



CMC CONNECTION SYSTEM

SELECTOR GUIDE



• **APTIV** •

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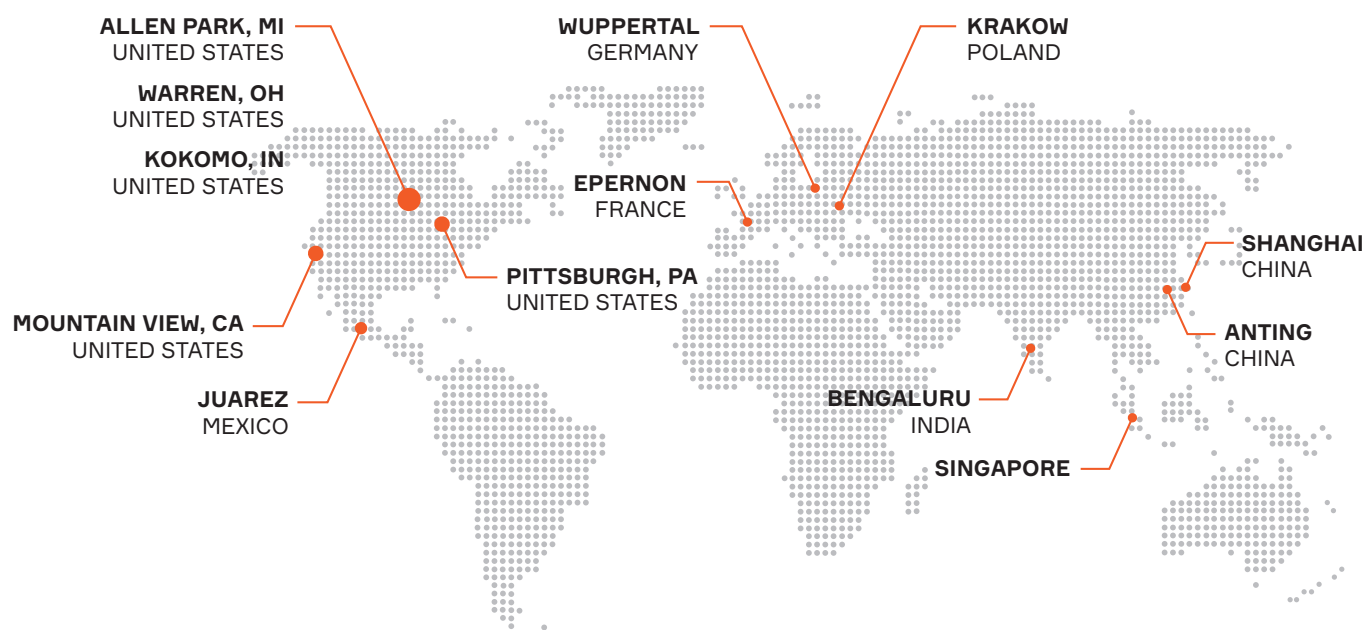
Aptiv is a **global technology company** that develops safer, greener and more connected solutions enabling the future of mobility.

Headquartered in Dublin, Aptiv has approximately 150,000 employees and operates 14 technical centers, as well as manufacturing sites and customer support centers in 45 countries.

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Major Design Centers Worldwide



A wide family range to fit your needs

CMC is one of the most popular interfaces for Engine Management and Electronic Control Units.

The compact connectors are sealed and have a high density of electrical contacts making them the ideal solution for harsh environments.



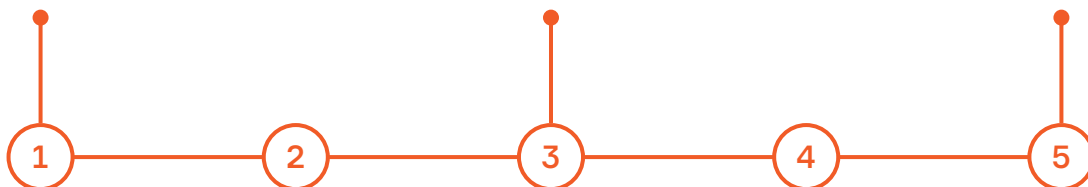
Headers



Dress Covers



Terminals



Connectors

Cavity Plugs & Tools



Robust features, meaningful benefits

1

A wide product range

- Headers, mating connectors, dress covers, terminals, seals & tools available
- Standard footprint interface
- Interchangeable with multiple industry solutions

2

High quality & unique design

- 64 & 86 way connectors as single source product
- Smart design on female housing (mat seal, 0.64 mm terminal cavities closed – no cavity plug needed)
- Capable to endure 5 re-works (extraction and re-insertion of terminals)
- One of the best terminal current derating performances on the market

3

Innovative technical features

- Clean-body terminal to prevent damage to the mat seal
- Highest vibration resistance on the market with 15 gravity rating
- Aptiv patents:
 - Front holder for Terminal Position Assurance (TPA) mating security
 - Polarization by the rear seal holder at the early stage of terminal insertion



Associated Parts

CAVITY PLUGS 32, 48, 64 & 86 WAY

Part number	Terminal size (mm)	Color	Application
13768626	0.64	White	Insertion of a wrong cavity - repairing purpose
13826722	1.50	Blue	Unloaded 1.5 mm cavity

SEALS & CAVITY PLUGS 86 WAY

Part number	Type	Terminal size (mm)	Color
10736278	Single Wire Seal	0.5 - 0.85	Yellow
10736279	Single Wire Seal	1.0 - 2.0	Green
10779162	Single Wire Seal	0.5 - 1.0	Blue
13578695	Single Wire Seal	1.25	Brown
10779159	Single Wire Seal	1.5 - 2.0	Red
10779161	Single Wire Seal	2.5	Yellow
10787316	Single Wire Seal	1.5	White
10779160	Single Wire Seal	2.8	Green
13629105	Cavity Plug	0.64	White

TOOLS

Part number	Application
10915564	0.64 mm terminal extraction
10915565	1.5 mm terminal extraction
10915566	Cover removal
33105886	0.64 mm dummy plug insertion
33105887	1.5 mm dummy plug insertion
N/A	2.8 mm female terminal extraction
33513040	TPA removal
33514306	1.5 mm terminal crimping
33514360	0.64 mm terminal crimping

CMC 32 WAY SERIES



32W HEADER

Pin Size (mm): 0.64 (24) / 1.5 (8)

Number of Indexes: 4

MAX
TEMPERATURE



SEALING
PROTECTION



CONNECTOR
MATING FORCE

< 60N

Part number	Cavity count	Color (mates same color housing)
33503152	32	Blue
33503150	32	Brown
33503149	32	Grey
33503151	32	Black



32W DRESS COVER

Part number	Cavity count	Color	Orientation
13851307	32	Black	90°



COMPATIBLE WITH GTS TERMINALS



Part number	Blade size (mm)	Wire size range (mm ²)	Plating	Other available platings
13955989	0.64	0.35	Sn	Ag, Au
13648598	0.64	0.50	Sn	Ag, Au
13712871	1.5	0.50 - 0.85	Sn	Ag, Au
13741954	1.5	1.0 - 1.3	Sn	Ag, Au
13749482	1.5	1.4 - 2.0	Sn	Ag, Au



32W MATING CONNECTORS

Series:	Mixed
Cavities:	32
Terminal Size (mm):	0.64 & 1.5
Material:	PBT

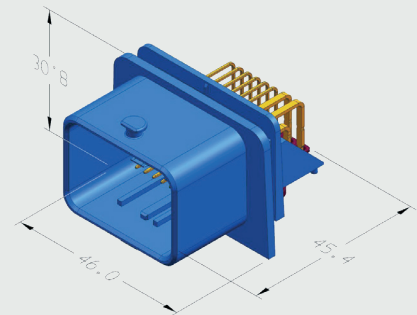
MAX TEMPERATURE SEALING PROTECTION TERMINAL RETENTION FORCE



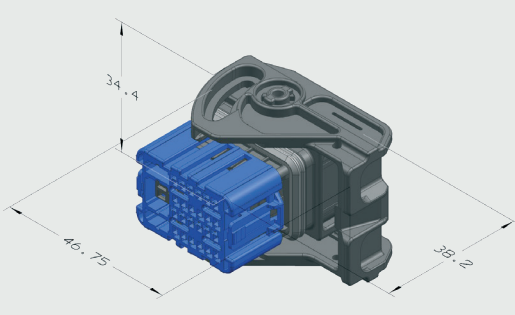
Part number	Cavity count	Sealing	Gender	Color	Wire direction
13851306	32	Sealed	Female	Black	Right
13741940	32	Sealed	Female	Black	Left
33500498	32	Sealed	Female	Blue	Right
33500497	32	Sealed	Female	Blue	Left
33500496	32	Sealed	Female	Brown	Right
33500495	32	Sealed	Female	Brown	Left
33500494	32	Sealed	Female	Grey	Right
33500507	32	Sealed	Female	Grey	Left



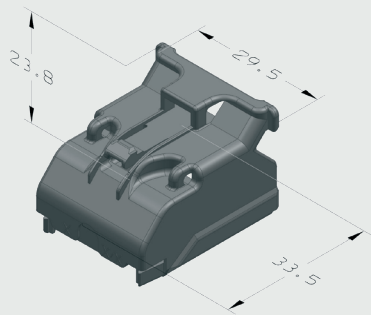
DIMENSION MEASUREMENT SAMPLE



33503152



33500497



13851307

CMC 48 WAY SERIES



48W HEADER

Pin Size (mm): 0.64 (40) / 1.5 (8)

Number of Indexes: 1

MAX
TEMPERATURE



SEALING
PROTECTION



CONNECTOR
MATING FORCE

< 60N

Part number	Cavity count	Color (mates same color housing)
33503457	48	Black



48W DRESS COVER

Part number	Cavity count	Color	Orientation
13956254	48	Black	90°
33517228	48	Black	45°



COMPATIBLE WITH GTS TERMINALS



Part number	Blade size (mm)	Wire size range (mm ²)	Plating	Other available platings
13955989	0.64	0.35	Sn	Ag, Au
13648598	0.64	0.50	Sn	Ag, Au
13712871	1.5	0.50 - 0.85	Sn	Ag, Au
13741954	1.5	1.0 - 1.3	Sn	Ag, Au
13749482	1.5	1.4 - 2.0	Sn	Ag, Au



48W MATING CONNECTORS

Series:	Mixed
Cavities:	48
Terminal Size (mm):	0.64 & 1.5
Material:	PBT

 MAX
TEMPERATURE

 SEALING
PROTECTION

 TERMINAL
RETENTION FORCE



Part number	Cavity count	Sealing	Gender	Color	Wire direction
13956255	48	Sealed	Female	Black	Right
13956021	48	Sealed	Female	Black	Left

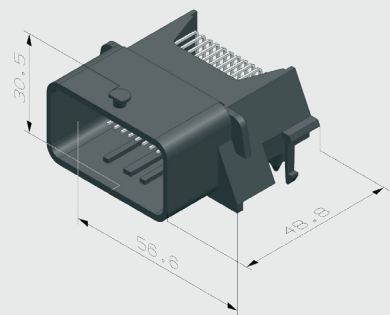
OTHER 48W MATING CONNECTORS CODINGS*

33500420	48	Sealed	Female	Brown	Right
33500419	48	Sealed	Female	Brown	Left
33500500	48	Sealed	Female	Grey	Right
33500499	48	Sealed	Female	Grey	Left

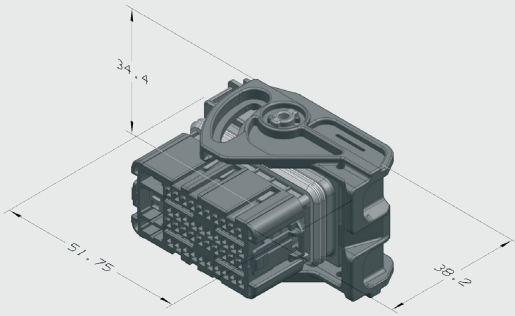
* Part numbers compatible with Aktiv 112 Way header.



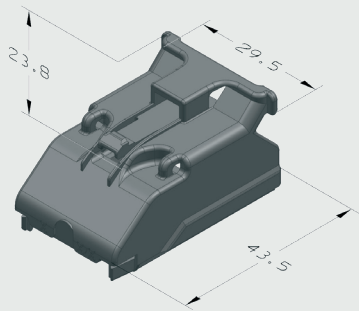
DIMENSION MEASUREMENT SAMPLE



33503457



13956021



13956254

CMC 64 WAY SERIES



64W HEADER

Pin Size (mm): 0.64 (56) / 1.5 (8)

Number of Indexes: 1

MAX
TEMPERATURE



SEALING
PROTECTION



CONNECTOR
MATING FORCE

< 60N

Part number	Cavity count	Color (mates same color housing)
33504510	64	Black
35110623	64	Grey



64W DRESS COVER

Part number	Cavity count	Color	Orientation
13648597	64	Black	90°



COMPATIBLE WITH GTS TERMINALS



Part number	Blade size (mm)	Wire size range (mm ²)	Plating	Other available platings
13955989	0.64	0.35	Sn	Ag, Au
13648598	0.64	0.50	Sn	Ag, Au
13712871	1.5	0.50 - 0.85	Sn	Ag, Au
13741954	1.5	1.0 - 1.3	Sn	Ag, Au
13749482	1.5	1.4 - 2.0	Sn	Ag, Au



64W MATING CONNECTORS

Series:	Mixed
Cavities:	64
Terminal Size (mm):	0.64 & 1.5
Material:	PBT

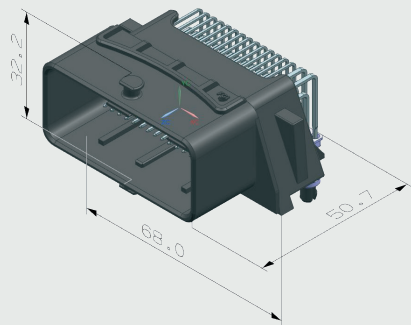
 MAX TEMPERATURE
  SEALING PROTECTION
  TERMINAL RETENTION FORCE



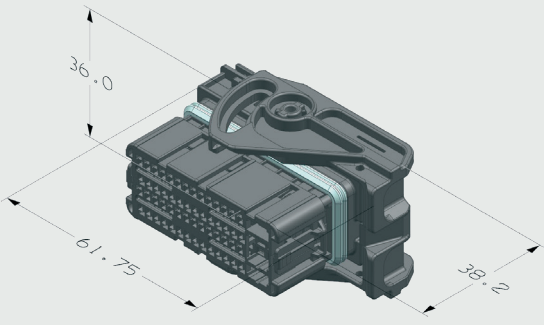
Part number	Cavity count	Sealing	Gender	Color	Wire direction
13648596	64	Sealed	Female	Black	Right
13722628	64	Sealed	Female	Black	Left
33500504	64	Sealed	Female	Grey	Right
33500503	64	Sealed	Female	Grey	Left



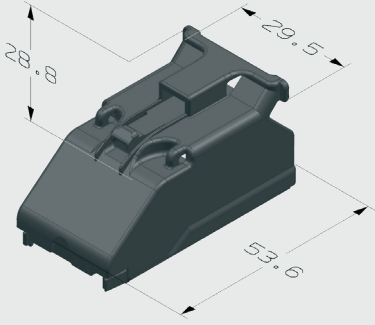
DIMENSION MEASUREMENT SAMPLE



33504510



13648596



13648597

CMC 86 WAY SERIES*



86W DRESS COVER

Part number	Cavity count	Color	Orientation
33121915	86	Black	90°
33121914	86	Grey	90°

* For more information on compatible Headers available on the market, please contact your local sales representative.



COMPATIBLE WITH GTS & APEX TERMINALS



Part number	Blade size (mm)	Wire size range (mm ²)	Plating	Other available platings
13955989	0.64	0.35	Sn	Ag, Au
13648598	0.64	0.50	Sn	Ag, Au
13737770	1.5	0.50 - 0.85	Sn	Ag, Au
13860784	1.5	1.0 - 1.3	Sn	Ag, Au
13737773	1.5	1.4 - 2.0	Sn	Ag, Au
10810375	2.8	0.5 - 1.25	Sn	Ag, Au
13627267	2.8	1.5 - 2.5	Sn	Ag, Au



86W MATING CONNECTORS

Series:	Mixed
Cavities:	86
Terminal Size (mm):	0.64, 1.5 & 2.8
Material:	PBT

 MAX TEMPERATURE
  SEALING PROTECTION
  TERMINAL RETENTION FORCE



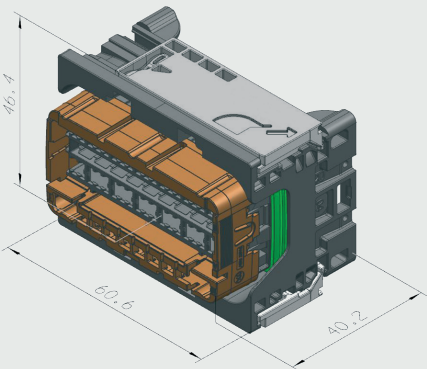
Part number	Cavity count	Sealing	Gender	Color	Wire direction
33156001	86	Sealed	Female	Brown	Right
33155995	86	Sealed	Female	Brown	Left
33156000	86	Sealed	Female	Grey	Right
33155993	86	Sealed	Female	Grey	Left

CORRESPONDING TERMINAL MODULES

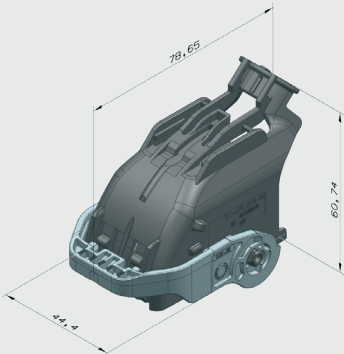
33121921	38W Female B Module (for 86W)
33121920	38W Female A Module (for 86W)



DIMENSION MEASUREMENT SAMPLE



33156001



33121915

CMC 112 WAY (32+32+48) SERIES



112W HEADER

Pin Size (mm): 0.64 (88) / 1.5 (24)

Number of Indexes: 1

MAX
TEMPERATURE



SEALING
PROTECTION



CONNECTOR
MATING FORCE

< 60N

Part number	Cavity count	Color (mates same color housing)
33504045	112	32W Black / 32W Grey / 48W Brown



112W DRESS COVER

Part number	Cavity count	Color	Orientation
13851307	32	Black	90°
13956254	48	Black	90°
33517228*	48	Black	45°

* Alternative dress cover.



COMPATIBLE WITH GTS TERMINALS



Part number	Blade size (mm)	Wire size range (mm²)	Plating	Other available platings
13955989	0.64	0.35	Sn	Ag, Au
13648598	0.64	0.50	Sn	Ag, Au
13712871	1.5	0.50 - 0.85	Sn	Ag, Au
13741954	1.5	1.0 - 1.3	Sn	Ag, Au
13749482	1.5	1.4 - 2.0	Sn	Ag, Au



112W MATING CONNECTORS

Series: Mixed

Cavities: 112

Terminal Size (mm): 0.64 & 1.5

Material: PBT



MAX
TEMPERATURE



SEALING
PROTECTION



TERMINAL
RETENTION FORCE

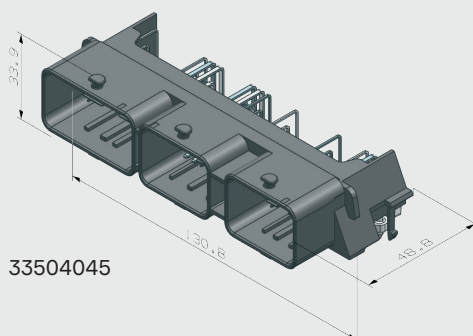


80N > 100N

Part number	Cavity count	Sealing	Gender	Color	Wire direction
13741940	32	Sealed	Female	Black	Left
33500494	32	Sealed	Female	Grey	Right
33500419	48	Sealed	Female	Brown	Left

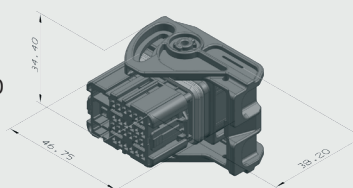


DIMENSION MEASUREMENT SAMPLE

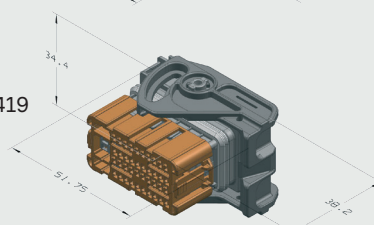


33504045

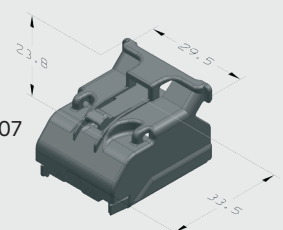
13741940



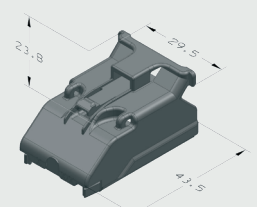
33500419



13851307



13956254



CMC 154 WAY (48+53+53) SERIES



154W HEADER

Pin Size (mm): 0.64 (120) / 1.5 (24) / 2.8 (10)

Number of Indexes: 1

MAX
TEMPERATURE



SEALING
PROTECTION



CONNECTOR
MATING FORCE

< 60N

Part number	Cavity count	Color (mates same color housing)
33513909	154	48W Grey / 53W Brown / 53W Black



154W DRESS COVER (FOR THE 48 WAY CONNECTOR)

Part number	Cavity count	Color	Orientation
13956254	48	Black	90°
33517228	48	Black	45°



COMPATIBLE WITH GTS TERMINALS



Part number	Blade size (mm)	Wire size range (mm²)	Plating	Other available platings
13955989	0.64	0.35	Sn	Ag, Au
13648598	0.64	0.50	Sn	Ag, Au
13712871	1.5	0.50 - 0.85	Sn	Ag, Au
13741954	1.5	1.0 - 1.3	Sn	Ag, Au
13749482	1.5	1.4 - 2.0	Sn	Ag, Au



154W MATING CONNECTORS

Series:	Mixed
Cavities:	154
Terminal Size (mm):	0.64, 1.5 & 2.8 (53 W)
Material:	PBT

 MAX
TEMPERATURE

 SEALING
PROTECTION

 TERMINAL
RETENTION FORCE

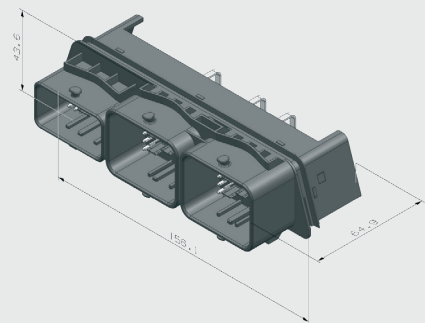


Part number	Cavity count	Sealing	Gender	Color	Wire direction
13956255	48	Sealed	Female	Grey	Right
13956021	48	Sealed	Female	Grey	Left

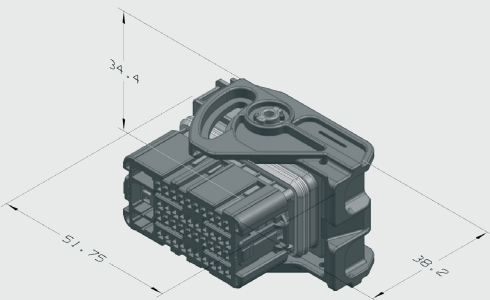
* 53W pocket compatible with generic connectors on market.



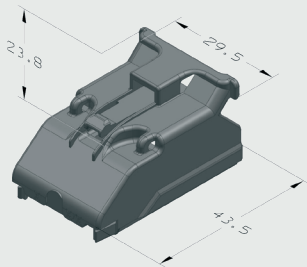
DIMENSION MEASUREMENT SAMPLE



33513909



13956021



13956254

Part Numbers

HEADERS & CONNECTORS

Part Number	Cavity count	Type	Sealing	Gender	Color	Wire Direction	Orientation
33503152	32	Header	-	-	Blue	-	-
33503150	32	Header	-	-	Brown	-	-
33503149	32	Header	-	-	Grey	-	-
33503151	32	Header	-	-	Black	-	-
13851306	32	Connector	Sealed	Female	Black	Right	-
13741940	32	Connector	Sealed	Female	Black	Left	-
33500498	32	Connector	Sealed	Female	Blue	Right	-
33500497	32	Connector	Sealed	Female	Blue	Left	-
33500496	32	Connector	Sealed	Female	Brown	Right	-
33500495	32	Connector	Sealed	Female	Brown	Left	-
33500494	32	Connector	Sealed	Female	Grey	Right	-
33500507	32	Connector	Sealed	Female	Grey	Left	-
13851307	32	Dress cover	-	-	Black	-	90°
33503457	48	Header	-	-	Black	-	-
13956255	48	Connector	Sealed	Female	Black	Right	-
13956021	48	Connector	Sealed	Female	Black	Left	-
33500420	48	Connector	Sealed	Female	Brown	Right	-
33500419	48	Connector	Sealed	Female	Brown	Left	-
33500500	48	Connector	Sealed	Female	Grey	Right	-
33500499	48	Connector	Sealed	Female	Grey	Left	-
13956254	48	Dress cover	-	-	Black	-	90°
33517228	48	Dress cover	-	-	Black	-	45°
33504510	64	Header	-	-	Black	-	-
35110623	64	Header	-	-	Grey	-	-
13648596	64	Connector	Sealed	Female	Black	Right	-
13722628	64	Connector	Sealed	Female	Black	Left	-
33500504	64	Connector	Sealed	Female	Grey	Right	-
33500503	64	Connector	Sealed	Female	Grey	Left	-
13648597	64	Dress cover	-	-	Black	-	-
33504045	112	Header	-	-	Black/Grey/Brown	-	-
33513909	154	Header	-	-	Grey/Brown/Black	-	-
33121921	38	B Module	-	Female	-	-	-
33121920	38	A Module	-	Female	-	-	-
33156001	86	Connector	Sealed	Female	Brown	Right	-
33155995	86	Connector	Sealed	Female	Brown	Left	-
33156000	86	Connector	Sealed	Female	Grey	Right	-
33155993	86	Connector	Sealed	Female	Grey	Left	-
33121915	86	Dress cover	-	-	Black	-	90°
33121914	86	Lever	-	-	Grey	-	90°

TERMINALS

Part number	Blade size (mm)	Terminal type	Wire size range (mm ²)	Plating	Other available platings	Compatible with
13955989	0.64	GTS	0.35	Sn	Ag, Au	32, 48, 64, 86, 112, & 154 Way
13648598	0.64	GTS	0.50	Sn	Ag, Au	32, 48, 64, 86, 112, & 154 Way
13712871	1.5	GTS	0.50 - 0.85	Sn	Ag, Au	32, 48, 64, 86, 112, & 154 Way
13741954	1.5	GTS	1.0 - 1.30	Sn	Ag, Au	32, 48, 64, 86, 112, & 154 Way
13749482	1.5	GTS	1.4 - 2.0	Sn	Ag, Au	32, 48, 64, 86, 112, & 154 Way
13774269	1.5	GTS	0.50 - 0.85	Sn	Ag, Au	86 Way
13860784	1.5	GTS	1.0 - 1.30	Sn	Ag, Au	86 Way
13737773	1.5	GTS	1.4 - 2.0	Sn	Ag, Au	86 Way
10810375	2.8	APEX	0.50 - 1.25	Sn	Ag, Au	86 Way
13627267	2.8	APEX	1.5 - 2.5	Sn	Ag, Au	86 Way

CAVITY PLUGS

Part number	Blade size (mm)	Terminal type	Color	Description	Compatible with
13768626	0.64	GTS	White	Cavity Plug	32, 48, & 64 Way
13826722	1.5	GTS	Blue	Cavity Plug	32, 48, & 64 Way
10736278	0.5 - 0.85	-	Yellow	Single Wire Seal	86 Way
10736279	1.0 - 2.0	-	Green	Single Wire Seal	86 Way
10779162	0.5 - 1.0	-	Blue	Single Wire Seal	86 Way
13578695	1.25	-	Brown	Single Wire Seal	86 Way
10779159	1.5 - 2.0	-	Red	Single Wire Seal	86 Way
10779161	2.5	-	Yellow	Single Wire Seal	86 Way
10787316	1.5	-	White	Single Wire Seal	86 Way
10779160	2.8	-	Green	Single Wire Seal	86 Way
13629105	0.64	-	White	Cavity Plug	86 Way

TOOLS

Part number	Application	Associated with
10915564	0.64 mm terminal extraction	32, 48, 64 & 86 Way
10915565	1.5 mm terminal extraction	32, 48, 64 & 86 Way
10915566	Cover removal	32, 48 & 64 Way
33105886	0.64 mm dummy plug insertion	32, 48 & 64 Way
33105887	1.5 mm dummy plug insertion	32, 48 & 64 Way
N/A	2.8 mm female terminal extraction	86 Way
33513040	TPA removal	32, 48 & 64 Way
33514306	1.5 mm terminal crimping	32, 48 & 64 Way
33514360	0.64 mm terminal crimping	32, 48 & 64 Way

Part numbers, specifications, dimensions and performance data in this document are for general references only and are subject to change without notice. To verify product information, please contact an Aptiv representative.

For **more** information:

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