

Cannon APD / DIN 72585 Connectors

Technical Data, 37-way*

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 ² (for a limited no. of contacts) max. 2 A at 120°C or 5 A, for wire size 1,5 mm ² (for a limited no. of contacts)
Contact Resistance	Initially: max. 5 mΩ After climatic tests: max 10 MΩ
Test Voltage	1.000 VAC
Insulation Resistance	> 1.000 MΩ

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



Dimensions shown in mm

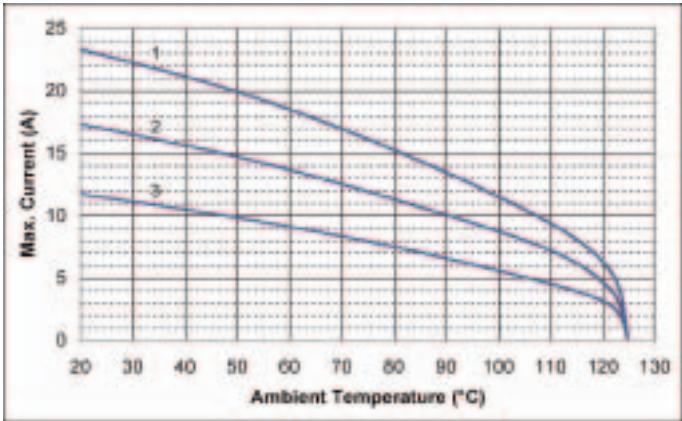
Specifications and dimensions subject to change



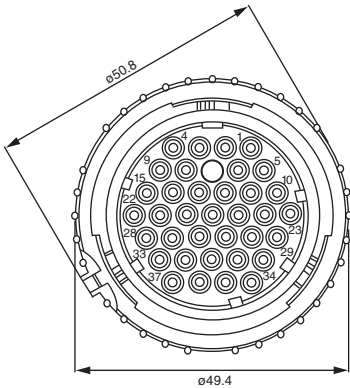
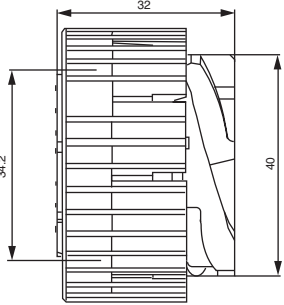
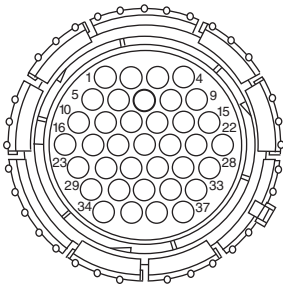
Derating Curve

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



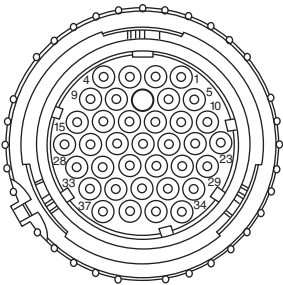
Order No.	Designation	Code	Color
121583-0058	APD-1BS37	1	black (RAL 9005)

Packaging unit 100 pcs.

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

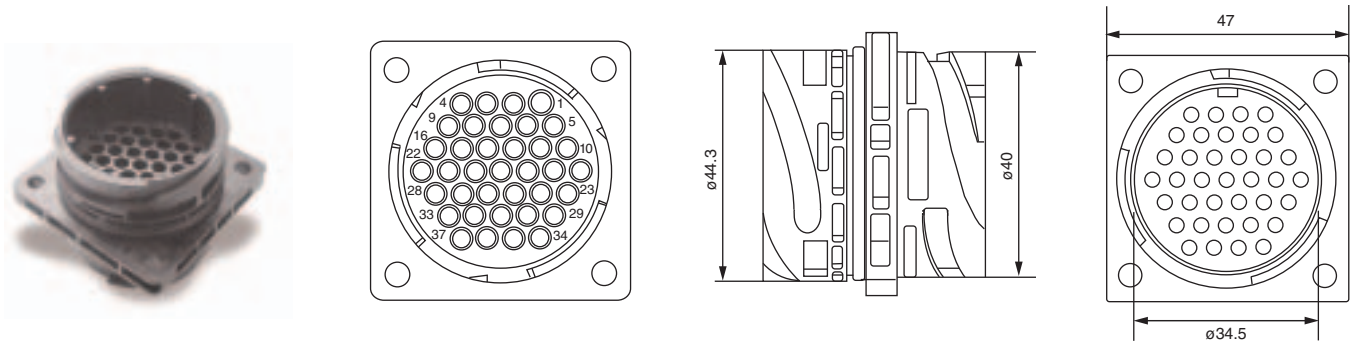
Coding 37-way layout

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)

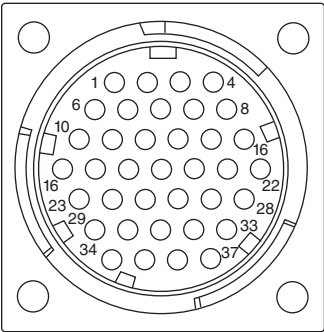
Packaging unit 100 pcs.

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

Accessories, see page 41 and 42.

Coding 37-way layout

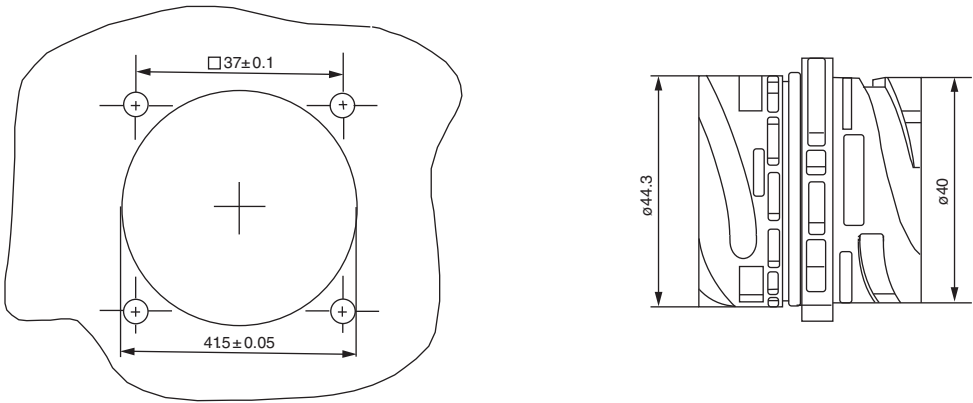
View on Mating Face



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 mm²	APK-SA16A07-002-C	121668-0220
		0,75 - 1,50 mm²	APK-SA16A15-002-C	121668-0222
	gold (0,8 µm)	0,35 - 0,75 mm²	APK-SA16G07-002-C	121668-0266
		0,75 - 1,50 mm²	APK-SA16G15-002-C	121668-0268
Pin Contacts	tin	0,35 - 0,75 mm²	APK-PA16A07-002-C	121668-0254
		0,75 - 1,50 mm²	APK-PA16A15-002-C	121668-0255
	gold (0,8 µm)	0,35 - 0,75 mm²	APK-PA16G07-002-C	121668-0265
		0,75 - 1,50 mm²	APK-PA16G15-002-C	121668-0267
Press-In Contacts (machined)				
Pin Contacts	tin	0,30 - 0,60 mm²	APK-PA16A06-E	330-8674-020
	gold (0,8 µm)	0,50 - 1,00 mm²	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