



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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ITT

Interconnect Solutions  
Cannon, VEAM, BIW

# Cannon APD Series ISO 15170 Connectors



*Engineered for life*

# Cannon, VEAM, BIW

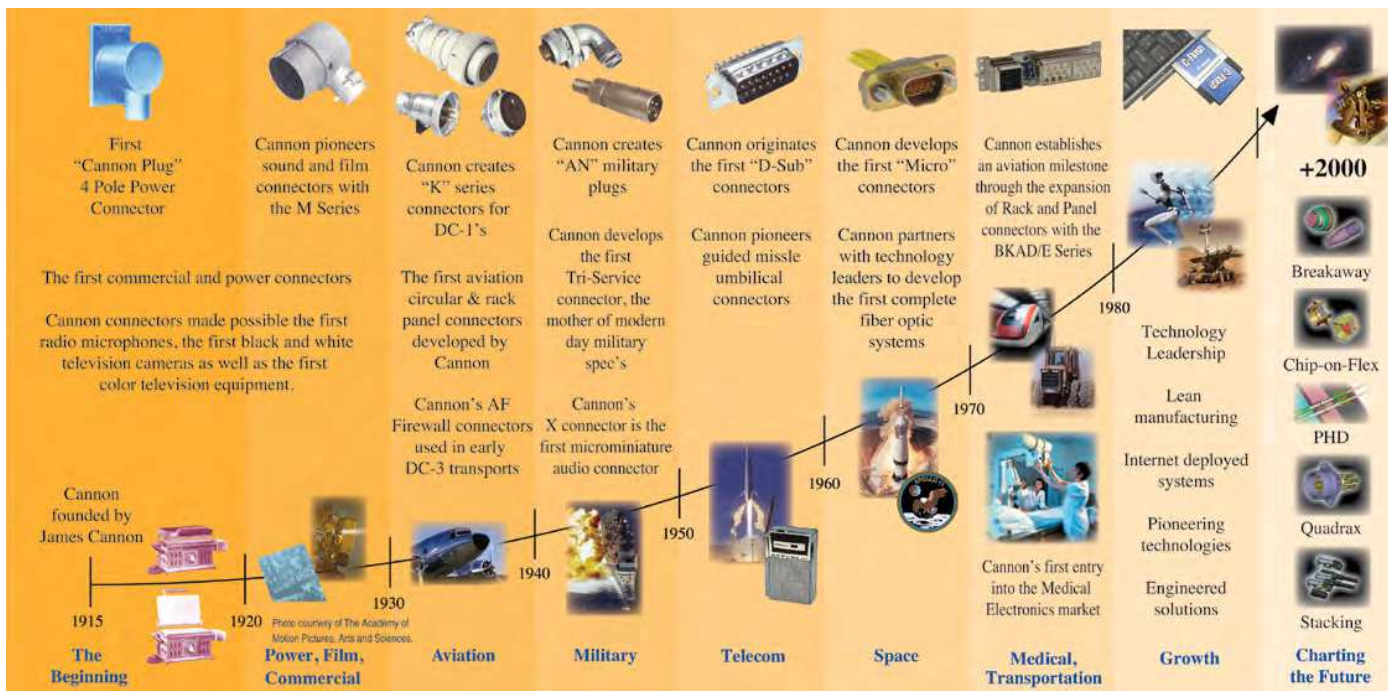
## A Historical Achievement of Technology Leadership

### Defining and Championing Innovation

Showcasing a portfolio of creativity, ITT's "Engineered For Life" execution embraces products which have become ubiquitous in a broad collection of markets including: Military/Aerospace, Civil Aircraft, Industrial Instrumentation, Medical, Oil & Gas, Energy, Transportation, Telecom/Handset, Computer, Consumer, and Automotive.

ITT's rich interconnect history embraces contributions to both technological breakthroughs and social movements. With one of the industry's broadest product offerings, ITT's interconnect products have supported:

- Every Free World space mission, bringing the universe to our doorstep.
- Motion picture, radio, and television equipment, serving laughter and entertainment to millions.
- Commercial and military communications systems, linking the voices of the world.
- Computerized tools, reshaping the information highway.
- Aircraft, rapid transit, and automobiles, mobilizing our expanding society.
- Oil and natural gas production, powering the world's economies.
- Agricultural equipment, attacking the roots of world hunger.



# ITT Interconnect Solutions

ITT Interconnect Solutions is a division of the multi-national ITT Corporation, a \$9 billion dollar global enterprise representing the brands Cannon, VEAM, and BIW. Our connector portfolio remains the most extensive in the industry offering the most reliable and cost effective range of interconnect solutions. These innovations have enabled ITT to provide products and technologies to such markets as:

- Automotive
- Computer/Consumer
- Industrial/Instrumentation
- Military/Aerospace
- Oil Fields
- Telecom/Handset
- Transportation

When you specify a Cannon, VEAM or BIW connector, you can rely on a product designed, developed, and manufactured to the highest quality and reliability standards. This tradition of excellence is based on ITT's corporate culture of operating its businesses under the principles of Six Sigma. At ITT, Six Sigma is not just a quality philosophy but a complete corporate culture that drives the entire business. Our Value Based Management and Value Based Product Development systems are two cornerstones that allow for the development of both leadership and product engineering principles, ensuring the correct industry leading products are developed to the accepted market driven lead times. These principles have allowed ITT to become the market leader in all of our business portfolios.

## Six Sigma Manufacturing

ITT operates manufacturing facilities in the United States, Germany, Italy, Mexico, China, Japan and the UK, all of which have particular product area strengths allowing ITT to offer a truly global footprint to our customers. Our facilities are world class and accommodate full vertical integration utilizing the latest manufacturing technologies including: automated and robotic machining centers, Super Market manufacturing cells, Kanban pull systems, and automated electrical, mechanical, and optical test and inspection equipment. The combination of our manufacturing strength and our advanced manufacturing facilities allows ITT

to offer products at market driven prices. Our capabilities, especially in robotics, computerized precision tooling, Kaizen Project Management, Six Sigma tools, and testing, give ITT the most optimized global manufacturing footprint in the interconnect industry.

## The Custom Difference

As the industry leader in harsh environment interconnect applications, ITT's world class engineering teams will work directly with our customers to design and develop cost effective solutions for their applications. In many cases we may modify one of our standard designs to ensure a highly reliable solution where timing is critical. Yet, in those cases where a complete custom interconnect solution is required, ITT will work with our customer's Engineers to design an interconnect solution which will be cost effective yet highly reliable. As professional consultants, our Engineering teams will provide a thorough systems and mechanical analysis of any proposed solution. These analyses provide our customers with sophisticated electrical signal and mechanical characterizations to determine the best solution for their application.

## RoHS Compliance Information

ITT has implemented a strict parts control plan for all ITT electronics plants worldwide that allows the Cannon, VEAM, and BIW connector product portfolios to meet the requirements of European Union Directive 2002/95/EC better known as the Reduction of Hazardous Substances initiative. As appropriate, specific Cannon, VEAM, and BIW products may be ordered with an R prefix number which insures our customers will receive RoHS compliant parts for their commercial electronics applications and equipment. Since most RoHS hazardous substances center around specific metal plating and lead solder coatings, ITT's products for RoHS compliance are available in the following plating finishes: black zinc electroless nickel, stainless steel, Anodize over aluminum and Gold plating. It should be noted that gold plating would be recommended as the replacement for tin-lead solder when ordering board mount connectors.



## Interconnect Technologies & Solutions for the Transportation Industry

For over 90 years, ITT has been developing innovative solutions for harsh environment applications. We have a proven track record of demonstrating our expertise and commitment to the transportation industry, offering the broadest portfolio of interconnect products.

### Off-Road / Heavy Vehicle

Our interconnect range include sealed circulars, plastic and metal shell bayonet coupling circulars, miniature metal shell circulars, PC board header connectors and sensor and direct device connectors. ITT is also a systems supplier, providing value-added module and harness assemblies.

*In addition to our APD ISO 15170 series,  
we also offer these connectivity solutions:*



#### VEAM VBN

Completely intermateable with VEAM VG95234/CIR reverse bayonet connectors.



#### Canon CA-Bayonet

Signal and power connectors with exceptional sealing against the ingress of fluids and will withstand the effects of high vibrations.



#### Canon Trident

Versatile range of electrical connectors based on a standard contact design. Options include; industrial grade, harsh environment and shielded circulars.

#### Canon Sure Seal

Sure Seal is a series of rugged, IP 67 proof connectors. The one piece molded body provides integrated sealing and excellent vibration resistance.



The ITT "Engineered Blocks" symbol and the composite ITT logo are registered trademarks of ITT Corporation. © 2011



APD is a versatile range of full plastic direct, in-line and bulkhead connectors. The products were originally designed for the transportation, off-road and special vehicle markets meeting all typical demands of applications in this field. In the meantime APD is also the connector of choice in other areas as e.g. military or industrial applications that require harsh environment solutions while needing a product that is both, small in size and light in weight.

The APD series covers a wide range of 1 and 2-way power solutions up to 51-way interface connectors, special sensor or PCB type versions and a flexible platform for your customized solutions.

Based on the original DIN72585 standard – now replaced by ISO 15170 – this connector is an ideal solution whenever harsh environment requirements like resistance to engine, transmission or brake fluids, high sealing grades up to IP69K or vibration requirements have to be met. Please be aware that all mentioned connectors are not designed to be disconnected under load.

APD 1-2-way	7-24
APD 4-7-way	25-41
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<b>APD / ISO 15170</b>						
<b>Series</b>	<b>1-way</b>	<b>1-way</b>	<b>2-way</b>	<b>2-way</b>	<b>4-way</b>	<b>4-way</b>
<b>Type</b>	Plug	Receptacle Flange / Jam Nut / Snap-In	Plug	Receptacle Flange / Jam Nut / Snap-In	Plug	Receptacle Flange / Jam Nut
<b>Contacts Materials</b>	Copper alloy silver plated	Copper alloy silver plated	Copper alloy silver plated	Copper alloy silver plated	Copper alloy tin, silver, gold plated	Copper alloy tin, silver, gold plated
<b>Contact style</b>	Machined	Machined	Machined	Machined	Stamped & Formed	Stamped & Formed
<b>Page Number</b>	8	9-11	19	19-21	26	27-28

<b>APD / ISO 15170</b>						
<b>Series</b>	<b>6/7-way</b>	<b>6/7-way</b>	<b>Sensor style 1</b>	<b>Sensor style 2</b>	<b>19-way</b>	<b>19-way</b>
<b>Type</b>	Plug	Receptacle Flange / Jam Nut	Receptacle	Receptacle	Plug	Receptacle Flange / Jam Nut / Wire-to-wire
<b>Contacts Materials</b>	Copper alloy silver plated	Copper alloy silver plated	Copper alloy silver plated	Copper alloy silver plated	Copper alloy tin, silver, gold plated	Copper alloy tin, silver, gold plated
<b>Contact style</b>	Stamped & Formed Machined	Stamped & Formed Machined	Machined	Machined	Stamped & Formed	Stamped & Formed
<b>Page Number</b>	36	37-38	42	43	45	46-48

<b>APD / ISO 15170</b>						
<b>Series</b>	<b>37-way</b>	<b>37-way</b>	<b>51-way</b>	<b>51-way</b>	<b>51-way</b>	<b>PCB</b>
<b>Type</b>	Plug	Receptacle Flange	Plug	Receptacle Jam Nut	Receptacle Snap In	Receptacle
<b>Contacts Materials</b>	Copper alloy silver plated	Copper alloy silver plated	Copper alloy silver plated	Copper alloy silver plated	Copper alloy tin, silver, gold plated	Copper alloy tin, silver, gold plated
<b>Contact style</b>	Stamped & Formed Machined	Stamped & Formed Machined	Stamped & Formed Machined	Stamped & Formed Machined	Stamped & Formed Machined	Machined
<b>Page Number</b>	56	57	63	65	64	73



The APD 1 / 2-way connectors are derived from ISO 15170 and adapted to applications requiring high power. These versions cover wire ranges from 16 mm<sup>2</sup> up to 50 mm<sup>2</sup> power and a power consumption up to 245A. The combination of small size and high power make them an ideal solution for many applications.

Applications for the 1 / 2-way connector include:

- Tail lifts
- On Board Kitchen
- Power Supply for Antennas and Base Stations

Power Distribution in:

- Trucks
- Tractors

### Electrical Data

Operating Voltage	48 VDC*
Operating Current	see derating curve
Contact Resistance	0,4 mΩ max.
Voltage Proof	1000 VAC, 60 seconds
Insulation Resistance	10 MΩ min.

### Mechanical Data

Durability	50 Mating Cycles
Coupling Torque	2 Nm max.
Static Load, free connector	350 N (ISO 15170-2, Sec. 4.6)

### Environmental Data (acc. ISO 15170)

Temperature Range	-40 °C up to 125 °C (ISO 15170-2, Sec. 6.4)
Humidity Range	up to 95 % r.h. (ISO 15170-2, Sec. 6.4)
Sealing	IP 67 (DIN EN 60529)*
Salt Spray	96 h, 35 °C (ISO 15170-2, Sec. 6.2)
Industrial Climate	SO <sub>2</sub> , 0,67 % (ISO 15170-2, Sec. 6.3)
Fluid Compatibility	Brakefluid, ATF, fuel, .. (ISO 15170-2, Sec. 6.6)*
Vibration Resistance	Sine, 100 m/s <sup>2</sup> , 3 axis, 24h, RT (EN 60512)*

### Materials List

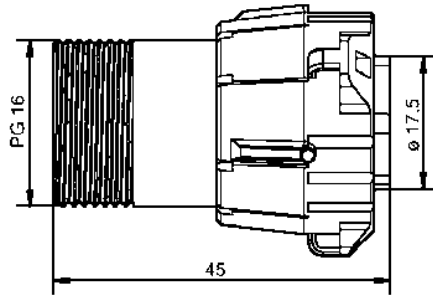
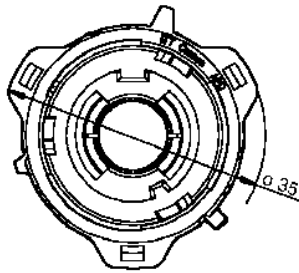
Housing Parts	PBT GF
Sealing Parts	HNBR (alternative FKM)
Coupling Nut	PA 66 GF
Contacts	Copper Alloy, Ag plated

\* Further information available upon request

Dimensions shown in mm  
Specifications and dimensions subject to change



High Power Plug, 1-way



Order No.	Designation	Code	Color
T21583-0012	APD-5BSH	5	blue (RAL 5012)
T21583-0013	APD-6BSH	6	red (RAL 2002)
T21583-0042	APD-7BSH	7	black (RAL 9005)

Packaging unit 100 pcs.

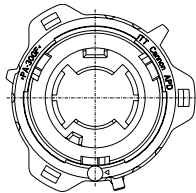
Socket crimp contacts see pages 12 and 13.

Accessories, see pages 15 and 16.

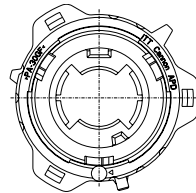
Note: Always use hex nut and cable seal.

Coding, 1-way layouts

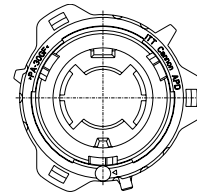
View on Mating Face



Code 5  
blue



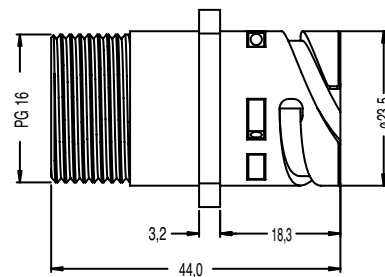
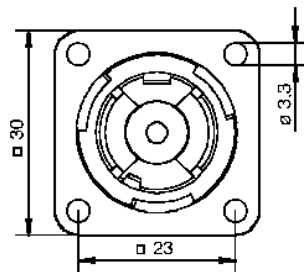
Code 6  
red



Code 7  
black

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

High Power Flange Receptacle, 1-way



Order No.	Designation	Code	Color
T21583-0014	APD-5APH	5	blue (RAL 5012)
T21583-0015	APD-6APH	6	red (RAL 2002)
T21583-0043	APD-7APH	7	black (RAL 9005)

Packaging unit 100 pcs.

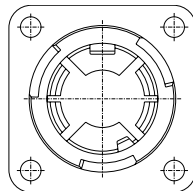
Pin crimp contacts see pages 12, 13 and 14.

Accessories, see pages 15 and 16.

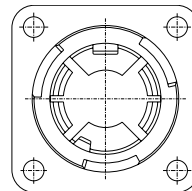
Note: Always use hex nut and cable seal.

Coding, 1-way layouts

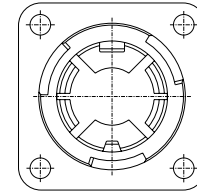
View on Mating Face



Code 5  
blue



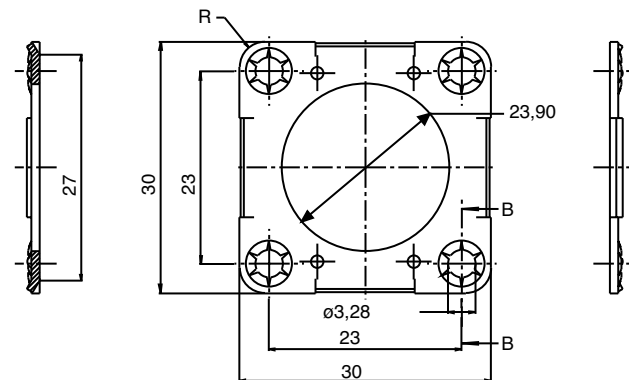
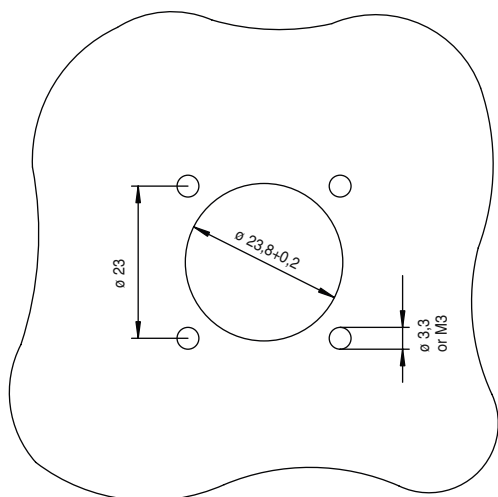
Code 6  
red



Code 7  
black

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

Panel Cut Out Flange for all Flange Receptacles

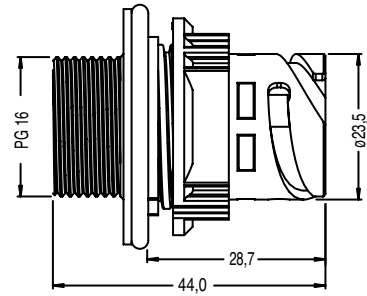
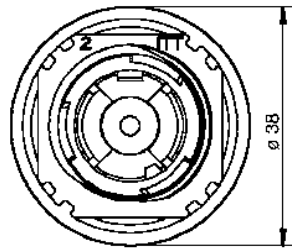


Order Number: 066-8516-005

Metal mounting flange for wall mounting of flange receptacles.

Dimensions shown in mm  
Specifications and dimensions subject to change

High Power Jam Nut Receptacle, 1-way



Order No.	Designation	Code	Color
T21583-0016	APD-5CPH	5	blue (RAL 5012)
T21583-0017	APD-6CPH	6	red (RAL 2002)
T21583-0217	APD-7CPH	7	black (RAL 9005)

Packaging unit 100 pcs.

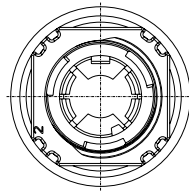
Pin crimp contacts see pages 12, 13 and 14.

Accessories, see pages 15 and 16.

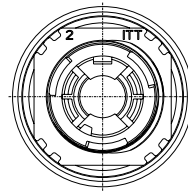
Note: Includes jam nut for wall thickness 1...4 mm. Always use hex nut and cable seal.

Coding, 1-way layouts

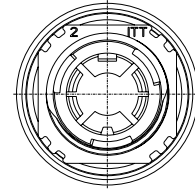
View on Mating Face



Code 5  
blue



Code 6  
red

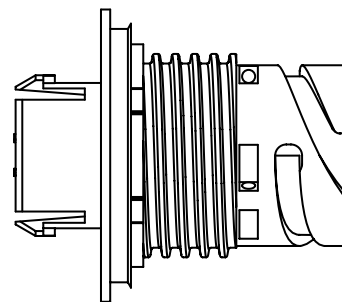
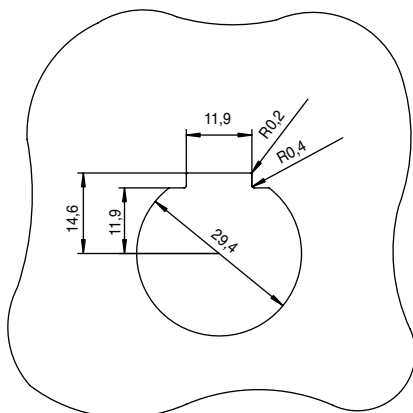


Code 7  
black

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

Panel Cut Out

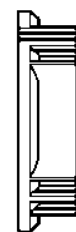
Flange for all Flange Receptacles



Housing



O-ring



Jam Nut

Wall thickness: Standard Jam Nut: min. 1,0 / max. 4,0 mm Special Jam Nut: min. 2,0 / max. 5,0 mm

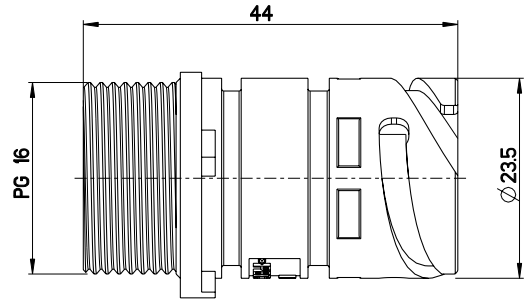
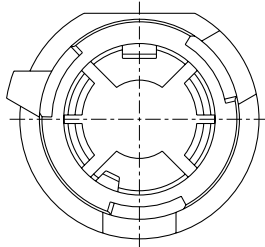
Jam Nut, special

Designation	Order No.
for special wall thickness 2,0 - 5,0 mm	217-8516-001



Dimensions shown in mm  
Specifications and dimensions subject to change

High Power Snap-In Receptacle, 1-way



Order No.	Designation	Code	Color
249-8619-005	APD-7SPH	7	black (RAL 9005)
249-8619-006	APD-6SPH	6	red (RAL 2002)
consult factory	APD-5SPH	5	blue (RAL 5012)

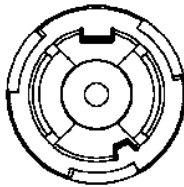
Packaging unit 100 pcs.

Pin crimp contacts see pages 12, 13 and 14.  
Accessories, see pages 15 and 16.

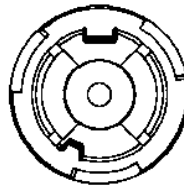
Note: Always use hex nut and cable seal.

Coding, 1-way layouts

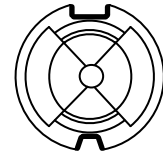
View on Mating Face



Code 5  
blue



Code 6  
red



Code 7  
black

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

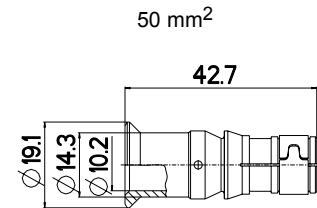
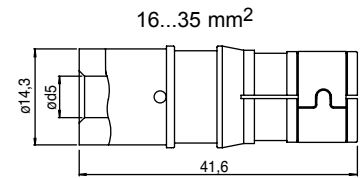
Panel Cut Out

3D data for design of snap-in cut out available on request. Please consult factory.

**Machined Socket Crimp-Contacts, High Performance Copper, 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
031-8646-015 (50,00 mm <sup>2</sup> )	with bunch	0	10,2

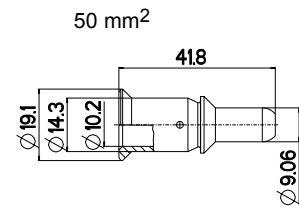
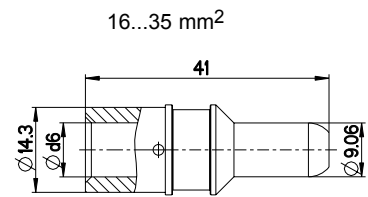
Packaging unit 100 pcs.



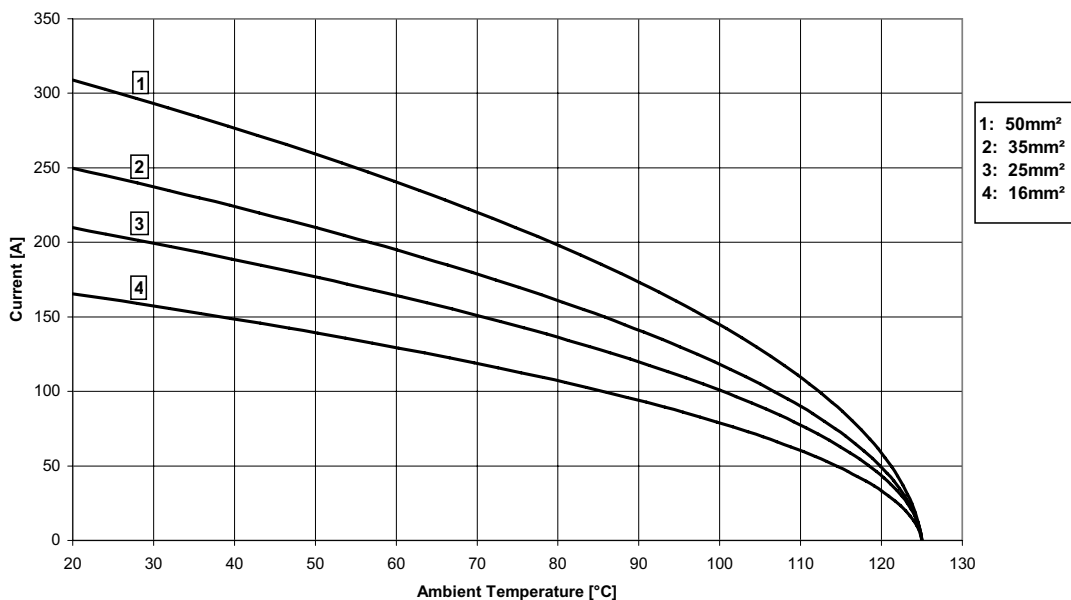
**Machined Pin Crimp Contacts, High Performance Copper, Silver plated**

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
030-8581-029 (50,00 mm <sup>2</sup> )	with bunch	0	10,2

Packaging unit 100 pcs.



**Derating Curve, High Performance Copper Contact**

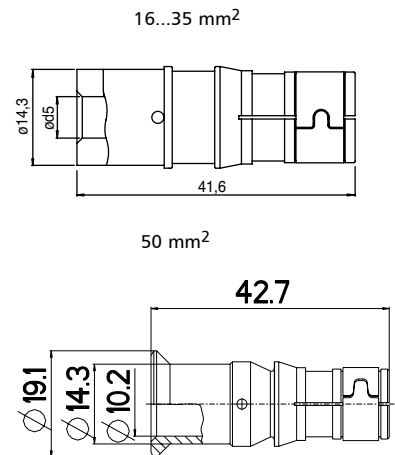


**Machined Socket Crimp-Contacts, Standard Brass, Silver plated**

Order No.	AWG	Contact size	d5+0,15
031-8531-010 (16,00 mm <sup>2</sup> )		0	6,2
031-8531-011 (25,00 mm <sup>2</sup> )	4	0	7,6
031-8531-012 (35,00 mm <sup>2</sup> )	2	0	9,1
031-8531-013 (50,00 mm <sup>2</sup> )	with bunch	0	10,2

Packaging unit 100 pcs.

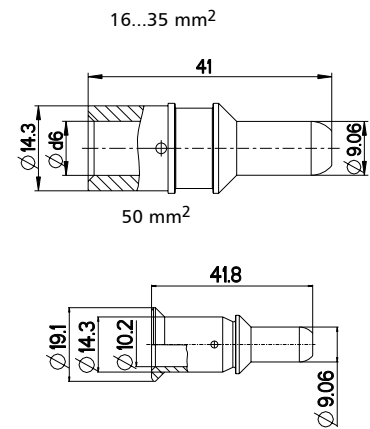
\*Available by Request



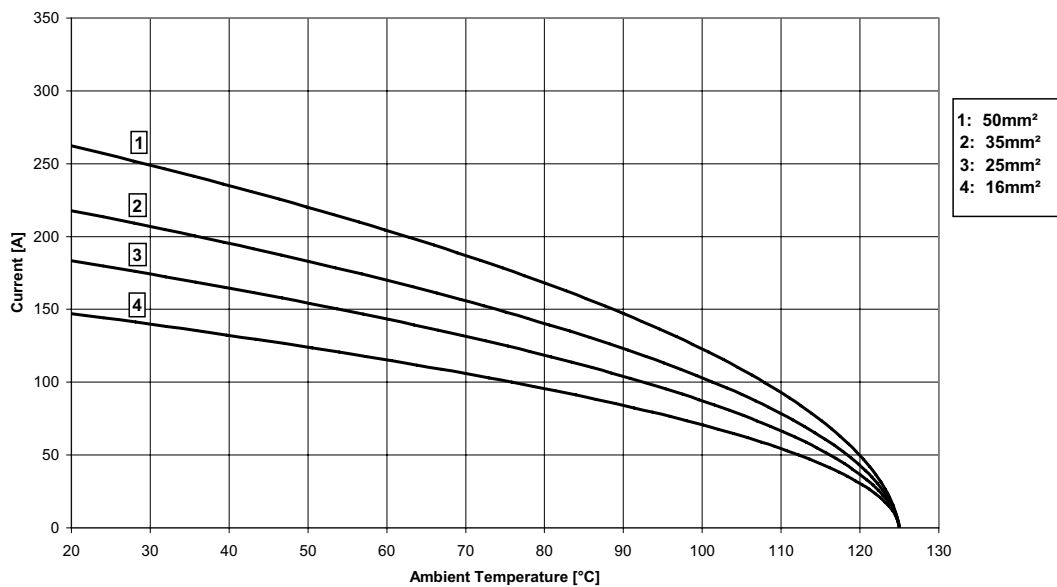
**Machined Pin Crimp Contacts, Standard Brass, Silver, plated**

Order No.	AWG	contact size	d6+0,15
030-8581-030 (16,00 mm <sup>2</sup> )		0	6,2
030-8581-031 (25,00 mm <sup>2</sup> )	4	0	7,6
030-8581-032 (35,00 mm <sup>2</sup> )	2	0	9,1
030-8581-033 (50,00 mm <sup>2</sup> )	with bunch	0	10,2

Packaging unit 100 pcs.



**Derating Curve, Standard Brass Contact**



Dimensions shown in mm  
 Specifications and dimensions subject to change





A new finger protected pin contact has been implemented for the APD High Power 1-way connector series.

Applications for the 1-way connector include:

- Tail lifts
- On Board Navigation
- Power Supply for Antennas and Base Stations

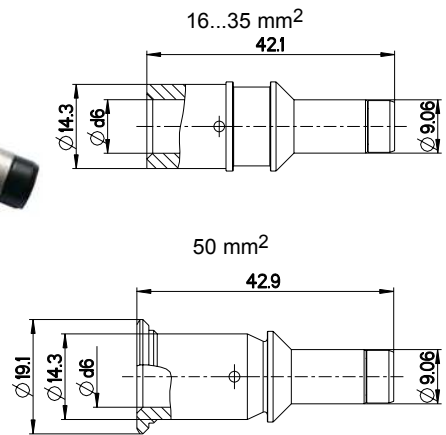
Power Distribution in:

- Trucks
- Tractors
- Hybrid and Electric Vehicles

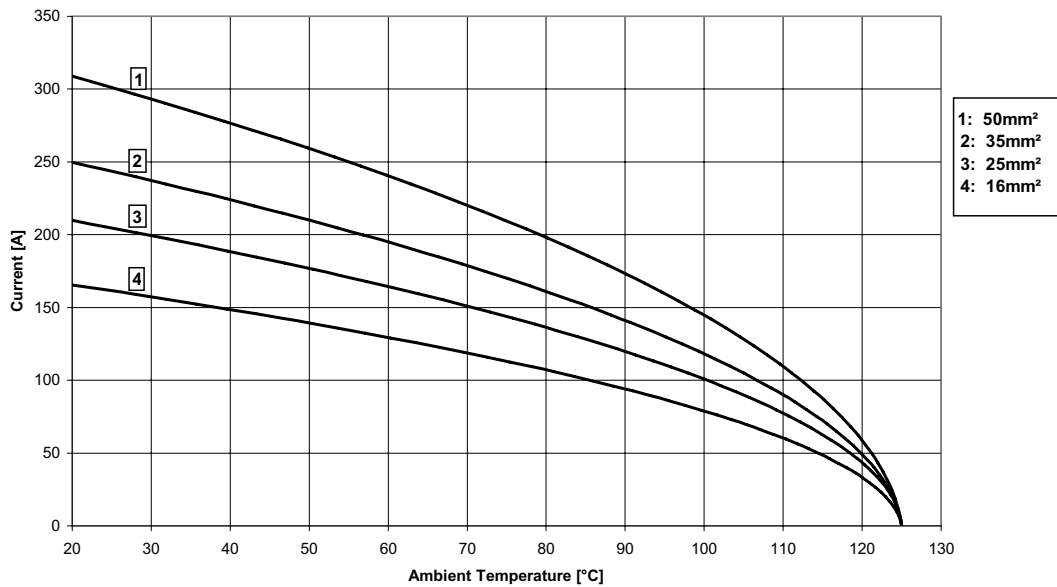
**Machined Pin Crimp Contacts, High Performance Copper, Silver plated, Finger Protected**

Order No.	AWG	Contact size	d5+0,15
120110-0229 (16,00 mm <sup>2</sup> )		0	6,2
120110-0220 (25,00 mm <sup>2</sup> )	4	0	7,6
120110-0221 (35,00 mm <sup>2</sup> )	2	0	9,1
120110-0222 (50,00 mm <sup>2</sup> )	with bunch	0	10,2

Packaging unit 100 pcs.



**Derating Curve, High Performance Copper Contact, Finger Protected**



**Sealing Cap for Receptacle**

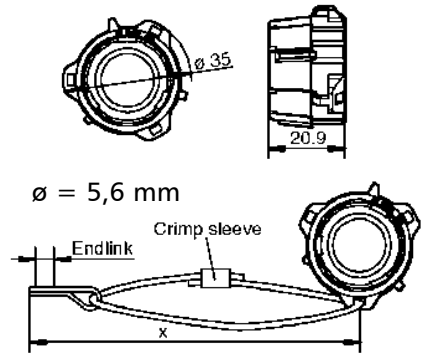
Designation	Order No.
APD-DP	121583-0021

Packaging unit 100 pcs.

APD-DP with rope, end link and eyelet  
 X = Total rope length upon request

Order number 120110-0026\* X~9cm

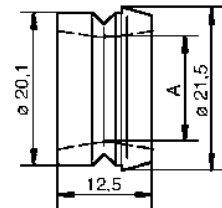
\* for other lengths please consult the factory



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

Order No.	Insulation ø	ø A mm
351-8697-005	5,8 - 7,4	5,4
351-8697-014	7,4 - 8,4	6,5
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	11,6
351-8697-003	14,2 - 15,8	13,8

Packaging unit 100 pcs.

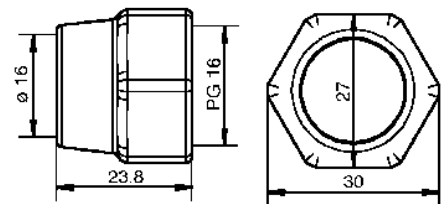


**Hexagonal Nut**

**High Power 1-way**

Order No. 217-8516-010

Packging unit 100 pcs.

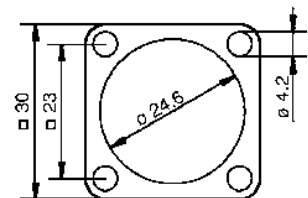


**Flange Gasket**

**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.  
 Nominal Width: 17



**Adaptor for Flex Tube**

**For 1-way Plug and Receptacle**

Order No. 980-8672-010 (ø 17 mm)

Packging unit 100 pcs.



**90° Endbell**

**For 1-way Plug and Receptacle up to 25 mm² wire**

Order No.: 980-8672-004

Packging unit 100 pcs.



ø max. = 17,4 mm  
 thread = PG 16

Dimensions shown in mm  
 Specifications and dimensions subject to change

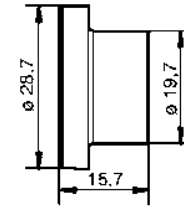




### Dust Cap for Plug

Order No. 025-8636-005

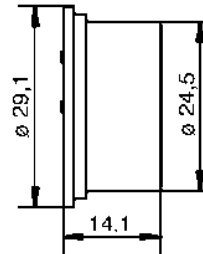
Packaging unit 100 pcs.



### Dust Cap for Receptacle

Order No. 025-0480-000

Packaging unit 100 pcs.



### Blind Socket for 1 / 2 / 4 / 6 / 7-way

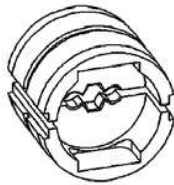
Order No. 120110-0217

Packaging unit 100 pcs.

Note: All cavities closed, mates with 1-7-way APD versions.



Tooling for 1-way High Power Connectors



Contact / Socket	Crimp-Dies
031-8561-000 (50,00 mm <sup>2</sup> )	121586-5229
031-8521-020 (35,00 mm <sup>2</sup> / AWG 2)	121586-5229
031-8521-010 (25,00 mm <sup>2</sup> / AWG 4)	121586-5229
031-8521-030 (16,00 mm <sup>2</sup> )	121586-5229

Contact / Pin	Crimp-Dies
030-8592-000 (50,00 mm <sup>2</sup> )	121586-5229
030-8614-020 (35,00 mm <sup>2</sup> / AWG 2)	121586-5229
030-8614-010 (25,00 mm <sup>2</sup> / AWG 4)	121586-5229
030-8614-030 (16,00 mm <sup>2</sup> )	121586-5229
Optional locator	121586-5232

Assembly Tools Jam Nut Receptacle

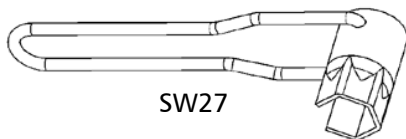
Square box spanner for torque moment wrench to fix the jam nut.



Designation	Order No.
SS627G	317-8649-034

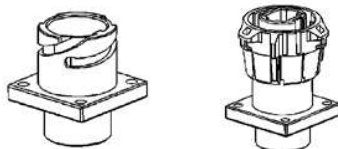
Assembly Tools (Hexagonal Nut)

To fix the hexagonal fixing nut 217-8516-010.



Order No.	980-8672-005
Torque: 2.5 ± 0.5Nm	

Assembly and Torque Wrench Adapter

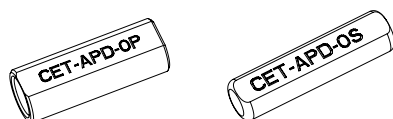


Designation	Order No.
MA-APD-1/ 2-P	248-8653-063
MA-APD-1/ 2-R	249-8619-010

1/4" adaption

Contract Extraction Tool

Housing can not be reused.



Designation	Order No.
CET-APD-#OP	121586-5192
CET-APD-#OS	121586-5193

Crimp Tool



Crimp Tool	Designation	Order No.
Hydraulic, hand operated:	HPW400U-ITT	121586-5257
Electro-hydraulic, 230 V AC operated	HP400EL-ITT	121586-5253

For detailed assembly instruction please see CAS 25023.

**Electrical Data**

Operating Voltage	48 VDC*
Operating Current	see derating curve
Contact Resistance	2 mΩ max.
Voltage Proof	1000 VAC, 60 seconds
Insulation Resistance	10 MΩ min.

**Mechanical Data**

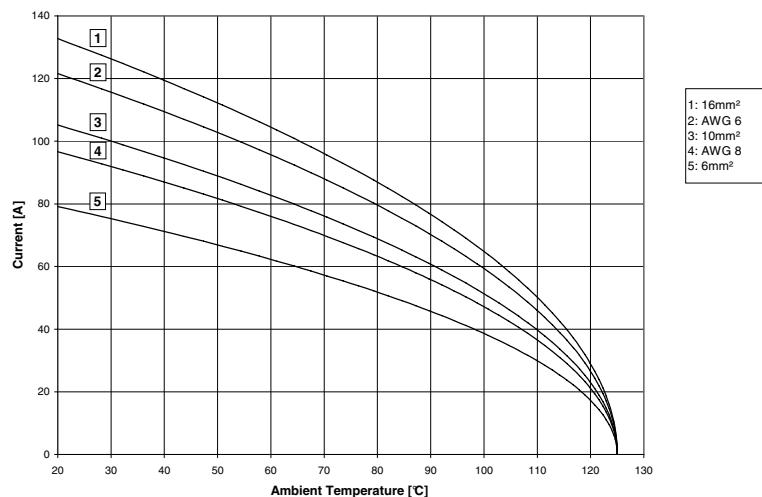
Durability	50 Mating Cycles
Coupling Torque	2 Nm max.
Static Load, free connector	350 N (ISO 15170-2, Sec. 4.6)

**Environmental Data (acc. ISO 15170)**

Temperature Range	-40 °C up to 125 °C (ISO 15170-2, Sec. 6.4)
Humidity Range	up to 95 % r.h. (ISO 15170-2, Sec. 6.4)
Sealing	IP 67 (DIN EN 60529)*
Salt Spray	96 h, 35 °C (ISO 15170-2, Sec. 6.2)
Industrial Climate	SO <sub>2</sub> , 0,67 % (ISO 15170-2, Sec. 6.3)
Fluid Compatibility	Brakefluid, ATF, fuel, .. (ISO 15170-2, Sec. 6.6)*

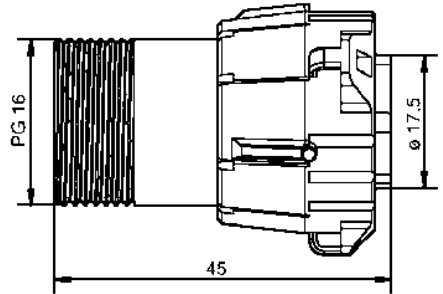
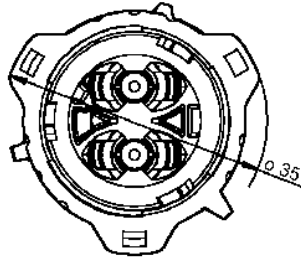
**Materials List**

Housing Parts	PBT GF
Sealing Parts	HNBR (alternative FKM)
Coupling Nut	PA 66 GF
Contacts	Copper Alloy, Ag plated

**Derating Curve**

Further information available upon request.

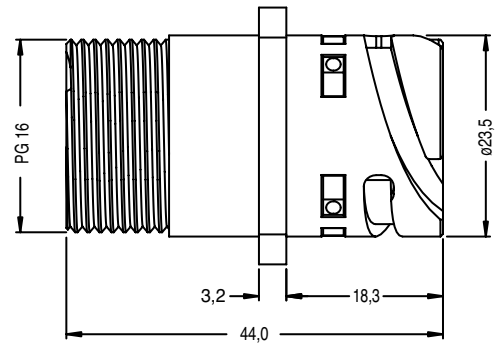
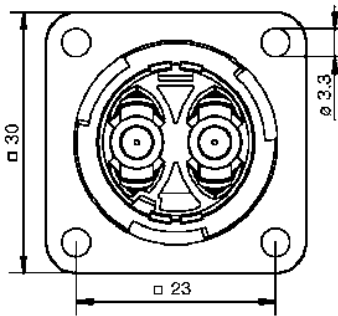
High Power Plug, 2-way



Order No.	Designation	Code	Color
T21583-0083	APD-1BSH8-2-12	1	grey (RAL 7036)
T21583-0025	APD-1BSH8-2	1	black (RAL 9005)
T21583-0084	APD-1BSH8-2-14	1	blue (RAL 5012)

Packaging unit 100 pcs.  
 Socket Crimp contacts see page 22.  
 Accessories, see pages 22 and 23.  
 Note: Always use hex nut and cable seal.

High Power Flange Receptacle, 2-way

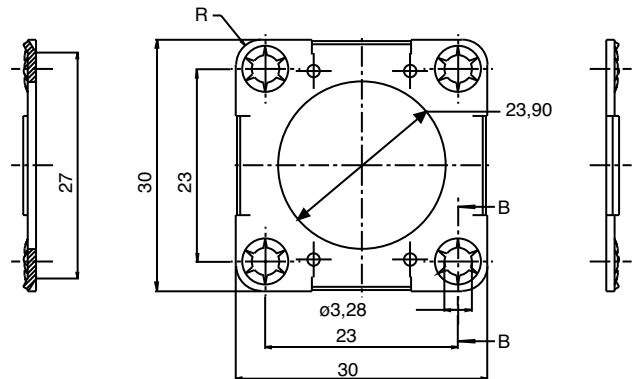
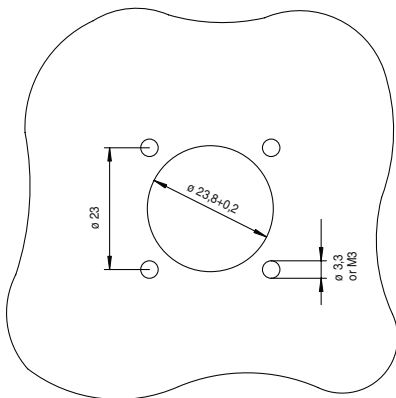


Order No.	Designation	Code	Color
T21583-0026	APD-1APH8-2	1	black (RAL 9005)

Packaging unit 100 pcs.  
 Pin crimp contacts see page 22.  
 Accessories, see pages 22 and 23.  
 Note: Always include hex nut and cable seal.

Panel Cut Out

Flange for all Flange Receptacles



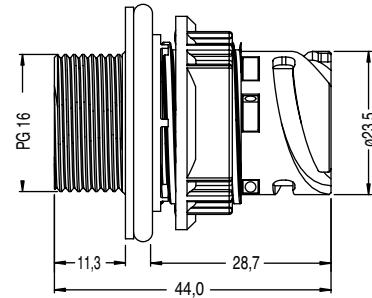
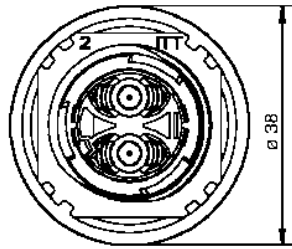
Order Number: 066-8516-005

Note: Metal mounting flange for wall mounting of flange receptacles.

Dimensions shown in mm  
 Specifications and dimensions subject to change



High Power Jam Nut Receptacle, 2-way



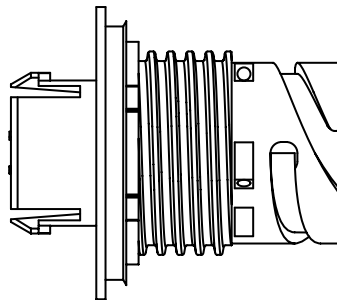
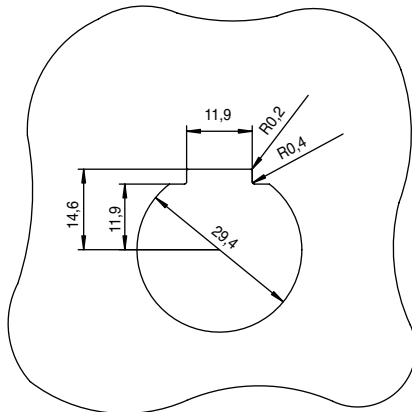
Order No.	Designation	Code	Color
121583-0085	APD-1CPH8-2-12	1	grey (RAL 7036)
121583-0027	APD-1CPH8-2	1	black (RAL 9005)
121583-0086	APD-1CPH8-2-14	1	blue (RAL 5012)

Packaging unit 100 pcs.

Pin crimp contacts see page 22.  
Accessories, see pages 22 and 23.

Note: Includes jam nut for wall thickness 1..4 mm. Always use hex nut and cable seal.

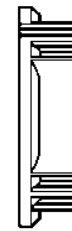
Panel Cut Out Flange for all Flange Receptacles



Housing



O-ring



Jam Nut

Wall Thickness:

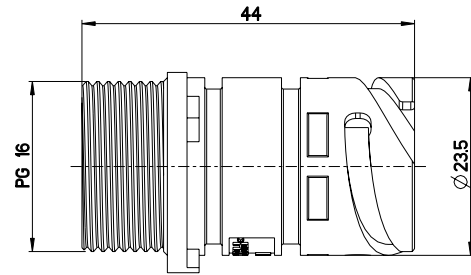
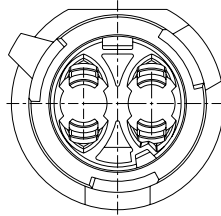
Standard Jam Nut: min. 1,0 / max. 4,0 mm  
Special Jam Nut: min. 2,0 / max. 5,0 mm

Jam Nut, special

Designation	Order No.
for special wall thickness 2,0 - 5,0 mm	217-8516-001



High Power Snap-In Receptacle, 2-way



Order No.	Designation	Code	Color
249-8619-007	APD-15PH8-2	1	black (RAL 9005)

Packaging unit 100 pcs.

Pin crimp contacts see page 22.  
 Accessories, see pages 22 and 23.  
 Note: Always use hex nut and cable seal.

Panel Cut Out

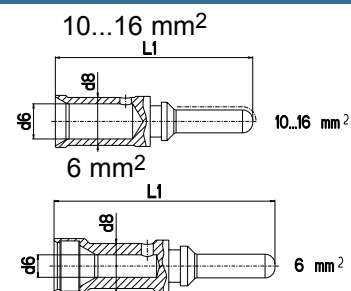
3D data for design of snap-in cut out available on request. Please consult factory.

Machined Pin Crimp Contacts, Standard Silver Plated

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.

\* use individual wire seal or grommet

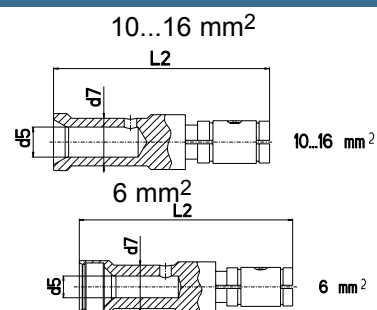


Machined Socket Crimp Contacts, Standard Silver Plated

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.

\* use individual wire seal or grommet

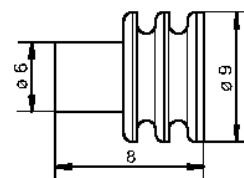


Individual Wire Seals

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

Designation	Order No.:
16GN5824	121668-0035

wire insulation ø 4,3 - 4,8 mm / green



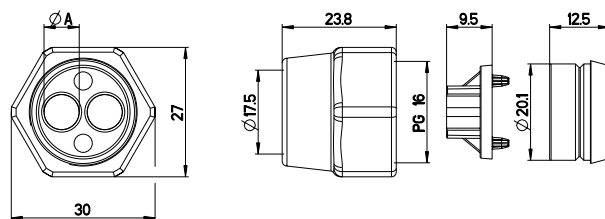
Cable Sealing Set

For High Power 2-way

Set consists of:  
 Hexagonal Nut (1)  
 Compression Support Plate for Cable Seal (2)  
 Cable Seal for Cable (3)

Order No.	Wire Insulation Ø	Ø A
121583-1000	4,2 - 5,8	3,8
121583-1001	5,7 - 7,3	5,3
121583-1002	7,4 - 8,3	7,3
121583-1003	6,8 - 8,3	6,5

Packaging unit 100 pcs.

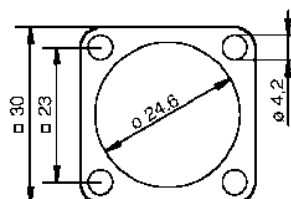


Flange Gasket

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.



Dimensions shown in mm  
 Specifications and dimensions subject to change

**Sealing Cap for Receptacle**

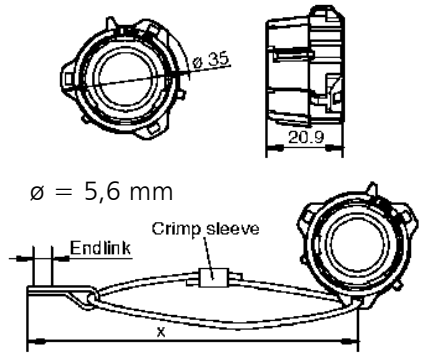
Designation Order No.  
 APD-DP 121583-0021

Packaging unit 100 pcs.

APD-DP with rope, end link and eyelet  
 X = Total rope length upon request

Order number 120110-0026\* X~9cm

\* for other lengths please consult the factory



**Adaptor for Flex Tube**

**For 2-way Plug and Receptacle**

Order No. 980-8672-010 (ø 17 mm)

Packaging unit 100 pcs.  
 Nominal Width: 17



**90° Endbell**

**For 2-way Plug and Receptacle**

Order No.: 980-8672-004

Packaging unit 100 pcs.

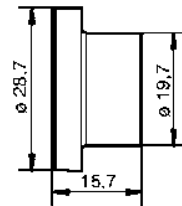


ø max. = 17,4 mm  
 thread = PG 16

**Dust Cap for Plug**

Order No. 025-8636-005

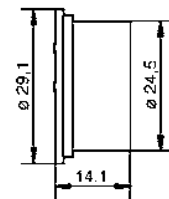
Packaging unit 100 pcs.



**Dust Cap for Receptacle**

Order No. 025-0480-000

Packaging unit 100 pcs.



**Blind Socket for 1 / 2 / 4 / 6 / 7-way**

Order No. 120110-0217

Packaging unit 100 pcs.

Note: All cavities closed, mates with 1-7-way APD versions.



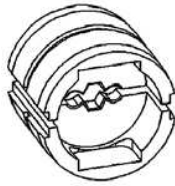
Dimensions shown in mm  
 Specifications and dimensions subject to change

www.ittcannon.com





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

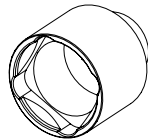


Contact / Socket	Designation	Order No.
031-8646-010 (6,00 mm <sup>2</sup> ) with individual wire seal	CT120090-165	120090-0165
031-8646-011 (10,00 mm <sup>2</sup> )	CT120090-165	120090-0165
031-8646-002 (AWG 8)	CT120090-165	120090-0165
031-8646-003 (AWG 6)	CT120090-165	120090-0165
031-8646-001 (16,0 mm <sup>2</sup> )	CT120090-171	120090-0171

Contact / Socket	Designation	Order No.
430-8645-000 (6,00 mm <sup>2</sup> ) with individual wire seal	CT120090-165	120090-0165
430-8645-009 (10,00 mm <sup>2</sup> )	CT120090-165	120090-0165
430-8645-003 (AWG 8)	CT120090-165	120090-0165
430-8645-002 (AWG 6)	CT120090-165	120090-0165
430-8645-007 (16,0 mm <sup>2</sup> )	CT120090-171	120090-0171

**Assembly Tools Jam Nut Receptacle**

Square box spanner for torque wrench to tighten the jam nut.

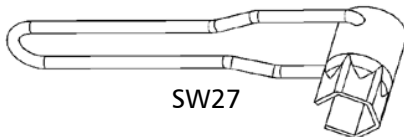


SW30

Order No. 317-8649-034

**Assembly Tools Hexagonal Nut**

To tighten the hexagonal fixing nut 217-8516-010.

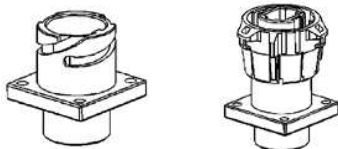


SW27

Designation SS627G Order No. 980-8672-005

Torque 2,5 +/- 0,5 Nm

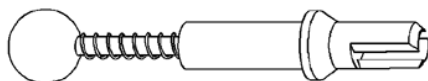
**Assembly and Torque Wrench Adapter**



Designation MA-APD-1/2-P Order No. 248-8653-063  
 Designation MA-APD-1/2-R Order No. 249-8619-010

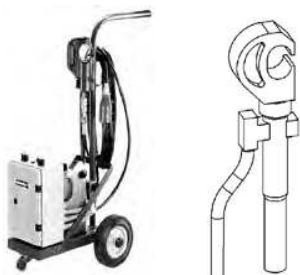
1/4" adaption

**Contract Extraction Tool**



Designation CET-APD-2 Order No. 121586-5149  
 for pin and socket contacts

**Crimp Tool**



Crimp Tool	Designation	Order No.
Hydraulic, hand operated:	HK120-25	121586-5077
Electro-hydraulic, 230 V AC operated	HK12-EL	121586-5075
Hand Crimp Tool 6 / 10 / 16 mm <sup>2</sup>		121586-5244



APD 4-way connectors are the original DIN72585 (now ISO 15170) versions using a 2,5 mm contact system.

Designed for automotive applications they also meet the requirements of transportation, off-road and special vehicle markets.

Applications for the 4- and 7-way connector include:

- Sensors
- Traction / Skid Control
- Brake Control
- Magnetic Switch Control Systems
- Lightening systems on Trucks and Trailers



### Electrical Data

Operating Voltage	48 VDC*
Operating Current	see derating curve
Contact Resistance	5 mΩ max.
Voltage Proof	1000 VAC, 60 seconds
Insulation Resistance	10 MΩ min.

### Mechanical Data

Durability	50 Mating Cycles
Coupling Torque	1,2 Nm max.
Static Load, mated Connector	250 N axial, 150 N lat. (ISO 15170-2, Sec. 4.5)
Static Load, free connector	350 N (ISO 15170-2, Sec. 4.6)

### Environmental Data (acc. ISO 15170)

Temperature Range	-40 °C up to 125 °C (ISO 15170-2, Sec. 6.4)
Humidity Range	up to 95 % r.h. (ISO 15170-2, Sec. 6.4)
Sealing	IP 67 (DIN EN 60529)*
Salt Spray	96 h, 35 °C (ISO 15170-2, Sec. 6.2)
Industrial Climate	SO <sub>2</sub> , 0,67 % (ISO 15170-2, Sec. 6.3)
Fluid Compatibility	Brakefluid, ATF, fuel, .. (ISO 15170-2, Sec. 6.6)*
Vibration Resistance	Sine, 300m/s <sup>2</sup> , 3 x 100h, RT and 120°C (ISO 15170-2)*

### Materials List

Housing Parts	PBT GF
Sealing Parts	HNBR (alternative FKM)
Coupling Nut	PA 66 GF
Contacts	Copper Alloy, Ag plated

\* Further information available upon request

Dimensions shown in mm  
Specifications and dimensions subject to change