



The APD 51-way connector offers the same features as the 37-way solution. Furthermore it is available in 2 versions, standard and secondary lock for added security. The connector features up to 8 mechanical key and visual color coding options for better mating identification and to avoid mis-mating.

Standard	Code 1: Green
	Code 2: Yellow
	Code 3: Brown
	Code 4: Purple

For other coding consult factory

Electrical Data

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

Mechanical Data

Durability	40 Mating Cycles
Coupling Torque	4,5 Nm max.
Static Load, free connector	250 N axial, 150 N lat. (ISO 15170-2, Sec. 4.5)
Dynamic Impact	2 J (40mm- ball- drop- test, height 800mm)

Environmental Data (acc. ISO 15170)

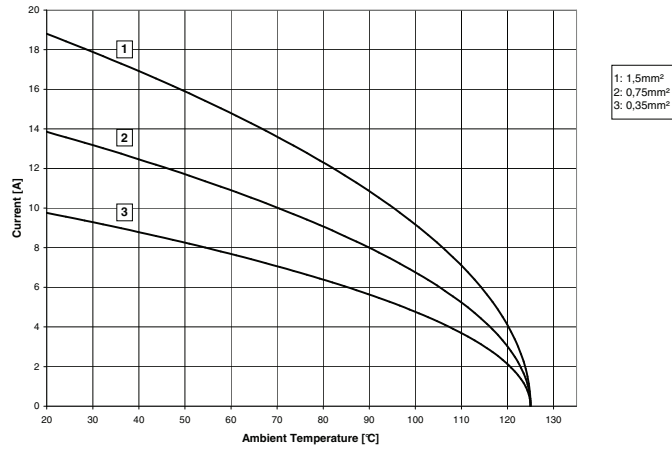
Temperature Range	-40 °C up to 125 °C (ISO 15170-2, Sec. 6.4)
Humidity Range	up to 95 % r.h. (ISO 15170-2, Sec. 6.4)
Sealing	IP 67 and IP 69k (DIN EN 60529)
Salt Spray	96 h, 35 °C (ISO 15170-2, Sec. 6.2)
Industrial Climate	SO ₂ , 0,67 % (ISO 15170-2, Sec. 6.3)
Fluid Compatibility	Brakefluid, ATF, fuel, .. (ISO 15170-2, Sec. 6.6)*
Vibration Resistance	Random, 0,2(m/s ²)/Hz, 3 x 24h, RT

Materials List

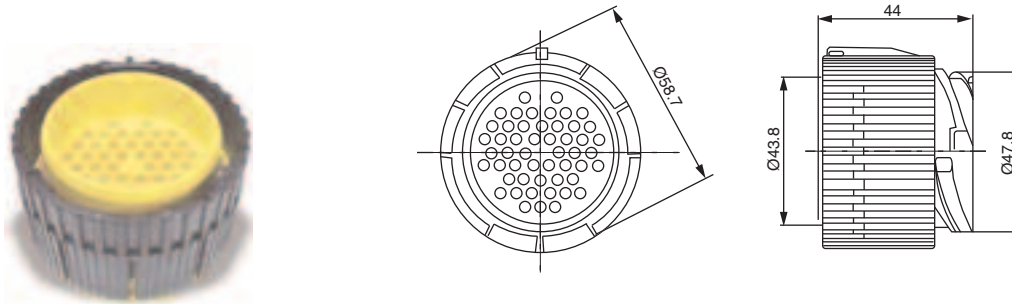
Housing Parts	PBT GF
Sealing Parts	FKM
Coupling Nut	PA 6 GF
Contacts	Copper Alloy, Au or Sn plated*

*Further information on request

Derating Curve



Plug, 51-way, Standard Version



Order No.	Designation	Code	Color
121583-0032	APD-1BP51	1	green (RAL 6018)
121583-0033	APD-2BP51	2	yellow (RAL 1018)
121583-0030	APD-3BP51	3	brown (RAL 3009)
121583-0031	APD-4BP51	4	purple (RAL 4001)

Packaging unit 100 pcs.

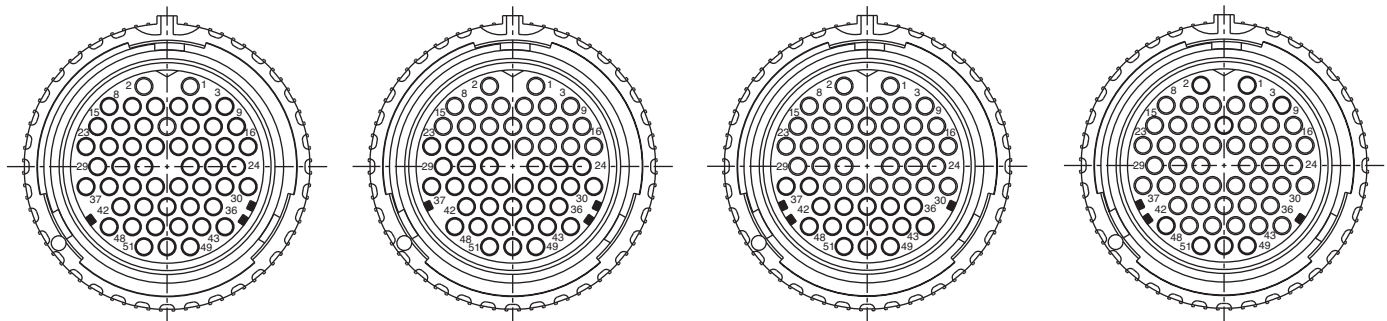
Pin crimp contacts see page 69.

Accessories, see page 70.

Note: Standard version requires use of alignment disc.

Coding 51-way layout

View on Mating Face



Code 1
green

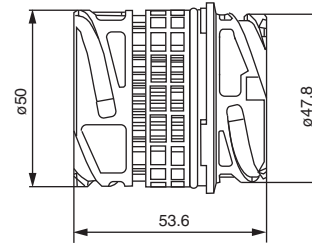
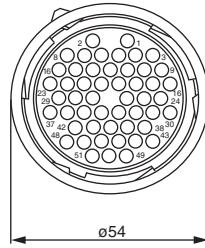
Code 2
yellow

Code 3
brown

Code 4
purple

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

Snap-In Receptacle, 51-way, Standard Version



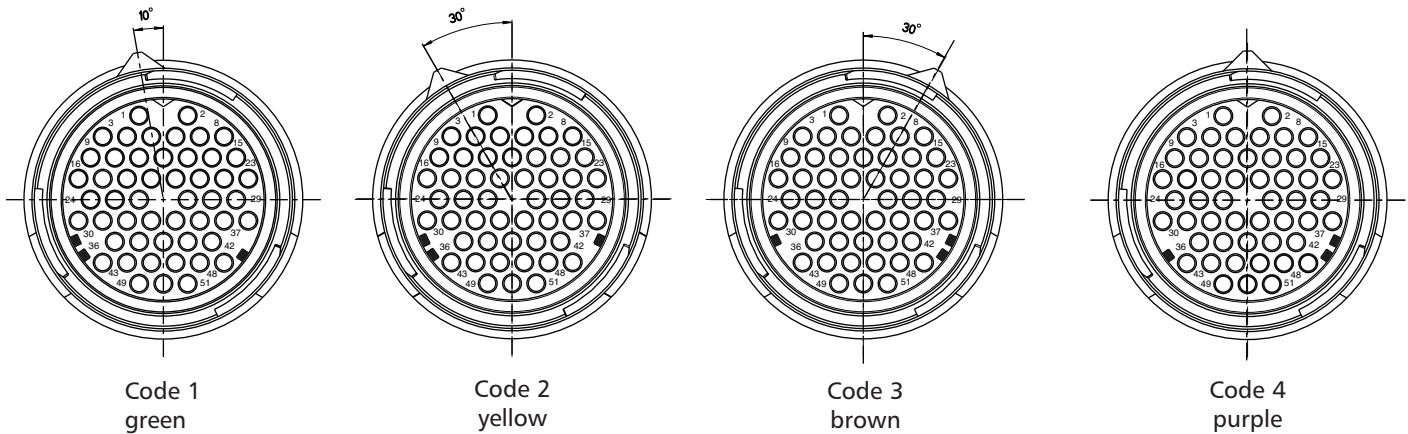
Order No.	Designation	Code	Color
249-8619-003	APD-1SS51	1	green (RAL 6018)
249-8619-004	APD-2SS51	2	yellow (RAL 1018)
249-8619-001	APD-3SS51	3	brown (RAL 3009)
249-8619-002	APD-4SS51	4	purple (RAL 4001)

Packaging unit 100 pcs.

Socket crimp contacts see page 69.
Accessories, see page 70.

Coding 51-way layout

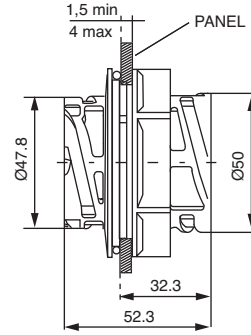
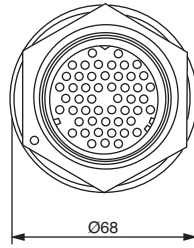
View on Mating Face



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

3D data showing snap-in design available upon request.

Jam Nut Receptacle, 51-way, Standard Version



Order No.	Designation	Code	Color
121583-0081	APD-1CS51	1	green (RAL 6018)
121583-0082	APD-2CS51	2	yellow (RAL 1018)
121583-0079	APD-3CS51	3	brown (RAL 3009)
121583-0080	APD-4CS51	4	purple (RAL 4001)

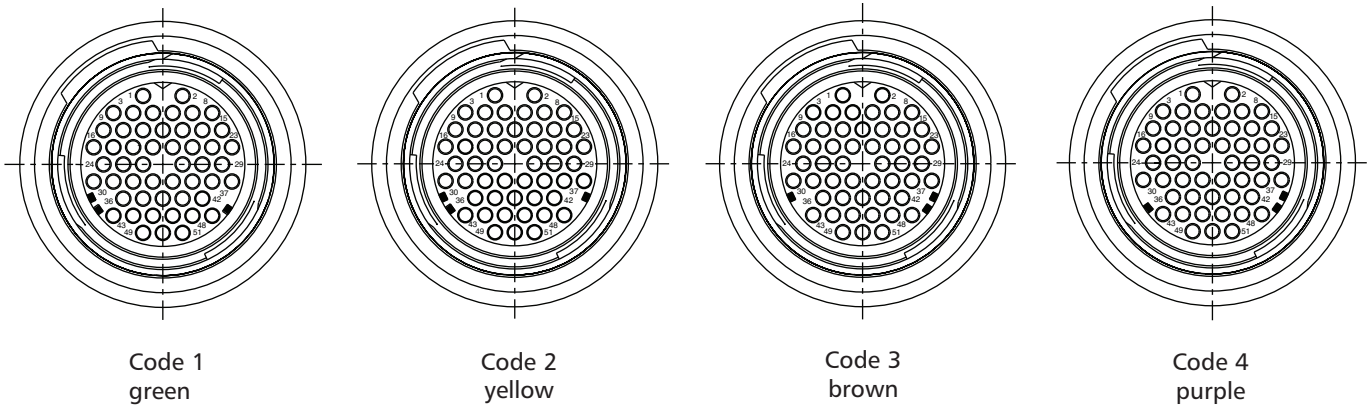
Packaging unit 100 pcs.

Socket crimp contacts see page 69.

Accessories, see page 70.

Coding 51-way layout

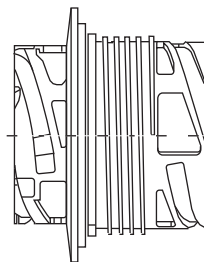
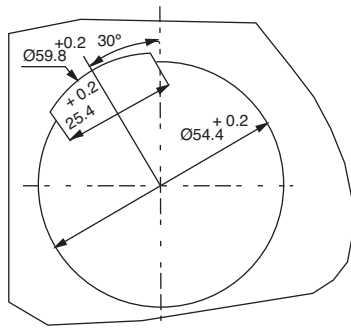
View on Mating Face



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

Panel Cut Out

Piece Parts / Assembly Instruction



Wall Thickness
Standard: min. 1,5 / max. 4,0 mm

Housing

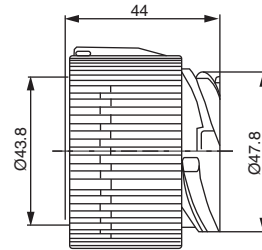
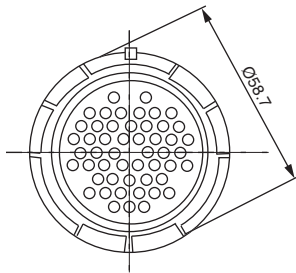
O-Ring

Jam Nut

Dimensions shown in mm
Specifications and dimensions subject to change



Plug, 51-way, Secondary Lock Version



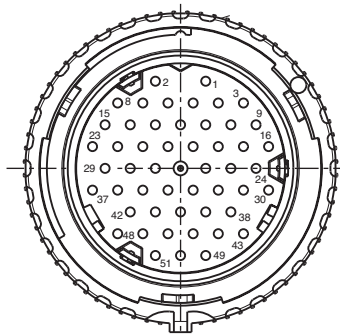
Order No.	Designation	Code	Color
121583-0187	APD-1BP51SN	1	green (RAL 6018)
121583-0188	APD-2BP51SN	2	yellow (RAL 1018)
121583-0189	APD-3BP51SN	3	brown (RAL 3009)
121583-0190	APD-4BP51SN	4	purple (RAL 4001)

Packaging unit 100 pcs.

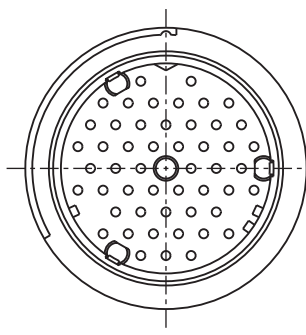
Pin crimp contacts see page 69.
Accessories, see page 70.

Coding 51-way layout

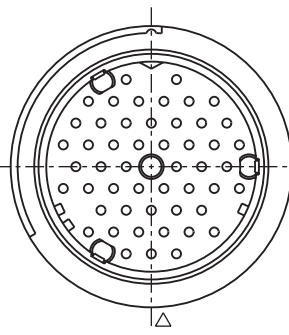
View on Mating Face



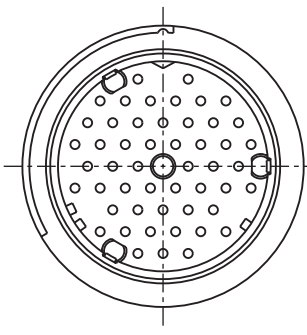
Code 1
green



Code 2
yellow



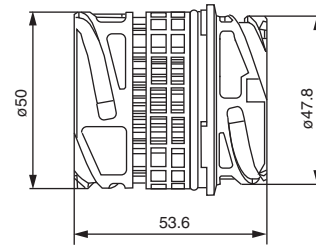
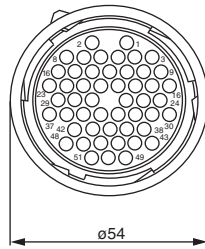
Code 3
brown



Code 4
purple

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

Snap-In Receptacle, 51-way, Secondary Lock Version



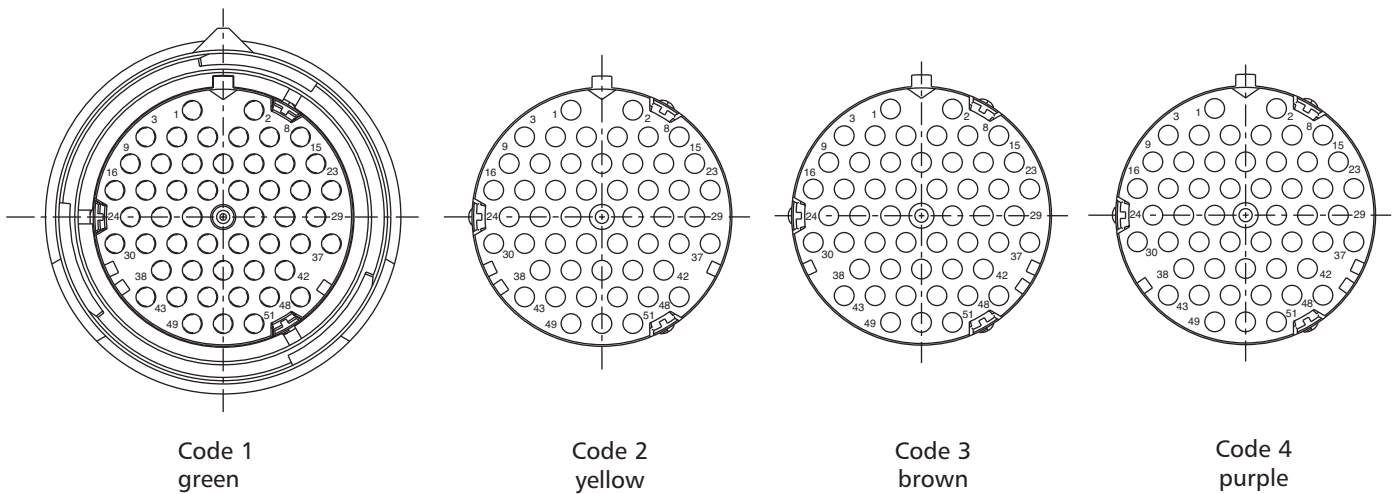
Order No.	Designation	Code	Color
121583-0091	APD-1SS51S	1	green (RAL 6018)
121583-0092	APD-2SS51S	2	yellow (RAL 1018)
121583-0093	APD-3SS51S	3	brown (RAL 3009)
121583-0094	APD-4SS51S	4	purple (RAL 4001)

Packaging unit 100 pcs.

Socket crimp contacts see page 69.
Accessories, see page 70.

Coding 51-way layout

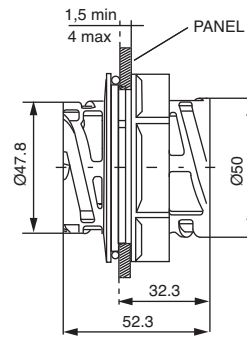
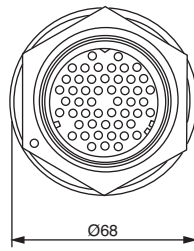
View on Mating Face



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

Snap-In dimension on demand 3-D-image available.

Jam Nut Receptacle, 51-way, Secondary Lock Version

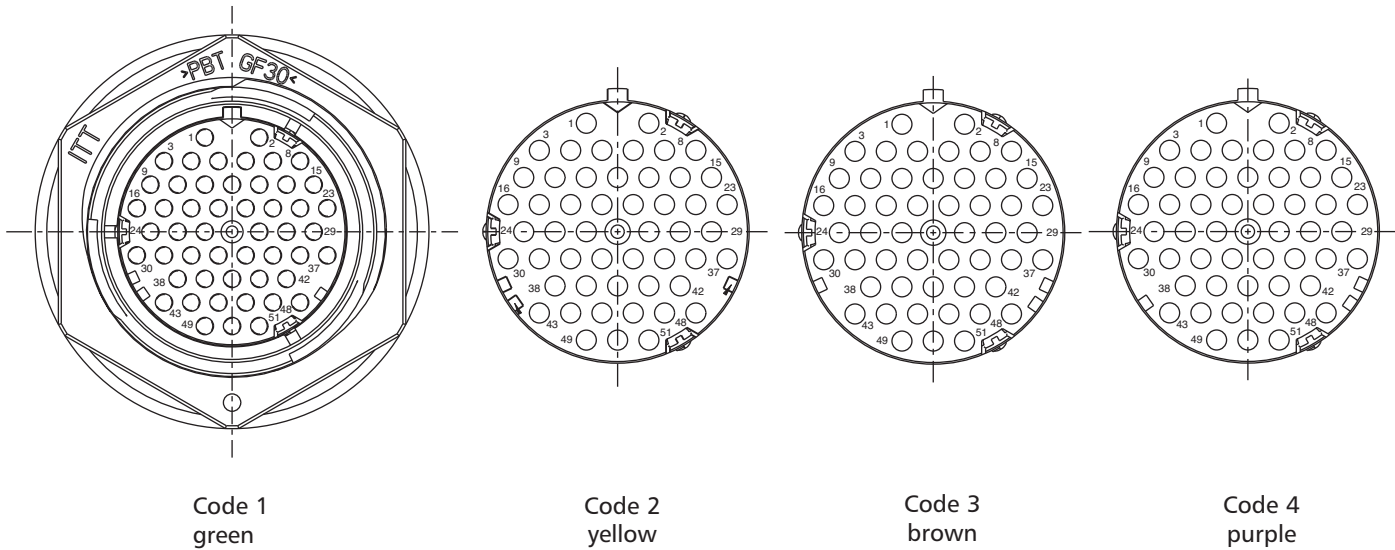


Order No.	Designation	Code	Color
121583-0095	APD-1CS51S	1	green (RAL 6018)
121583-0096	APD-2CS51S	2	yellow (RAL 1018)
121583-0097	APD-3CS51S	3	brown (RAL 3009)
121583-0098	APD-4CS51S	4	purple (RAL 4001)

Packaging unit 100 pcs.
 Socket crimp contacts see page 69.
 Accessories, see page 70.

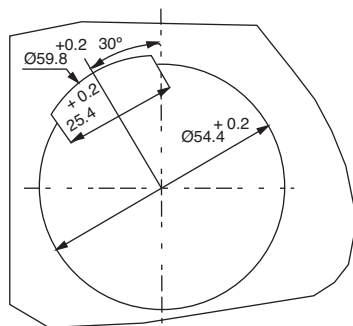
Coding 51-way layout

View on Mating Face

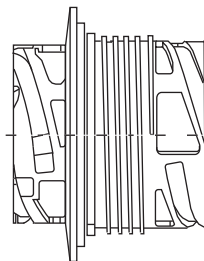


Note: The connectors offer both mechanical keying and visual coding by different colors.

Panel Cut Out Piece Parts / Assembly Instruction



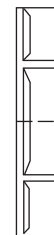
Wall Thickness
 Standard: min. 1,5 / max. 4,0 mm



Housing



O-Ring



Jam Nut



Dimensions shown in mm
 Specifications and dimensions subject to change

CONTACTS



- Low contact resistance (max. 5mΩ) for maximum signal integrity
- Current carrying capacity: 12A max.
- Machined press-in contacts. (other machined contacts available on request)
- Silver plating, please consult factory

For 51-way Standard Version

Contacts (stamped & formed)	Plating	Crimp Range	Reeled (5000 pcs)		Loose Piece (bags of 100)	
			Designation	Part number	Designation	Part number
Socket contacts	tin	0,35 - 0,75 mm ²	APK-SA16A07-002-C	121668-0220	-	-
		0,75 - 1,5 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 - 1,5 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 - 1,5 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 - 1,5 mm ²	APK-PA16G15-002-C	121668-0267	-	-

For 51-way Secondary Lock Version

Contacts (stamped & formed)	Plating	Crimp Range	Reeled (5000 pcs)		Loose Piece (bags of 100)	
			Designation	Part number	Designation	Part number
Socket contacts	tin	0,35 - 0,75 mm ²	APK-SA16A07-002	121668-0221	APK-SA16A07-002-B	121668-0274
		0,75 - 1,5 mm ²	APK-SA16A15-002	121668-0202	APK-SA16A15-002-B	121668-0278
	gold (0,8 μm)	0,35 - 0,75 mm ²	APK-SA16G07-002	121668-0270	APK-SA16G07-002-B	121668-0276
		0,75 - 1,5 mm ²	APK-SA16G15-002	121668-0272	APK-SA16G15-002-B	121668-0280
Pin contacts	tin	0,35 - 0,75 mm ²	APK-PA16A07-002	121668-0252	APK-PA16A07-002-B	121668-0275
		0,75 - 1,5 mm ²	APK-PA16A15-002	121668-0253	APK-PA16A15-002-B	121668-0279
	gold (0,8 μm)	0,35 - 0,75 mm ²	APK-PA16G07-002	121668-0269	APK-PA16G07-002-B	121668-0277
		0,75 - 1,5 mm ²	APK-PA16G15-002	121668-0271	APK-PA16G15-002-B	121668-0281

Press-In Contacts (Standard Version)

Contacts (machined)	Plating	Crimp Range	Reeled		Single piece	
			Designation	Part number	Designation	Part number
Pin contacts	tin	0,3 - 0,6 mm ²	-	-	APK-PA16A06-E	330-8674-020
		0,3 - 0,6 mm ²	-	-	APK-PA16G06-E	330-8674-026
	gold (0,8 μm)	0,5 - 1,0 mm ²	-	-	APK-PA16G10-E	330-8674-025
		1,0 - 1,5 mm ²	-	-	APK-PA16G15-E	330-8674-024

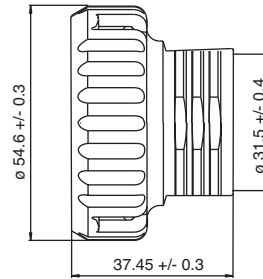
Individual Wire Seals / Blind Seals

Description	Insulation Diameter	Color	Part Number
Single Wire Sealing	1,2 - 1,6 mm	Red	121667-0024
	1,4 - 2,0 mm	Grey	121667-0022
	1,9 - 2,1 mm	Yellow	121667-0023
Blind Seal	1,4 - 2,0 mm	White	121667-0025

Dimensions shown in mm
 Specifications and dimensions subject to change



Endbell, 51-way

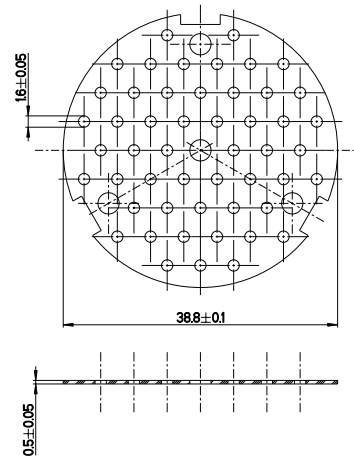


Order No.	Designation	Color
120110-0075	Endbell for APD 51-way version only	black (RAL 9005)

Packaging unit 100 pcs.

Alignment Disc, 51-way

Order No.	Designation
052-8509-003	Alignment disc for 51-way standard version only (plug only)



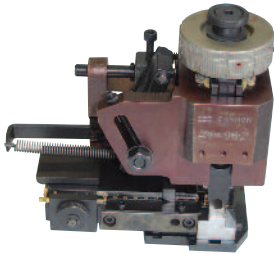
Note: Not required for secondary lock version.

Hand Crimp Tool for Stamped and Formed Contacts



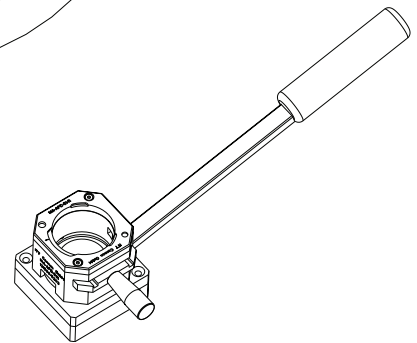
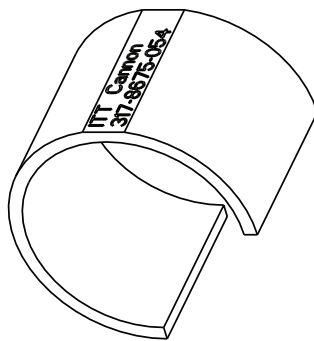
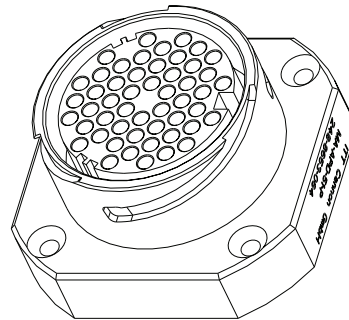
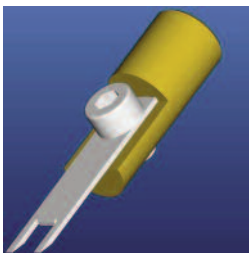
Contact	Hand Tool Order No.	Locator
0,35 - 0,75 mm ²	121586-5156	consult factory
0,75 - 1,5 mm ²	121586-5156	121586-5197

Mini Applications for Stamped and Formed Contacts



Contact	Order No.	Designation
0,35 - 0,75 mm ²	121586-5131	WWZ-20-100-APK16-07-002
0,75 - 1,5 mm ²	121586-5132	WWZ-20-100-APK16-15-002

Support Tools, 51-way



Designation	Order No.
Assembly Adaptor for plug MA-APD-51-P	248-8653-064
Assembly Adaptor for receptacle MA-APD-51-R	248-8619-011
Replacement Nut for MA-APD-51-R	217-8516-005
Assembly adaptor for plug MA-APD-51-P-SEC-LOCK	121586-5202
Assembly adaptor for receptacle MA-APD-51-R-SEC-LOCK	121586-5203
Assembly adaptor for Jam nut MA-APD-51-FL-SEC-LOCK	121586-5206
Unlocking Device	317-8875-054
Contact Insertion Tool CIT APK-16-15-C	121586-5200
Contact Extraction Tool CET-APK-16-C	121586-5195
Secondary Lock Set CET-ADP-51	121586-5259*

*For plug only

Dimensions shown in mm
 Specifications and dimensions subject to change

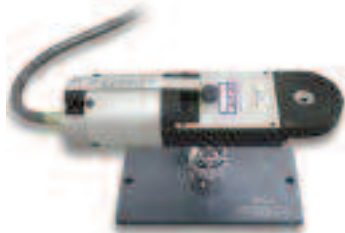
Hand Crimp Tool for Press-in Contacts



Basic Hand Crimp Tool	Order No.
M225201/1-01	995-0001-585

Locator	Order No.
M225201/1-05	995-0001-507

Automatic Crimp Tooling for Press-in Contacts



Designation	Order No.	Description
WA27-7	121586-5067	Pneumatic Tool
M22501/1-05	995-0001-507	Locator
BM-2	121586-5068	Bench Mount
WA-10	121586-5069	Foot Pedal

Assembly Tooling for Press-in Contacts



Designation	Order No.	Description
CHPZ-240	121586-0081	Hand Lever Press
CIT-APD16-TIP	317-8648-008	Mounting Tip