contact arrangements on request

High temperature connector see chapter 05

<sup>b)</sup> Connectors with snap-in clips see chapter 00

48

DIN Signal  
to 2 A01  
27

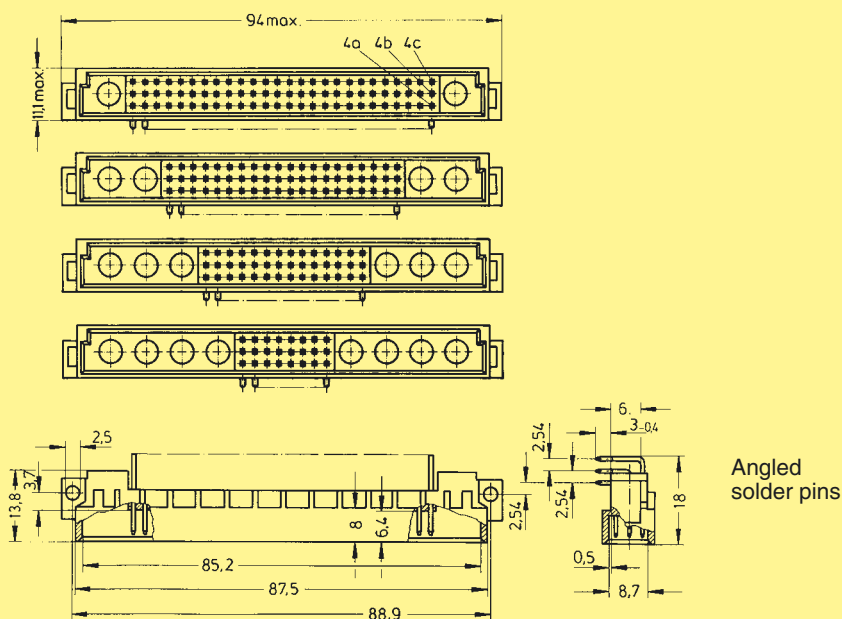
Other contact arrangements on request  
 b) Connectors with snap-in clips see chapter 00

78+2, 60+4,  
42+6, 24+8



**DIN Signal  
to 2 A**

## Dimensions



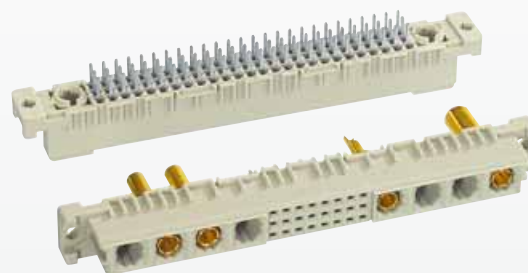
Order high current, high voltage, coaxial and fibre optic contacts separately, see pages 01.30 and 01.31

[illegible]

Dimensions in mm

Number of contacts

# 78+2, 60+4, 42+6, 24+8



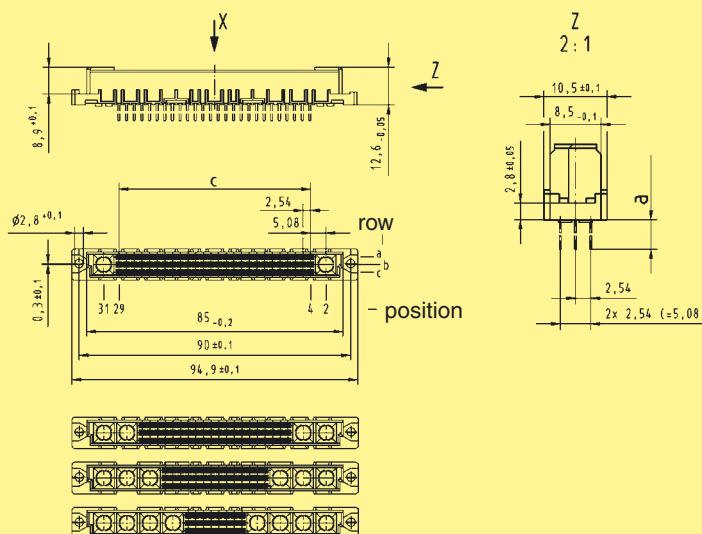
Female connectors

| Identification                                                         | Number of contacts                   | Contact arrangement | Part No.                       | Performance levels according to IEC 60 603-2. Explanation chapter 00 |                                |
|------------------------------------------------------------------------|--------------------------------------|---------------------|--------------------------------|----------------------------------------------------------------------|--------------------------------|
|                                                                        |                                      |                     | 3                              | 2                                                                    | 1                              |
| Female connector with solder pins 2.9 mm<br>(without special contacts) | 78 + 2<br>60 + 4<br>42 + 6<br>24 + 8 |                     | Performance level 3 on request | 09 03 278 6804<br>09 03 260 6804<br>09 03 242 6804<br>09 03 224 6804 | Performance level 1 on request |
| Female connector with solder pins 4.5 mm<br>(without special contacts) | 78 + 2<br>60 + 4<br>42 + 6<br>24 + 8 |                     |                                | 09 03 278 6805<br>09 03 260 6805<br>09 03 242 6805<br>09 03 224 6805 |                                |

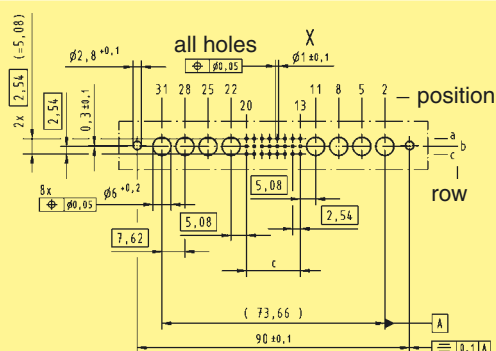
Female connector with press-in pins

Part Nos. and variants  
see chapter 04

Dimensions



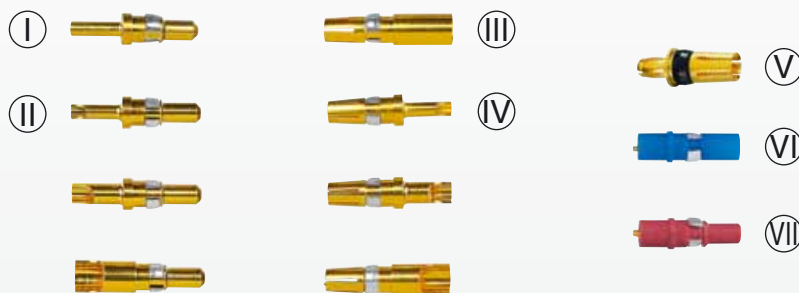
Order high current, high voltage, coaxial and fibre optic contacts separately, see pages 01.30 and 01.31

Board drillings  
Mounting side

| Type   | c                 |
|--------|-------------------|
| 78 + 2 | 25 x 2.54 = 63.5  |
| 60 + 4 | 19 x 2.54 = 48.26 |
| 42 + 6 | 13 x 2.54 = 33.02 |
| 24 + 8 | 7 x 2.54 = 17.78  |

Dimensions in mm

Other contact arrangements on request

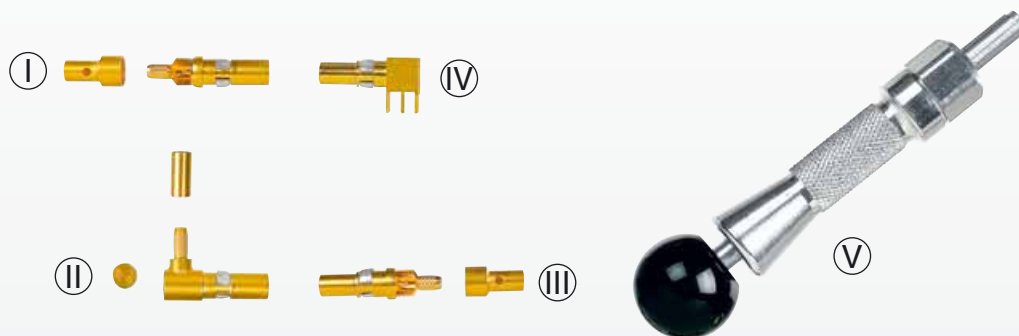


High current contacts  
High voltage contacts

| Identification                                                   |                | Part No.       | Drawing        | Dimensions in mm                                                                                                                                                                                                                                                                                                |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
|------------------------------------------------------------------|----------------|----------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------|------|------------------|------|------|------|------|-----|----|------|------|------|---|----|------|------|------|----|---|
| High current male contacts for male connectors <sup>1)</sup>     |                |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| I for straight crimp termination                                 | 10 A           | 09 03 000 6113 |                | <table><tr><td></td><td>ø A</td><td>ø B</td><td>wire gauge [mm²]</td><td>AWG</td></tr><tr><td>10 A</td><td>1.85</td><td>2.55</td><td>1.5</td><td>16</td></tr><tr><td>20 A</td><td>2.80</td><td>3.70</td><td>4</td><td>12</td></tr><tr><td>40 A</td><td>4.40</td><td>5.60</td><td>10</td><td>8</td></tr></table> |      | ø A              | ø B  | wire gauge [mm²] | AWG  | 10 A | 1.85 | 2.55 | 1.5 | 16 | 20 A | 2.80 | 3.70 | 4 | 12 | 40 A | 4.40 | 5.60 | 10 | 8 |
|                                                                  |                | ø A            |                |                                                                                                                                                                                                                                                                                                                 | ø B  | wire gauge [mm²] | AWG  |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
|                                                                  | 10 A           | 1.85           |                |                                                                                                                                                                                                                                                                                                                 | 2.55 | 1.5              | 16   |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
|                                                                  | 20 A           | 2.80           |                |                                                                                                                                                                                                                                                                                                                 | 3.70 | 4                | 12   |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
|                                                                  | 40 A           | 4.40           |                |                                                                                                                                                                                                                                                                                                                 | 5.60 | 10               | 8    |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
|                                                                  | 20 A           | 09 03 000 6114 |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| 40 A                                                             | 09 03 000 6115 |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| Leading contact                                                  | 10 A           | 09 03 000 6123 |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| 20 A                                                             | 09 03 000 6124 |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| 40 A                                                             | 09 03 000 6125 |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| II for straight solder termination                               | 10 A           | 09 03 000 6101 |                | <table><tr><td></td><td>ø</td></tr><tr><td>10 A</td><td>1.7</td></tr><tr><td>20 A</td><td>2.8</td></tr><tr><td>40 A</td><td>4.8</td></tr></table>                                                                                                                                                               |      | ø                | 10 A | 1.7              | 20 A | 2.8  | 40 A | 4.8  |     |    |      |      |      |   |    |      |      |      |    |   |
|                                                                  |                | ø              |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
|                                                                  | 10 A           | 1.7            |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
|                                                                  | 20 A           | 2.8            |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
|                                                                  | 40 A           | 4.8            |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
|                                                                  | 20 A           | 09 03 000 6102 |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| 40 A                                                             | 09 03 000 6103 |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| Leading contact                                                  | 10 A           | 09 03 000 6111 |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| 20 A                                                             | 09 03 000 6122 |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| 40 A                                                             | 09 03 000 6133 |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| for angled pcb termination                                       |                | max. 40 A*     | 09 03 000 6104 |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| Leading contact                                                  |                | max. 40 A*     | 09 03 000 6134 |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| * depending on the pcb design                                    |                |                |                | 1) Solder pins for hole ø 1 ± 0.1 mm                                                                                                                                                                                                                                                                            |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| High current female contacts for female connectors <sup>2)</sup> |                |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| III for straight crimp termination                               | 10 A           | 09 03 000 6213 |                | <table><tr><td></td><td>ø A</td><td>ø B</td><td>wire gauge [mm²]</td><td>AWG</td></tr><tr><td>10 A</td><td>1.85</td><td>2.55</td><td>1.5</td><td>16</td></tr><tr><td>20 A</td><td>2.80</td><td>3.70</td><td>4</td><td>12</td></tr><tr><td>40 A</td><td>4.40</td><td>5.60</td><td>10</td><td>8</td></tr></table> |      | ø A              | ø B  | wire gauge [mm²] | AWG  | 10 A | 1.85 | 2.55 | 1.5 | 16 | 20 A | 2.80 | 3.70 | 4 | 12 | 40 A | 4.40 | 5.60 | 10 | 8 |
|                                                                  |                | ø A            |                |                                                                                                                                                                                                                                                                                                                 | ø B  | wire gauge [mm²] | AWG  |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
|                                                                  | 10 A           | 1.85           |                |                                                                                                                                                                                                                                                                                                                 | 2.55 | 1.5              | 16   |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| 20 A                                                             | 2.80           | 3.70           | 4              | 12                                                                                                                                                                                                                                                                                                              |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| 40 A                                                             | 4.40           | 5.60           | 10             | 8                                                                                                                                                                                                                                                                                                               |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| 20 A                                                             | 09 03 000 6214 |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| 40 A                                                             | 09 03 000 6215 |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| IV for straight solder termination                               | 10 A           | 09 03 000 6201 |                | <table><tr><td></td><td>ø</td></tr><tr><td>10 A</td><td>1.7</td></tr><tr><td>20 A</td><td>2.8</td></tr><tr><td>40 A</td><td>4.8</td></tr></table>                                                                                                                                                               |      | ø                | 10 A | 1.7              | 20 A | 2.8  | 40 A | 4.8  |     |    |      |      |      |   |    |      |      |      |    |   |
|                                                                  |                | ø              |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
|                                                                  | 10 A           | 1.7            |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| 20 A                                                             | 2.8            |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| 40 A                                                             | 4.8            |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| 20 A                                                             | 09 03 000 6202 |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| 40 A                                                             | 09 03 000 6203 |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| V for press-in termination for type M-flat                       | 40 A           | 09 03 000 6250 |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| High voltage male contact for male connectors <sup>3)</sup>      |                |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| VI for straight solder termination                               | 2.8 kV         | 09 03 000 6140 |                | Wire gauge<br>max. 0.5 mm²                                                                                                                                                                                                                                                                                      |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| High voltage female contact for female connectors <sup>3)</sup>  |                |                |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| VII for straight solder termination                              | 2.8 kV         | 09 03 000 6240 |                | Wire gauge<br>max. 0.5 mm²                                                                                                                                                                                                                                                                                      |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |
| Crimping tool for high current contacts                          |                | 09 99 000 0196 |                |                                                                                                                                                                                                                                                                                                                 |      |                  |      |                  |      |      |      |      |     |    |      |      |      |   |    |      |      |      |    |   |

<sup>2)</sup> Contact resistance max. 1.5 mΩ

<sup>3)</sup> Contact resistance internal wire max. 3 mΩ



## Coaxial contacts

| Identification                                                                                                                                                      | Part No.<br>Performance level 2                                                                                                           | Drawing                                                                                               | Dimensions in mm                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| <b>Male coaxial contacts for female connectors</b><br><b>I</b> for straight solder and/or crimp termination<br><b>II</b> for angled solder and/or crimp termination | 09 03 000 6160<br>09 03 000 6181*<br><br>09 03 000 6161                                                                                   |                                                                                                       | <b>Assembly instruction for contacts I and III</b><br> |
| <b>Female coaxial contacts for male connectors</b><br><b>III</b> for straight solder and/or crimp termination<br><br><b>IV</b> angled for pcb termination           | without knurled area<br>09 03 000 6260<br>09 03 000 6281*<br>with knurled area<br>09 03 000 6274<br><br>09 03 000 6262<br>09 03 000 6269* | <p>with/without knurled area</p> <p>1) Solder pins for hole <math>\varnothing 1 \pm 0.1</math> mm</p> | <b>Assembly instruction for contacts II</b><br>        |
| <b>Crimping tool</b><br>for coaxial contacts                                                                                                                        | 09 99 000 0194                                                                                                                            |                                                                                                       |                                                        |
| <b>Removal tool incl. removal jacket</b><br><b>V</b> for contact replacement                                                                                        | 09 99 000 0174                                                                                                                            |                                                                                                       |                                                        |
| <b>Replacement removal jacket</b>                                                                                                                                   | 09 99 000 0243                                                                                                                            |                                                                                                       |                                                        |

## Electrical characteristics of 50 $\Omega$ coaxial contacts and wires

|                                                                                            |                               |
|--------------------------------------------------------------------------------------------|-------------------------------|
| Impedance                                                                                  | 50 $\Omega$                   |
| Max. working frequency                                                                     | 2 up to 10 GHz                |
| VSWR-value                                                                                 | $1.07 + 0.02 f$ [GHz]         |
| Proof voltage                                                                              | 750 V / 50 Hz                 |
| Working voltage                                                                            | 250 V / 50 Hz                 |
| Insulation resistance                                                                      | $\geq 1$ G $\Omega$           |
| Contact resistance – Center contact<br>– Outer contact                                     | 10 m $\Omega$<br>3 m $\Omega$ |
| Contact current max.                                                                       | 1.5 A                         |
| Admissible power (depends on: frequency, application, VSWR, environmental characteristics) | Data on request               |
| 75 Ohm versions                                                                            | Data on request               |

| Cable group 2 flexible wires | Shell $\varnothing$ | Screening $\varnothing$ | Dielectric $\varnothing$ | Internal wire $\varnothing$ | Hexagonal crimp Spanner width |
|------------------------------|---------------------|-------------------------|--------------------------|-----------------------------|-------------------------------|
| RG 174 A/U                   | 2.5                 | 2.0                     | 1.5                      | 0.48                        | 3.25                          |
| RG 188 A/U                   | 2.6                 | 2.0                     | 1.5                      | 0.54                        | 3.25                          |
| RG 316 U                     | 2.5                 | 2.0                     | 1.5                      | 0.54                        | 3.25                          |

\* Coaxial contact 75  $\Omega$   
Fibre optic contacts on request

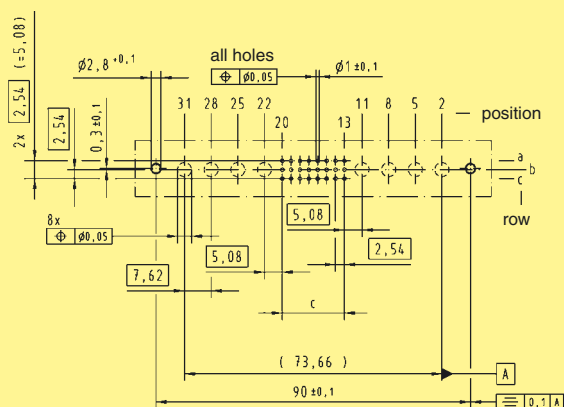
78+2, 60+4,  
42+6, 24+8



| Identification                                                             | Number of contacts | Contact arrangement | Part No.<br>3                     | Performance levels according to IEC 60 603-2. | Explanation chapter 00            |
|----------------------------------------------------------------------------|--------------------|---------------------|-----------------------------------|-----------------------------------------------|-----------------------------------|
|                                                                            |                    |                     |                                   | 2                                             | 1                                 |
| Female connector with solder pins<br>2.9 mm<br>(without special contacts)* | 78 + 2             |                     | Performance level 3<br>on request | 09 03 278 6864                                | Performance level 1<br>on request |
|                                                                            | 60 + 4             |                     |                                   | 09 03 260 6864                                |                                   |
|                                                                            | 42 + 6             |                     |                                   | 09 03 242 6864                                |                                   |
|                                                                            | 24 + 8             |                     |                                   | 09 03 224 6864                                |                                   |
| Female connector with solder pins<br>4.5 mm<br>(without special contacts)* | 78 + 2             |                     | Performance level 3<br>on request | 09 03 278 6865                                | Performance level 1<br>on request |
|                                                                            | 60 + 4             |                     |                                   | 09 03 260 6865                                |                                   |
|                                                                            | 42 + 6             |                     |                                   | 09 03 242 6865                                |                                   |
|                                                                            | 24 + 8             |                     |                                   | 09 03 224 6865                                |                                   |

Part Nos. and variants  
see chapter 04

Board drillings  
Mounting side



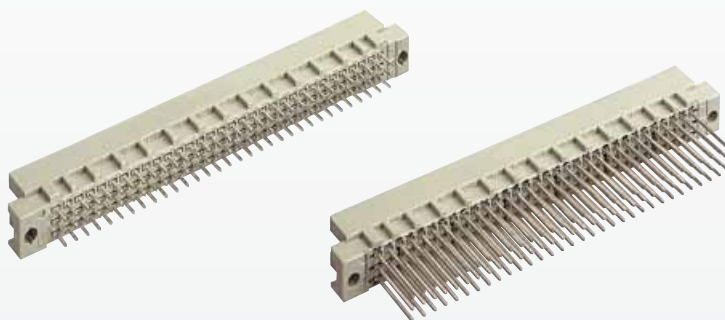
| Type   | c                        |
|--------|--------------------------|
| 78 + 2 | $25 \times 2.54 = 63.5$  |
| 60 + 4 | $19 \times 2.54 = 48.26$ |
| 42 + 6 | $13 \times 2.54 = 33.02$ |
| 24 + 8 | $7 \times 2.54 = 17.78$  |

Dimensions  
in mm



Number of contacts

96, 64, 32



## Male connectors

Identification      Number of contacts      Contact arrangement      Part No.      Performance levels according to IEC 60 603-2. Explanation chapter 00

3      2      1

Male connector with solder pins 2.5 mm

|                     |  |                |                              |                              |
|---------------------|--|----------------|------------------------------|------------------------------|
| 96                  |  | 09 73 196 7902 | 09 73 196 6902               | 09 73 196 2902               |
| 94 + 2 <sup>▲</sup> |  | 09 73 196 7952 | 09 73 396 6902 <sup>b)</sup> | 09 73 196 2952               |
| 64                  |  | 09 73 164 7902 | 09 73 164 6902               | 09 73 164 2902               |
|                     |  |                | 09 73 364 6902 <sup>b)</sup> | 09 73 364 2902 <sup>b)</sup> |
| 32                  |  | 09 73 132 7902 | 09 73 132 6902               | 09 73 132 2902               |

Male connector with solder pins 4.0 mm

|                     |  |                |                              |                |
|---------------------|--|----------------|------------------------------|----------------|
| 96                  |  | 09 73 196 7903 | 09 73 196 6903               | 09 73 196 2903 |
| 94 + 2 <sup>▲</sup> |  | 09 73 196 7953 | 09 73 396 6903 <sup>b)</sup> | 09 73 196 2953 |
| 64                  |  | 09 73 164 7903 | 09 73 164 6903               | 09 73 164 2903 |
|                     |  |                | 09 73 364 6903 <sup>b)</sup> |                |
| 32                  |  | 09 73 132 7903 | 09 73 132 6903               | 09 73 132 2903 |

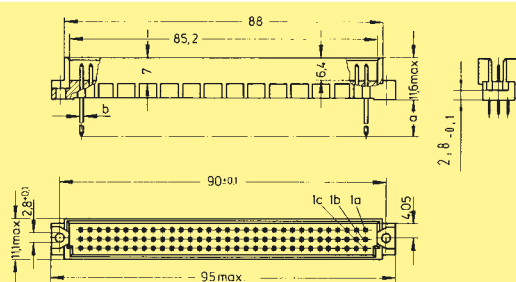
Male connector with wrap posts 13 mm

|                     |  |                |                |                |
|---------------------|--|----------------|----------------|----------------|
| 96                  |  | 09 73 196 7907 | 09 73 196 6907 | 09 73 196 2907 |
| 94 + 2 <sup>▲</sup> |  | 09 73 196 7957 | 09 73 196 6957 | 09 73 196 2957 |
| 64                  |  | 09 73 164 7907 | 09 73 164 6907 | 09 73 164 2907 |
| 32                  |  | 09 73 132 7907 | 09 73 132 6907 | 09 73 132 2907 |

Male connector with press-in pins

Part Nos. and variants  
see chapter 04

## Dimensions



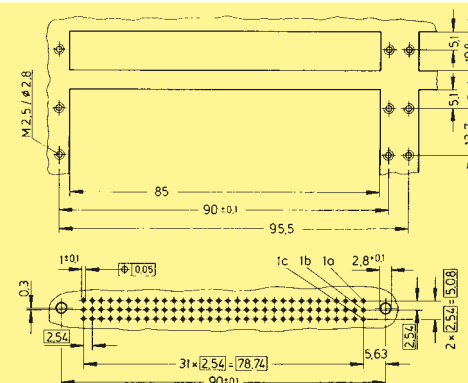
| a   | b   |
|-----|-----|
| 2.5 | 0.7 |
| 4   |     |

Solder pins

| a  | b   |
|----|-----|
| 13 | 0.6 |

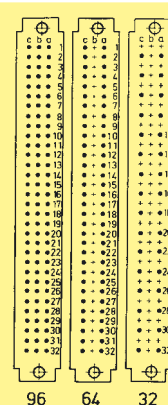
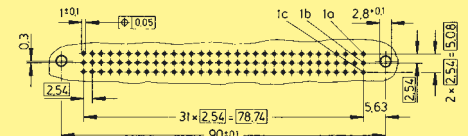
Wrap posts

## Panel cut out



## Board drillings

Mounting side

Contact arrangement  
View from termination side

Dimensions in mm

▲ Male connectors with 2 leading contacts [(0.8 mm) pos. a1 and a32]

Other contact arrangements as well with lagging pins on request

b) Connectors with snap-in clips see chapter 00

Number of contacts

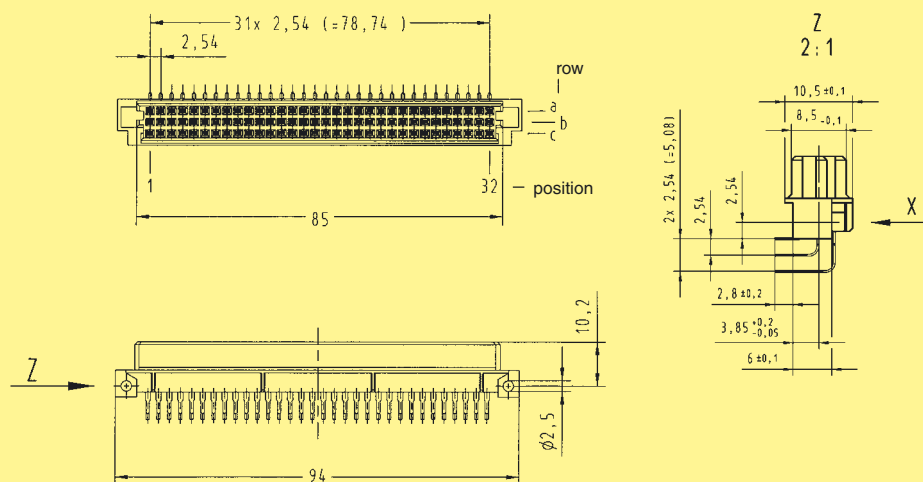
96, 64, 32



## Female connectors

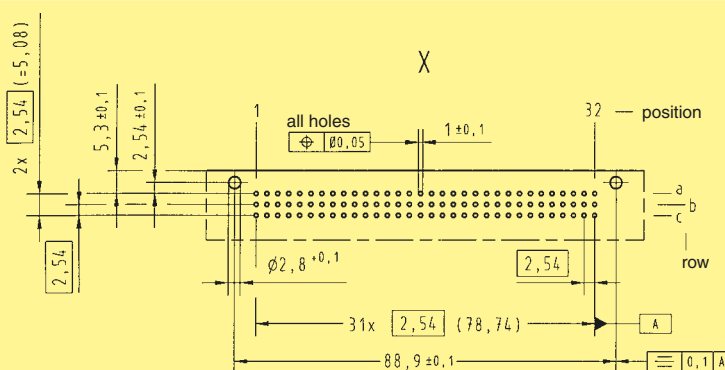
| Identification                           | Number of contacts | Contact arrangement | Part No.                                       | Performance levels according to IEC 60 603-2. Explanation chapter 00 |                |
|------------------------------------------|--------------------|---------------------|------------------------------------------------|----------------------------------------------------------------------|----------------|
|                                          |                    |                     | 3                                              | 2                                                                    | 1              |
| Female connector with angled solder pins | 96                 |                     | 09 73 296 7801<br>09 73 496 7801 <sup>b)</sup> | 09 73 296 6801<br>09 73 496 6801 <sup>b)</sup>                       | 09 73 296 2801 |
|                                          | 64                 |                     | 09 73 264 7801<br>09 73 464 7801 <sup>b)</sup> | 09 73 264 6801<br>09 73 464 6801 <sup>b)</sup>                       | 09 73 264 2801 |
|                                          | 32                 |                     | 09 73 232 7801                                 | 09 73 232 6801                                                       | 09 73 232 2801 |
|                                          | 32                 |                     | 09 73 232 7811                                 | 09 73 232 6811                                                       | 09 73 232 2811 |

## Dimensions



## Board drillings

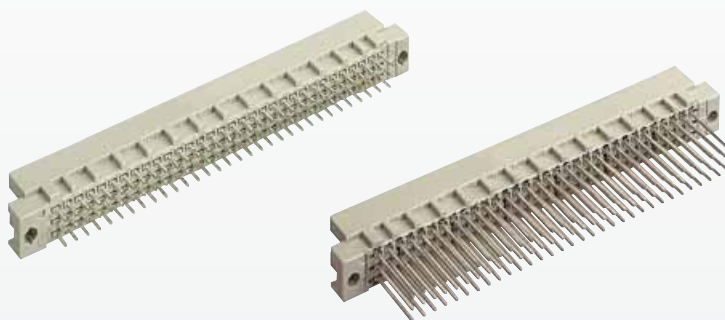
Mounting side



Dimensions in mm

Number of contacts

96, 64, 32



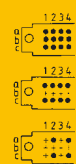
## Male connectors

Identification      Number of contacts      Contact arrangement      Part No.      Performance levels according to IEC 60 603-2. Explanation chapter 00

3      2      1

Male connector with solder pins 2.5 mm

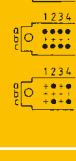
96



09 79 196 7902

09 79 196 6902

64



09 79 164 7902

09 79 164 6902

32



09 79 132 7902

09 79 132 6902

Male connector with solder pins 4.0 mm

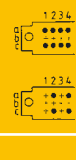
96



09 79 196 7903

09 79 196 6903  
09 79 396 6903<sup>b)</sup>

64



09 79 164 7903

09 79 164 6903  
09 79 364 6903<sup>b)</sup>

32

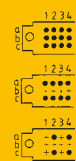


09 79 132 7903

09 79 132 6903

Male connector with wrap posts 13 mm

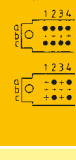
96



09 79 196 7907

09 79 196 6907

64



09 79 164 7907

09 79 164 6907

32

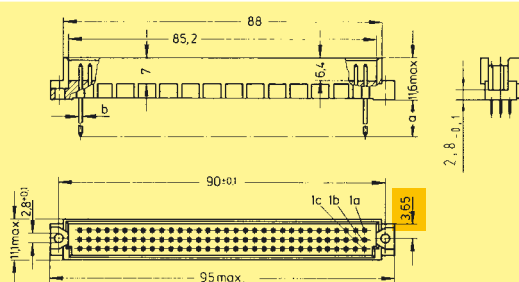


09 79 132 7907

09 79 132 6907

Performance level 1  
on request

## Dimensions



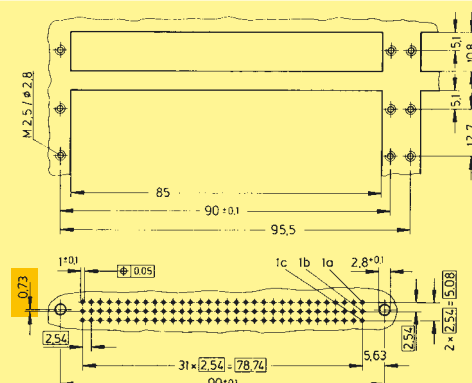
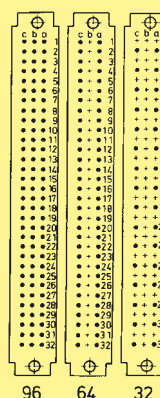
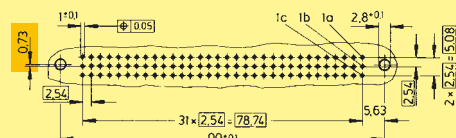
| a   | b     |
|-----|-------|
| 2.5 | ø 0.7 |
| 4   |       |

Solder pins

| a  | b     |
|----|-------|
| 13 | □ 0.6 |

Wrap posts

## Panel cut out

Contact arrangement  
View from termination sideBoard drillings  
Mounting side

Dimensions in mm

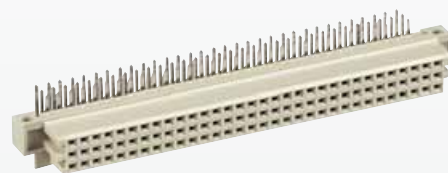
Other contact arrangements on request

= deviating dimensions from standard male connectors (see page 01.34)

<sup>b)</sup> Connectors with snap-in clips see chapter 00

Number of contacts

96, 64



## Female connectors

DIN Signal  
to 2 A

| Identification | Number of contacts | Contact arrangement | Part No. | Performance levels according to IEC 60 603-2. Explanation chapter 00 |
|----------------|--------------------|---------------------|----------|----------------------------------------------------------------------|
|                |                    |                     | 3        | 2                                                                    |

Female connector with angled solder pins

96



09 79 296 7801

09 79 296 6801  
09 79 496 6801<sup>b)</sup>

Performance level 1  
on request

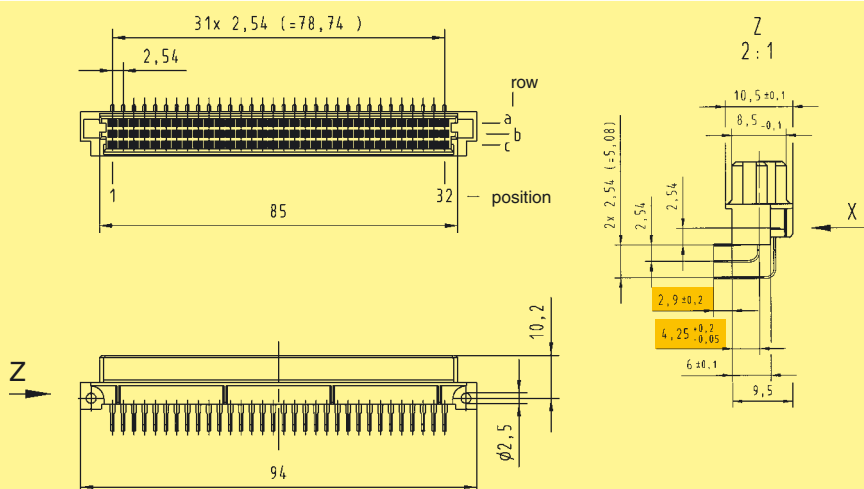
64



09 79 264 7801

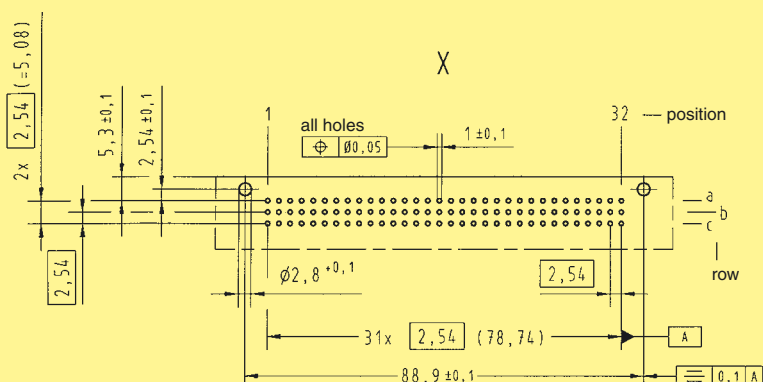
09 79 264 6801  
09 79 464 6801<sup>b)</sup>

## Dimensions



## Board drillings

Mounting side



Dimensions in mm

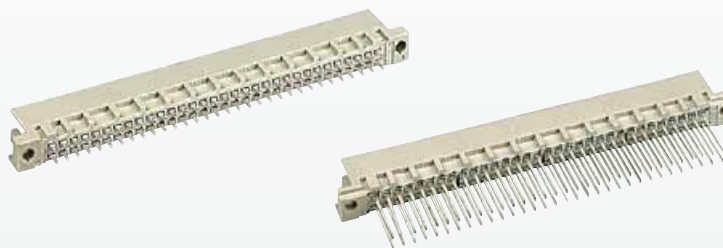
Other contact arrangements on request

= deviating dimensions from standard female connectors (see page 01.35)

<sup>b)</sup> Connectors with snap-in clips see chapter 00

Number of contacts

64



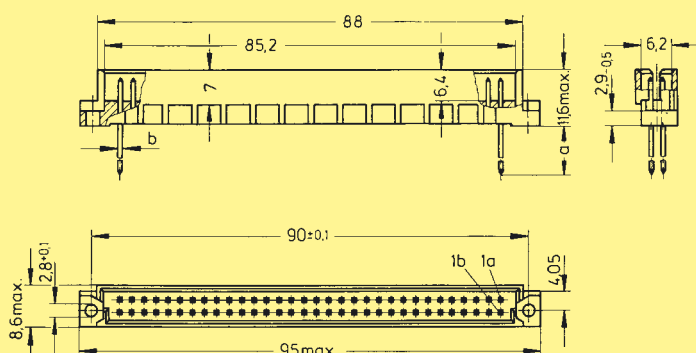
## Male connectors

| Identification                         | Number of contacts        | Contact arrangement | Part No.                         | Performance levels according to IEC 60 603-2. | Explanation chapter 00         |
|----------------------------------------|---------------------------|---------------------|----------------------------------|-----------------------------------------------|--------------------------------|
|                                        |                           |                     | 3                                | 2                                             | 1                              |
| Male connector with solder pins 2.5 mm | 64<br>62 + 2 <sup>▲</sup> |                     | 09 72 164 7902<br>09 72 164 7952 | 09 72 164 6902<br>09 72 164 6952              | Performance level 1 on request |
| Male connector with solder pins 4.0 mm | 64<br>62 + 2 <sup>▲</sup> |                     | 09 72 164 7903<br>09 72 164 7953 | 09 72 164 6903<br>09 72 164 6953              |                                |
| Male connector with wrap posts 13 mm   | 64<br>62 + 2 <sup>▲</sup> |                     | 09 72 164 7907<br>09 72 164 7957 | 09 72 164 6907<br>09 72 164 6957              |                                |

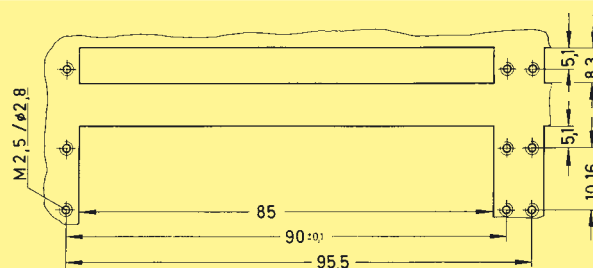
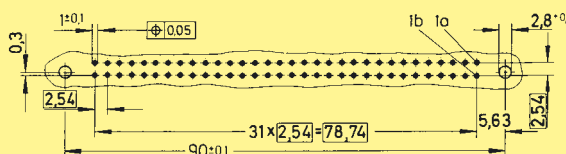
Male connector with press-in pins

Part Nos. and variants see chapter 04

## Dimensions



## Panel cut out

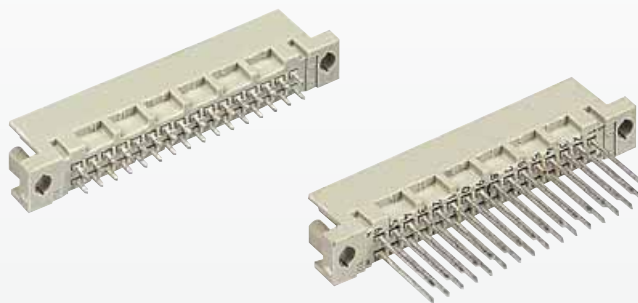
Board drillings  
Mounting side

Dimensions in mm

▲ Male connectors with 2 leading contacts [(0.8 mm) pos. a1 and a32]  
Other contact arrangements as well with lagging pins on request

Number of contacts

# 32



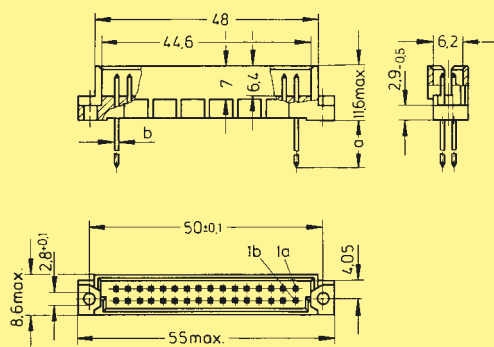
## Male connectors

| Identification                         | Number of contacts | Contact arrangement | Part No.                         | Performance levels according to IEC 60 603-2. Explanation chapter 00 |                                |
|----------------------------------------|--------------------|---------------------|----------------------------------|----------------------------------------------------------------------|--------------------------------|
|                                        |                    |                     | 3                                | 2                                                                    | 1                              |
| Male connector with solder pins 2.5 mm | 32<br>30 + 2▲      |                     | 09 27 132 7902<br>09 27 132 7952 | 09 27 132 6902<br>09 27 132 6952                                     | Performance level 1 on request |
| Male connector with solder pins 4.0 mm | 32<br>30 + 2▲      |                     | 09 27 132 7903<br>09 27 132 7953 | 09 27 132 6903<br>09 27 132 6953                                     |                                |
| Male connector with wrap posts 13 mm   | 32<br>30 + 2▲      |                     | 09 27 132 7907<br>09 27 132 7957 | 09 27 132 6907<br>09 27 132 6957                                     |                                |

Male connector with press-in pins

Part Nos. and variants see chapter 04

## Dimensions



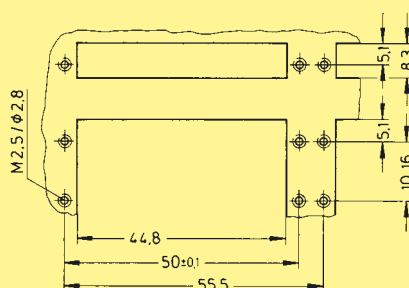
| a     | b |
|-------|---|
| 2.5   | 4 |
| ø 0.7 |   |

Solder pins

| a  | b     |
|----|-------|
| 13 | □ 0.6 |

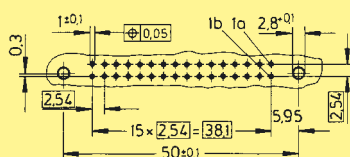
Wrap posts

## Panel cut out



## Board drillings

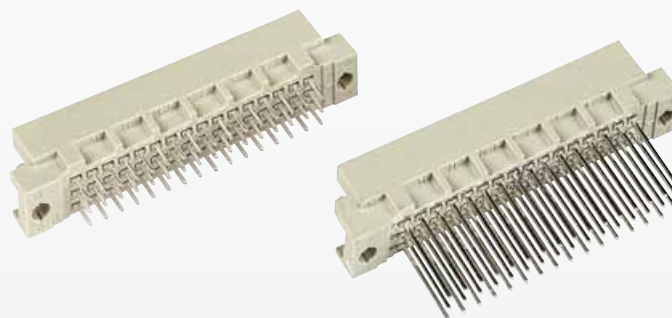
Mounting side



Dimensions in mm

▲ Male connectors with 2 leading contacts [(0.8 mm) pos. a1 and a16]  
Other contact arrangements as well with lagging pins on request

48, 32



**DIN Signal  
to 2 A**

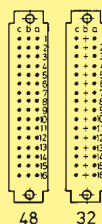
**DIN Signal  
to 2 A**

Part Nos. and variants  
see chapter 04

Solder pins

## Wrap posts

Contact arrangement  
View from termination side

01  
40

b) Connectors with snap-in clips see chapter 00

Number of contacts

## 64, 48, 32



Female connectors

Identification      Number of contacts      Contact arrangement      Performance level 2 according to IEC 60 603-2. Explanation chapter 00      Part No.

Female connector with angled solder pins

Type Q

64



09 72 264 6801

Type 2Q

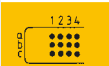
32



09 27 232 6801

Type 2R

48

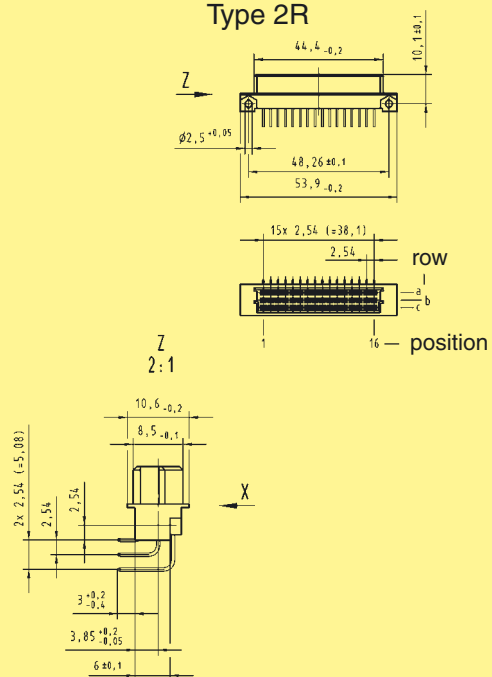
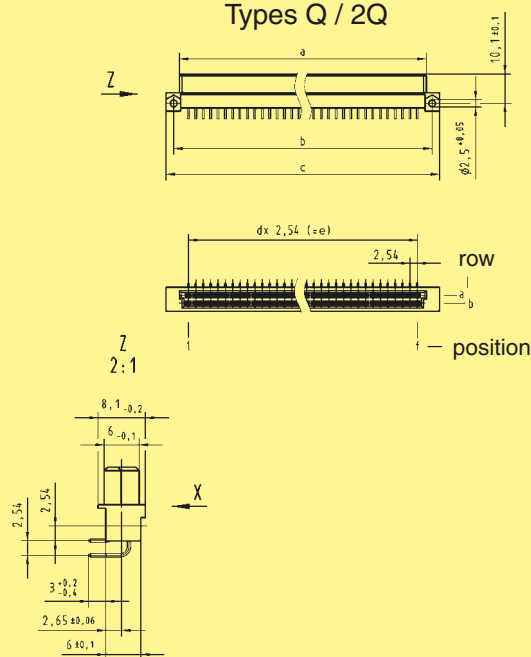


09 28 248 6801

Dimensions

Types Q / 2Q

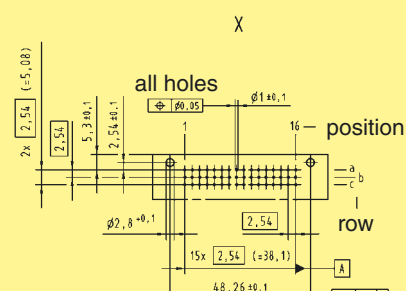
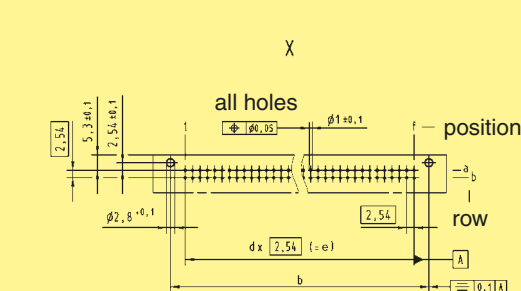
Type 2R



| Type | a                    | b                     | c                    | d  | e     | f  |
|------|----------------------|-----------------------|----------------------|----|-------|----|
| Q    | 85.0 <sup>-0.2</sup> | 88.90 <sup>±0.1</sup> | 94.0 <sup>-0.2</sup> | 31 | 78.74 | 32 |
| 2Q   | 44.4 <sup>-0.2</sup> | 48.26 <sup>±0.1</sup> | 53.9 <sup>-0.2</sup> | 15 | 38.10 | 16 |

Board drillings

Mounting side



Dimensions in mm

Other contact arrangements on request

DIN Signal to 2 A

| Identification | Part No. | Drawing | Dimensions in mm |
|----------------|----------|---------|------------------|
|----------------|----------|---------|------------------|

Coding system  
without contact loss

Male and  
female  
connectors

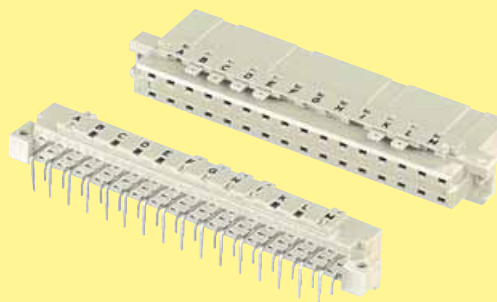
Types  
B, C, D and E

see product pages  
or  
on request

To avoid accidental and incorrect mating of adjacent connectors a coding system is required. This coding system is an integral part of both male and female connectors. A comb with 12 coding pins, which is supplied under a single part number, allows over 900 coding variations. The pins are to be locked into the male and female connectors.

The connectors with the integrated coding facility are supplied for types B, C, D and E and are available for all variants.

Please contact us.

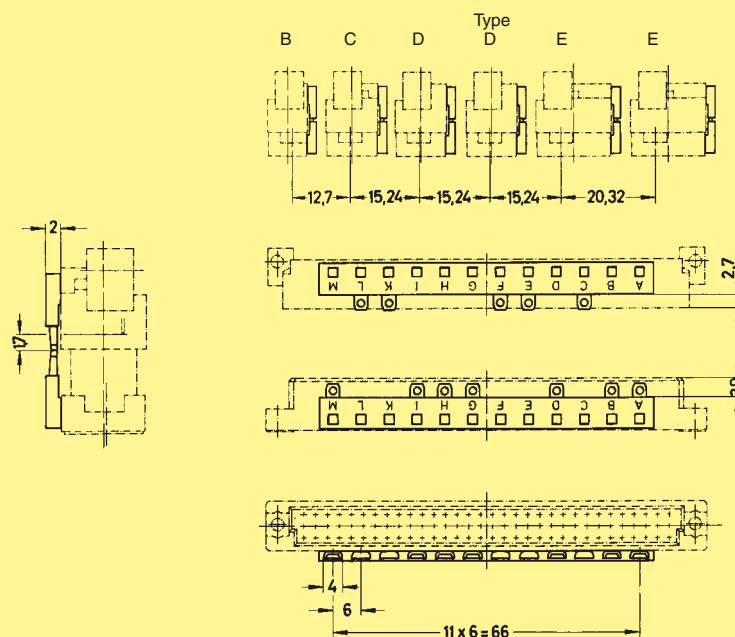


Coding pins

12 pins  
on a comb

09 02 000 9928

Mounting example



Coding system  
with contact loss

Code pin for types  
B, 2B,  
C, 2C,  
M, M-flat,  
Q, 2Q,  
R, R (HE 11), 2R,  
har-bus 64

09 02 000 9901

Removal tool  
for  
male contacts

09 99 000 0133

To avoid accidental and incorrect mating of adjacent connectors a coding system is required. The coding is achieved by means of a code pin which is inserted into the selected chamber of the female connector (the contact cavity must be filled with a female contact!). The opposite male contact must be removed with the help of the specially designed tool.

