

APD 37-way is a highly reliable, cost effective multi-pin connector with signal contacts (multi-layout power / signal on demand). It offers wire to wire and wire to board connection solutions. According to DIN 72585, the connector is dedicated for harsh environmental usage. Various customer specific designs (e.g. different coding) are possible.



Electrical Data

| | |
|----------------------------|---|
| Voltage | 48 VDC max. |
| Current Carrying Capacity: | max. 12 A at 85°C / 105 °C short time, for wire size 1,5 mm Ω (for a limited no. of contacts) max. 2 A at 120°C or 5 A, for wire size 1,5 mm Ω (for a limited no. of contacts) |
| Contact Resistance | Initially: max. 5 m Ω After climatic tests: max 10 M Ω |
| Test Voltage | 1.000 VAC |
| Insulation Resistance | > 1.000 M Ω |

Mechanical Data

| | |
|---|---|
| Sealing acc. to IEC 60529 and DIN 40050 | IP 67: 0,1 bar / 30 minutes IP 69K. Jet water 85°C |
| Operating Temperature Range | -40°C / 125°C |
| Shock | 50g / 11ms half sine IEC 60512 |
| Vibration | Sine wave 70-2.000 Hz, 18/20g 100 hours / axis, 50% of test time at 120°C (test conditions) DIN 72585 |
| Durability | 20 Mating cycles |
| Coupling Torque | close: max 4 Nm open: min 1 Nm; max 4 Nm |
| Contact Retention Force | min 80 N |
| Mechanical Robustness | Static, lateral load: 150N / 10s Dynamic impact, ball drop 2 Joules, Cable drop 1m height EN ISO 8092 |
| Humidity, cyclic: | 23°C/ 83% - 40°C/ 95%; 168h |
| Industrial Atmosphere | Condensed water / SO ₂ ; 3 cycles |

Materials

| | |
|-------------------|-----------------------------------|
| Connector housing | PA66 |
| O-Ring | FKM |
| Contacts | Copper alloy, tinned, gold-plated |
| Coupling nut | PA |

Standards and Specifications (in accordance with DIN 72585) Environmental

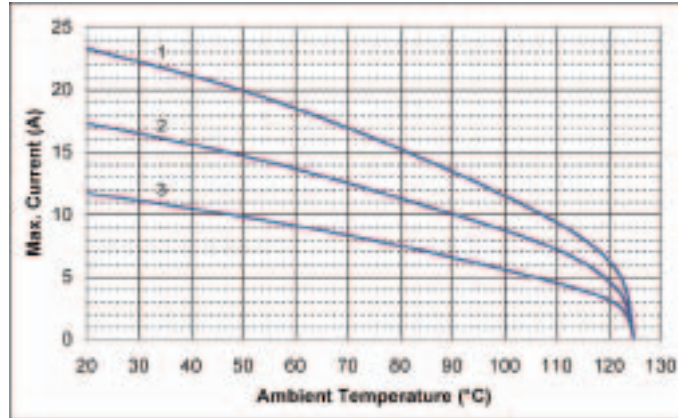
| | |
|----------------------------|---|
| Resistance against Fluids: | Diesel DIN EN 590 Diesel + test fuel FAM2 Motor oil SAE30 Motor oil DIN 51 5111 Gearbox oil, different types e.g. SAE 80W90 Brake Fluid DIN ISO 4925 Cleaning agent |
| Salt Spray Test: | 48h DIN 50021 |

* Contact layout is not specified by DIN 72585

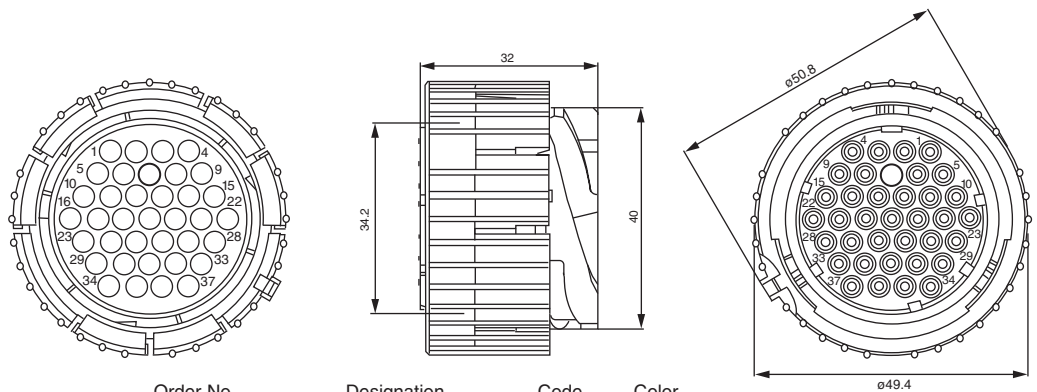
Derating Curve

For a single contact under load.

- 1. Cable Size: 1,5 mm²
- 2. Cable Size: 0,75 mm²
- 3. Cable Size: 0,35 mm²



37-way



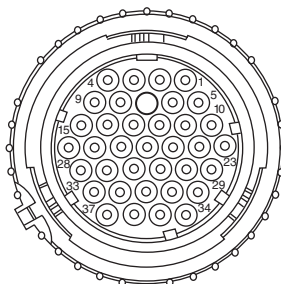
| Order No. | Designation | Code | Color |
|-------------|-------------|------|------------------|
| 121583-0058 | APD-1BS37 | 1 | black (RAL 9005) |

Packaging unit 100 pcs.

Socket Crimp-Contacts, Individual wire-seal, Wire filler, Flange gasket, see page 27.
Accessories, see page 41 and 42.

Coding 37-way layout

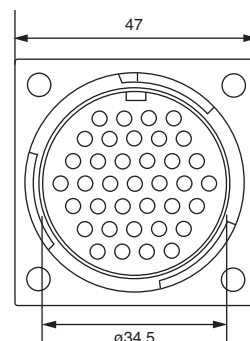
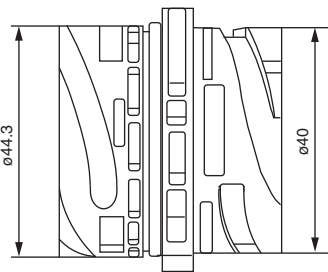
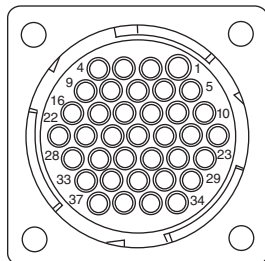
View on Mating Face



Note: Additional coding on demand.



Flange Receptacle, 37-way



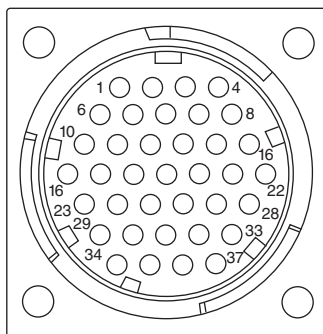
| Order No. | Designation | Code | Color |
|--------------|-------------|------|------------------|
| 249-8619-017 | APD-1AP37 | 1 | black (RAL 9005) |

Packaging unit 100 pcs.

Pin Crimp-Contacts, Individual wire-seal, Wire filler, Flange gasket, see page 27.
Accessories, see page 41 and 42.

Coding 37-way layout

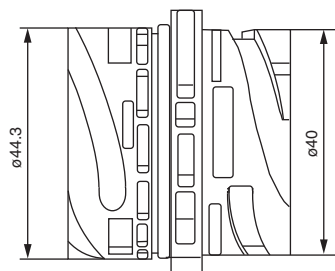
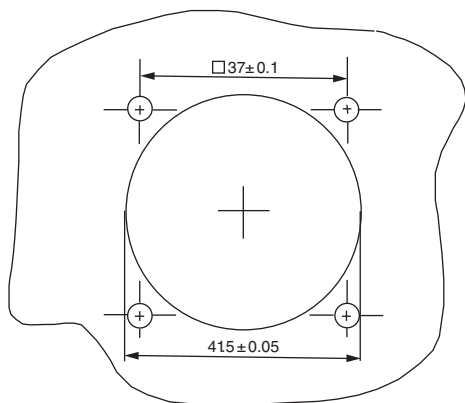
View on Mating Face



Note: Additional coding on demand.

Panel Cut Out

Flange for all Flange Receptacles



CONTACTS



- Low contact resistance (max. 5mΩ) for maximum signal integrity
- Current carrying capacity: 12A max.
- Press-in contacts for PCB mounting
- Plating with special material available by request
- Machined press-in contacts. (other machined contacts available by request)

For APD 37-way and 51-way Standard Version

| Contacts (stamped & formed) | Plating | Crimp Range | Designation | Part Number |
|-----------------------------|---------------|-----------------------------|-------------------|-------------|
| Socket Contacts | tin | 0,35 - 0,75 mm ² | APK-SA16A07-002-C | 121668-0220 |
| | | 0,75 - 1,50 mm ² | APK-SA16A15-002-C | 121668-0222 |
| | gold (0,8 μm) | 0,35 - 0,75 mm ² | APK-SA16G07-002-C | 121668-0266 |
| | | 0,75 - 1,50 mm ² | APK-SA16G15-002-C | 121668-0268 |
| Pin Contacts | tin | 0,35 - 0,75 mm ² | APK-PA16A07-002-C | 121668-0254 |
| | | 0,75 - 1,50 mm ² | APK-PA16A15-002-C | 121668-0255 |
| | gold (0,8 μm) | 0,35 - 0,75 mm ² | APK-PA16G07-002-C | 121668-0265 |
| | | 0,75 - 1,50 mm ² | APK-PA16G15-002-C | 121668-0267 |

Press-In Contacts (machined)

| | | | | |
|--------------|---------------|-----------------------------|---------------|--------------|
| Pin Contacts | tin | 0,30 - 0,60 mm ² | APK-PA16A06-E | 330-8674-020 |
| | gold (0,8 μm) | 0,50 - 1,00 mm ² | APK-PA16G10-E | 330-8674-025 |

For APD 51-way Secondary Lock Version

| Contacts (stamped & formed) | | | | |
|-----------------------------|---------------|-----------------------------|-----------------|-------------|
| Socket Contacts | tin | 0,75 - 1,50 mm ² | APK-SA16A15-002 | 121668-0202 |
| | | 0,35 - 0,75 mm ² | APK-SA16G07-002 | 121668-0270 |
| | gold (0,8 μm) | 0,75 - 1,50 mm ² | APK-SA16G15-002 | 121668-0272 |
| | | 0,35 - 0,75 mm ² | APK-PA16A07-002 | 121668-0252 |
| Pin Contacts | tin | 0,75 - 1,50 mm ² | APK-PA16A15-002 | 121668-0253 |
| | | 0,35 - 0,75 mm ² | APK-PA16G07-002 | 121668-0269 |
| | gold (0,8 μm) | 0,75 - 1,50 mm ² | APK-PA16G15-002 | 121668-0271 |

Accessories

| Description | Cross Section | Color | Designation | Part Number |
|---------------------|---------------|--------|-------------|--------------|
| Single Wire Sealing | 1,2 - 1,6 mm | Red | 10RD3940 | 273-8506-010 |
| | 1,4 - 2,0 mm | Grey | 10GR3940 | 273-8506-008 |
| | 1,9 - 2,1 mm | Yellow | 10YE3940 | 273-8506-009 |
| Blind Seal | 1,4 - 2,0 mm | White | 10WH3940 | 273-8506-011 |

| Description | Part Number |
|--------------------------------------|--------------|
| Dust cap for APD 37-way (plug) | 025-8636-037 |
| Dust cap for APD 37-way (receptacle) | 025-8636-053 |

Dimensions shown in mm
 Specifications and dimensions subject to change

