



## APD / DIN 72585 Connectors



Cannon



**ITT Industries**  
*Engineered for life*

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## Benefits

- Meets sensors and actuators requirements
- Signal integrity for low current applications
- Survives harshest vehicle environment
- Superior environmental sealing
- Easy contact assembly and installation into connector housing
- Easy contact assembly and installation into connector housing
- Enhanced durability during assembly
- Low installed cost

## Introduction

### Connectors with Bayonet Coupling Heavy Duty Environmental

- Cable connector
- Receptacle with flange for front and rear mounting
- Jam nut receptacle
- High Power connector
- Customer tailored versions (please consult factory)

APD is a direct, in-line and bulkhead sensor connector that is resistant to engine, transmission and brake fluid. It also boasts very low contact resistance, so you can benefit from maximum signal integrity. APD is available in 1-, 2-, 3-, 4-, 6- and 7 position versions and has been designed to meet all DIN 72585 requirements.

### Applications for the 4- and 7-way connector

- Sensors
- Traction / Anti Skid Control
- Brake Control (ABS)
- Magnetic Switch Control Systems
- Valve Control ( Water, Oil, Air, Pressure)
- Lightening systems on Trucks and Trailers

### Applications for the 1- and 2-way connector

- Power supply
- Power distribution
- Battery links

## Features

- Available with 2, 3 and 4 contacts, current rating 30 A max. (4 mm<sup>2</sup> wire)
- 6 and 7 contacts, current rating 16 A max. (1,5 mm<sup>2</sup> wire)
- 2-way High Power, up to 74 A max. (16 mm<sup>2</sup> wire)
- 1-way High Power up to 245 A max. (50 mm<sup>2</sup> wire)
- Low contact resistance
- High performance engineered materials for continuous operation at - 40°C / 125°C.
- Class K2: -40°C/140°C contact temperature for APD 4-Way and 7-Way
- Environmental sealed to IP 69K
- Individual wire seals
- Hexagonal crimp profile at machined contacts
- Hand insertable contacts
- Bayonet coupling
- Keying  
4 different keying colors (2-, 3-, 4-way)  
1 coding only (7-way and 2-way High Power)  
2 coding possibility 2 different colors  
1 way High Power
- Conduit flex tube termination with straight or 90° right angle endbells
- In acc. to GGVS Resp. ADR

**Specials available  
by request**

## APD / DIN 72585 Connector

|                                    |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>APD /<br/>DIN 72585</b>         |  |  |  |  |  |  |
| Series                             | 4-way                                                                             | 4-way                                                                             | 4-way                                                                             | 6-/7-way                                                                           | 6-/7-way                                                                            | 6-/7-way                                                                            |
| Type                               | Plug                                                                              | Flange Receptacle                                                                 | Jam Nut Receptacle                                                                | Plug                                                                               | Flange Receptacle                                                                   | Jam Nut Receptacle                                                                  |
| Max. current                       | 21 A<br>29 A<br>34 A                                                              | 21 A<br>29 A<br>34 A                                                              | 21 A<br>29 A<br>34 A                                                              | 12 A<br>19 A                                                                       | 12 A<br>19 A                                                                        | 12 A<br>19 A                                                                        |
| Contact Resistance                 | ≤ 5 mΩ                                                                            | ≤ 5 mΩ                                                                            | ≤ 5 mΩ                                                                            | ≤ 5 mΩ                                                                             | ≤ 5 mΩ                                                                              | ≤ 5 mΩ                                                                              |
| Contacts                           | Copper alloy<br>tinned                                                            | Copper alloy<br>tinned                                                            | Copper alloy<br>tinned                                                            | Copper alloy<br>tinned                                                             | Copper alloy<br>tinned                                                              | Copper alloy<br>tinned                                                              |
| Sealed Cap                         | -                                                                                 | 121583-0021                                                                       | 121583-0021                                                                       | -                                                                                  | 121583-0021                                                                         | 121583-0021                                                                         |
| Straight End Bell for<br>Flex Tube | ø 8,5 mm<br>058-8578-100                                                          | -                                                                                 | -                                                                                 | ø 8,5 mm<br>058-8578-100                                                           | -                                                                                   | -                                                                                   |
|                                    | ø 10 mm<br>058-8578-102                                                           | -                                                                                 | -                                                                                 | ø 10 mm<br>058-8578-102                                                            | -                                                                                   | -                                                                                   |
| 90° End Bell for<br>Flex Tube      | ø 8,5 mm<br>058-8578-101                                                          | -                                                                                 | -                                                                                 | ø 8,5 mm<br>058-8578-101                                                           | -                                                                                   | -                                                                                   |
|                                    | ø 10 mm<br>058-8578-103                                                           | -                                                                                 | -                                                                                 | ø 10 mm<br>058-8578-103                                                            | -                                                                                   | -                                                                                   |
| Dust Cap                           | 025-8636-005                                                                      | 025-0480-000                                                                      | 025-0480-000                                                                      | 025-8636-005                                                                       | 025-0480-000                                                                        | 025-0480-000                                                                        |
| Wire Filler                        | 273-8506-007                                                                      | 273-8506-007                                                                      | 273-8506-007                                                                      | 273-8506-011                                                                       | 273-8506-011                                                                        | 273-8506-011                                                                        |
| Page Number                        | 3                                                                                 | 5                                                                                 | 6                                                                                 | 10                                                                                 | 11                                                                                  | 12                                                                                  |

|                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>APD /<br/>DIN 72585</b>         |  |  |  |  |  |  |
| Series                             | High Power<br>1-way                                                                 | High Power<br>1-way                                                                 | High Power<br>1-way                                                                 | High Power<br>2-way                                                                  | High Power<br>2-way                                                                   | High Power<br>2-way                                                                   |
| Type                               | Plug                                                                                | Flange Receptacle                                                                   | Jam Nut Receptacle                                                                  | Plug                                                                                 | Flange Receptacle                                                                     | Jam Nut Receptacle                                                                    |
| Max. current                       | 245 A                                                                               | 245 A                                                                               | 245 A                                                                               | 74 A                                                                                 | 74 A                                                                                  | 74 A                                                                                  |
| Contact Resistance                 | ≤ 0,4 mΩ                                                                            | ≤ 0,4 mΩ                                                                            | ≤ 0,4 mΩ                                                                            | ≤ 2 mΩ                                                                               | ≤ 2 mΩ                                                                                | ≤ 2 mΩ                                                                                |
| Contacts                           | Copper alloy<br>silver plated                                                       | Copper alloy<br>silver plated                                                       | Copper alloy<br>silver plated                                                       | Copper alloy<br>silver plated                                                        | Copper alloy<br>silver plated                                                         | Copper alloy<br>silver plated                                                         |
| Sealed Cap                         | -                                                                                   | 121583-0021                                                                         | 121583-0021                                                                         | -                                                                                    | 121583-0021                                                                           | 121583-0021                                                                           |
| Flex Tube Adapter<br>ø 21 mm       | 980-8672-010                                                                        | -                                                                                   | -                                                                                   | 980-8672-010                                                                         | -                                                                                     | -                                                                                     |
| 90° End Bell<br>(up to 25 mm wire) | 980-8672-004                                                                        | -                                                                                   | -                                                                                   | -                                                                                    | -                                                                                     | -                                                                                     |
| Dust Cap                           | 025-8636-005                                                                        | 025-0480-000                                                                        | 025-0480-000                                                                        | 025-8636-005                                                                         | 025-0480-000                                                                          | 025-0480-000                                                                          |
| Hexagonal Nut                      | 217-8516-010                                                                        | 217-8516-010                                                                        | 217-8516-010                                                                        | 217-8516-010                                                                         | 217-8516-010                                                                          | 217-8516-010                                                                          |
| Page Number                        | 16                                                                                  | 17                                                                                  | 18                                                                                  | 24                                                                                   | 25                                                                                    | 26                                                                                    |

## Electrical Data

|                       |                                                    |
|-----------------------|----------------------------------------------------|
| Voltage               | 48 VDC max.                                        |
| Current               | 21 A max. for wire size 1,5 mm <sup>2</sup> / 25°C |
|                       | 29 A max. for wire size 2,5 mm <sup>2</sup> / 25°C |
|                       | 34 A max. for wire size 4,0 mm <sup>2</sup> / 25°C |
| Contact resistance    | ≤ 5mΩ                                              |
| Test Voltage          | 1000 VAC (Ueff)                                    |
| Insulation resistance | ≥10MΩ                                              |

## Mechanical Data

|                                               |                                             |
|-----------------------------------------------|---------------------------------------------|
| Sealing acc. to IEC 529 and DIN 40050, Part 9 | IP 67 and IP 69K                            |
| Operating Temperature Range                   | -40°C / 125°C                               |
|                                               | Class K2: -40°C / 140°C contact temperature |
| Shock / Vibration                             | 30g acc. to DIN 72585                       |
| Durability                                    | 50 Mating cycles                            |

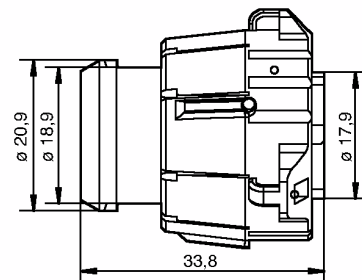
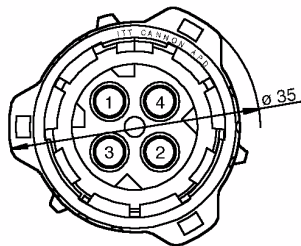
## Materials

|                   |                      |
|-------------------|----------------------|
| Connector housing | PBT                  |
| O-ring            | HNBR                 |
| Contacts          | Copper alloy, tinned |
| Coupling nut      | PA                   |

## Standards and Specifications (in accordance with DIN 72585) Environmental

|                   |                                             |
|-------------------|---------------------------------------------|
| DIN 40050, Part 9 | Sealing                                     |
| DIN 50016         | Humidity                                    |
| DIN 50021         | Resistance against fluids, Salt spray test  |
| DIN 51512         | Lubricants such as engine oil, grease, etc. |
| DIN EN 590        | Diesel fuel, gasoline                       |
| DIN ISO 4925      | Brake fluids, anti-freeze, coolants         |

## Plug, 4-way

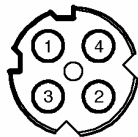
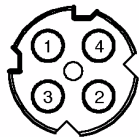
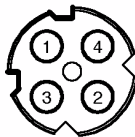
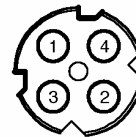


| Order No.   | Designation | Code | Color            |
|-------------|-------------|------|------------------|
| 121583-0000 | APD-1BS-K2  | 1    | black (RAL 9005) |
| 121583-0001 | APD-2BS-K2  | 2    | gray (RAL 7036)  |
| 121583-0002 | APD-3BS-K2  | 3    | green (RAL 6029) |
| 121583-0003 | APD-4BS-K2  | 4    | blue (RAL 5012)  |

Packaging unit 100 pcs.

## Coding, 4-way layouts

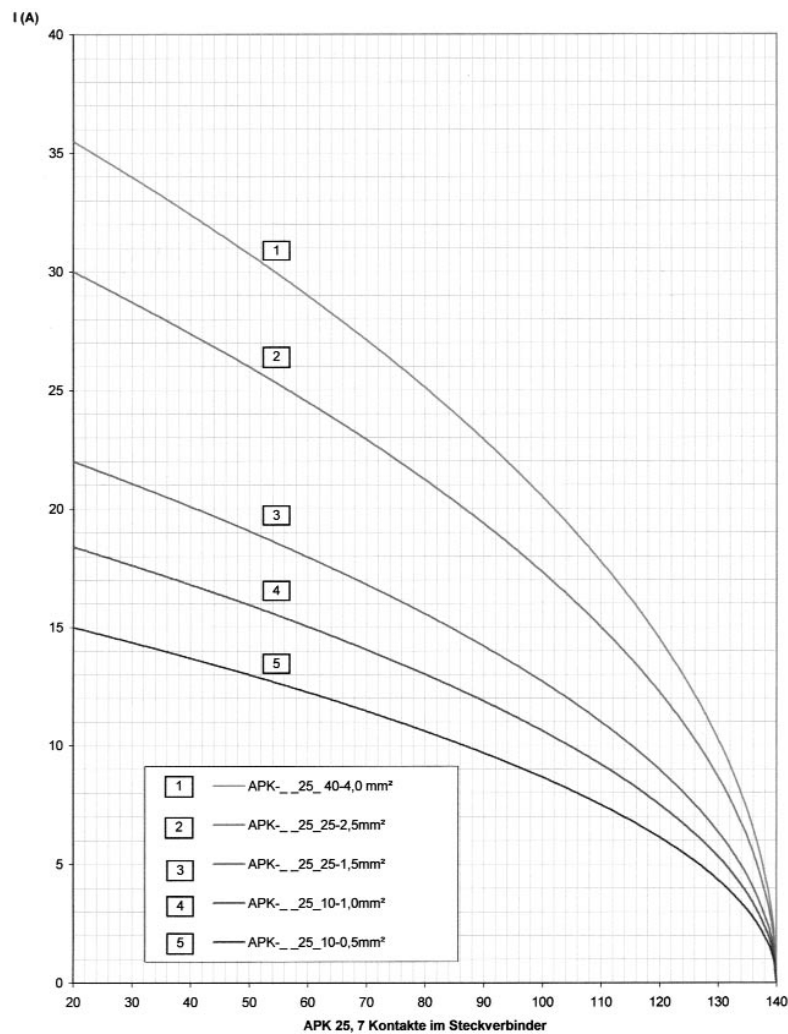
View on Mating Face

code 1  
blackcode 2  
graycode 3  
greencode 4  
blue

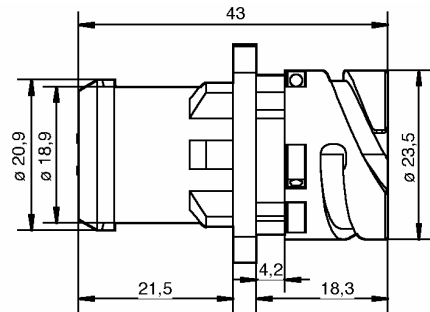
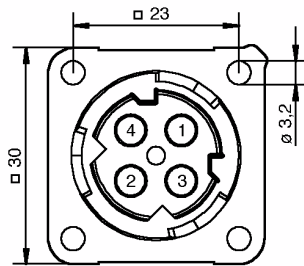
Note: The connectors offer both mechanical keying and visual coding by different colors

Socket Crimp Contacts, Individual wire-seal, Wire filler, see page 7

## Derating Curve



### Flange Receptacle, 4-way

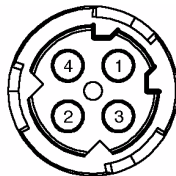


| Order No.   | Designation | Code | Color            |
|-------------|-------------|------|------------------|
| 121583-0004 | APD-1AP-K2  | 1    | black (RAL 9005) |
| 121583-0005 | APD-2AP-K2  | 2    | gray (RAL 7036)  |
| 121583-0006 | APD-3AP-K2  | 3    | green (RAL 6029) |
| 121583-0007 | APD-4AP-K2  | 4    | blue (RAL 5012)  |

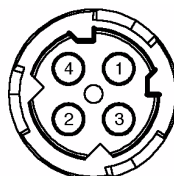
Packaging unit 100 pcs.

## Coding, 4-way layouts

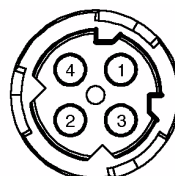
View on Mating Face



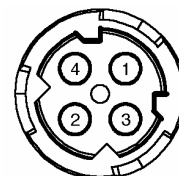
code 1  
black



code 2  
gray



code 3  
green

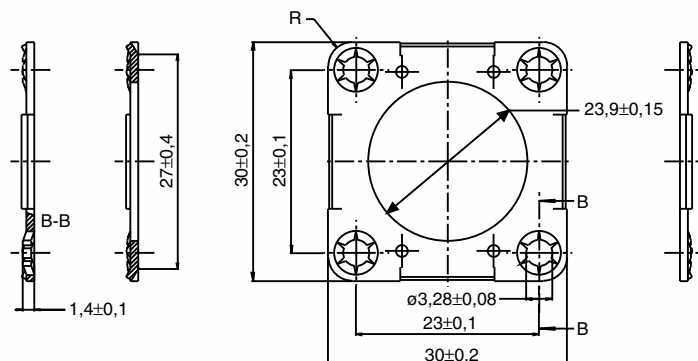
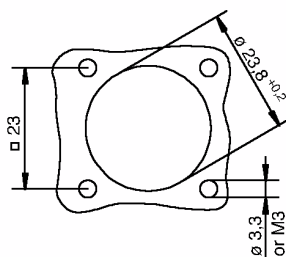


code 4  
blue

Note: The connectors offer both mechanical keying and visual coding by different colors

### Panel Cut Out

## Flange for all Flange Receptacles

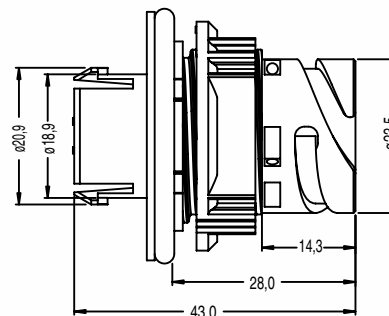
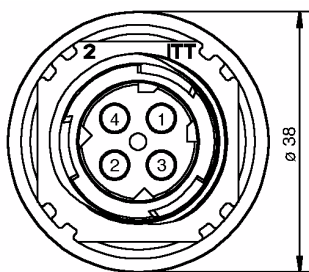


Order Number: 066-8516-005

Pin Crimp-Contacts, Individual wire-seal, Wire filler, Flange gasket, see page 7



Jam Nut Receptacle, 4-way

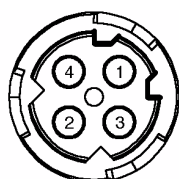


| Order No.   | Designation | Code | Color            |
|-------------|-------------|------|------------------|
| 121583-0008 | APD-1CP-K2  | 1    | black (RAL 9005) |
| 121583-0009 | APD-2CP-K2  | 2    | gray (RAL 7036)  |
| 121583-0010 | APD-3CP-K2  | 3    | green (RAL 6029) |
| 121583-0011 | APD-4CP-K2  | 4    | blue (RAL 5012)  |

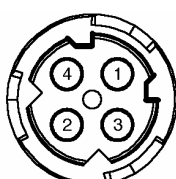
Packaging unit 100 pcs.

Coding, 4-way layouts

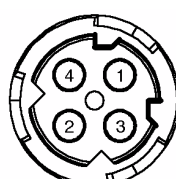
View on Mating Face



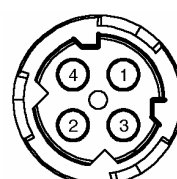
code 1  
black



code 2  
gray



code 3  
green

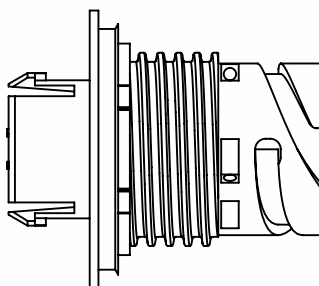
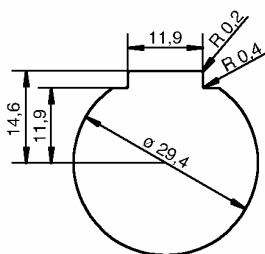


code 4  
blue

Note: The connectors offer both mechanical keying and visual coding by different colors

Panel Cut Out

Piece Parts / Assembly Instruction



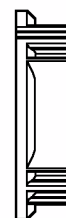
Housing



O-ring



Wall  
Thickness



Jam Nut

Pin Crimp-Contacts, Individual wire-seal,  
Wire filler, Flange gasket, see page 7

Standard: min. 1,0 / max. 4,0 mm  
Special: min. 2,0 / max. 5,0 mm

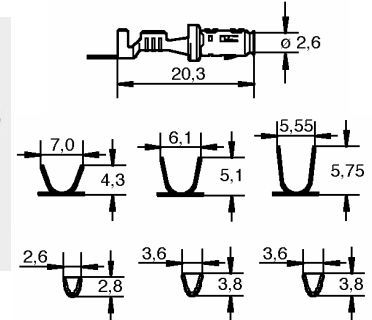
**Socket Crimp-Contacts Standard Tinned, 3000 contacts per reel**

| Designation - Standard                       | Order No.   |
|----------------------------------------------|-------------|
| APK-SB25A10-002 (0,5 - 1,5 mm <sup>2</sup> ) | 121668-0125 |
| APK-SB25A25-002 (1,5 - 2,5 mm <sup>2</sup> ) | 121668-0126 |
| APK-SB25A40-002 (2,5 - 4,0 mm <sup>2</sup> ) | 121668-0127 |

**Optional with Au-flash**

|                                                |             |
|------------------------------------------------|-------------|
| * APK-SB25H10-002 (0,5 - 1,5 mm <sup>2</sup> ) | 121668-0022 |
| * APK-SB25H25-002 (1,5 - 2,5 mm <sup>2</sup> ) | 121668-0128 |
| * APK-SB25H40-002 (2,5 - 4,0 mm <sup>2</sup> ) | 121668-0124 |

\* Available only by request

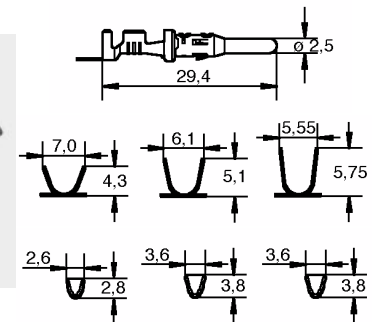

**Pin Crimp-Contacts Standard Tinned, 3000 contacts per reel**

| Designation - Standard                       | Order No.   |
|----------------------------------------------|-------------|
| APK-PB25A10-002 (0,5 - 1,5 mm <sup>2</sup> ) | 121668-0026 |
| APK-PB25A25-002 (1,5 - 2,5 mm <sup>2</sup> ) | 121668-0027 |
| APK-PB25A40-002 (2,5 - 4,0 mm <sup>2</sup> ) | 121668-0028 |

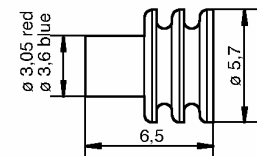
**Optional with Au-flash**

|                                                |             |
|------------------------------------------------|-------------|
| * APK-PB25H10-002 (0,5 - 1,5 mm <sup>2</sup> ) | 121668-0024 |
| * APK-PB25H25-002 (1,5 - 2,5 mm <sup>2</sup> ) | 121668-0029 |
| * APK-PB25H40-002 (2,5 - 4,0 mm <sup>2</sup> ) | 121668-0020 |

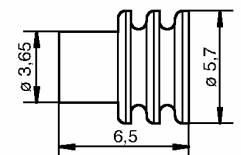
\* Available only by request


**Individual Wire Seals**
**For all versions 4-way**

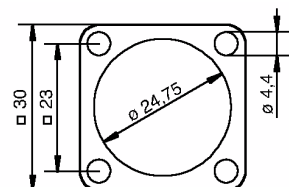
| Designation                           | Order No.    |
|---------------------------------------|--------------|
| 10RD5821                              | 273-8506-005 |
| Wire insulation ø 1,4 - 2,0 mm / red  |              |
| 15BL5822                              | 273-8506-006 |
| Wire insulation ø 2,0 - 2,9 mm / blue |              |


**Wire Filler**
**For all versions 4-way**

| Designation | Order No.    |
|-------------|--------------|
| 15WH5823    | 273-8506-007 |
| white       |              |


**Flange Gasket**
**For Flange Receptacle, 4-way**

| Order No.                 |
|---------------------------|
| 075-8503-000 (-55/125° C) |
| 075-8503-004 (-30/200° C) |
| Packaging unit 100 pcs.   |


**Jam Nut, special**

| Designation                             | Order No.    |
|-----------------------------------------|--------------|
| for special wall thickness 1,0 - 4,0 mm | 217-8516-002 |



**Crimp and Assembly Tools for APK 25 Contacts**

| Contact / Socket                             | Hand Crimp Tool / Order No. | Crimp-Dies   |
|----------------------------------------------|-----------------------------|--------------|
| APK-SB25A10-002 (0,5 - 1,0 mm <sup>2</sup> ) | M22520-5-01 / 995-0001-761  | CT121586-289 |
| APK-SB25A25-002 (1,5 - 2,5 mm <sup>2</sup> ) | M22520-5-01 / 995-0001-761  | CT121586-290 |
| APK-SB25A40-002 (2,5 - 4,0 mm <sup>2</sup> ) | M22520-5-01 / 995-0001-761  | CT121586-292 |

| Contact / Pin                                | Hand Crimp Tool / Order No. | Crimp-Dies   |
|----------------------------------------------|-----------------------------|--------------|
| APK-PB25A10-002 (0,5 - 1,0 mm <sup>2</sup> ) | M22520-5-01 / 995-0001-761  | CT121586-289 |
| APK-PB25A25-002 (1,5 - 2,5 mm <sup>2</sup> ) | M22520-5-01 / 995-0001-761  | CT121586-290 |
| APK-PB25A40-002 (2,5 - 4,0 mm <sup>2</sup> ) | M22520-5-01 / 995-0001-761  | CT121586-292 |

**Crimp Machine for volume production**

| Designation | Order No.   |
|-------------|-------------|
| EPS 2000    | 121586-5039 |

**Quick Change Tool for above Crimp Machine: (Mini Applicator)**

| Contact / Socket                             | Designation             | Order No.<br>(to be mentioned on order) |
|----------------------------------------------|-------------------------|-----------------------------------------|
| APK-SB25A10-002 (0,5 - 1,0 mm <sup>2</sup> ) | WWZ.20-100-APK25-10-002 | 121586-5134                             |
| APK-SB25A25-002 (1,5 - 2,5 mm <sup>2</sup> ) | WWZ.20-100-APK25-25-002 | 121586-5135                             |
| APK-SB25A40-002 (2,5 - 4,0 mm <sup>2</sup> ) | WWZ.20-100-APK25-40-002 | 121586-5136                             |

| Contact / Pin                                | Designation             | Order No.<br>(to be mentioned on order) |
|----------------------------------------------|-------------------------|-----------------------------------------|
| APK-PB25A10-002 (0,5 - 1,0 mm <sup>2</sup> ) | WWZ.20-100-APK25-10-002 | 121586-5134                             |
| APK-PB25A25-002 (1,5 - 2,5 mm <sup>2</sup> ) | WWZ.20-100-APK25-25-002 | 121586-5135                             |
| APK-PB25A40-002 (2,5 - 4,0 mm <sup>2</sup> ) | WWZ.20-100-APK25-40-002 | 121586-5136                             |

**Contact Extraction Tool**

| Designation | Order No.   |
|-------------|-------------|
| CET-APK25   | 192900-0176 |

\* Contact layout is not specified by DIN 72585

**Electrical Data**

|                       |                                                    |
|-----------------------|----------------------------------------------------|
| Voltage               | 48 VDC max.                                        |
| Current               | 12 A max. for wire size 0,5 mm <sup>2</sup> / 25°C |
|                       | 19 A max. for wire size 1,5 mm <sup>2</sup> / 25°C |
| Contact resistance    | ≤ 5mΩ                                              |
| Test Voltage          | 1000 VAC (Ueff)                                    |
| Insulation resistance | 10MΩ                                               |

**Mechanical Data**

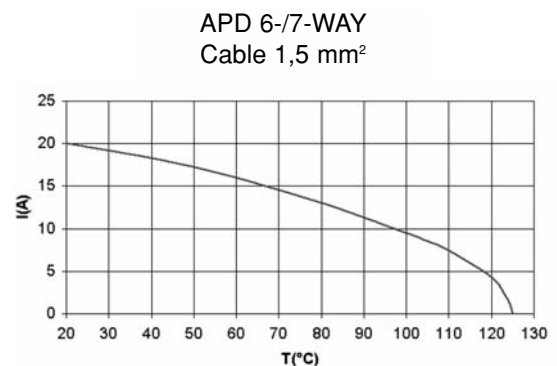
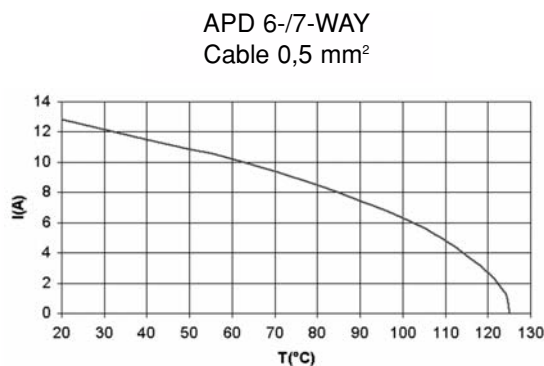
|                                               |                       |
|-----------------------------------------------|-----------------------|
| Sealing acc. to IEC 529 and DIN 40050, Part 9 | IP 67 and IP 69K      |
| Operating Temperature Range                   | -40°C / 125°C         |
| Shock / Vibration                             | 20g acc. to DIN 72585 |
| Durability                                    | 50 Mating cycles      |

**Materials**

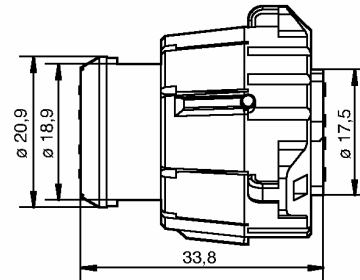
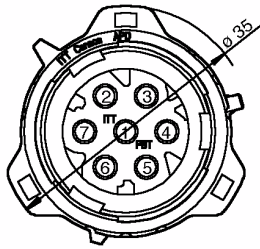
|                   |                      |
|-------------------|----------------------|
| Connector housing | PBT                  |
| O-ring            | HNBR                 |
| Contacts          | Copper alloy, tinned |
| Coupling nut      | PA                   |

**Standards and Specifications (in accordance with DIN 72585) Environmental**

|                   |                                             |
|-------------------|---------------------------------------------|
| DIN 40050, Part 9 | Sealing                                     |
| DIN 50016         | Humidity                                    |
| DIN 50021         | Resistance against fluids, Salt spray test  |
| DIN 51512         | Lubricants such as engine oil, grease, etc. |
| DIN EN 590        | Diesel fuel, gasoline                       |
| DIN ISO 4925      | Brake fluids, anti-freeze, coolants         |

**Derating Curve**


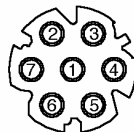
## Plug, 7-way



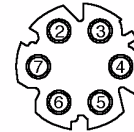
| Order No.   | Designation | Code | Color                                       |
|-------------|-------------|------|---------------------------------------------|
| 121583-0018 | APD-1BS7    | 1    | black (RAL 9005)                            |
| 120110-0024 | APD-1BS6    | 1    | black (RAL 9005)<br>contact cavity 1 closed |

Packaging unit 100 pcs.

## 6-/7-way



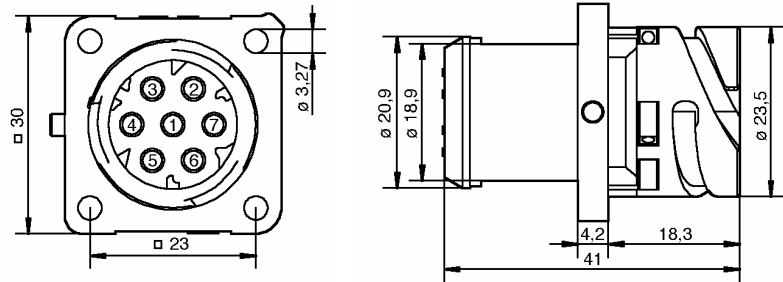
7 way



6 way

Socket Crimp-Contacts, Individual wire-seal, Wire filler, see page 13

Flange Receptacle, 7-way (for standard contacts)



|          | Order No.   | Designation  | Code | Color                                         |
|----------|-------------|--------------|------|-----------------------------------------------|
|          | 121583-0020 | APD-1AP7     | 1    | black (RAL 9005)                              |
|          | 121583-0060 | APD-1AP6     | 1    | black (RAL 9005)<br>(contact cavity 1 closed) |
| Optional | 120110-0083 | APD-1AP6-SPL | 1    | black<br>(contact cavity 1 closed)            |

Pin Crimp-Contacts, Individual wire-seal, Wire filler, Flange gasket, see page 13

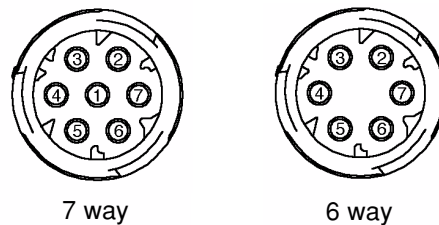
6-/7-way with crimp press-in contacts

6-way Flange Receptacle

Order No. APD 120110-0020

7-way Flange Receptacle

Order No. upon request



Press-in Crimp Contact

For Flange and Jam Nut Receptacle 6-/7-way

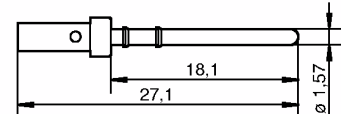
Order No.

330-8672-021 (tinned) (0,75 - 1,5 mm<sup>2</sup>)

330-8672-019 (tinned) (0,35 - 0,75 mm<sup>2</sup>)

with gold flash plate upon request

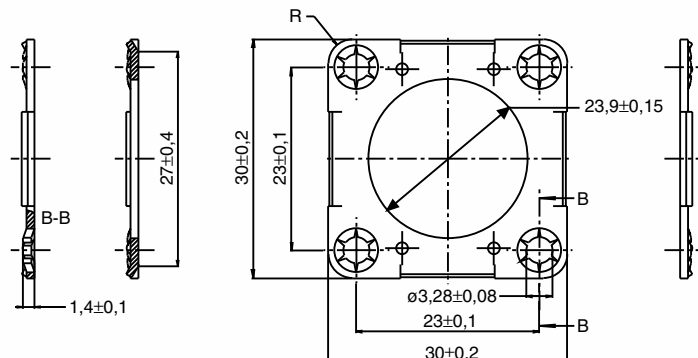
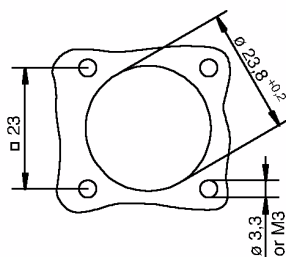
Packaging unit: 100 pcs



Note - Press-in Crimp Contacts are not removable after insertion

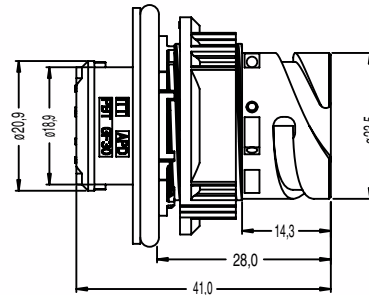
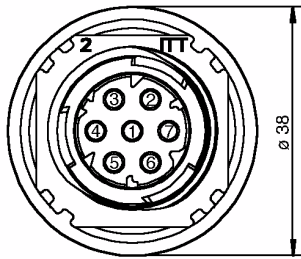
Panel Cut Out

Flange for all Flange Receptacles



Order Number: 066-8516-005

Jam Nut Receptacle, 7-way (for standard contacts)



| Order No.   | Designation | Code | Color            |
|-------------|-------------|------|------------------|
| 121583-0019 | APD-1CP7    | 1    | black (RAL 9005) |
| 121583-0061 | APD-1CP6    | 1    | black (RAL 9005) |

(contact cavity 1 closed)

Packaging unit 100 pcs.

Crimp-Contacts, Individual wire-seal, Wire filler, see page 13

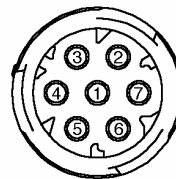
6-/7-way with crimp press-in contacts

6-way Jam Nut Receptacle

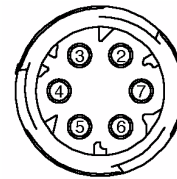
Order No. upon request

7-way Jam Nut Receptacle

Order No. 121583-0028



7 way



6 way

Press-in Crimp Contact

For Flange and Jam Nut Receptacle 7-way

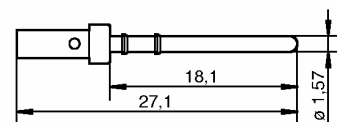
Order No.

330-8672-021 (tinned) (0,75 - 1,5 mm<sup>2</sup>)

330-8672-019 (tinned) (0,35 - 0,75 mm<sup>2</sup>)

with gold flash plate upon request

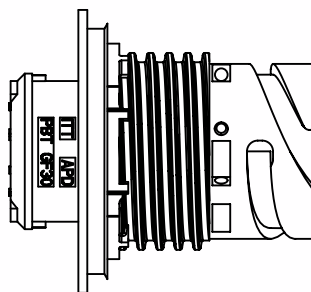
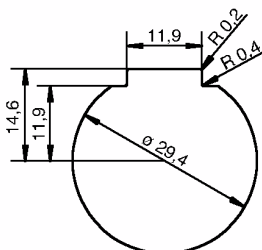
Packaging unit: 100 pcs



Note - Press-in Crimp Contacts are not removable after insertion

Panel Cut Out

Flange for all Flange Receptacles



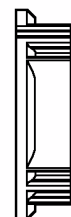
Housing



O-ring



Wall Thickness

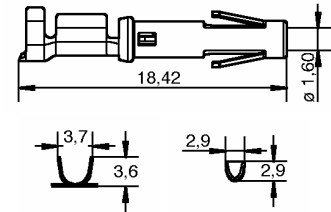


Jam Nut

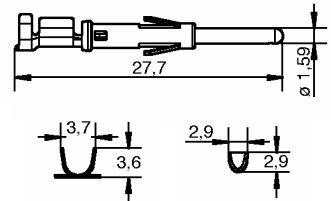
Standard: min. 1,0 / max. 4,0 mm  
Special: min. 2,0 / max. 5,0 mm

**Socket Crimp-Contacts 1,6 mm Standard Tinned, 3000 contacts per reel**

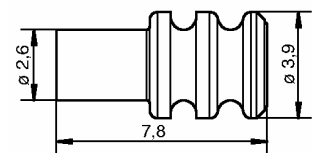
Order No. 192900-0001 (0,5 - 1,5 mm<sup>2</sup>)


**Pin Crimp-Contacts 1,6 mm Standard Tinned, 3000 contacts per reel**

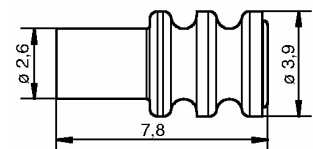
Order No. 192900-0000 (0,5 - 1,5 mm<sup>2</sup>)


**Individual Wire Seals**

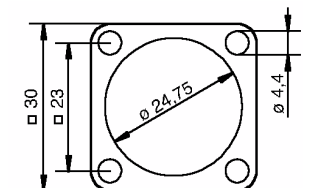
| Designation                             | Order No.    |
|-----------------------------------------|--------------|
| 10GR3940                                | 273-8506-008 |
| Wire insulation ø 1,4 - 2,0 mm / gray   |              |
| 10YE3940                                | 273-8506-009 |
| Wire insulation ø 1,9 - 2,1 mm / yellow |              |
| 10RD3940                                | 273-8506-010 |
| Wire insulation ø 1,2 - 1,6 mm / red    |              |


**Wire Filler**

| Designation | Order No.    |
|-------------|--------------|
| 10WH3940    | 273-8506-011 |
| white       |              |


**Flange Gasket for all Flansch Receptacle**

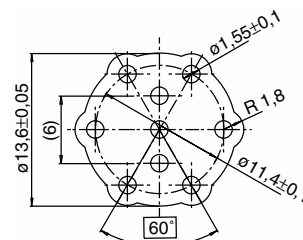
|           |                           |
|-----------|---------------------------|
| Order No. |                           |
|           | 075-8503-000 (-55/125° C) |
|           | 075-8503-004 (-30/200° C) |
|           | Packaging unit 100 pcs.   |


**Alignment Disc**

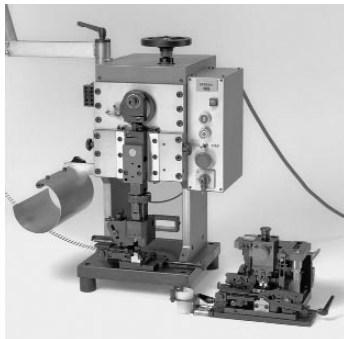
|           |                      |
|-----------|----------------------|
| Order No. | 052-8509-002         |
|           | for pin contact only |

**Jam Nut, special**

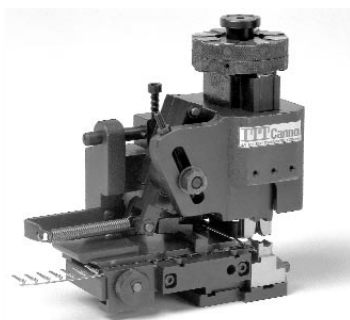
| Designation                             | Order No.    |
|-----------------------------------------|--------------|
| for special wall thickness 1,0 - 4,0 mm | 217-8516-002 |





**Crimp Machine for Volume Production**

| Designation: | Order No.   |
|--------------|-------------|
| EPS 2000     | 121586-5039 |

**Quick Change Tool for above Crimp Machine: (Mini Applicator)**

| Contact / Socket                            | Designation                  | Order No.<br>(to be mentioned on order) |
|---------------------------------------------|------------------------------|-----------------------------------------|
| 192900-0001<br>(0,5 - 1,5 mm <sup>2</sup> ) | WWZ.20-100-Trident 16-18-002 | 121586-519                              |
| Contact / Socket                            | Designation                  | Order No.<br>(to be mentioned on order) |
| 192900-0000<br>(0,5 - 1,5 mm <sup>2</sup> ) | WWZ.20-100-Trident 16-18-002 | 121586-5190                             |

**Contact Extraction Tool**

| Description                              | Order No.   |
|------------------------------------------|-------------|
| Trident Extraction Tool                  | 192922-1450 |
| Wire Insulation Stripping length: 4,5 mm |             |

**Crimp and assembly Tools for press in contacts**

| Basic - Hand Crimp Tool | Order No.    |
|-------------------------|--------------|
| M22520-1-01             | 995-0001-585 |

**Turret (Locator) (for hand crimp tool)**

|              |              |             |
|--------------|--------------|-------------|
| 330-8672-021 | CT120090-163 | 120090-0163 |
| 330-8672-019 | CT120090-163 | 120090-0163 |

**Insertion Tool**

|                |              |
|----------------|--------------|
| CIT-APD 16-TIP | 317-8648-008 |
|----------------|--------------|

**Hand Lever - Press**

|          |             |
|----------|-------------|
| CHPZ-240 | 121586-0081 |
|----------|-------------|



\* Contact layout not specified by DIN 72585

**Electrical Data**

|                       |                                                    |
|-----------------------|----------------------------------------------------|
| Voltage               | 48 VDC max.                                        |
| Current               | 245 A max. for wire size 50 mm <sup>2</sup> / 25°C |
| Contact resistance    | ≤ 0,4 mΩ                                           |
| Test Voltage          | 1000 VAC (Ueff)                                    |
| Insulation resistance | 10MΩ                                               |

**Mechanical Data**

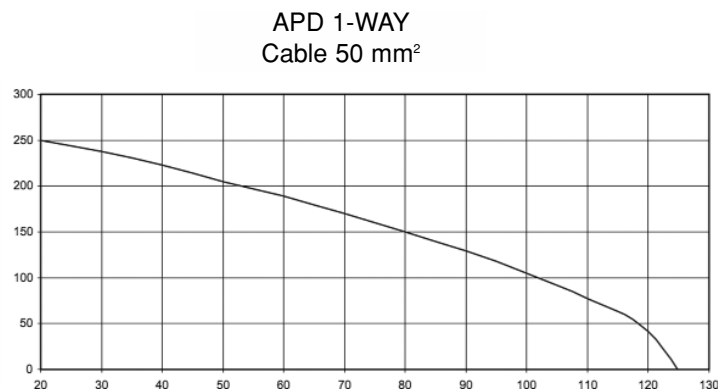
|                                               |                   |
|-----------------------------------------------|-------------------|
| Sealing acc. to IEC 529 and DIN 40050, Part 9 | IP 67 and IP 69K  |
| Operating Temperature Range                   | -40°C / 125°C     |
| Shock / Vibration                             | acc. to DIN 72585 |
| Durability                                    | 50 Mating cycles  |

**Materials**

|                   |                             |
|-------------------|-----------------------------|
| Connector housing | PBT                         |
| O-ring            | HNBR                        |
| Contacts          | Copper alloy, silver plated |
| Coupling nut      | PA                          |

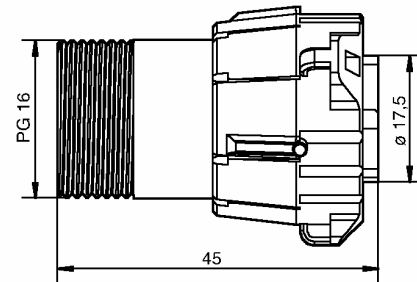
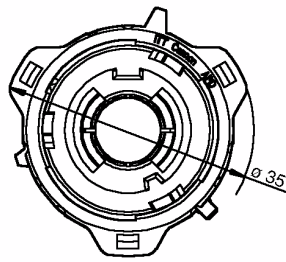
**Standards and Specifications (in accordance with DIN 72585) Environmental**

|                   |                                             |
|-------------------|---------------------------------------------|
| DIN 40050, Part 9 | Sealing                                     |
| DIN 50016         | Humidity                                    |
| DIN 50021         | Resistance against fluids, Salt spray test  |
| DIN 51512         | Lubricants such as engine oil, grease, etc. |
| DIN EN 590        | Diesel fuel, gasoline                       |
| DIN ISO 4925      | Brake fluids, anti-freeze, coolants         |

**Derating Curve**


APD - High Power Contacts # 500, wire size 50mm<sup>2</sup> (AWG 0)

## High Power Plug, 1-way

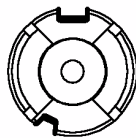


| Order No.   | Designation | Code | Color            |
|-------------|-------------|------|------------------|
| 121583-0012 | APD-5BSH    | 5    | blue (RAL 5012)  |
| 121583-0013 | APD-6BSH    | 6    | red (RAL 2002)   |
| 121583-0042 | APD-7BSH    | 7    | black (RAL 9005) |

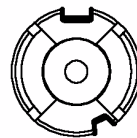
Packaging unit 100 pcs.

## Coding, 1-way layouts

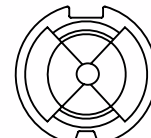
View on Mating Face



code 5  
blue



code 6  
red

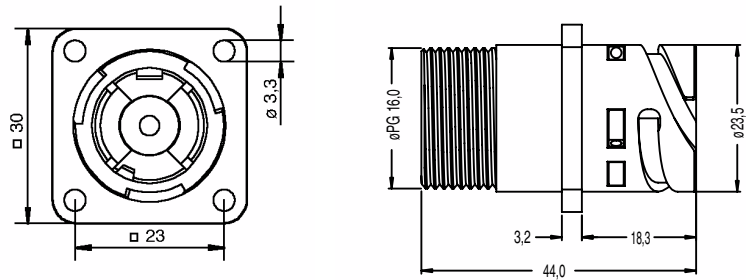


code 7  
black

Note: the connectors offer both mechanical keying and visual coding by different colors

Socket Crimp-Contacts, Cable seal, Hexagonal nut, see pages 19 and 20.

## High Power Flange Receptacle, 1-way

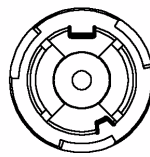


| Order No.   | Designation | Code | Color            |
|-------------|-------------|------|------------------|
| 121583-0014 | APD-5APH    | 5    | blue (RAL 5012)  |
| 121583-0015 | APD-6APH    | 6    | red (RAL 2002)   |
| 121583-0043 | APD-7APH    | 7    | black (RAL 9005) |

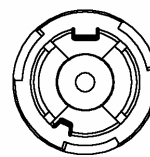
Packaging unit 100 pcs.

## Coding, 1-way layouts

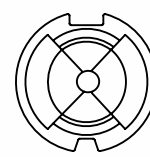
View on Mating Face



code 5  
blue



code 6  
red

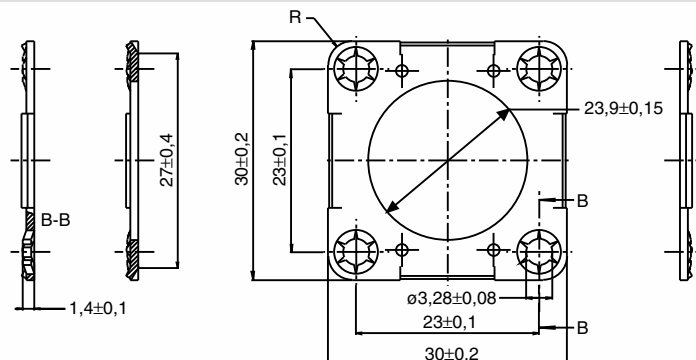
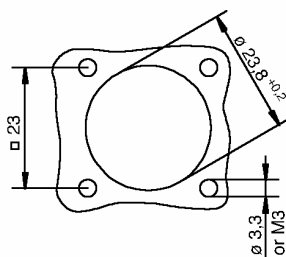


code 7  
black

Note: the connectors offer both mechanical keying and visual coding by different colors

## Panel Cut Out

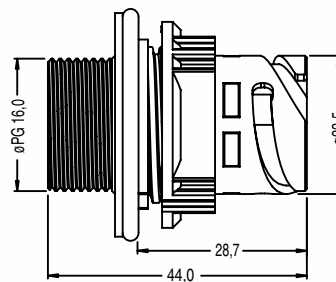
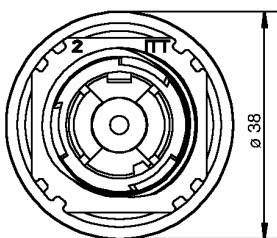
## Flange for all Flange Receptacles



Order Number: 066-8516-005

Machined Pin-Contacts, Contact for ring lock termination, O-ring, Cable seal, Hexogonal nut, Flange gasket, see pages 19 and 20.

## High Power Jam Nut Receptacle, 1-way

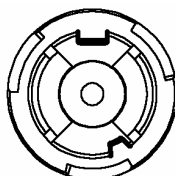


| Order No.   | Designation | Code | Color           |
|-------------|-------------|------|-----------------|
| 121583-0016 | APD-5CPH    | 5    | blue (RAL 5012) |
| 121583-0017 | APD-6CPH    | 6    | red (RAL 2002)  |

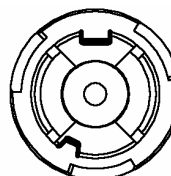
Packaging unit 100 pcs.

## Coding, 1-way layouts

View on Mating Face



code 5  
blue

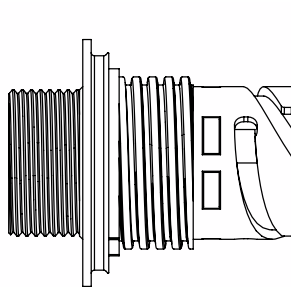
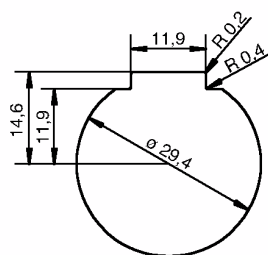


code 6  
red

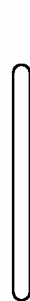
Note: the connectors offer both mechanical keying and visual coding by different colors

## Panel Cut Out

## Flange for all Flange Receptacles



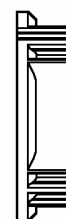
Housing



O-ring



Wall  
Thickness



Jam Nut

Standard: min. 1,0 / max. 4,0 mm

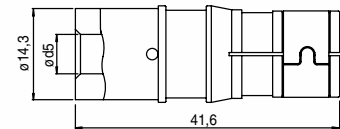
Special: min. 2,0 / max. 5,0 mm

Machined Pin-Contacts, Contact for ring lock termination, O-ring, Cable seal, Hexagonal nut, Flange gasket, see pages 20 and 21.

**Machined Socket Crimp-Contacts Standard, Silver plated**

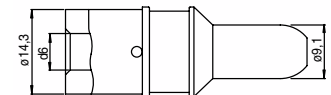
| Order No.                             | AWG | Contact size | d5+0,15 |
|---------------------------------------|-----|--------------|---------|
| 031-8521-030 (16,00 mm <sup>2</sup> ) |     | 0            | 6,2     |
| 031-8521-010 (25,00 mm <sup>2</sup> ) | 4   | 0            | 7,6     |
| 031-8521-020 (35,00 mm <sup>2</sup> ) | 2   | 0            | 9,1     |
| 031-8561-000 (50,00 mm <sup>2</sup> ) |     | 0            | 10,7    |
| 031-8521-000 (53,40 mm <sup>2</sup> ) | 0   | 0            | 11,5    |

Packaging unit 100 pcs


**Machined Pin Crimp Contacts, Standard Silver plated**

| Order No.                             | AWG | contact size | d6+0,15 |
|---------------------------------------|-----|--------------|---------|
| 030-8614-030 (16,00 mm <sup>2</sup> ) |     | 0            | 6,2     |
| 030-8614-010 (25,00 mm <sup>2</sup> ) | 4   | 0            | 7,6     |
| 030-8614-020 (35,00 mm <sup>2</sup> ) | 2   | 0            | 9,1     |
| 030-8592-000 (50,00 mm <sup>2</sup> ) |     | 0            | 10,7    |
| 030-8614-000 (53,40 mm <sup>2</sup> ) | 0   | 0            | 11,5    |

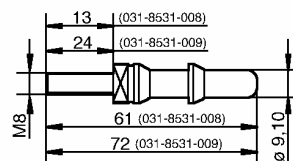
Packaging unit 100 pcs



**Contact for ring lock terminals**
**For Flange and Jam Nut Receptacle, High Power 1-way**

| Order No.    | Thread  |
|--------------|---------|
| 031-8531-008 | M8 X 13 |
| 031-8531-009 | M8 X 24 |

Packaging unit 100 pcs


**O-Ring for contact sealing with threaded stud**
**For Pin Contact Sealing High Power 1-way**

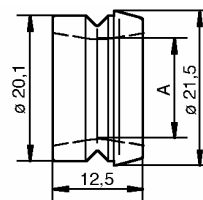
Order No. 980-8605-002

Packaging unit 100 pcs


**Cable Seal for Cable (in acc. to DIN 670722 FLY/ DIN 72551 FLRY) For all Style, High Power 1-way**

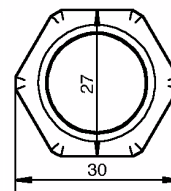
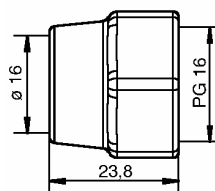
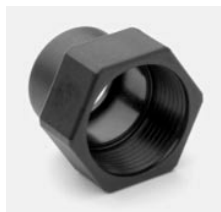
| Order No.    | Insulation $\phi$ | $\phi$ A mm |
|--------------|-------------------|-------------|
| 351-8697-005 | 5,8 - 7,4         | 5,4         |
| 351-8697-009 | 8,4 - 10,0        | 8,0         |
| 351-8697-001 | 10,4 - 12,0       | 10,0        |
| 351-8697-002 | 12,3 - 13,5       | 11,9        |
| 351-8697-003 | 14,2 - 15,8       | 13,8        |

Packaging unit 100 pcs.


**Hexagonal Nut**
**For all Style, High Power 1-way**

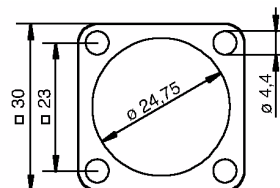
Order No. 217-8516-010

Packaging unit 100 pcs


**Flange Gasket**
**For Flange Receptacle, High Power 1-way**

| Order No.                 |
|---------------------------|
| 075-8503-000 (-55/125° C) |
| 075-8503-004 (-30/200° C) |

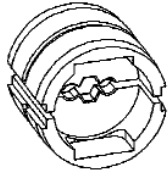
Packaging unit 100 pcs.


**Jam Nut, special**

| Designation                             | Order No.    |
|-----------------------------------------|--------------|
| for special wall thickness 2,0 - 5,0 mm | 217-8516-002 |



## Tooling for 1-way High Power Connectors

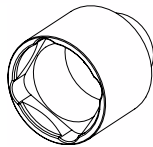


| Contact / Socket                             | Crimp-Dies  |
|----------------------------------------------|-------------|
| 031-8521-000 (53,40 mm <sup>2</sup> / AWG 0) | 121586-5160 |
| 031-8561-000 (50,00 mm <sup>2</sup> )        | 121586-5160 |
| 031-8521-020 (35,00 mm <sup>2</sup> / AWG 2) | 121586-5160 |
| 031-8521-010 (25,00 mm <sup>2</sup> / AWG 4) | 121586-5160 |
| 031-8521-030 (16,00 mm <sup>2</sup> )        | 121586-5160 |

| Contact / Socket                             | Crimp-Dies  |
|----------------------------------------------|-------------|
| 030-8614-000 (53,40 mm <sup>2</sup> / AWG 0) | 121586-5160 |
| 030-8592-000 (50,00 mm <sup>2</sup> )        | 121586-5160 |
| 030-8614-020 (35,00 mm <sup>2</sup> / AWG 2) | 121586-5160 |
| 030-8614-010 (25,00 mm <sup>2</sup> / AWG 4) | 121586-5160 |
| 030-8614-030 (16,00 mm <sup>2</sup> )        | 121586-5160 |

## Assembly Tools Jam Nut Receptacle

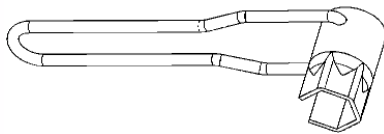
Square box spanner for torque moment wrench to fix the jam nut



|           |                |
|-----------|----------------|
| Order No. | CT317-8649-034 |
|-----------|----------------|

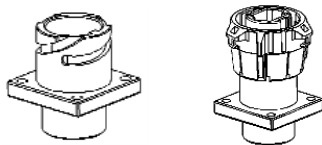
## Assembly Tools (Hexagonal Nut)

To fix the hexagonal fixing nut 217-8516-010



|           |              |
|-----------|--------------|
| Order No. | 980-8672-005 |
|-----------|--------------|

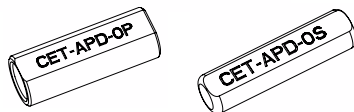
## Assembly and Torque Wrench Adapter



| Designation  | Order No.    |
|--------------|--------------|
| MA-APD-112-P | 248-8653-063 |
| MA-APD-112-R | 249-8619-010 |

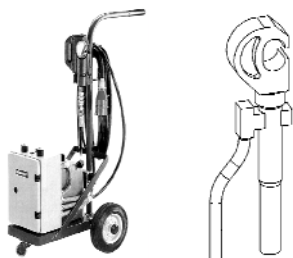
## Contract Extraction Tool

Housing can not be reused



| Designation      | Order No.   |
|------------------|-------------|
| CET-APD#0-Pin    | 121586-5192 |
| CET-APD#0-Socket | 121586-5193 |

## Crimp Tool



| Crimp Tool                           | Designation | Order No.     |
|--------------------------------------|-------------|---------------|
| Hydraulic, hand operated:            | HK120       | CT121586-5077 |
| Electro-hydraulic, 230 V AC operated | HK12-EL     | CT121586-5075 |

For detailed assembly instruction please see CAS 25023E

## Custom Made Versions



High density APD connector with 37 respectively 51 signal contacts (16 Amp. max.). Combinations of signal and power contacts upon request.



2 to 4-way APD Sensor connector with machined crimp contacts. (Other termination methods are possible). Connector is fixed either by joint flared or over mold.



Y splice Box. (other configurations / arrangements are possible).



Pressure transmitter sensor-connector with PCB terminals. (Other termination methods are possible). Connector is fixed either by flared joint or over-mold.



Sensor Application



Sensor Application

\* Contact layout is not specified by DIN 72585

**Electrical Data**

|                       |                                                   |
|-----------------------|---------------------------------------------------|
| Voltage               | 48 VDC max.                                       |
| Current               | 74 A max. for wire size 10 mm <sup>2</sup> / 25°C |
| Contact resistance    | ≤ 2 mΩ                                            |
| Test Voltage          | 1000 VAC (Ueff)                                   |
| Insulation resistance | 10MΩ                                              |

**Mechanical Data**

|                                               |                   |
|-----------------------------------------------|-------------------|
| Sealing acc. to IEC 529 and DIN 40050, Part 9 | IP 69K            |
| Operating Temperature Range                   | -40°C / 125°C     |
| Shock / Vibration                             | acc. to DIN 72585 |
| Durability                                    | 50 Mating cycles  |

**Materials**

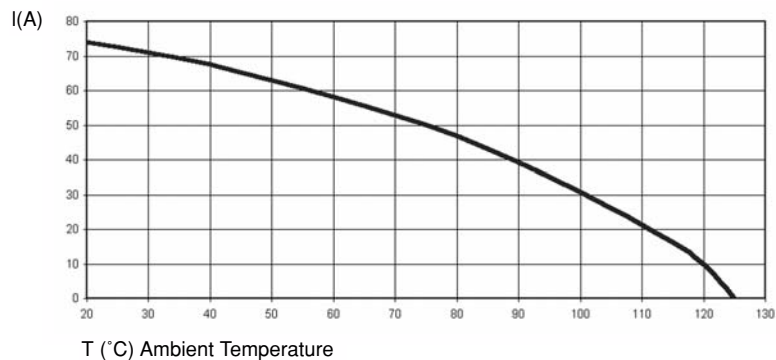
|                   |                             |
|-------------------|-----------------------------|
| Connector housing | PBT                         |
| O-ring            | HNBR                        |
| Contacts          | Copper alloy, silver plated |
| Coupling nut      | PA                          |

**Standards and Specifications (in accordance with DIN 72585) Environmental**

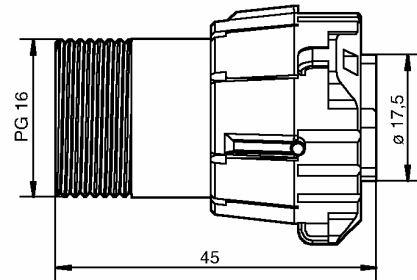
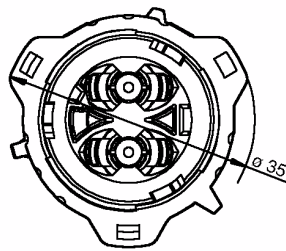
|                   |                                             |
|-------------------|---------------------------------------------|
| DIN 40050, Part 9 | Sealing                                     |
| DIN 50016         | Humidity                                    |
| DIN 50021         | Resistance against fluids, Salt spray test  |
| DIN 51512         | Lubricants such as engine oil, grease, etc. |
| DIN EN 590        | Diesel fuel, gasoline                       |
| DIN ISO 4925      | Brake fluids, anti-freeze, coolants         |

**Derating Curve**

APD 2-WAY  
Cable 10 mm<sup>2</sup>



High Power Plug, 2-way

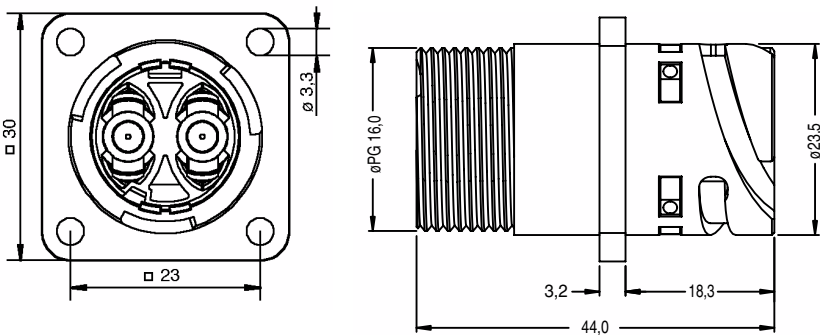


| Order No.   | Designation | Code | Color            |
|-------------|-------------|------|------------------|
| 121583-0025 | APD-1BSH8-2 | 5    | black (RAL 9005) |

Packaging unit 100 pcs.

Socket Crimp-Contacts, Individual Wire Seal, Cable Seal, Hexagonal Nut, see page 28

High Power Flange Receptacle, 2-way

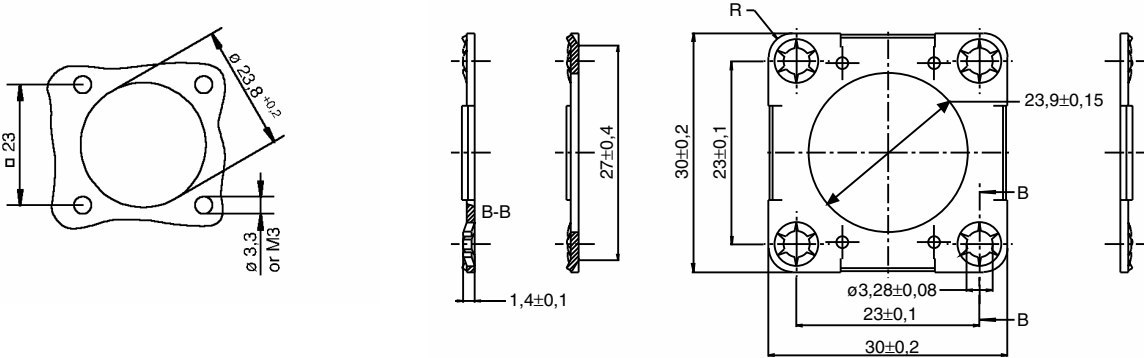


| Order No.   | Designation | Code | Color            |
|-------------|-------------|------|------------------|
| 121583-0026 | APD-1APH8-2 | 5    | black (RAL 9005) |

Packaging unit 100 pcs.

Panel Cut Out

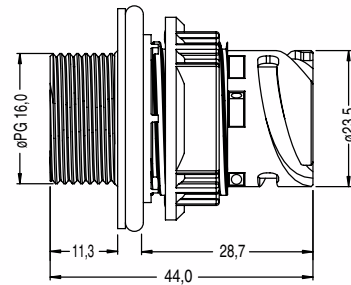
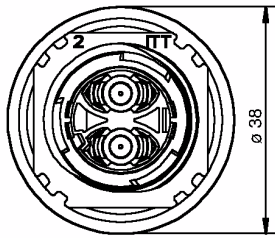
Flange for all Flange Receptacles



Order Number: 066-8516-005

Machined Pin-Contacts, Individual Wire Seal, Cable Seal, Hexagonal Nut, Flange Gasket, see page 28.

## High Power Jam Nut Receptacle, 2-way

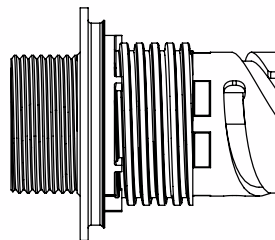
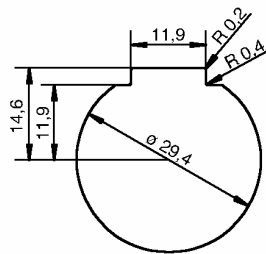


| Order No.   | Designation | Code | Color            |
|-------------|-------------|------|------------------|
| 121583-0027 | APD-1CPH8-2 | 5    | black (RAL 9005) |

Packaging unit 100 pcs.

## Panel Cut Out

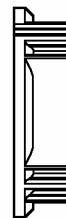
## Flange for all Flange Receptacles



Housing



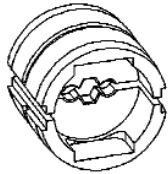
O-ring

Wall  
Thickness

Jam Nut

Standard: min. 1,0 / max. 4,0 mm  
Special: min. 2,0 / max. 5,0 mm

Machined Pin-Contacts, Individual Wire Seal, Cable Seal, Hexagonal Nut, see page 28.

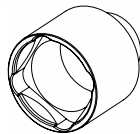
**Tooling for 2-way High Power Connectors**


| Contact / Socket                      | Crimp-Dies   |
|---------------------------------------|--------------|
| 031-8646-010 (6,00 mm <sup>2</sup> )  | CT120090-165 |
| with individual wire seal             |              |
| 031-8646-011 (10,00 mm <sup>2</sup> ) | CT120090-165 |
| 031-8646-002 (AWG 8)                  | CT120090-165 |
| 031-8646-003 (AWG 6)                  | CT120090-165 |
| 031-8646-001 (16,0 mm <sup>2</sup> )  | CT120090-171 |

| Contact / Socket                      | Crimp-Dies   |
|---------------------------------------|--------------|
| 430-8645-000 (6,00 mm <sup>2</sup> )  | CT120090-165 |
| with individual wire seal             |              |
| 430-8645-009 (10,00 mm <sup>2</sup> ) | CT120090-165 |
| 430-8645-003 (AWG 8)                  | CT120090-165 |
| 430-8645-002 (AWG 6)                  | CT120090-165 |
| 430-8645-007 (16,0 mm <sup>2</sup> )  | CT120090-171 |

**Assembly Tools Jam Nut Receptacle**

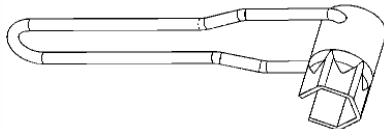
Square box spanner for torque wrench to tighten the jam nut



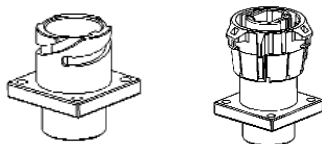
Order No. CT317-8649-034

**Assembly Tools Hexagonal Nut**

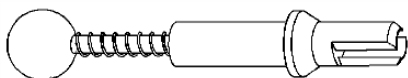
To tighten the hexagonal fixing nut 217-8516-010



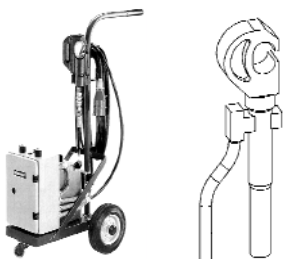
Order No. 980-8672-005

**Assembly and Torque Wrench Adapter**


| Designation  | Order No.    |
|--------------|--------------|
| MA-APD-112-P | 248-8653-063 |
| MA-APD-112-R | 249-8619-010 |

**Contract Extraction Tool**


| Designation | Order No.   |
|-------------|-------------|
| CET- APD-2  | 121586-5149 |

**Crimp Tool**


| Crimp Tool                           | Designation | Order No.     |
|--------------------------------------|-------------|---------------|
| Hydraulic, hand operated:            | HK120       | CT121586-5077 |
| Electro-hydraulic, 230 V AC operated | HK12-EL     | CT121586-5075 |

For detailed assembly instruction please see CAS 25025E

## APD / DIN 72585 Connector

## High Power 2-way, Contacts, Seals, Nut

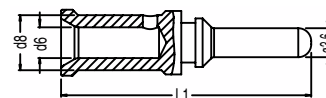
### Machined Pin Crimp Contacts, Standard Silver Plated

### for Plug, High Power 2-way

| Order No.                              | d6  | d8  | L1   |
|----------------------------------------|-----|-----|------|
| 430-8645-000 (6,00 mm <sup>2</sup> ) * | 3,4 | 6,8 | 33,4 |
| 430-8645-009 (10,00 mm <sup>2</sup> )  | 4,3 | 6,8 | 30,9 |
| 430-8645-003 (AWG 8)                   | 3,8 | 6,8 | 30,9 |
| 430-8645-002 (AWG 6)                   | 5,3 | 6,8 | 30,9 |
| 430-8645-007 (16,00 mm <sup>2</sup> )  | 5,5 | 7,5 | 30,9 |

Packaging unit 100 pcs

\* for individual wire seal and grommet

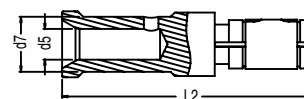


### Machined Socket Crimp Contacts, Standard Silver Plated

| Order No.                              | d5  | d7  | L2   |
|----------------------------------------|-----|-----|------|
| 031-8646-010 (6,00 mm <sup>2</sup> ) * | 3,4 | 6,8 | 33,4 |
| 031-8646-011 (10,00 mm <sup>2</sup> )  | 4,3 | 6,8 | 30,9 |
| 031-8646-002 (AWG 8)                   | 3,8 | 6,8 | 30,9 |
| 031-8646-003 (AWG 6)                   | 5,3 | 6,8 | 30,9 |
| 031-8646-001 (16,00 mm <sup>2</sup> )  | 5,5 | 7,5 | 30,9 |

Packaging unit 100 pcs

\* for individual wire seal and grommet

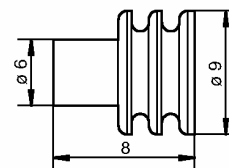


### Individual Wire Seals

### For High Power 2-way 6 mm<sup>2</sup> only

| Designation | Order No.:   |
|-------------|--------------|
| 16GN5824    | 273-8506-012 |

wire insulation  $\varnothing$  4,3 - 4,8 mm / green

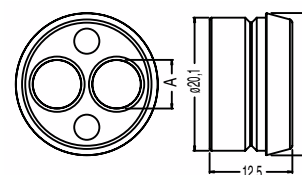


### Grommet/Cable Seal for Cable (acc. to DIN 670722 FLY/DIN 72551 FLRY)

### For High Power 2-way

| Order No.                             | Wire Insulation $\varnothing$ | $\varnothing$ A mm |
|---------------------------------------|-------------------------------|--------------------|
| 351-8697-000 (6,00 mm <sup>2</sup> )  | 4,2 - 5,8                     | 3,8                |
| 351-8697-007 (10,00 mm <sup>2</sup> ) | 5,7 - 7,3                     | 5,3                |
| 391-8697-010 (16,00 mm <sup>2</sup> ) | 6,8 - 8,3                     | 6,5                |
| 351-8697-013 (6,00 mm <sup>2</sup> )  | 3,7 - 5,0                     | 3,3                |
|                                       | (1 cavity closed)             |                    |

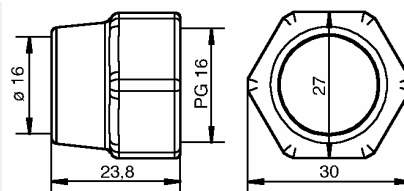
Packaging unit 100 pcs.



### Hexagonal Nut

### For High Power 2-way

|                |              |
|----------------|--------------|
| Order No.      | 217-8516-010 |
| Packaging unit | 100 pcs.     |

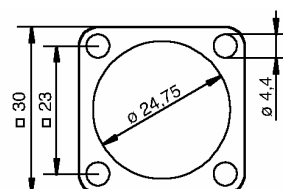
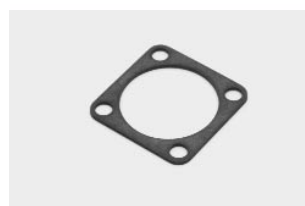


### Flange Gasket

### For Flange Receptacle, High Power 2-way

|           |                          |
|-----------|--------------------------|
| Order No. | 075-8503-000 (-55/125°C) |
|           | 075-8503-004 (-30/200°C) |

Packaging unit 100 pcs.

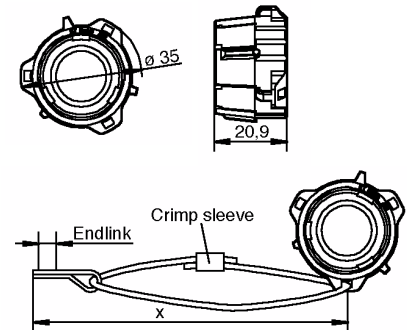




**Sealing Cap for Receptacle**
**Applicable for 4-way and 7-way, 1-way HP and 2-way HP**

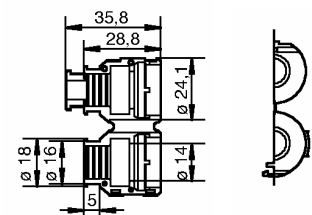
|             |             |
|-------------|-------------|
| Designation | Order No.   |
| APD-DP      | 121583-0021 |

Packaging unit 100 pcs  
with rope upon request  
End link upon request  
X = Total rope length upon request  
Crimp sleeve upon request


**Straight Endbell for Flex Tube**
**Applicable for 4-way and 7-way**

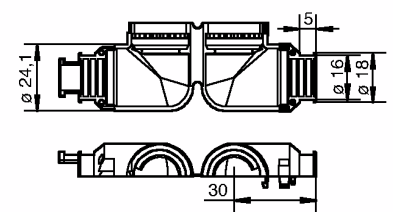
|           |                          |
|-----------|--------------------------|
| Order No. | 058-8578-100 (ø 8,5 mm)  |
|           | 058-8578-102 (ø 10,0 mm) |

Packaging unit 100 pcs


**90° End Bell for Flex Tube**
**Applicable for 4-way and 7-way**

|           |                          |
|-----------|--------------------------|
| Order No. | 058-8578-101 (ø 8,5 mm)  |
|           | 058-8578-103 (ø 10,0 mm) |

Packaging unit 100 pcs


**Flex Tube Adapter ø 21 mm**
**Applicable for 1-way and 2-way High Power**

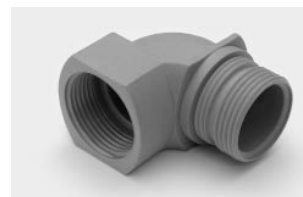
|           |              |
|-----------|--------------|
| Order No. | 980-8672-010 |
|-----------|--------------|

Packaging unit 100 pcs


**90° End Bell**
**Applicable for 1-way High Power up to 25 mm² wire**

|            |              |
|------------|--------------|
| Order No.: | 980-8672-004 |
|------------|--------------|

Packaging unit 100 pcs

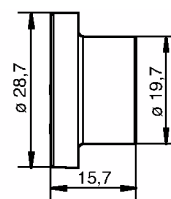

**Jam Nut, special**

|                                         |              |
|-----------------------------------------|--------------|
| Designation                             | Order No.    |
| for special wall thickness 2,0 - 5,0 mm | 217-8516-002 |

**Dust Cap for Plug**
**Applicable for all APD Plugs**

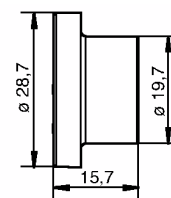
Order No. 025-8636-005

Packaging unit 100 pcs


**Dust Cap for Receptacle**
**Applicable for all APD Receptacles**

Order No. 025-0480-000

Packaging unit 100 pcs


**Cross Reference AWG Size / metric size (mm<sup>2</sup>)**

| AWG | mm <sup>2</sup> | AWG | mm <sup>2</sup> | AWG | mm <sup>2</sup> |
|-----|-----------------|-----|-----------------|-----|-----------------|
| 6/0 | 170,3           | 10  | 5,27            | 25  | 0,163           |
| 5/0 | 135,1           | 11  | 4,15            | 26  | 0,128           |
| 4/0 | 107,2           | 12  | 3,31            | 27  | 0,102           |
| 3/0 | 85,0            | 13  | 2,63            | 28  | 0,0804          |
| 2/0 | 67,5            | 14  | 2,08            | 29  | 0,0646          |
| 0   | 53,4            | 15  | 1,65            | 30  | 0,0503          |
| 1   | 42,4            | 16  | 1,31            | 31  | 0,0400          |
| 2   | 33,6            | 17  | 1,04            | 32  | 0,0320          |
| 3   | 26,7            | 18  | 0,823           | 33  | 0,0252          |
| 4   | 21,2            | 19  | 0,653           | 34  | 0,0200          |
| 5   | 16,8            | 20  | 0,519           | 35  | 0,0161          |
| 6   | 13,3            | 21  | 0,412           | 36  | 0,0123          |
| 7   | 10,6            | 22  | 0,325           | 37  | 0,0100          |
| 8   | 8,35            | 23  | 0,259           | 38  | 0,00795         |
| 9   | 6,62            | 24  | 0,205           | 39  | 0,00632         |

## Conversion Chart for MM to Inches

| mm | Inches | mm | Inches | mm | Inches |
|----|--------|----|--------|----|--------|
| 1  | 0.04   | 18 | 0.71   | 35 | 1.38   |
| 2  | 0.08   | 19 | 0.75   | 36 | 1.42   |
| 3  | 0.12   | 20 | 0.79   | 37 | 1.46   |
| 4  | 0.16   | 21 | 0.83   | 38 | 1.50   |
| 5  | 0.20   | 22 | 0.87   | 39 | 1.54   |
| 6  | 0.24   | 23 | 0.91   | 40 | 1.57   |
| 7  | 0.28   | 24 | 0.94   | 41 | 1.61   |
| 8  | 0.31   | 25 | 0.98   | 42 | 1.65   |
| 9  | 0.35   | 26 | 1.02   | 43 | 1.69   |
| 10 | 0.39   | 27 | 1.06   | 44 | 1.73   |
| 11 | 0.43   | 28 | 1.10   | 45 | 1.77   |
| 12 | 0.47   | 29 | 1.14   | 46 | 1.81   |
| 13 | 0.51   | 30 | 1.18   | 47 | 1.85   |
| 14 | 0.55   | 31 | 1.22   | 48 | 1.89   |
| 15 | 0.59   | 32 | 1.26   | 49 | 1.93   |
| 16 | 0.63   | 33 | 1.30   | 50 | 1.97   |
| 17 | 0.67   | 34 | 1.34   |    |        |

Equation for converting mm to inches:  
mm divided by 25.4 = inches

## Conversion Chart for Centigrade to Fahrenheit

| °C  | °F    | °C  | °F    | °C  | °F    |
|-----|-------|-----|-------|-----|-------|
| -40 | -40.0 | -10 | +14.0 | +10 | +50.0 |
| -38 | -36.4 | -9  | +15.8 | +11 | +51.8 |
| -36 | -32.8 | -8  | +17.6 | +12 | +53.6 |
| -34 | -29.2 | -7  | +19.4 | +13 | +55.4 |
| -32 | -25.6 | -6  | +21.2 | +14 | +57.2 |
| -30 | -22.0 | -5  | +23.0 | +15 | +59.0 |
| -28 | -18.4 | -4  | +24.8 | +16 | +60.8 |
| -26 | -14.8 | -3  | +26.6 | +17 | +62.6 |
| -24 | -11.2 | -2  | +28.4 | +18 | +64.4 |
| -22 | -7.6  | -1  | +30.2 | +19 | +66.2 |
| -20 | -4.0  | 0   | +32.0 | +20 | +68.0 |
| -19 | -2.2  | +1  | +33.8 | +21 | +69.8 |
| -18 | +0.4  | +2  | +35.6 | +22 | +71.6 |
| -17 | +1.4  | +3  | +37.4 | +23 | +73.4 |
| -16 | +3.2  | +4  | +39.2 | +24 | +75.2 |
| -15 | +5.0  | +5  | +41.0 | +25 | +77.0 |
| -14 | +6.8  | +6  | +42.8 | +26 | +78.8 |
| -13 | +8.6  | +7  | +44.6 | +27 | +80.6 |
| -12 | +10.4 | +8  | +46.4 | +29 | +82.4 |
| -11 | +12.2 | +9  | +48.2 | +29 | +84.2 |
|     |       |     |       | +30 | +86.0 |

Equation for converting Centigrade to Fahrenheit:  
 $32 + (C^{\circ} \times 1.8) = \text{Fahrenheit}$

**THIS NOTE MUST BE READ IN CONJUNCTION WITH THE PRODUCT DATA SHEET/CATALOG. FAILURE TO OBSERVE THE ADVICE IN THIS INFORMATION SHEET AND THE OPERATING CONDITIONS SPECIFIED IN THE PRODUCT DATA SHEET/ CATALOG COULD RESULT IN HAZARDOUS SITUATIONS.**

### 1. MATERIAL CONTENT AND PHYSICAL FORM

Electrical connectors do not usually contain hazardous materials. They contain conducting and non-conducting materials and can be divided into two groups.

- a) Printed circuit types and low cost audio types which employ all plastic insulators and casings.
- b) Rugged, Fire Barrier and High Reliability types with metal casings and either natural rubber, synthetic rubber, plastic or glass insulating materials. Contact materials vary with type of connector and also application and are usually manufactured from either: Copper, copper alloys, nickel, alumel, chromel or steel. In special applications, other alloys may be specified.

### 2. FIRE CHARACTERISTICS AND ELECTRIC SHOCK HAZARD

**There is no fire hazard when the connector is correctly wired and used within the specified parameters. Incorrect wiring or assembly of the connector or careless use of metal tools or conductive fluids, or transit damage to any of the component parts may cause electric shock or burns. Live circuits must not be broken by separating mated connectors as this may cause arcing, ionization and burning.** Heat dissipation is greater at maximum resistance in a circuit. Hot spots may occur when resistance is raised locally by damage, e.g. cracked or deformed contacts, broken strands of wire. Local overheating may also result from the use of the incorrect application tools or from poor quality soldering or slack screw terminals. Overheating may occur if the ratings in the product Data Sheet/Catalog are exceeded and can cause breakdown of insulation and hence electric shock. If heating is allowed to continue it intensifies by further increasing the local resistance through loss of temper of spring contacts, formation of oxide film on contacts and wires and leakage currents through carbonization of insulation and tracking paths. Fire can then result in the presence of combustible materials and this may release noxious fumes. Overheating may not be visually apparent. Burns may result from touching overheated components.

### 3. HANDLING

Care must be taken to avoid damage to any component parts of electrical connectors during installation and use. Although there are normally no sharp edges, care must be taken when handling certain components to avoid injury to fingers. Electrical connectors may be damaged in transit to the customers, and damage may result in creation of hazards. Products should therefore be examined prior to installation/use and rejected if found to be damaged.

### 4. DISPOSAL

Incineration of certain materials may release noxious or even toxic fumes.

### 5. APPLICATION

Connectors with exposed contacts should not be selected for use on the current supply side of an electrical circuit, because an electric shock could result from touching exposed contacts on an unmated connector. Voltages in excess of 30 V ac or 42.5 V dc are potentially hazardous and care should be taken to ensure that such voltages cannot be transmitted in any way to exposed metal parts of the connector body. The connector and wiring should be checked, before making live, to have no damage to metal parts or insulators, no solder blobs, loose strands, conducting lubricants, swarf, or any other undesired conducting particles. Circuit resistance and continuity check should be made to make certain that there are no high resistance joints or spurious conducting paths. Always use the correct application tools as specified in the Data Sheet/Catalog. Do not permit untrained personnel to wire, assemble or tamper with connectors. For operation voltage please see appropriate national regulations.

### IMPORTANT GENERAL INFORMATION

**(i) Air and creepage paths/Operating voltage.** The admissible operating voltages depend on the individual applications and the valid national and other applicable safety regulations.

For this reason the air and creepage path data are only reference values. Observe reduction of air and creepage paths due to PC board and/or harnessing.

### (ii) Temperature

All information given are temperature limits. The operation temperature depends on the individual application.

### (iii) Other important information

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Fax: 32.2.7269201

#### China

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Zhenjiang  
Phone: 86.511.880.3210  
Fax: 86.511.880.3616

#### Denmark

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Fax: 45.43.58.58

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Fax: 31.35.691.8796

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