

# LOW VOLTAGE CONNECTORS

Designed for the future of mobility



• APTIV •





# Going Beyond The Possibilities

Aptiv is a global technology company that develops safer, greener and more connected solutions enabling a more sustainable future.

Aptiv has more than 190,000 employees across 140 manufacturing facilities and 11 major technical centers worldwide. With a presence in 49 countries, we address mobility's toughest challenges through our deep software and systems integration expertise, delivering market relevant solutions for our customers.

[VISIT APTIV.COM](https://www.apativ.com)

INTELLIGENTLY CONNECTED  
FROM END TO END  
ONE OF THE MOST COMPREHENSIVE  
PORTFOLIO IN THE MARKET

At Aptiv, we understand the full electrical architecture of today's vehicles. This unique perspective gives us the expertise to design the most robust and innovative connection systems available, optimizing the cost and performance of the entire electrical system.

Aptiv never stops innovating when it comes to our complete portfolio of automotive connectors, terminals, seals and headers. Our wide range of robust, reliable and easy-to-use connection systems can address any application in the vehicle and enable future advancements in automotive design.



# A COMPREHENSIVE PRODUCT PORTFOLIO



## TERMINAL SYSTEMS

Aptiv's full range of terminals provides the perfect combination of electrical and provides mechanical performance for nearly any automotive application.

Our terminal options include standard one-piece and two-piece terminals, ring terminals, bus bars, and more. We also offer a variety of plating options as well as terminals that support single wire sealing.



## HOUSINGS

Aptiv offers a large variety of connectors and housings, with options for device (wire-to-board) and in-line (wire-to-wire) connections.

Our portfolio includes solutions for connections in the powertrain & engine area, active and passive safety systems, body and chassis electronics, multimedia systems, and interior functions, with various termination options to meet application requirements.

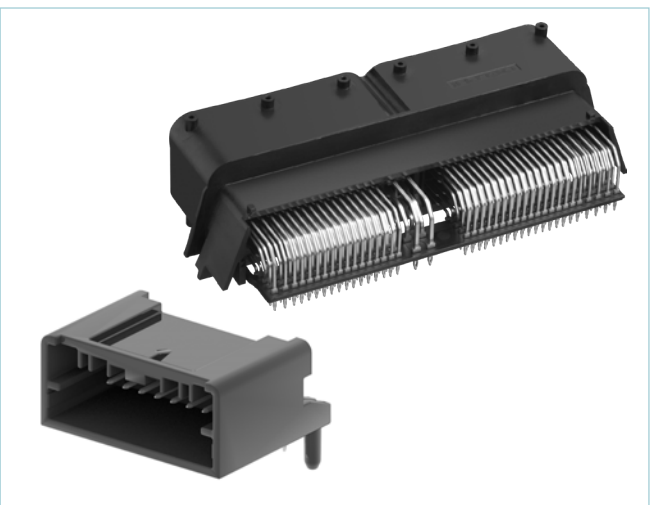


## SEALS

Aptiv manufactures a broad spectrum of cable seals which offer protection from particle and moisture intrusion.

Aptiv offers more than 250 different single wire seals for all types of connector cavities.

We have in-house capability of production and a global footprint.



## HEADERS

Aptiv offers a wide range of state of the art headers featuring high pin count solutions for harsh environment applications as well as solder & press-fit (compliant pin) applications.

We also offer miniaturized headers featuring 0.5 pitch.

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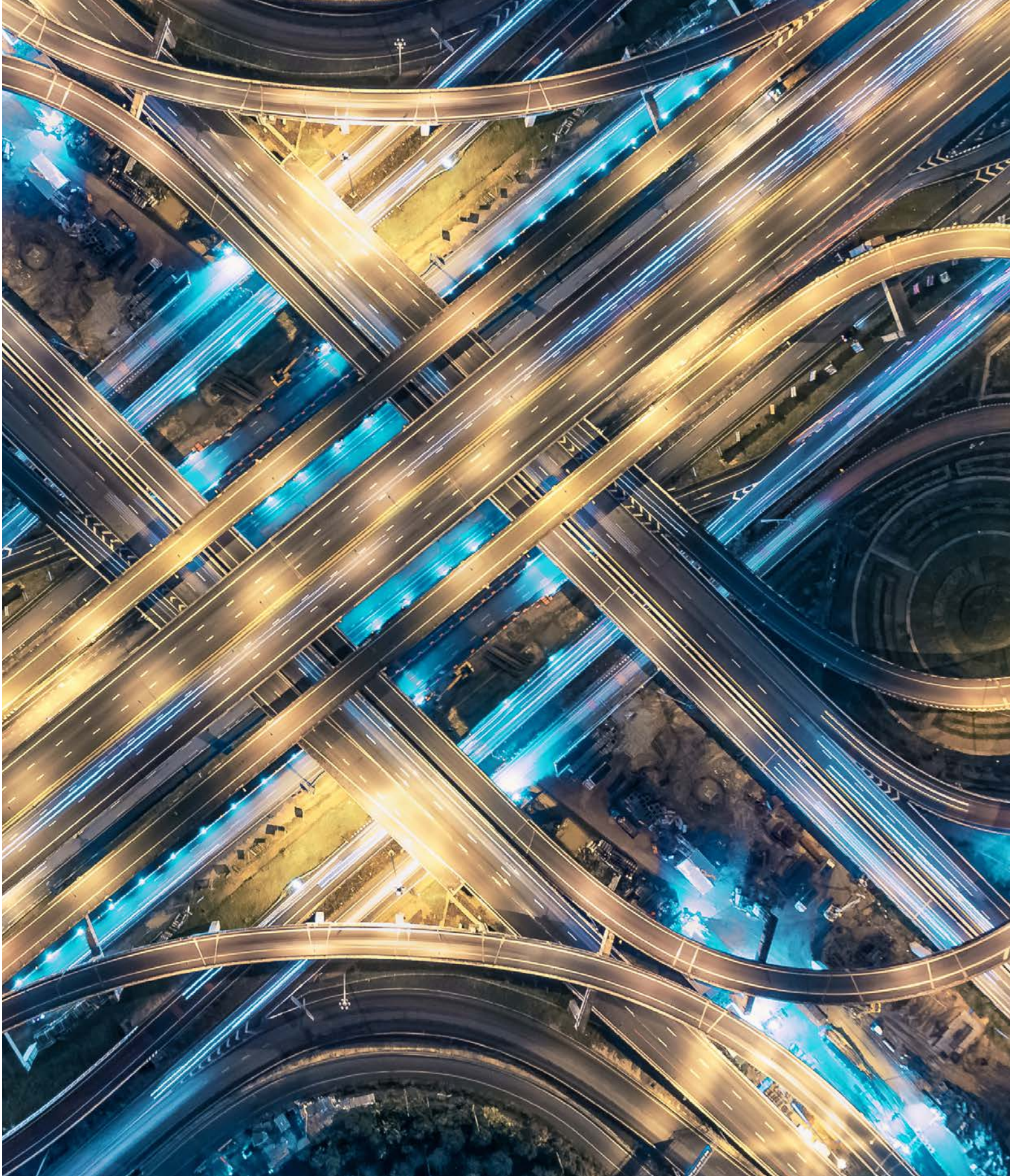
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# TERMINALS

## SELECTOR GUIDE

Aptiv’s terminals provide the perfect combination of electrical and mechanical performance for nearly any automotive application. Our terminal options include **standard one- and two-piece terminals, ring terminals, bus bars**, and more.

We also offer a variety of plating options as well as terminals that support single wire sealing.



	Miniature		
	0.5 mm	0.64 mm	1.2 mm
APEX			18 A
CTS	3 A		16.9 A
GTS		13 A	
HDK			11 A
OCS		7.5 A	16.5 A
SICMA		13 A	

Maximum current carrying capacity at 80°C is given for reference only. This document is non contractual

Mid Current		Power		
1.5 mm	2.8 mm	6.3 mm	9.5 mm	12 mm
18 A	40 A	55 A	120 A	
19 A	25 A	60 A	63 A	165 A
27 A				
29.5 A				
22 A	32 A			
19 A	22.6 A			





# APEX<sup>®</sup> TERMINALS AND CONNECTORS






# APEX® CONNECTORS

## SELECTOR GUIDE

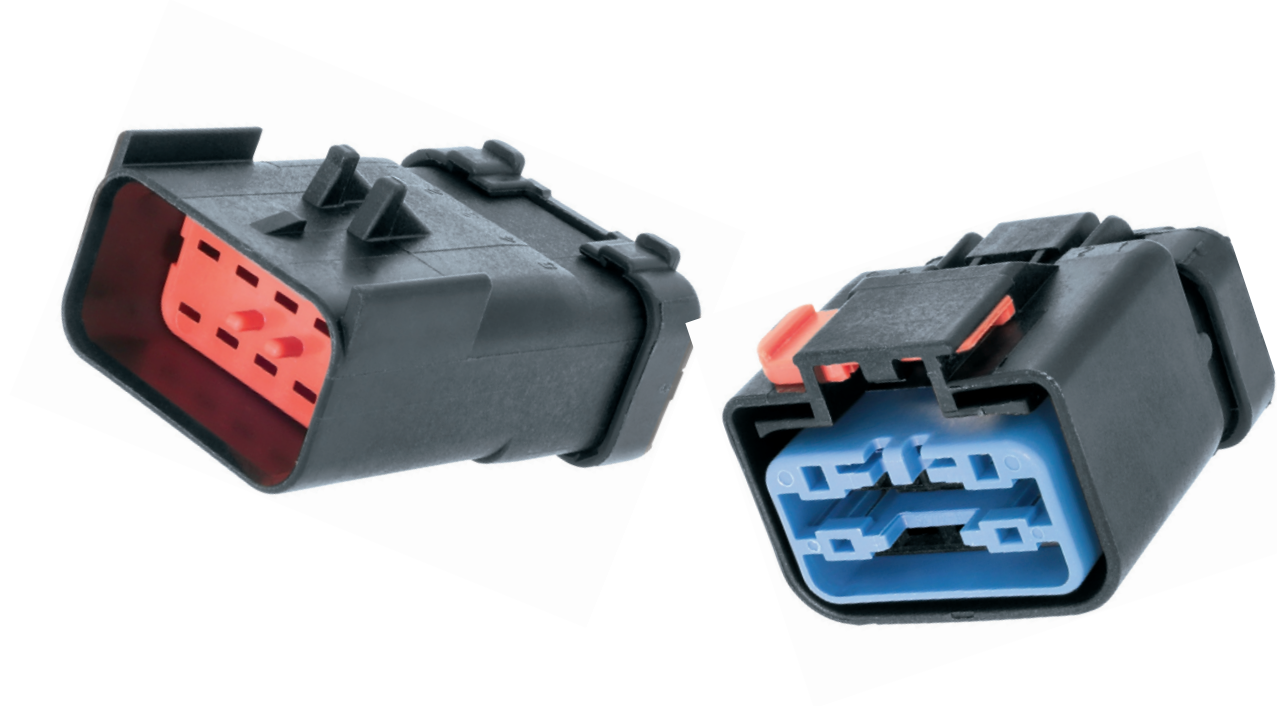
APEX electrical connection systems incorporates proven technology for harsh environments in automotive, off-highway, and specialty vehicles. These connectors are designed for applications where heat, vibration and moisture are a concern.




Our time-tested high performance and ergonomic solution delivering **the industry's highest current rating.**

- Heavy-duty performance
- High current capacity
- Ergonomic design

					
Product Series	APEX® 1.2 SensoMate™	APEX® 150 Sealed	APEX® 2.8 SensoMate™	APEX® 2.8 Sealed	APEX® 2.8 Unsealed
Applications	On-engine sensors and actuators	Sealed inline and device applications	On-engine sensors	On-engine sensors	Unsealed inline and device applications
Blade Size	1.2	1.5	2.8	2.8	2.8
# of Cavities	2, 3, 4, 5, 6	10, 16	2, 3, 4	2, 3, 4, 5, 6, 10, 14	2, 3, 4, 5, 6, 10, 14
Gender	F, M (2 to 4)	F, M	F	F, M	F, M
Temperature Class	T4	T3	T3	T3	T3
IP Rating	IP69K	IP69K	IP69K	IP68	NA
CPA	Optional	Optional	Optional	Optional	Optional
See Pages	28-29	30-31	32-33	34-35	36-37

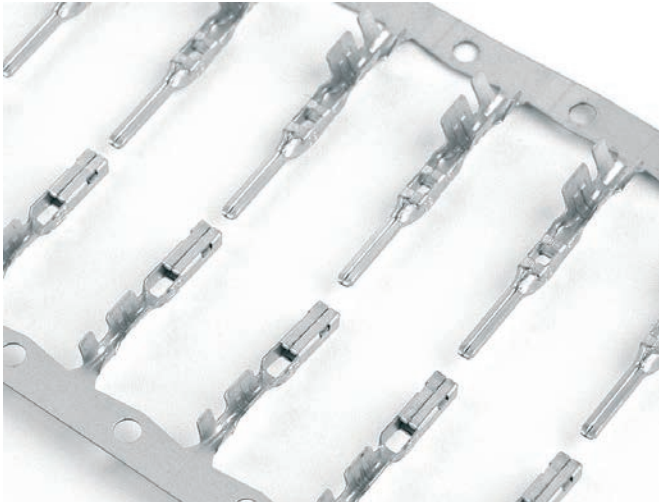
*This document is non-contractual and is for information purpose only*



		
APEX® Mixed	APEX® ErgoMate™	APEX® Halogen Bulb
Sealed inline applications	Sealed inline applications	Halogen Bulb
1.5 and 2.8	1.5 and 2.8	2.8
14	24	2
F, M	F, M	F
T3	T3	T4
IP69K	IP69K	IP69K
Optional	Optional	Optional
38-39	40-41	42-43



# APEX® 1.2 FEMALE TERMINALS



APEX® 1.2 Female & Male Terminals

## AVAILABLE CONFIGURATIONS

Terminal Type	Box & Blade
Terminal Construction	Two-piece
Locking Mechanism	Tangless / Lanceless
Terminal Cavity	APEX® 1.2 SensoMate™
Blade Size (mm)	1.2
Wire Gage Range (AWG)	22 - 16
Wire Gage Range (mm²)	0.35 - 1.5
Genders	Female, Male
Sealing Options	Unsealed, Mat Sealed, Cable Sealed
Plating Options	Sn, Sn/Ag, Ag, Au

## BENEFITS

- Heavy-duty performance
- Highest current rating

## FEATURES

- Two-piece construction
- Integrated floating spring made of beryllium copper or copper nickel silicon

## CHARACTERISTICS

Contact Resistance	< 0.5 mΩ
Contact Mating Force	< 5 N
Contact Unmating Force	< 1 N



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings	Other available configurations
Unsealed	F	Au	20	0.35 - 0.5	15504560	-	-
Cable Sealed	F	Sn	20	0.35 - 0.5	13806233	Sn/Ag, Ag, Au	Rewind A
Cable Sealed	F	Sn	18	0.75 - 1.5	13576990	Sn/Ag, Ag, Au	Rewind A

Please, contact an Aptiv representative for the full part number list.

## COMPATIBLE SEALS

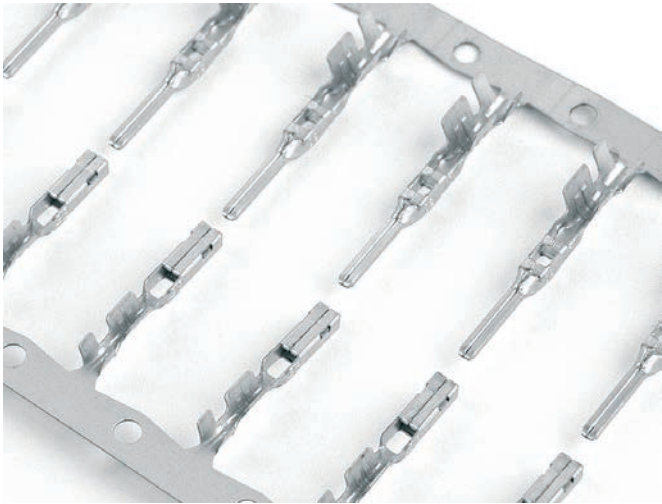
Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 0.5	Gray	Yes	33318278
Cable Seal	0.5 - 0.85	Gray	Yes	33318279
Cable Seal	1.0 - 1.5	Black	Yes	33318275

## COMPATIBLE WITH



APEX® 1.2 SensoMate™ Series Housings

# APEX® 1.5 TERMINALS



APEX® 1.5 Female & Male Terminals

## BENEFITS

- Heavy-duty performance
- Highest current rating

## FEATURES

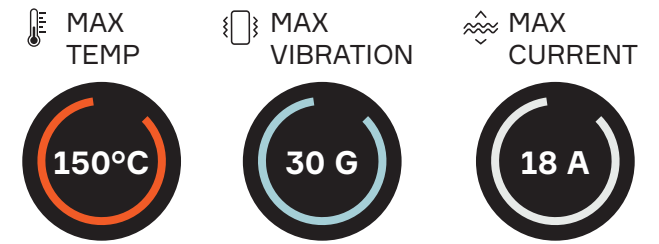
- Two-piece construction
- Integrated floating spring made of beryllium copper or copper nickel silicon

## AVAILABLE CONFIGURATIONS

Terminal Type	Box & Blade
Terminal Construction	Two-piece
Locking Mechanism	Tangless / Lanceless
Terminal Cavity	APEX®
Blade Size (mm)	1.5
Wire Gage Range (AWG)	22 - 16
Wire Gage Range (mm²)	0.35 - 1.5
Genders	Female, Male
Sealing Options	Unsealed, Mat Sealed, Cable Sealed
Plating Options	Sn, Au

## CHARACTERISTICS


Contact Resistance	< 0.5 mΩ
Contact Mating Force	< 5 N
Contact Unmating Force	< 1 N



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings	Other available configurations
Unsealed	F	Sn	24 - 20	0.35 - 0.5	15521509	Au	-
Unsealed	F	Sn	20 - 18	0.75 - 1.25	13679770	Au	-
Unsealed	F	Sn	16 - 14	1.5 - 2.5	15521507	-	-
Unsealed	M	Au	22 - 20	0.35 - 0.5	15520991	-	Rewind A, C
Unsealed	M	Sn	20 - 18	0.75 - 1.25	15438399	-	-
Cable Sealed	F	Au	24 - 20	0.35 - 0.5	33337935	-	-

Please, contact an Aptiv representative for the full part number list.

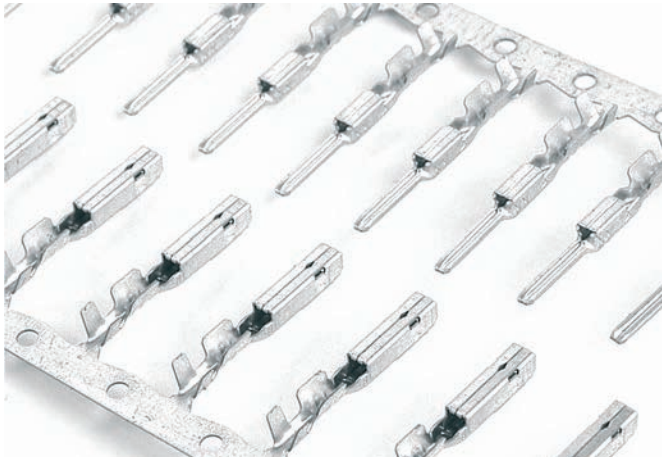
## COMPATIBLE SEALS

Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 0.5	Blue		
			No	15344938
Cable Seal	0.35 - 0.75	Yellow		
			Yes	10736278



# APEX® 150 TERMINALS

USCAR



APEX® 150 Female & Male Terminals

## BENEFITS

- Heavy-duty performance
- Highest current rating

## FEATURES

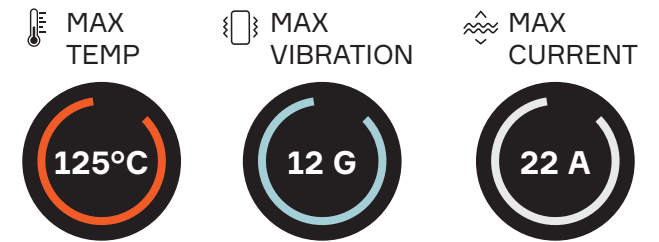
- Two-piece construction
- Integrated floating spring made of beryllium copper or copper nickel silicon
- Meets or exceeds USCAR performance standards

## AVAILABLE CONFIGURATIONS

Terminal Type	Box & Blade
Terminal Construction	Two-piece
Locking Mechanism	Tangless / Lanceless
Terminal Cavity	APEX®
Blade Size (mm)	1.5
Wire Gage Range (AWG)	22 - 16
Wire Gage Range (mm²)	0.35 - 1.0
Genders	Female, Male
Sealing Options	Unsealed
Plating Options	Sn, Au

## CHARACTERISTICS

Contact Resistance	< 0.5 mΩ
Contact Mating Force	< 3.5 N
Contact Unmating Force	< 1 N



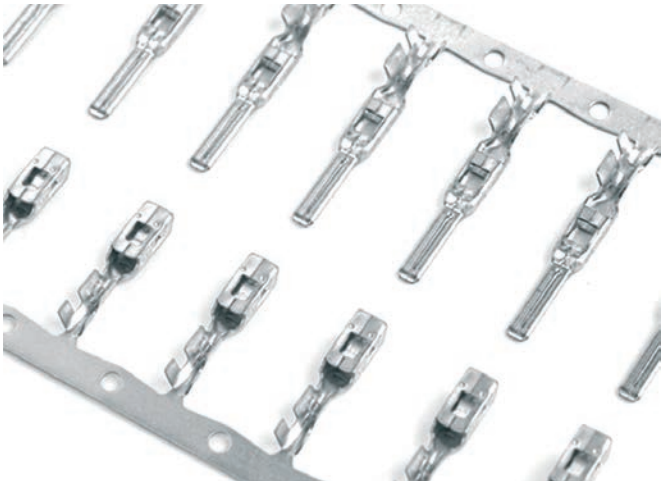
Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings	Other available configurations
Unsealed	F	Sn	22 - 20	0.35 - 0.5	13624983	Au	Rewind A, C
Unsealed	F	Sn	18 - 16	0.75 - 1.25	13613157	Au	Rewind A, C
Unsealed	M	Sn	22 - 20	0.35 - 0.5	13624759	Au	Rewind A
Unsealed	M	Sn	18 - 16	0.75 - 1.25	13630404	Au	Rewind A, C

Please, contact an Aptiv representative for the full part number list.

## COMPATIBLE WITH



# APEX® 2.8 TERMINALS



APEX® 2.8 Female & Male Terminals

## BENEFITS

- Heavy-duty performance
- Highest current rating

## FEATURES

- Two-piece construction
- Integrated floating spring made of beryllium copper or copper nickel silicon
- Low contact mating force

## AVAILABLE CONFIGURATIONS

Terminal Type	Box & Blade
Terminal Construction	Two-piece
Locking Mechanism	Tangless / Lanceless
Terminal Cavity	APEX®
Blade Size (mm)	2.8
Wire Gage Range (AWG)	22 - 10
Wire Gage Range (mm²)	0.35 - 6.0
Genders	Female, Male
Sealing Options	Unsealed, Mat Sealed, Cable Sealed
Plating Options	Sn, Ag, Au

## CHARACTERISTICS

Contact Resistance	< 2 mΩ
Contact Mating Force	< 5 N
Contact Unmating Force	< 2 N



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings	Other available configurations
Unsealed	F	Sn	12 - 10	4.0 - 6.0	10762802	Au	Greased/Ungreased, Rewind A, C
Unsealed	F	Sn	12	3.0	15422738	Au	Greased/Ungreased, Rewind A, C
Unsealed	F	Sn	16 - 14	2.0	10762803	Au	Greased/Ungreased, Rewind A, C
Unsealed	F	Sn	20 - 18	0.5 - 1.0	10757690	Au	Greased/Ungreased, Rewind A, C
Unsealed	F	Sn	22	0.35	10757691	-	Greased/Ungreased, Rewind A, C
Unsealed	M	Sn	12 - 10	4.0 - 6.0	10762774	Au	Rewind A, C
Unsealed	M	Sn	16 - 14	1.5 - 2.5	10757692	Au	Rewind A, C
Unsealed	M	Sn	20 - 18	0.5 - 1.0	10762775	Au	Rewind A, C
Unsealed	M	Sn	22	0.35	10762776	Au	Rewind A, C
Cable Sealed	F	Sn	12	3.0	10810733	-	Greased/Ungreased, Rewind A, C
Cable Sealed	F	Sn	16 - 14	1.5 - 2.5	13627267	Ag, Au	Greased/Ungreased, Rewind A, C
Cable Sealed	F	Sn	20 - 18	0.5 - 1.0	10810375	Ag, Au	Greased/Ungreased, Rewind A, C

## COMPATIBLE SEALS

Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 1.0	Pink	Yes	35296484
Cable Seal	1.0 - 2.0	Black	Yes	15518641
Cable Seal	2.5 - 4.0	Brown	Yes	15458498

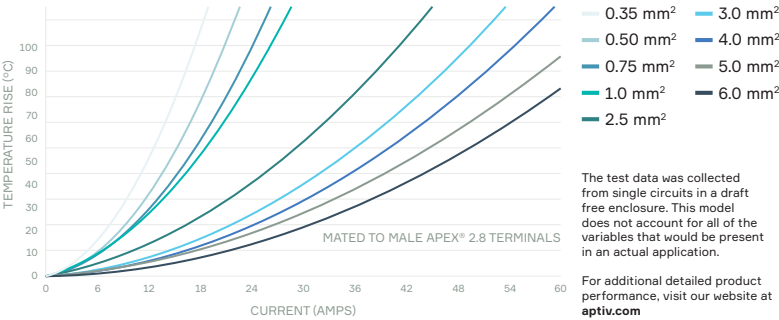
Please, contact an Aptiv representative for the full part number list.

## TEMP RISE CURVE

### APEX® 2.8 FEMALE TERMINAL

Aptiv taxi: 15324842  
Cable range: 0.35 - 6.0 mm²  
Crimp method: Standard  
Contact plating: Sn  
Test method: Single circuit in free air\*  
Mated to: Male terminal

\* For reference only



## COMPATIBLE WITH





# APEX® 6.35 TERMINALS



APEX® 6.35 Female & Male Terminals

## AVAILABLE CONFIGURATIONS

Terminal Type	Box & Blade
Terminal Construction	Two-piece
Locking Mechanism	Tangless / Lanceless
Terminal Cavity	APEX®
Blade Size (mm)	6.35
Wire Gage Range (AWG)	20 - 8
Wire Gage Range (mm²)	0.5 - 8.0
Genders	Female, Male
Sealing Options	Unsealed, Cable Sealed
Plating Options	Sn, Sn/Ag, Ag

## APPLICATIONS

High current/high power unique applications

## BENEFITS

- Heavy-duty performance
- Highest current rating

## FEATURES

- Two-piece construction
- Integrated floating spring made of beryllium copper or copper nickel silicon

## CHARACTERISTICS

Contact Resistance	< 2 mΩ
Contact Mating Force	< 10 N
Contact Unmating Force	< 5 N



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings	Other available configurations
Unsealed	F	Sn	8	8.0	35213380	-	Greased/Ungreased ReRewind A, C
Unsealed	F	Sn	10	4.0 - 6.0	13843152	-	Greased/Ungreased ReRewind A, C
Unsealed	F	Sn	14 - 12	2.0 - 3.0	13600463	-	Greased/Ungreased ReRewind A, C
Unsealed	F	Sn	18 - 16	0.75 - 1.5	13965582	-	Greased/Ungreased ReRewind A, C
Unsealed	F	Sn	20 - 18	0.5 - 0.75	13872174	-	Greased/Ungreased ReRewind A, C
Unsealed	M	Sn	10	4.0 - 6.0	33386358	-	-
Cable Sealed	F	Sn	10	4.0 - 6.0	10863886	Ag	Greased/Ungreased, Rewind A, C
Cable Sealed	F	Sn	14 - 12	2.0 - 3.0	13658862	Ag	Greased/Ungreased ReRewind A, C
Cable Sealed	F	Sn	18 - 16	0.75 - 1.5	13673119	Ag	Greased/Ungreased ReRewind A, C

## COMPATIBLE SEALS

Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.75 - 1.25	Natural	No	15324997
Cable Seal	1.25 - 2.0	Red	No	15324995
Cable Seal	2.5 - 4.0	Gray	No	15324994
Cable Seal	4.0 - 6.0	Blue	No	15324996
Cable Seal	2.0 - 3.0	Black	Yes	35308322

Please, contact an Aptiv representative for the full part number list.

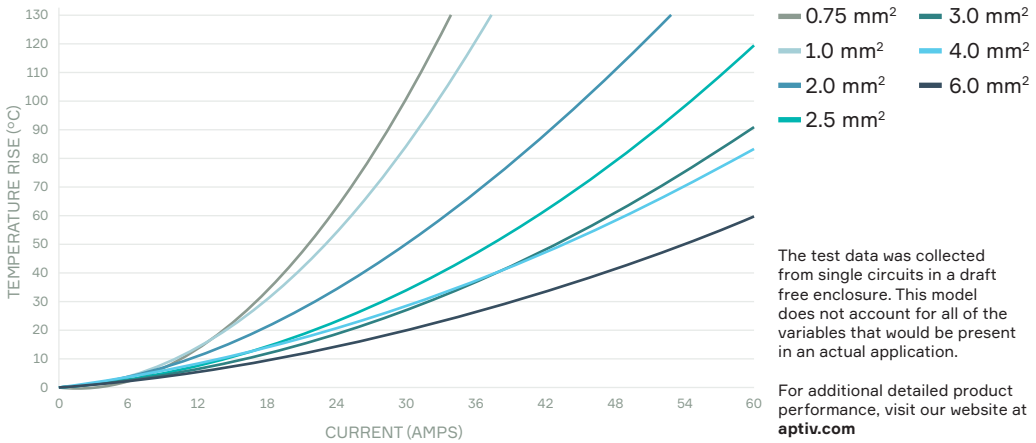
## TEMP RISE CURVE

### APEX® 6.3 FEMALE TERMINAL

Aptiv taxi: 13707625  
Cable range: 0.75 - 6.0 mm²  
Crimp method: Standard  
Contact plating: Sn halt  
Test method: Single circuit in free air\*

Mated to: Male terminal

\* For reference only



The test data was collected from single circuits in a draft free enclosure. This model does not account for all of the variables that would be present in an actual application.

For additional detailed product performance, visit our website at [aptiv.com](https://www.aptiv.com)

# APEX® 9.5 TERMINALS



APEX® 9.5 Female & Male Terminals

## BENEFITS

- Heavy-duty performance
- Highest current rating
- Suitable for high power and high voltage applications

## FEATURES

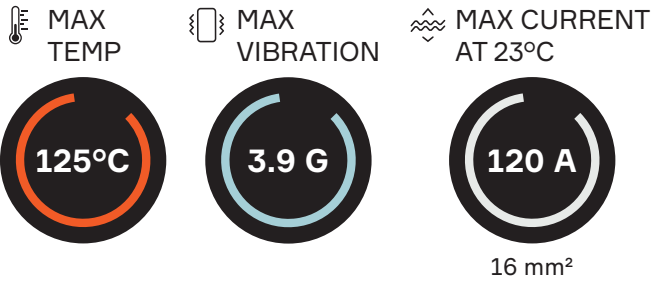
- Two-piece construction
- Integrated floating spring made of stainless steel
- Large cable size capability

## AVAILABLE CONFIGURATIONS

Terminal Type	Box & Blade
Terminal Construction	Two-piece
Locking Mechanism	Tangless / Lanceless
Terminal Cavity	APEX®
Crimp Validated to	RSA/PSA
Blade Size (mm)	9.5
Wire Gage Range (AWG)	7 - 3
Wire Gage Range (mm²)	10 - 16
Genders	Female, Male
Sealing Options	Unsealed, Cable Sealed
Plating Options	Sn
Mating Tab Dimension (mm)	9.5 x 1.2

## CHARACTERISTICS

Contact Resistance	< 0.3 mΩ
Contact Mating Force	< 30 N
Contact Unmating Force	< 10 N
Mating Cycles Tin/Silver	10
Cavity Pullout Force	> 150 N
Center Line Spacing (mm)	18 (sealed) 14 (unsealed)



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number
Unsealed	F	Sn	5 - 3	16 - 25	13862251
Cable Sealed	F	Sn	7 - 5	10 - 16	33514387
Cable Sealed	M	Sn	7 - 5	10 - 16	33514386

## COMPATIBLE SEALS

Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	6	Green	Yes	35239048
Cable Seal	10	Blue	Yes	33503294
Cable Seal	16	Yellow	Yes	33503295

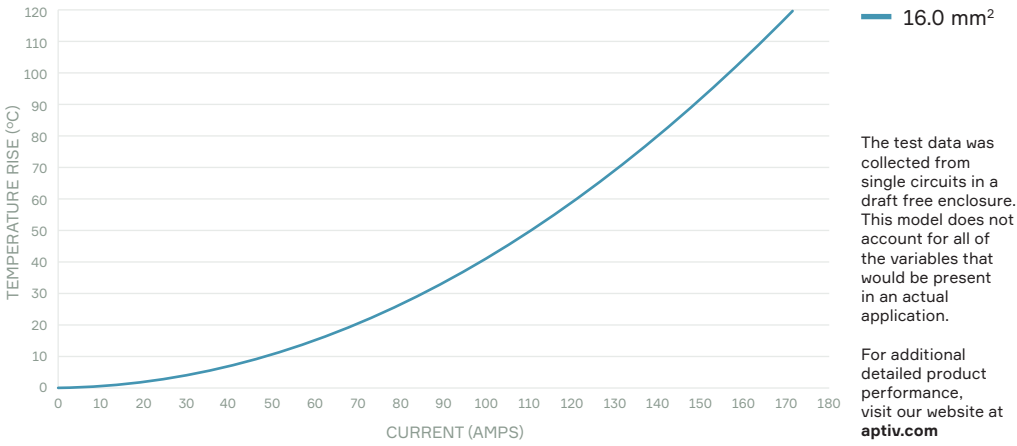
Please, contact an Aptiv representative for the full part number list.

## TEMP RISE CURVE

### APEX® 9.5 FEMALE TERMINAL

Cable range: 10.0 - 16.0 mm²  
Crimp method: Standard  
Contact plating: Sn  
Test method: Single circuit in free air\*  
Mated to: Male terminal

\* For reference only





# APEX<sup>®</sup> 1.2 SensoMate<sup>™</sup> SERIES



## BENEFITS

- Heavy-duty performance for engine vibration and temperature
- Highest current rating of APEX two-piece performance technology
- Ergonomic design including Connector Position Assurance (CPA)

## FEATURES

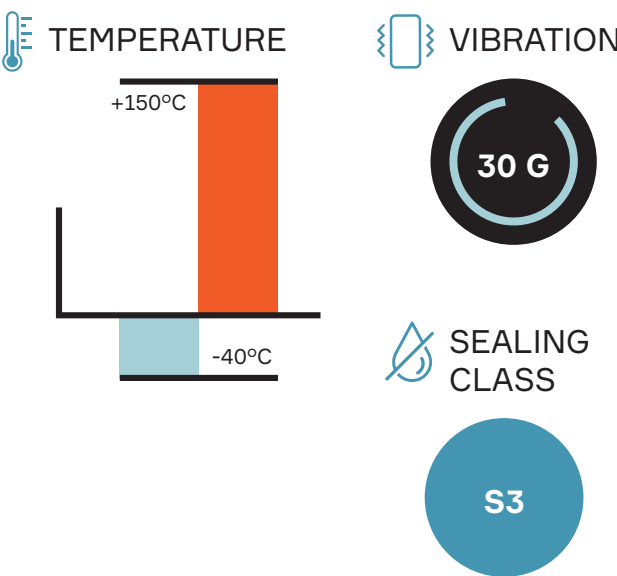
- Compatible with VDA (AK) 1.2 and USCAR 120 device interfaces (1.2 mm male blade)
- Compliant with Hyundai ES 91500-00/02
- Compliant with USCAR design guidelines and performance standards
- Compliant to Renault-Nissan-Mitsubishi RND5-B-00029 performance standards
- Terminal Position Assurance (TPA) based on Primary Lock Reinforcement (PLR) to detect partially installed terminals

## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	2, 3, 4, 5, 6
Cavity Configurations (mm)	1.2
Blade Size (mm)	1.2
Genders	Female, Male
Sealing Type	Cable Sealed
Centerline Spacing (mm)	4.0
TPA	PLR
CPA	Optional
High Temperature T5 (175°C)	Version available

## APPLICATIONS

On-engine sensors and actuators



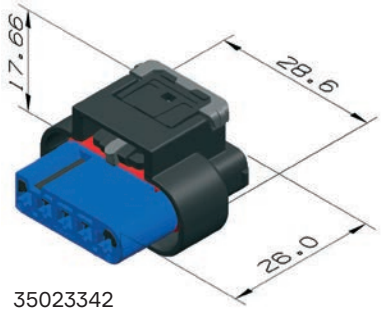
Cavity count	Gender	Dimensions W x H x D (mm)	Part number	Index	CPA	Color	Generation	Shroud Length	Other indexes offered
2	F	16.4 x 17.6 x 32.0	13806231	A	No	Black	One	Short (half)	B, C
2	F	17 x 16.45 x 28.3	33401217	A	No	Black	Two	Short (half)	B, C, D
2	F	17.4 x 16.45 x 28.3	33401221	A	Yes	Black	Two	Short (half)	B, C, D
2	F	17 x 16.45 x 28.3	33384128	A	No	Black	Two. Clip-Type	Long (full)	B, C, D
2	F	17.4 x 16.45 x 28.3	35050101	A	Yes	Black	Two. Clip-Type	Long (full)	B, C, D
2	F	17 x 16.45 x 28.3	33318607	A	No	Black	Two	Long (full)	B, C, D
2	F	17.4 x 16.45 x 28.3	33318611	A	Yes	Black	Two	Long (full)	B, C, D
2	F	17 x 16.45 x 28.3	35259417	A	No	Black	Two. High Temp T5	Long (full)	B, C
2	F	17.4 x 16.45 x 28.3	35259421	A	Yes	Black	Two. High Temp T5	Long (full)	B, C
3	F	19.3 x 17.6 x 31.0	13578335	A	No	Black	One	Short (half)	B, C, D
3	F	19.3 x 16.45 x 28.3	33242572	A	No	Black	Two	Short (half)	B, C, D
3	F	19.3 x 16.45 x 28.3	33242576	A	Yes	Black	Two	Short (half)	B, C, D
3	F	19.3 x 16.45 x 28.3	33317676	A	No	Black	Two	Long (full)	B, C, D
3	F	19.3 x 16.45 x 28.3	33317681	A	Yes	Black	Two	Long (full)	B, C, D
4	F	24.5 x 17.6 x 32.1	13820427	A	No	Black	One	Short (half)	B, C, D
4	F	24.6 x 17.7 x 28.3	33218537	A	No	Black	One	Short (half)	B, C, D
4	F	24.6 x 17.6 x 28.3	35172690	A	No	Black	Two	Long (full)	B, C, D
4	F	24.6 x 17.6 x 28.3	35172708	A	Yes	Black	Two	Long (full)	B, C, D
5	F	28.6 x 17.6 x 28.7	35023342	A	No	Black	Two	Short (half)	B, C, D
5	F	28.6 x 17.6 x 28.7	35032599	A	Yes	Black	Two	Short (half)	B, C, D
5	F	28.6 x 17.6 x 28.7	33241268	A	No	Black	Two	Long (full)	B, C, D
5	F	28.6 x 17.6 x 28.7	33241269	A	Yes	Black	Two	Long (full)	B, C, D
5	F	28.6 x 17.6 x 28.7	35288140	A	No	Black	Two*	Short (half)	B, C, D
5	F	28.6 x 17.6 x 28.7	35288144	A	Yes	Black	Two*	Short (half)	B, C, D
6	F	32.6 x 17.65 x 28.45	33355813	A	No	Black	Two	Long (full)	B, C, D
6	F	32.6 x 17.65 x 28.45	33356199	A	Yes	Black	Two	Long (full)	B, C, D
2	M	12.6 x 13.45 x 43.4	33219402	A	x	Black	One	N/A	B, C, D
3	M	15.2 x 13.45 x 43.4	33355759	A	x	Black	One	N/A	B, C, D
4	M	21.9 x 18.7 x 43.4	35078036	A	x	Black	One	N/A	B, C, D

\* 180° polarization oriented

Type	Applicable Wire Size (mm <sup>2</sup> )	Color	Restraint Ring	Part Number
Cavity Plug	N/A	White	No	12198198
Cable Seal	0.35 - 0.5	Gray	Yes	33318278
Cable Seal	0.5 - 0.85	Gray	Yes	33318279
Cable Seal	1.0 - 1.5	Black	Yes	33318275

\* 180° polarization oriented

## DIMENSION MEASUREMENT SAMPLE



## COMPATIBLE WITH



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.

# APEX® 150 SEALED SERIES



APEX® 150 Sealed  
10W Female & Male

## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	10, 16
Cavity Configurations (mm)	1.5
Genders	Female, Male
Sealing Type	Mat Sealed
Centerline Spacing (mm)	3.5
CPA	Optional

## APPLICATIONS

Sealed inline and device applications

See back page for representative part numbers and packaging dimensions.

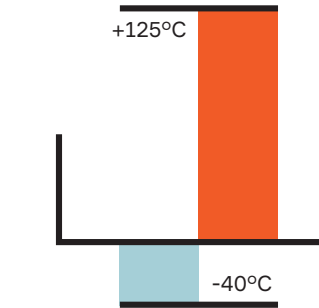
## BENEFITS

- Heavy-duty performance
- Highest current rating
- Ergonomic design

## FEATURES

- Waterproof application with interfacial and mat seal
- Compliant with USCAR design guidelines and performance standards
- USCAR footprint compatible
- Primary Lock Reinforcement (PLR)
- Mechanical polarization

## TEMPERATURE



## VIBRATION



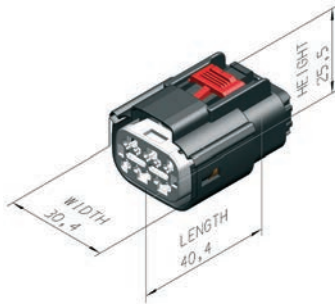
## ENVIRONMENTAL PROTECTION



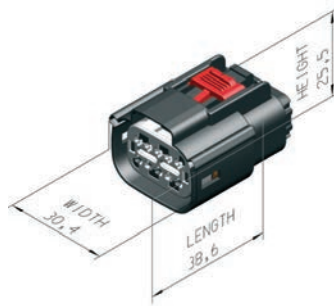
Cavity count	Blade size (mm)	Gender	Dimensions W x H x D (mm)	Part number	Index	Color	Other indexes offered
10	1.5	F	28.7 x 24.7 x 38.6	13737245	A	Black	B, C, D
10	1.5	M	25.9 x 23.3 x 53.0	13763996	A	Black	B, C, D
16	1.5	F	39.2 x 24.7 x 38.6	13625159	A	Black	B, C, D
16	1.5	M	36.4 x 23.3 x 53.0	13625160	A	Black	B, C, D

Please, contact an Aptiv representative for the full part number list.

## DIMENSION MEASUREMENT SAMPLE

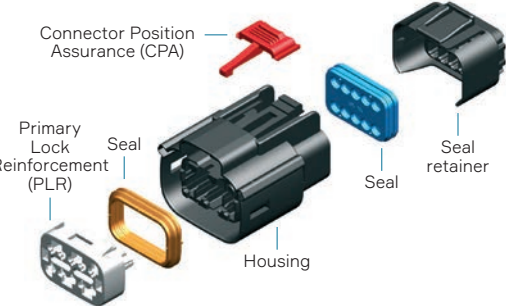


APEX® 150 Sealed  
10W Female pre-assembly



APEX® 150 Sealed  
10W Female assembly

## EXPLODED VIEW



APEX® 150 Sealed  
10W Female

## COMPATIBLE WITH



APEX® 150 Series Terminals



# APEX<sup>®</sup> 2.8 SensoMate<sup>™</sup> SERIES



APEX<sup>®</sup> 2.8 SensoMate<sup>™</sup>  
4W Female

## BENEFITS

- Heavy-duty performance
- Highest current rating
- Ergonomic design

## FEATURES

- Compliant with USCAR design guidelines and performance standards
- Industry standard footprint
- Superior single-piece housing construction
- Primary Lock Reinforcement (PLR) to detect partially installed terminals

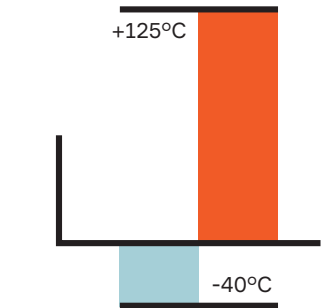
## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	2, 3, 4
Cavity Configurations (mm)	2.8
Genders	Female
Sealing Type	Cable Sealed
Centerline Spacing (mm)	5.0

## APPLICATIONS

On-engine sensors

## TEMPERATURE



## VIBRATION



## ENVIRONMENTAL PROTECTION



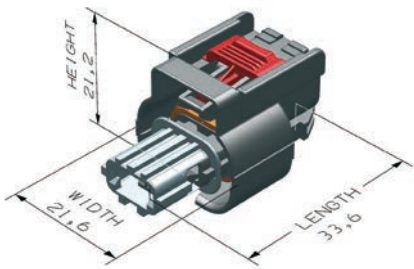
Cavity count	Blade size (mm)	Gender	Dimensions W x H x D (mm)	Part number	Index	Color	Other indexes offered
2	2.8	F	21.6 x 21.2 x 31.0	13821046	A	Black	B
3	2.8	F	26.6 x 21.2 x 31.0	13791661	A	Black	B
4	2.8	F	31.6 x 23.2 x 31.0	33513154	A	Black	B

Please, contact an Aptiv representative for the full part number list.

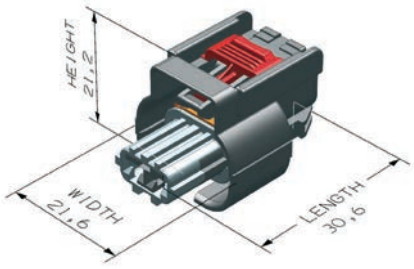
## COMPATIBLE SEALS

Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 1.0	Pink	Yes	35296484
Cable Seal	1.0 - 2.0	Black	Yes	15518641
Cable Seal	2.5 - 4.0	Brown	Yes	15458498
Cavity Plug	N/A	Blue	Yes	35478080
Cavity Plug	N/A	White	No	15305170

## DIMENSION MEASUREMENT SAMPLE

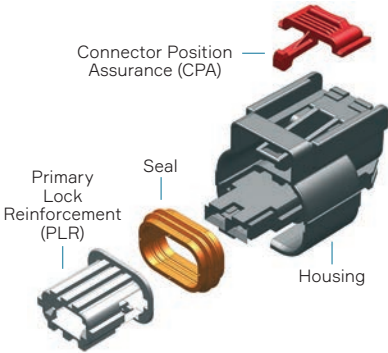


APEX<sup>®</sup> 2.8 SensoMate<sup>™</sup>  
2W Female pre-assembly



APEX<sup>®</sup> 2.8 SensoMate<sup>™</sup>  
2W Female assembly

## EXPLODED VIEW



APEX<sup>®</sup> 2.8 SensoMate<sup>™</sup>  
2W Female

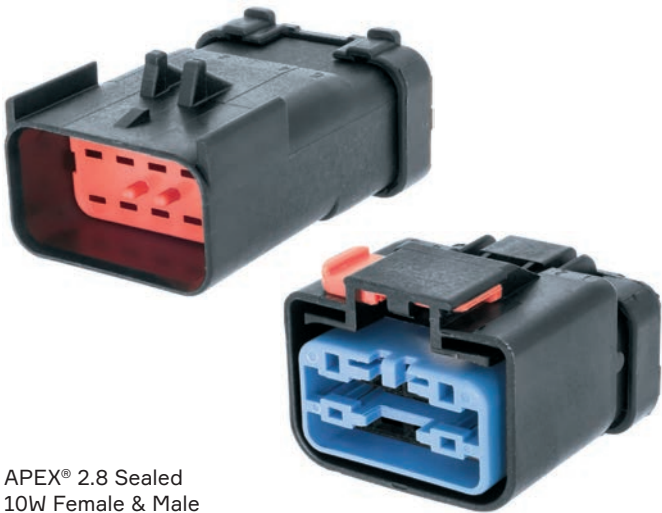
## COMPATIBLE WITH



APEX<sup>®</sup> 2.8 Series Terminals

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.

# APEX® 2.8 SEALED SERIES



APEX® 2.8 Sealed  
10W Female & Male

## BENEFITS

- Heavy-duty performance
- Highest current rating
- Ergonomic design

## FEATURES

- Most compact 2.8 mm system in the industry
- Fully protected interface seal
- Meets or exceeds USCAR performance standards and GMW3191
- Compliant with USCAR design guidelines and performance standards
- 0.75 mm² (20 AWG) to 4 mm² (10 AWG)
- Primary Lock Reinforcement (PLR)
- Mechanical polarization

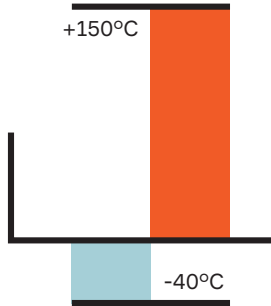
## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	2, 3, 4, 5, 6, 10, 14
Cavity Configurations (mm)	2.8
Genders	Female, Male
Sealing Type	Mat Sealed
Centerline Spacing (mm)	5.25

## APPLICATIONS

Sealed inline and device applications

## TEMPERATURE



## VIBRATION



## ENVIRONMENTAL PROTECTION

IP68

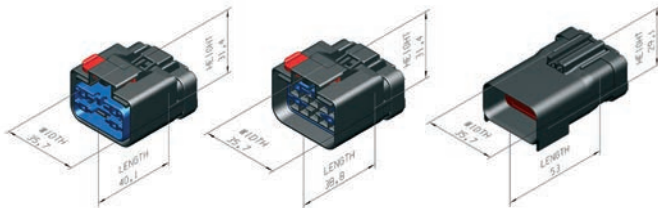
Cavity count	Blade size (mm)	Gender	Dimensions W x H x D (mm)	Part number	Index	Color	Other indexes offered
2	2.8	F	24.8 x 25.7 x 40.1	10757672	A	Black	B, C, D
2	2.8	M	21.9 x 23.4 x 53.0	15488574	A	Black	B, C, D
3	2.8	F	28.2 x 21.9 x 40.1	10757671	A	Black	B, C, D
3	2.8	M	28.2 x 22.5 x 53.0	15394689	A	Black	B, C, D
4	2.8	F	32.6 x 22.2 x 40.1	15425692	A	Black	B, C, D
4	2.8	M	31.1 x 22.5 x 53.0	15489820	A	Black	B, C, D
5	2.8	F	36.0 x 23.4 x 41.3	33513170	A	Black	B, C, D
6	2.8	F	24.8 x 25.3 x 37.7	35063643	A	Black	B, C, D
6	2.8	M	24.4 x 26.3 x 53.0	15430633	A	Black	B, C, D
10	2.8	F	35.3 x 31.4 x 40.1	15316895	A	Black	B, C, D
10	2.8	M	32.4 x 29.1 x 53.0	15425612	A	Black	B, C, D
14	2.8	F	45.8 x 30.8 x 37.8	10763414	A	Black	B, C, D
14	2.8	M	46.2 x 29.2 x 53.1	10757674	A	Black	B, C, D

Please, contact an Aptiv representative for the full part number list.

## COMPATIBLE SEALS

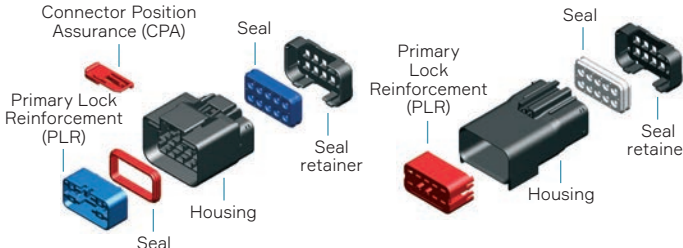
Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 1.0	Pink	Yes	35296484
Cable Seal	1.0 - 2.0	Black	Yes	15518641
Cable Seal	2.5 - 4.0	Brown	Yes	15458498
Cavity Plug	N/A	Blue	Yes	35478080
Cavity Plug	N/A	White	No	15305170

## DIMENSION MEASUREMENT SAMPLE

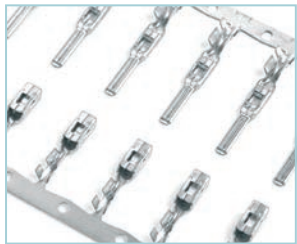


APEX® 2.8 Sealed 10W Female    APEX® 2.8 Sealed 10W Female    APEX® 2.8 Sealed 10W Male

## EXPLODED VIEW



## COMPATIBLE WITH



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# APEX® 2.8 UNSEALED SERIES



## BENEFITS

- Heavy-duty performance
- Highest current rating
- Ergonomic design

## FEATURES

- Meets or exceeds USCAR performance standards and GMW3191
- 0.35 mm<sup>2</sup> (22 AWG) to 5 mm<sup>2</sup> (10 AWG)
- Fully assembled connector for ease of use
- Primary Lock Reinforcement (PLR)
- Mechanical polarization

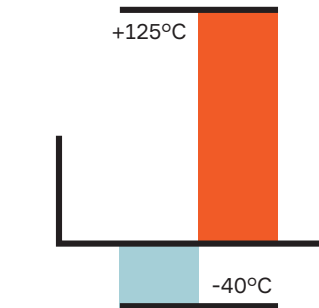
## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	2, 3, 4, 5, 6, 10, 14
Cavity Configurations (mm)	2.8
Genders	Female, Male
Centerline Spacing (mm)	5.25
CPA	Optional

## APPLICATIONS

Unsealed inline and device applications

## TEMPERATURE



## VIBRATION



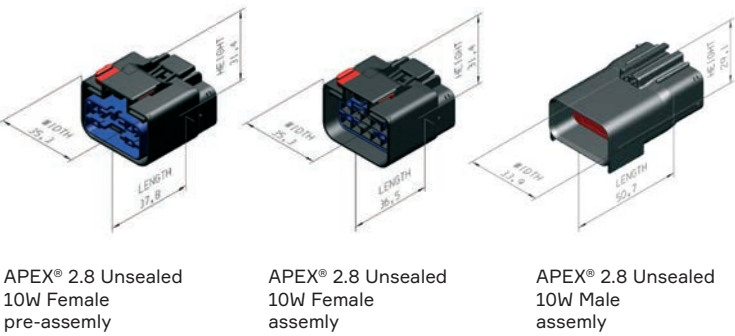
## ENVIRONMENTAL PROTECTION

IP40

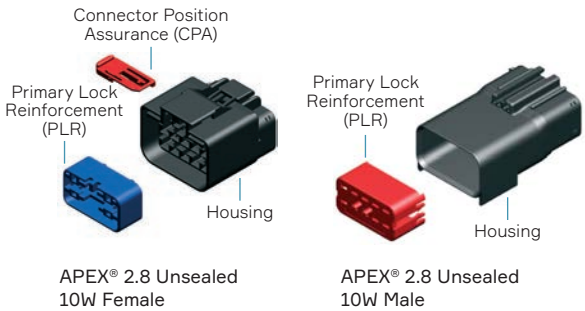
Cavity count	Blade size (mm)	Gender	Dimensions W x H x D (mm)	Part number	Index	Color	Other indexes offered
2	2.8	F	24.8 x 25.7 x 40.1	13869306	A	Black	B, C, D
2	2.8	M	21.9 x 23.4 x 50.7	33500082	A	Black	B, C, D
3	2.8	F	28.2 x 21.9 x 37.8	13576040	A	Black	B, C, D
3	2.8	M	28.2 x 22.5 x 50.7	33500093	A	Black	B, C, D
4	2.8	F	32.6 x 22.2 x 37.8	33517234	A	Black	B, C, D
4	2.8	M	31.1 x 22.5 x 50.7	33500099	A	Black	B, C, D
5	2.8	F	36.0 x 23.4 x 39.0	33513166	A	Black	B, C, D
6	2.8	F	24.8 x 25.3 x 37.8	15441804	A	Black	B, C, D
6	2.8	M	24.4 x 26.3 x 50.7	33500104	A	Black	B, C, D
10	2.8	F	35.3 x 31.4 x 37.8	15492288	A	Black	B, C, D
10	2.8	M	32.4 x 29.1 x 50.7	33500112	A	Black	B, C, D
14	2.8	F	45.8 x 30.8 x 37.8	13582973	A	Black	B, C, D
14	2.8	M	46.2 x 29.2 x 50.7	13581869	A	Black	B, C, D

Please, contact an Aptiv representative for the full part number list.

## DIMENSION MEASUREMENT SAMPLE



## EXPLODED VIEW



## COMPATIBLE WITH



# APEX<sup>®</sup> MIXED SERIES



### BENEFITS

- Heavy-duty performance
- Highest current rating
- Ergonomic design

### FEATURES

- APEX 150 and APEX 2.8 terminals for power and signal delivery
- Compliant with USCAR design guidelines and performance standards
- Primary Lock Reinforcement (PLR)
- Shorting Bar version available for safety circuit protection (where electro-static discharge must be prevented)

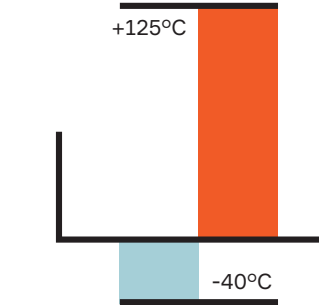
### AVAILABLE CONFIGURATIONS

Cavity Count (ways)	14
Cavity Configurations (mm)	1.5, 2.8
Genders	Female, Male
Sealing Type	Mat Sealed
CPA	Optional

### APPLICATIONS

Sealed inline applications

### TEMPERATURE



### VIBRATION



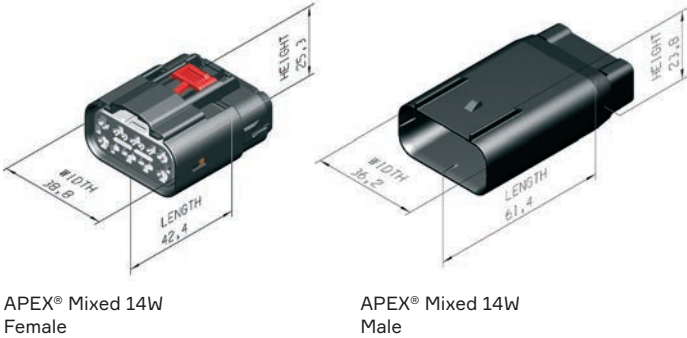
### ENVIRONMENTAL PROTECTION



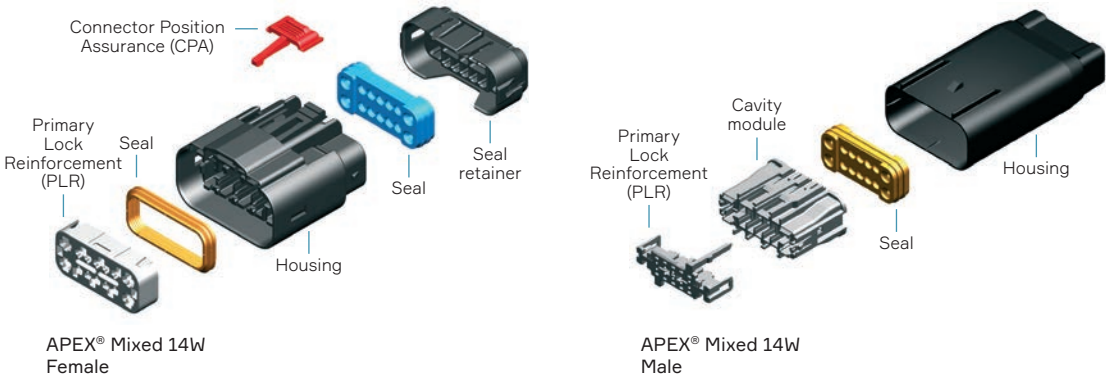
Cavity count	Blade size (mm)	Gender	Dimensions W x H x D (mm)	Part number	Index	Color	Other indexes offered
14	1.5 (10) + 2.8 (4)	F	38.3 x 25.1 x 37.9	13878050	A	Black	B, C, D, E, F
14	1.5 (10) + 2.8 (4)	M	36.2 x 23.3 x 61.5	13694022	A	Black	B, C, D, E, F

Please, contact an Aptiv representative for the full part number list.

### DIMENSION MEASUREMENT SAMPLE



### EXPLODED VIEW



### COMPATIBLE WITH





# APEX® ErgoMate™ SERIES



APEX® ErgoMate™  
24W Female & Male

## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	24
Cavity Configurations (mm)	1.5, 2.8
Genders	Female, Male
Sealing Type	Mat Sealed

## APPLICATIONS

Sealed inline applications

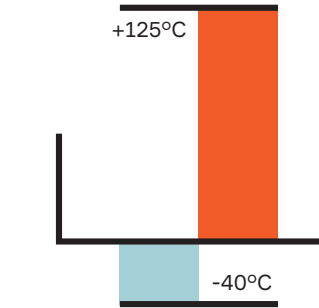
## BENEFITS

- Heavy-duty performance
- Highest current rating
- Ergonomic design

## FEATURES

- High reliability one-handed mating
- Simplified engagement system reduces the possibility of mis-mating the connection system
- Unique geared cam and slider system is fully self-contained, provides a 3:1 mechanical advantage
- A lower-profile ergonomically friendly alternative to traditional lever assist
- Low connector mating force at ~55N
- Primary Lock Reinforcement (PLR)

## TEMPERATURE



## VIBRATION



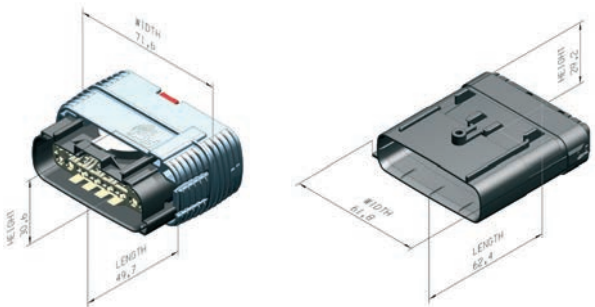
## ENVIRONMENTAL PROTECTION

IP69K

Cavity count	Blade size (mm)	Gender	Dimensions W x H x D (mm)	Part number	Index	Color	Other indexes offered
24	1.5 (16) + 2.8 (8)	F	71.6 x 30.7 x 49.7	13795018	A	Black	B, C, D, E, F
24	1.5 (16) + 2.8 (8)	M	60.7 x 29.4 x 62.4	13672210	A	Black	B, C, D, E, F

Please, contact an Aptiv representative for the full part number list.

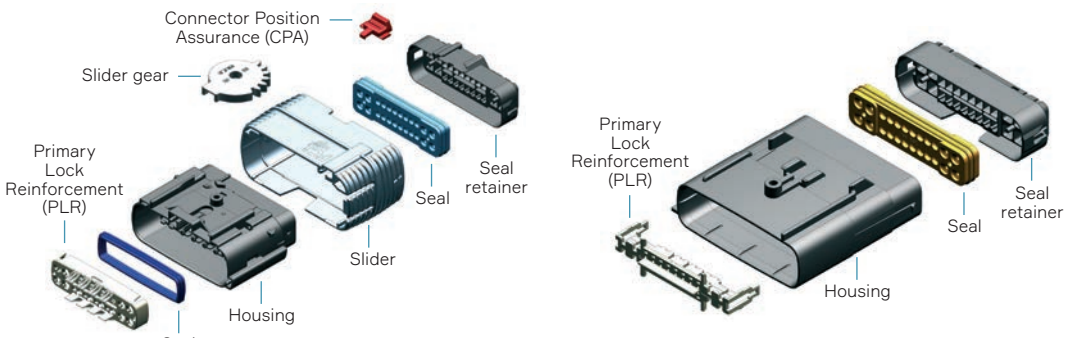
## DIMENSION MEASUREMENT SAMPLE



APEX® ErgoMate™ 24W  
Female

APEX® ErgoMate™ 24W  
Male

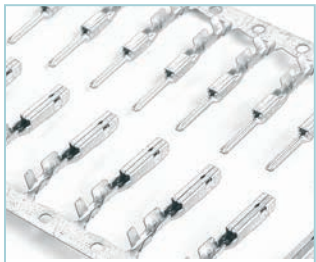
## EXPLODED VIEW



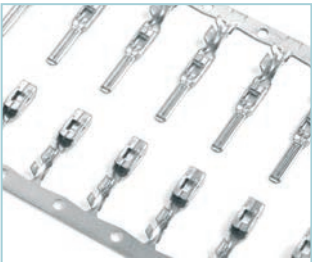
APEX® ErgoMate™ 24W  
Female

APEX® ErgoMate™ 24W  
Male

## COMPATIBLE WITH



APEX® 150 Series Terminals



APEX® 2.8 Series Terminals

# APEX® HALOGEN BULB SERIES



APEX® Halogen Bulb  
2W Female HB3/HIR2

## BENEFITS

- Heavy-duty performance
- Highest current rating
- Ergonomic design

## FEATURES

- Meets USCAR-12 & USCAR-25 design & ergonomic guidelines:
  - Ergonomic large thumb latch provides ease of de-latching with a gloved hand
  - Optional axial mate CPA feature reduces mis-mating frequency
  - Axial PLR device secures locking of female terminal in connector housing
- Footprint defined by ISO IEC60061-1
- Primary Lock Reinforcement (PLR)

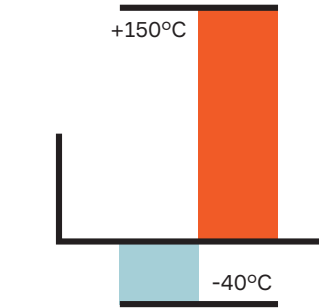
## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	2
Cavity Configurations (mm)	2.8
Genders	Female
Sealing Type	Cable Sealed

## APPLICATIONS

Halogen bulb

## TEMPERATURE



## VIBRATION



## ENVIRONMENTAL PROTECTION

IP69K

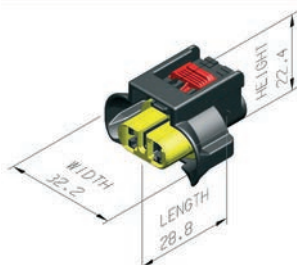
Bulb type	Blade size (mm)	Gender	Dimensions W x H x D (mm)	Part number	Index	Color	Other indexes offered
H8, H11, H16	2.8	F	32.3 x 22.5 x 31.9	13930730	A	Black	B
H9	2.8	F	32.3 x 22.5 x 31.9	33517462	A	Black	B
HIR2, HB4, HB4A	2.8	F	29.7 x 17.0 x 33.0	33503725	A	Black	B
HIR1, H12, H10, HB3	2.8	F	29.7 x 17.0 x 33.0	33503726	A	Black	B

## COMPATIBLE SEALS

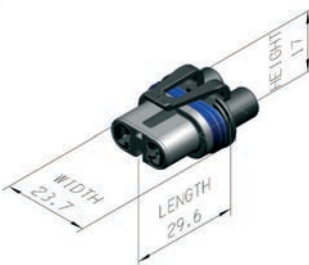
Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 1.0	Pink	Yes	35296484
Cable Seal	1.0 - 2.0	Black	Yes	15518641
Cable Seal	2.5 - 4.0	Brown	Yes	15458498
Cavity Plug	N/A	Blue	Yes	35478080
Cavity Plug	N/A	White	No	15305170

Please, contact an Aptiv representative for the full part number list.

## DIMENSION MEASUREMENT SAMPLE

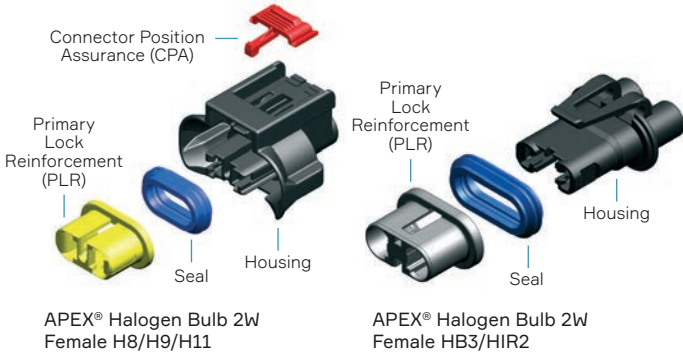


APEX® Halogen Bulb 2W  
Female H8/H9/H11



APEX® Halogen Bulb 2W  
Female HB3/HIR2

## EXPLODED VIEW



## COMPATIBLE WITH



APEX® 2.8 Series Terminals

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.



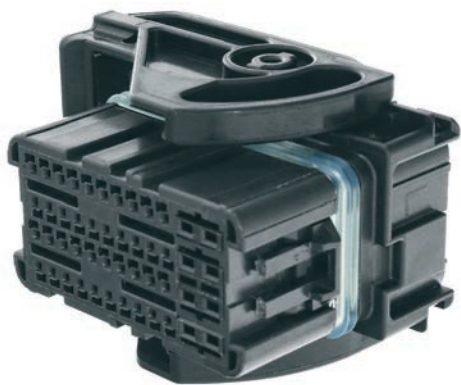


# CMC CONNECTORS AND HEADERS



# CMC CONNECTORS

## 32, 48, 64, 86 Way



CMC 48W Connector

### BENEFITS

- TPA\* front holder latch for lock & unlock
- Smooth guided terminal insertion
- Clean body terminals do not damage mat/block seal
- High retention force
- Standard interface interchangeable with multiple suppliers

### FEATURES

- Polarized terminals
- Mat seal is pre-closed on the 0.64 mm terminal cavities
- Easy cable assembly
- First mate last break lay-out for safe connection

\* Terminal position assurance

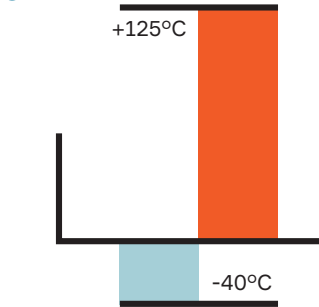
### TECHNICAL CHARACTERISTICS

Cavity Count (ways)	32, 48, 64, 86
Materials	PBT
Genders	Female

### APPLICATIONS

Engine management
Gas converter
Body control

### TEMPERATURE



### VIBRATION



### SEALING PROTECTION

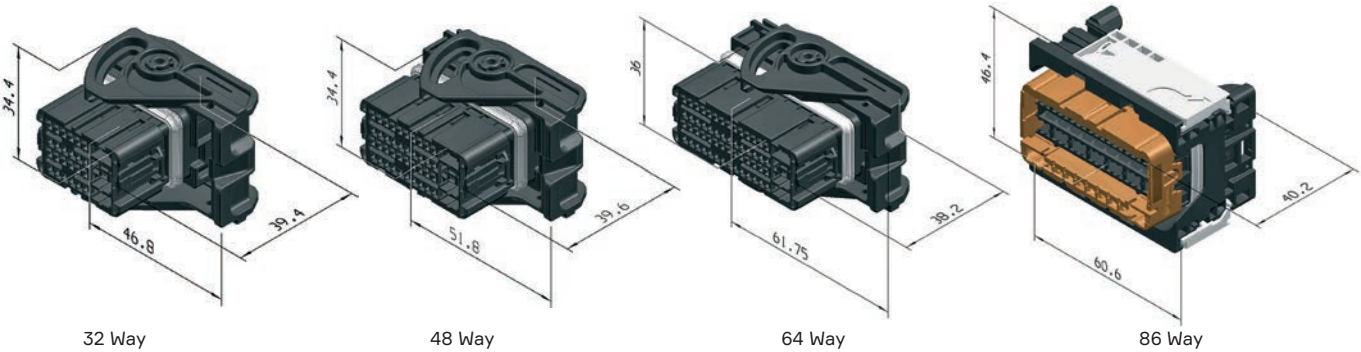


### MATING/UNMATING CYCLES

**20**  
(with tin plated terminals)

Part number	Cavity Count (ways)	Color coding	Mating cover part number		
13851306	32	Black	13851307		
13956255	48	Black	13956254	0°	33517228 45°
13648596	64	Black	13648597		
33156001	86	Grey	33121915		

### DIMENSION MEASUREMENT SAMPLE



### COMPATIBLE WITH





# CMC HEADERS

## 32, 48, 64 Way



CMC 32W Pin Header

### BENEFITS

- Compact and small form factor
- Sealable pin header by cover and gasket
- Tin-plated pins, silver-plated upon demand
- Through hole solder type

### FEATURES

- Standard interface interchangeable with multiple female housing suppliers
- Easy solder process to a PCB\*
- Small occupancy on the PCB\*

\* Printed circuit board

### TECHNICAL CHARACTERISTICS

Orientation	90°
Materials	PA4.6 GF30%, CuZn30
Genders	Male

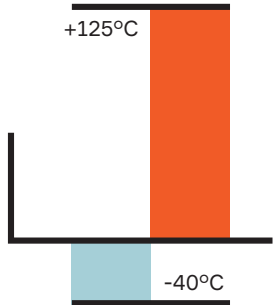
### APPLICATIONS

Engine management

Gas converter

Body control

### TEMPERATURE



### VIBRATION



### SEALING PROTECTION

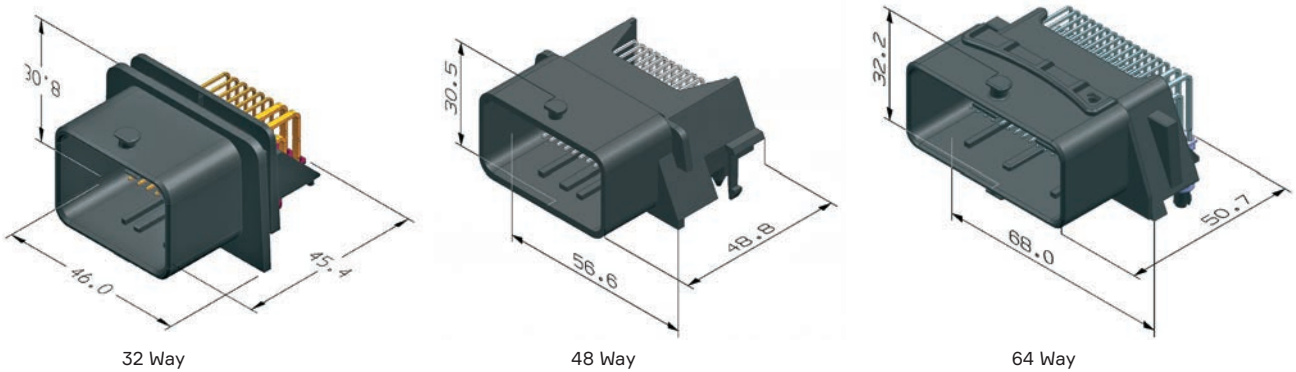


### CONNECTOR MATING FORCE

< 60 N

Part number	Cavity count (ways)	Color coding
33503152	32	Blue
33503150		Black
33503149		Grey
33503151		Brown
33503457	48	Black
35110623	64	Grey
33504510		Black

### DIMENSION MEASUREMENT SAMPLE

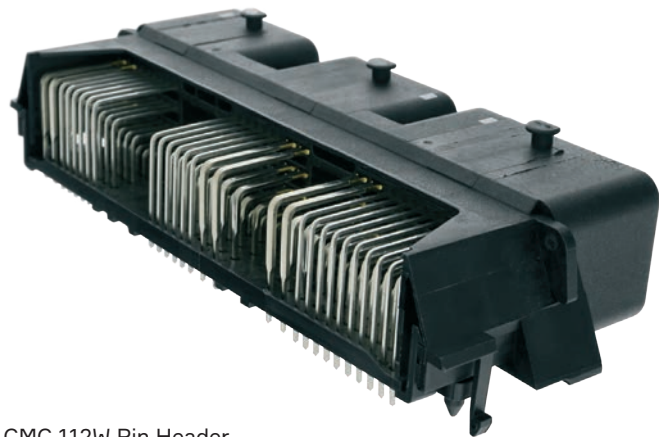


### COMPATIBLE WITH



# CMC PIN HEADER

## 112 Way



CMC 112W Pin Header

### BENEFITS

- Compact and small form factor
- Sealable pin header by cover and gasket
- Tin-plated pins, silver-plated upon demand
- Through hole solder type

### FEATURES

- Standard interface interchangeable with multiple female housing suppliers
- Easy solder process to a PCB\*
- Small occupancy on the PCB\*

\* Printed circuit board

### TECHNICAL CHARACTERISTICS

Orientation	90°
Materials	PA4.6 GF30%, CuZn30
Genders	Male

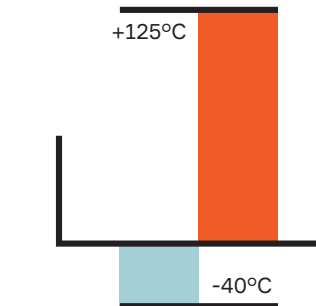
### APPLICATIONS

Engine management

Gas converter

Body control

### TEMPERATURE



### VIBRATION



### SEALING PROTECTION

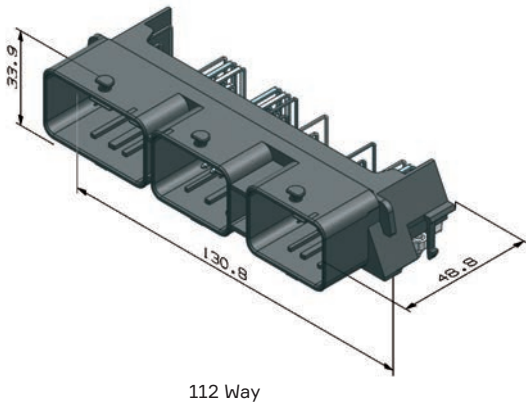


### CONNECTOR MATING FORCE

< 60 N

Part number	Cavity count (ways)	Color coding
33504045	112 (48+32+32)	Black + Grey + Brown

### DIMENSION MEASUREMENT SAMPLE



### COMPATIBLE WITH



CMC Covers



CMC Housings



GTS 0.64 Series Terminals



GTS 1.5 Series Terminals





# CTS TERMINALS AND CONNECTORS




# CTS CONNECTORS





## SELECTOR GUIDE

Compact Terminal System - The CTS Terminal Automotive Connectors offer a robust terminal design, improved ergonomics for protected and easier mating, and withstand high vibration up to V4. CTS Terminal series are widely used in engine sensors and harsh environment applications. These terminals provide the perfect combination of electrical and mechanical performance for nearly any automotive application.



	
Product Series	NanoPack™ CTS Unsealed USCAR
Application	Interior, Multimedia, HVAC
Blade Size	0.5
# of Cavities	4, 8, 12, 16*, 20
Gender	F
Temperature Class	T1
IP Rating	NA
CPA	Yes
See Pages	76-77

\* available upon request  
This document is non-contractual and is for information purpose only

			
NanoPack™ CTS Unsealed AK	NanoPack™ CTS Sealed AK	CTS 1.2 SensoMate™	CTS 2.8 Sealed
Cockpit, Dashboard, Ambient lightning, Ethernet	Radars, Cameras, Tire pressure sensors exposed to humidity and liquid splashes	Chassis, Engine compartment, On-Engine-Mount, Severe Gearbox applications, Sensors/Actuators	Sealed inline and device applications
0.5	0.5	1.2	2.8
2, 3, 4, 5, 6*, 7, 8*, 9*, 10, 11, 12*, 14, 16*, 18*, 20, 22	8, 12	2, 3, 4, 5, 6	2, 3, 4
F	F	F, M (2 to 4 way)	F
T2	T2	T4 up to 175°C	T3
NA	IPX9K IP67	IPX9K IP68	IP69K
Optional	Optional	Yes	Yes
78-79	80-81	82-83	84-85



# CTS 0.5 LOCKING LANCE TERMINALS



CTS 0.5 Locking Lance  
Female & Male Terminals

## BENEFITS

- Compatible with industry standard cavities
- Robust terminal design with several design features providing a perfect electrical function
- 100% vision controlled manufacturing

## FEATURES

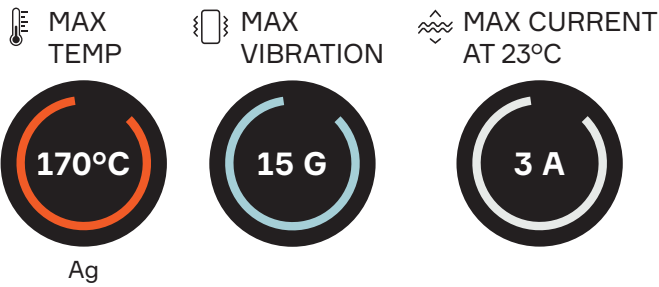
- Protected mating area
- One robust primary locking lance
- High performance copper alloy

## AVAILABLE CONFIGURATIONS

Terminal Construction	One-piece Female Two-piece Male
Locking Mechanism	Tanged / Lanced
Crimp Validated to	LV214 / USCAR-21
Blade Size (mm)	0.5
Wire Gage Range (AWG)	26 - 22
Wire Gage Range (mm²)	0.08 - 0.35
Genders	Female, Male
Sealing Options	Block Seal, Unsealed
Plating Options	Sn, Ag
Mating Tab Dimension (mm)	0.4 x 0.5

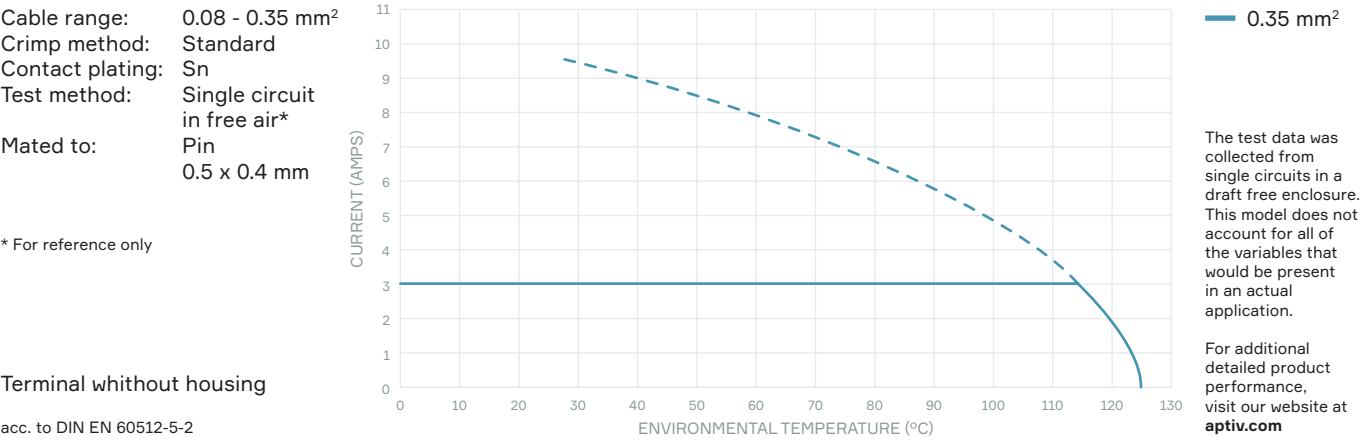
## TECHNICAL CHARACTERISTICS

Contact Resistance	7 mΩ
Contact Mating Force	2.0 N
Contact Unmating Force	2.0 N
Mating Cycles	20 (Sn) / 50 (Ag)
Cavity Pullout Force	> 30 N
Center Line Spacing	1.2 x 1.8 mm



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings
Block Seal	F	Sn	26	0.08 - 0.14	33124946	Ag
Block Seal	F	Sn	24 - 22	0.17 - 0.35	33124945	Ag
Unsealed	M	Sn	26	0.08 - 0.14	35195964	Ag
Unsealed	M	Sn	24 - 22	0.17 - 0.35	35195966	Ag

## DERATING CURVES



## COMPATIBLE WITH



# CTS 0.5 FEMALE CLEAN BODY TERMINALS



## BENEFITS

- Compatible with industry standard cavities
- Robust terminal design with several design features providing a perfect electrical function
- 100% vision controlled manufacturing

## FEATURES

- Protected mating area
- Robust one side cavity flex lock feature
- High performance copper alloy

## AVAILABLE CONFIGURATIONS

Terminal Construction	One-piece
Locking Mechanism	Tangless / Clean Body
Crimp Validated to	VW60330, VW75174
Blade Size	0.5
Wire Gage Range (AWG)	26 - 22
Wire Gage Range (mm <sup>2</sup> )	0.08 - 0.35
Genders	Female
Sealing Options	Mat Seal
Plating Options	Ag, Sn
Mating Tab Dimension	0.5 x 0.4

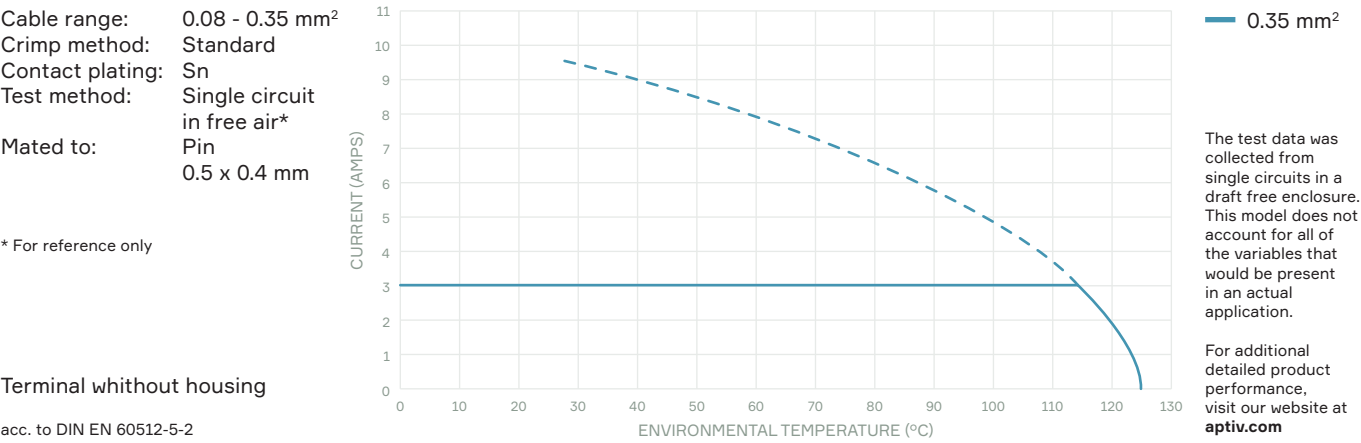
## TECHNICAL CHARACTERISTICS

Contact Resistance	10 mΩ
Contact Mating Force	4.5 N
Contact Unmating Force	4.5 N
Mating Cycles	20 (Sn) / 50 (Ag)
Cavity Pullout Force	55 N
Center Line Spacing	1.8 x 1.5 mm

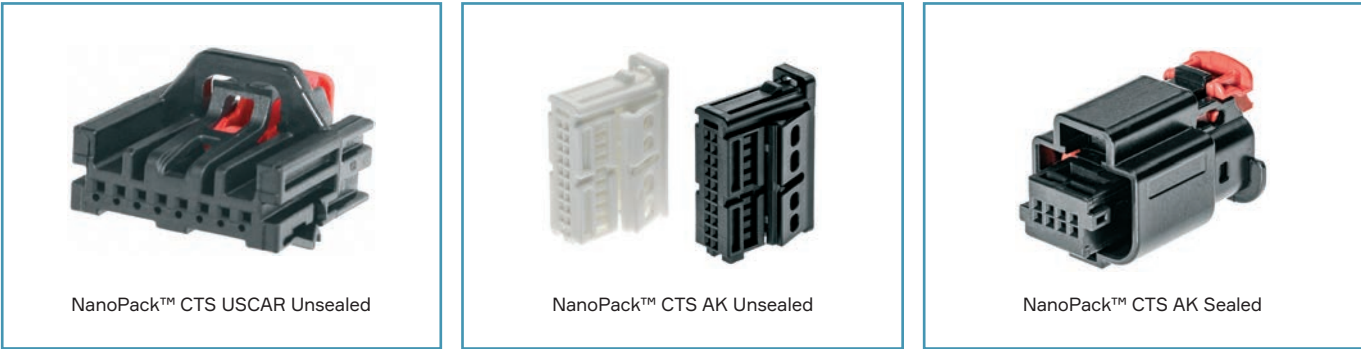


Sealing	Gender	Plating	Wire Size Range (AWG)	Wire Size Range (mm) <sup>2</sup>	Part Number
Block Seal	F	Sn	26	0.08 - 0.14	33367567
Block Seal	F	Ag	24 - 22	0.17 - 0.35	33367568
Block Seal	F	Sn	26	0.08 - 0.14	33389499
Block Seal	F	Ag	24 - 22	0.17 - 0.35	33389500

## DERATING AND TEMP RISE CURVE

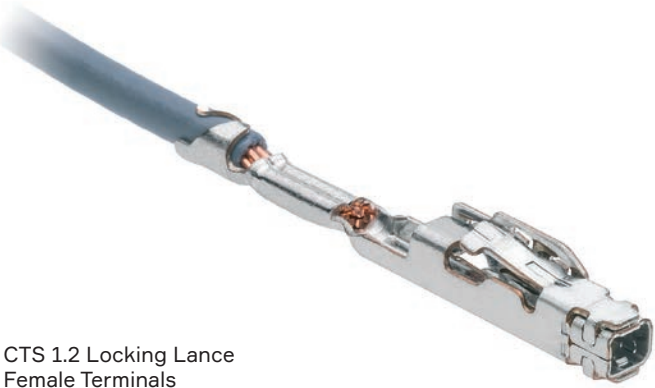


## COMPATIBLE WITH (COMPATIBLE FAMILIES)





# CTS 1.2 FEMALE LOCKING LANCE TERMINALS



CTS 1.2 Locking Lance  
Female Terminals

## BENEFITS

- Compatible with industry standard cavities
- Robust terminal design with several design features providing a perfect electrical function for two different tab thicknesses in one part
- 100% vision controlled manufacturing

## FEATURES

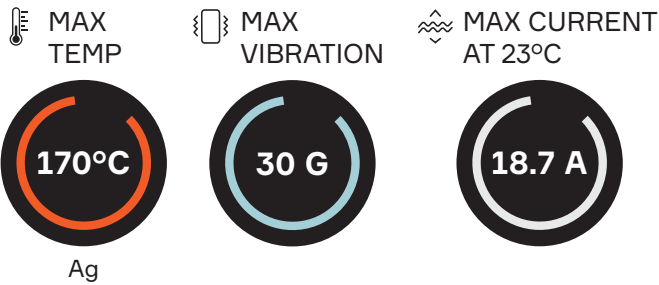
- Protected mating area
- One robust primary locking lance
- High performance copper alloy
- Shape inside four electrical contact points
- Ultrasonic welding ability according to AK 43-2

## AVAILABLE CONFIGURATIONS

Terminal Construction	Two-piece
Locking Mechanism	Tanged / Lanced
Crimp Validated to	VW60330, VW75174-2
Blade Size (mm)	1.2
Wire Gage Range (AWG)	24 - 16
Wire Gage Range (mm²)	0.13 - 1.5
Genders	Female
Sealing Options	Unsealed, Cable Sealed
Plating Options	Sn, Ag
Mating Tab Dimension (mm)	1.2 x 0.6 (up to 0.64)

## TECHNICAL CHARACTERISTICS

Contact Resistance	2.5 mΩ
Contact Mating Force	4.2 N
Contact Unmating Force	4.2 N
Mating Cycles	20 (Sn) / 30 (Ag)
Center Line Spacing	Unsealed: 2.5 x 2.5 mm Sealed: 4.5 x 4.5 mm



# CTS 1.2 MALE LOCKING LANCE TERMINALS



## BENEFITS

- Compatible with industry standard cavities
- Robust terminal design with several design features providing a perfect electrical function for two different tab thicknesses in one part
- 100% vision controlled manufacturing

## FEATURES

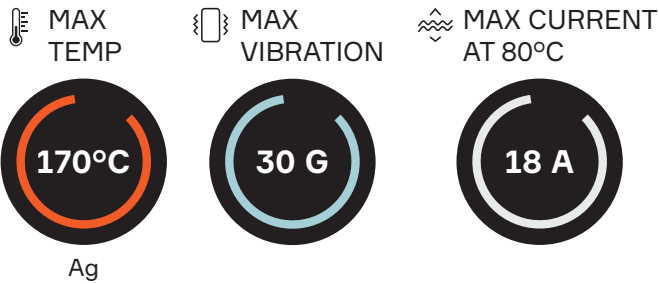
- One robust primary locking lance
- High performance copper alloy
- Ultrasonic welding ability according to AK 43-2

## AVAILABLE CONFIGURATIONS

Terminal Construction	Two-piece
Locking Mechanism	Tanged / Lanced
Crimp Validated to	VW60330, VW75174-2
Blade Size	1.2
Wire Gage Range (AWG)	24 - 16
Wire Gage Range (mm <sup>2</sup> )	0.13 - 1.5
Genders	Male
Sealing Options	Unsealed, Cable Sealed
Plating Options	Sn, Ag, Au
Mating Tab Dimension	1.2 x 0.6

## TECHNICAL CHARACTERISTICS

Contact Resistance	≤ 5mΩ
Contact Mating Force	4.2 N
Mating Cycles	20 (Sn) / 30 (Ag)
Cavity Pullout Force	min. 55 N
Center Line Spacing	2.5 - 4.5mm

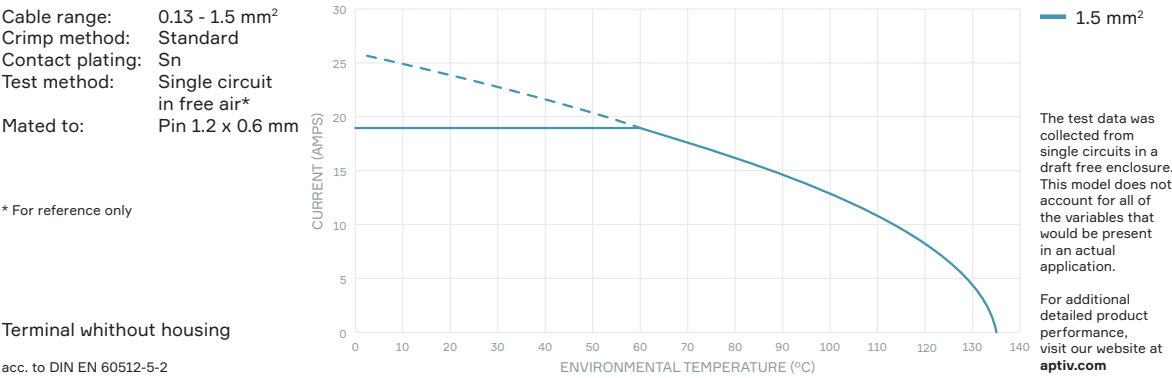


Blade Size (mm)	Sealing	Gender	Plating	Wire Size Range (AWG)	Wire Size Range (mm <sup>2</sup> )	Part Number	Other Available Platings
1.2	Unsealed	M	Sn	24	0.13	35350104	Ag, Au
1.2	Unsealed	M	Sn	22	0.22 - 0.35	35350105	Ag, Au
1.2	Unsealed	M	Sn	20	0.50 - 0.75	35350106	Ag, Au
1.2	Unsealed	M	Sn	18	1	35505514	Ag, Au
1.2	Unsealed	M	Sn	16	1.5	35350107	Ag, Au
1.2	Cable Sealed	M	Sn	24	0.13	35350198	Ag, Au
1.2	Cable Sealed	M	Sn	22	0.22 - 0.35	35350202	Ag, Au
1.2	Cable Sealed	M	Sn	20	0.50 - 0.75	35350200	Ag, Au
1.2	Cable Sealed	M	Sn	18	1	35350201	Ag, Au

## COMPATIBLE SEALS

Type	Applicable Wire Size (mm <sup>2</sup> )	Color	Restraint Ring	Part Number
Cable Seal	0.13 - 0.35	Yellow	Yes	13887349
	0.5 - 1.0	Green	Yes	13887350
Cable Seal	0.13 - 0.35	Black	No	33120594
	0.35 - 0.5	Red	No	15327913
	0.5 - 1.0	Gray	No	15327918
	1.0 - 1.25	Yellow	No	15339412

## DERATING CURVES

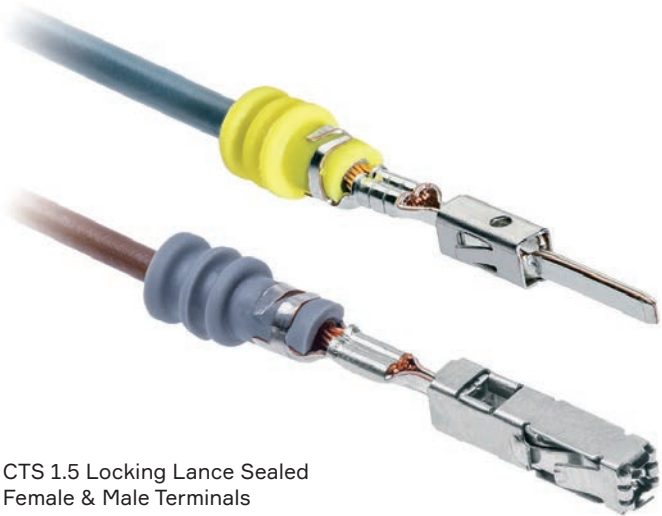


## HOUSING COMPATIBILITY (COMPATIBLE FAMILIES)





# CTS 1.5 LOCKING LANCE SEALED TERMINALS



CTS 1.5 Locking Lance Sealed Female & Male Terminals

## AVAILABLE CONFIGURATIONS

Terminal Type	Box & Blade
Locking Mechanism	Tanged / Lanced
Crimp Validated to	LV 214
Blade Size (mm)	1.5
Wire Gage Range (AWG)	28 - 16
Wire Gage Range (mm²)	0.08 - 1.5
Genders	Female, Male (TTS)
Sealing Options	Cable Sealed
Plating Options	Sn, Ag, Au

## BENEFITS

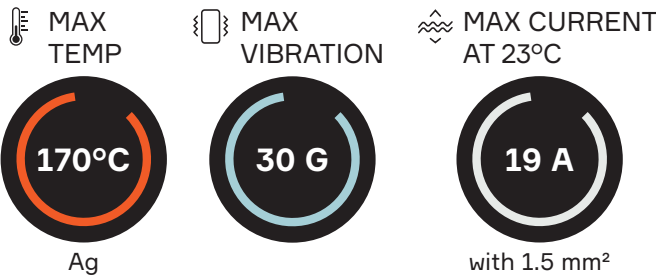
- Compatible with industry standard cavities
- Robust terminal design with several design features providing perfect electrical function for two different tab thicknesses in one part
- 100% vision controlled manufacturing

## FEATURES

- Usable for tab thicknesses of 0.6 mm and 0.8 mm
- Protected mating area
- Two-tang primary lock
- Stainless steel spring
- High pre-loaded contact area

## TECHNICAL CHARACTERISTICS


Contact Resistance	< 2 mΩ
Contact Mating Force	< 7.0 N
Contact Unmating Force	< 7.0 N
Mating Cycles	20 (Sn) / 50 (Ag) / 100 (Au)
Cavity Pullout Force	> 55 N (Primary lock) > 90 N (Secondary lock)
Center Line Spacing	4.0 x 4.0 mm / 3.5 x 4.0 mm with 2.0 mm displacing



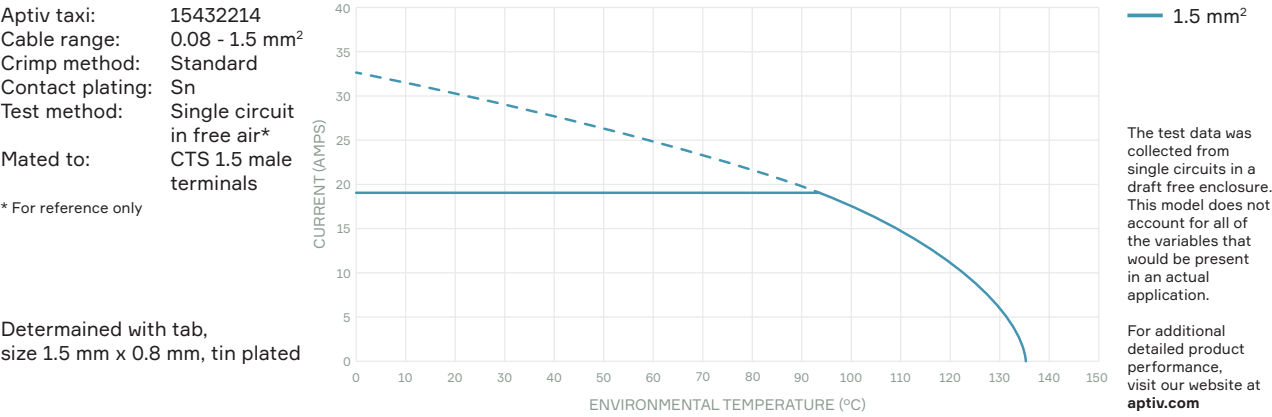
Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings
Cable Sealed	F	Sn	24 - 22	0.22 - 0.35	15432208	Ag, Au
Cable Sealed	F	Sn	20 - 16	0.5 - 1.0	15432210	Ag, Au
Cable Sealed	F	Sn	16	1.0 - 1.5	15432212	Ag, Au
Cable Sealed	M	Sn	24 - 22	0.22 - 0.35	15482330	Ag, Au
Cable Sealed	M	Sn	20 - 16	0.5 - 1.0	15482331	Ag, Au
Cable Sealed	M	Sn	16	1.0 - 1.5	15482332	Ag, Au

Please, contact an Aptiv representative for the full part number list.

## COMPATIBLE SEALS

Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number	
	Cable Seal	0.13 - 0.35	Yellow	Yes	13887349
	Cable Seal	0.5 - 1.0	Green	Yes	13887350
	Cable Seal	1.0 - 1.5	Red	Yes	35297210
	Cable Seal	0.13 - 0.35	Black	No	33120594
	Cable Seal	0.35 - 0.5	Red	No	15327913
	Cable Seal	0.5 - 1.0	Gray	No	15327918
	Cable Seal	1.0 - 1.25	Yellow	No	15339412

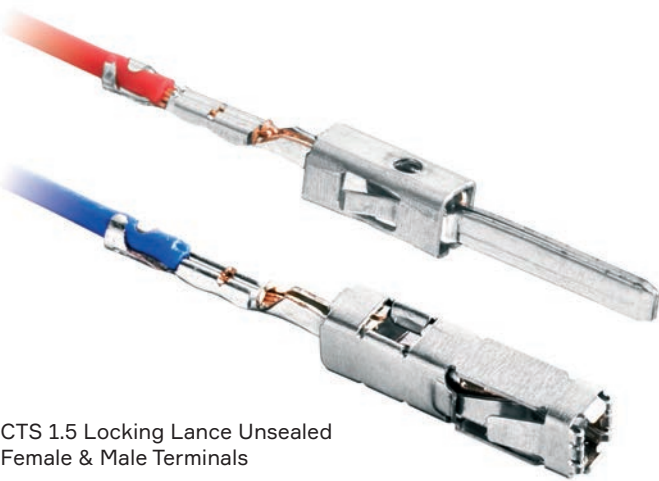
## DERATING CURVE



## COMPATIBLE WITH



# CTS 1.5 LOCKING LANCE UNSEALED TERMINALS



CTS 1.5 Locking Lance Unsealed  
Female & Male Terminals

## AVAILABLE CONFIGURATIONS

Terminal Type	Box & Blade
Locking Mechanism	Tanged / Lanced
Crimp Validated to	LV 214
Blade Size (mm)	1.5
Wire Gage Range (AWG)	28 - 16
Wire Gage Range (mm²)	0.08 - 1.5
Genders	Female, Male (TTS)
Sealing Options	Unsealed
Plating Options	Sn, Au

## BENEFITS

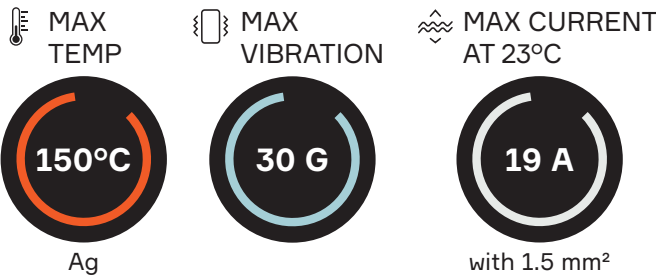
- Compatible with industry standard cavities
- Robust terminal design with several design features providing perfect electrical function for two different tab thicknesses in one part
- 100% vision controlled manufacturing

## FEATURES

- Usable for tab thicknesses of 0.6 mm and 0.8 mm
- Protected mating area
- Two-tang primary lock
- Stainless steel spring
- High pre-loaded contact area

## TECHNICAL CHARACTERISTICS

Contact Resistance	< 2 mΩ
Contact Mating Force	< 7.0 N
Contact Unmating Force	< 7.0 N
Mating Cycles	20 (Sn) / 50 (Ag) / 100 (Au)
Cavity Pullout Force	> 55N (Primary lock) > 90N (Secondary lock)
Center Line Spacing	4.0 x 4.0 mm / 3.5 x 4.0 mm with 2.0 mm displacing



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings
Unsealed	F	Sn	28 - 26	0.08 - 0.18	13819159	Au
Unsealed	F	Sn	24 - 22	0.22 - 0.35	15432237	Au
Unsealed	F	Sn	20 - 16	0.5 - 1.0	15432235	Au
Unsealed	F	Sn	16	1.0 - 1.5	15432233	Au
Unsealed	M	Sn	28 - 26	0.08 - 0.18	13733481	Au
Unsealed	M	Sn	24 - 22	0.22 - 0.35	15396711	Au
Unsealed	M	Sn	20 - 16	0.5 - 1.0	15396712	Au
Unsealed	M	Sn	16	1.0 - 1.5	15482337	Au
Unsealed	M	Sn	(2)22 - (2)20	(2)0.35 - (2)0.50	15396713	Au

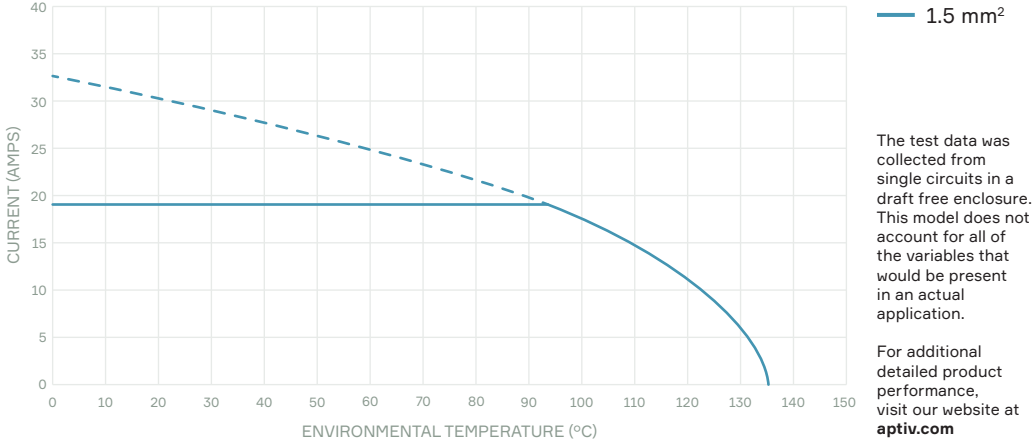
Please, contact an Aptiv representative for the full part number list.

## DERATING CURVE

Aptiv taxi: 15432239  
Cable range: 0.08 - 1.5 mm²  
Crimp method: Standard  
Contact plating: Sn  
Test method: Single circuit in free air\*  
Mated to: CTS 1.5 male terminals

\* For reference only

Determined with tab,  
size 1.5 mm x 0.8 mm, tin plated

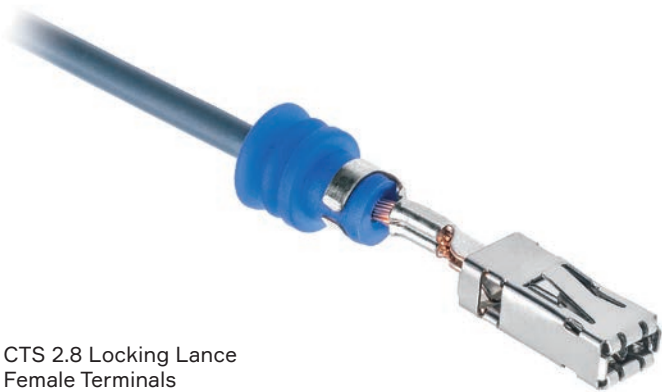


## COMPATIBLE WITH





# CTS 2.8 LOCKING LANCE TERMINALS



CTS 2.8 Locking Lance  
Female Terminals

## BENEFITS

- Compatible with industry standard cavities
- Robust terminal design with several design features providing a perfect electrical function for two different tab thicknesses in one part
- 100% vision controlled manufacturing

## FEATURES

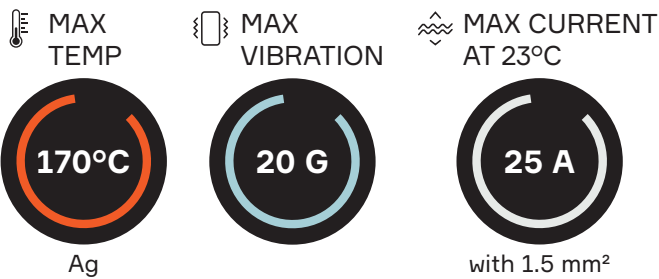
- Protected mating area
- Usable for tab thicknesses of 0.6 and 0.8 mm
- Two-tang primary lock
- Stainless steel spring
- High pre-loaded contact area

## AVAILABLE CONFIGURATIONS

Terminal Construction	Two-piece
Locking Mechanism	Tanged / Lanced
Crimp Validated to	USCAR 14 / LV214 (slow motion)
Blade Size (mm)	2.8
Wire Gage Range (AWG)	24 - 14
Wire Gage Range (mm²)	0.22 - 2.5
Genders	Female
Sealing Options	Unsealed, Cable Sealed
Plating Options	Sn, Ag
Mating Tab Dimension (mm)	2.8 x 0.8

## TECHNICAL CHARACTERISTICS

Contact Resistance	< 4 mΩ
Contact Mating Force	< 10 N
Contact Unmating Force	> 2 N
Mating Cycles	10 (Sn) / 25 (Ag)
Cavity Pullout Force	> 80 N
Center Line Spacing	Unsealed: 5 x 5.5 mm Sealed: 5 x 6 mm



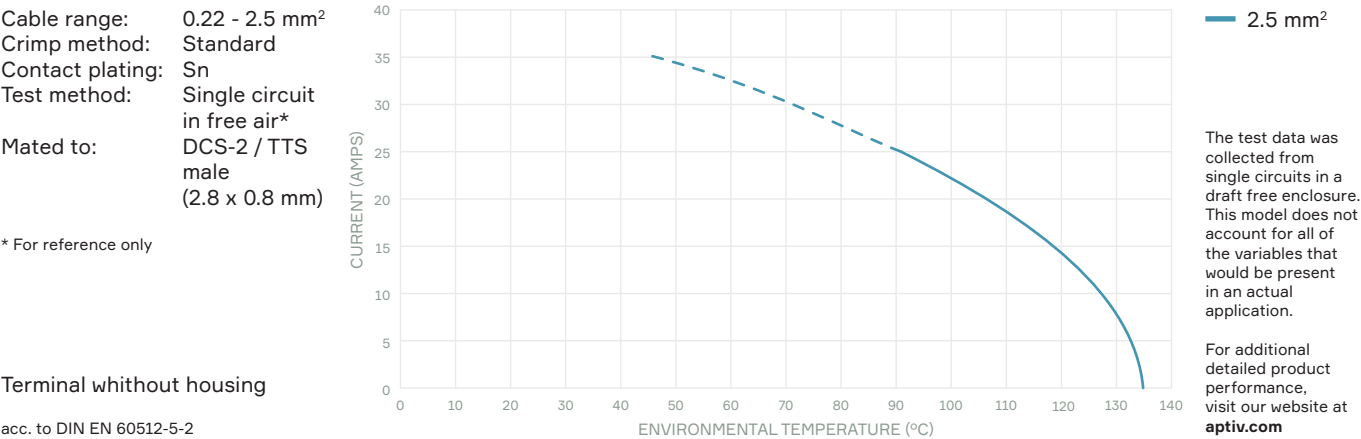
Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings
Unsealed	F	Sn	24 - 22	0.22 - 0.35	15457847	Ag
Unsealed	F	Sn	20 - 18	0.5 - 1.0	15457848	Ag
Unsealed	F	Sn	16 - 14	1.5 - 2.5	15457849	Ag
Cable Sealed	F	Sn	24 - 22	0.22 - 0.35	15446673	Ag
Cable Sealed	F	Sn	20 - 18	0.5 - 1.0	15446674	Ag
Cable Sealed	F	Sn	16 - 14	1.5 - 2.5	15446675	Ag

## COMPATIBLE SEALS

Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 1.0	Blue	Yes	15339967
	1.25 - 2.5	White	Yes	15339838
Cable Seal	0.35 - 0.75	Blue	No	15324974
	0.5 - 1.0	Red	No	15327786
	1.25 - 2.0	Red	No	15324973
	2.5	Yellow	No	10779161

Please, contact an Aptiv representative for the full part number list.

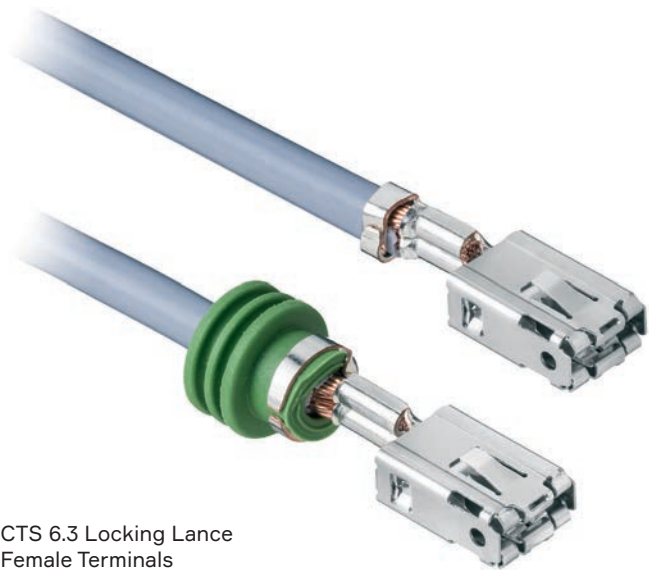
## DERATING CURVES



## COMPATIBLE WITH



# CTS 6.3 FEMALE LOCKING LANCE TERMINALS



CTS 6.3 Locking Lance  
Female Terminals

## AVAILABLE CONFIGURATIONS

Terminal Construction	Two-piece
Locking Mechanism	Tanged / Lanced
Crimp Validated to	USCAR-21 (2014)
Blade Size (mm)	5.8
Wire Gage Range (AWG)	22 - 9
Wire Gage Range (mm²)	0.35 - 6.0
Genders	Female
Sealing Options	Unsealed, Cable Sealed
Plating Options	Sn, Ag
Mating Tab Dimension (mm)	5.8 x 0.8

## BENEFITS

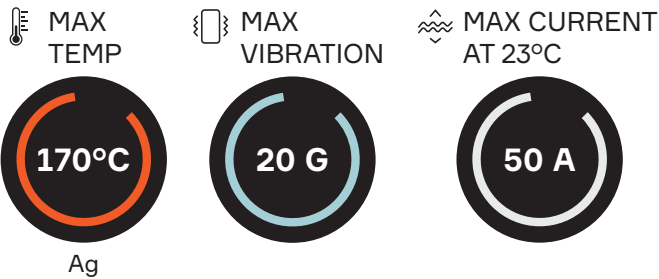
- Compatible with industry standard cavities
- Robust terminal design with several design features providing a perfect electrical function for two different tab thicknesses in one part
- 100% vision controlled manufacturing

## FEATURES

- Protected mating area
- Usable for tab thicknesses of 0.6 and 0.8 mm
- Two-tang primary lock
- Stainless steel spring
- High pre-loaded contact area

## TECHNICAL CHARACTERISTICS

Contact Resistance	< 4 mΩ
Contact Mating Force	< 20 N
Contact Unmating Force	> 4 N
Mating Cycles	10 (Sn) / 20 (Ag)
Center Line Spacing	Unsealed: 8.0 x 6.0 mm Sealed: 9.0 x 9.0 mm



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings
Unsealed	F	Sn	22	0.35	13976098	Ag
Unsealed	F	Sn	20 - 17	0.5 - 1.0	13976099	Ag
Unsealed	F	Sn	16 - 14	1.5 - 2.5	13976100	Ag
Unsealed	F	Sn	14 - 12	2.5 - 4.0	13976101	Ag
Unsealed	F	Sn	12 - 8	4.0 - 6.0	13976102	Ag
Cable Sealed	F	Sn	22	0.35	13976114	Ag
Cable Sealed	F	Sn	20 - 17	0.5 - 1.0	13976115	Ag
Cable Sealed	F	Sn	16 - 14	1.5 - 2.5	13976116	Ag
Cable Sealed	F	Sn	14 - 12	2.5 - 4.0	13976117	Ag
Cable Sealed	F	Sn	12 - 8	4.0 - 6.0	13976118	Ag

## COMPATIBLE SEALS

Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 1.0	Yellow	No	15363779
Cable Seal	1.25 - 2.0	White	No	15363604
Cable Seal	2.5 - 4.0	Red	No	15327864
Cable Seal	5.0 - 6.0	Green	No	15363605

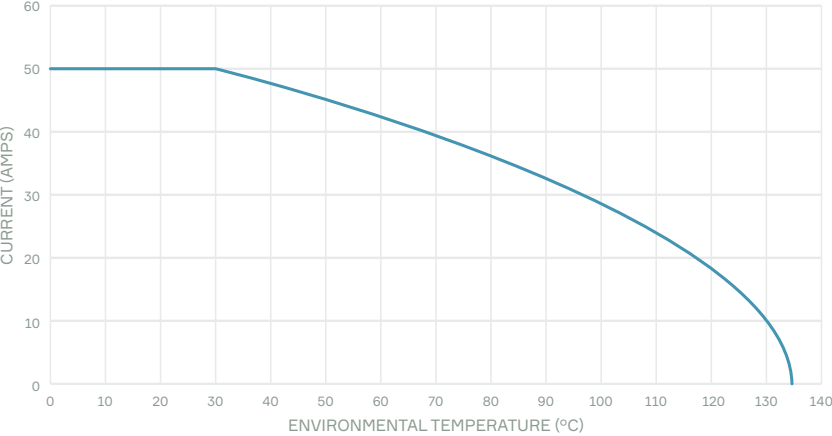
Please, contact an Aptiv representative for the full part number list.

## DERATING CURVES

Cable range: 0.35 - 6.0 mm²  
Crimp method: Standard  
Contact plating: Sn  
Test method: Single circuit in free air\*  
Mated to: Tab (5,8 x 0,8 mm)  
Sn

\* For reference only

Terminal without housing  
acc. to DIN EN 60512-5-2



The test data was collected from single circuits in a draft free enclosure. This model does not account for all of the variables that would be present in an actual application.

For additional detailed product performance, visit our website at [aptiv.com](https://www.aptiv.com)

## COMPATIBLE WITH



CTS 6.3 Female Sealed  
Series Housings



CTCS Unsealed Series Housings



CTCS SP Series  
Housings



CTCS XP Series  
Housings



# CTS 9.5 FEMALE LOCKING LANCE TERMINALS



CTS 9.5 Locking Lance  
Female Terminal

## AVAILABLE CONFIGURATIONS

Terminal Construction	Two-piece
Locking Mechanism	Tanged, Lanced
Crimp Validated to	VW60330; VW75174-2
Blade Size (mm)	9.5
Wire Gage Range (AWG)	2 - 6
Wire Gage Range (mm²)	2.5 - 16
Genders	Female
Sealing Options	Unsealed, Cable Sealed
Plating Options	Sn, Ag
Mating Tab Dimension (mm)	9.5 x 1.2

## BENEFITS

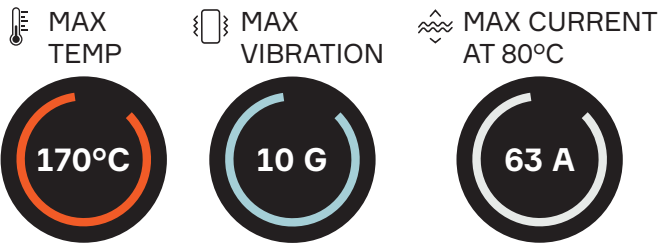
- Mechanical locking of terminal box assures ultrasonic welding robustness
- Compatible with industry standard cavities
- Robust terminal design with several design features providing a perfect electrical function
- 100% vision controlled manufacturing

## FEATURES

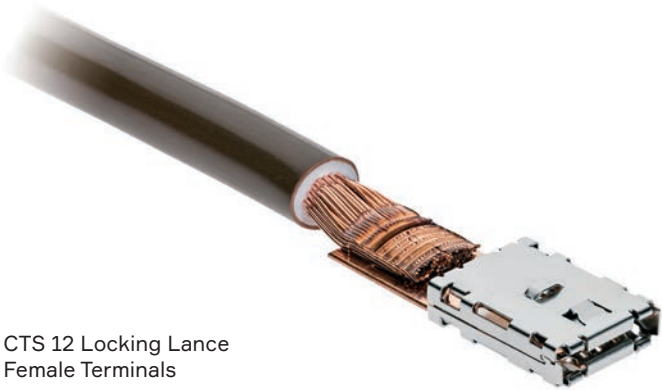
- Two-tang primary lock
- Stainless steel spring
- High performance copper alloy
- Available in several cross sections & platings
- Ultrasonic welding ability according to AK 43-2

## TECHNICAL CHARACTERISTICS

Contact Resistance	< 1 mΩ
Contact Mating Force	< 25 N
Contact Unmating Force	> 25 N
Mating Cycles	20 (Sn) / 20 (Ag)
Cavity Pullout Force	200 N
Center Line Spacing	Unsealed: 12.5 x 12.5 mm Sealed: 13.0 x 13.0 mm



# CTS 12 FEMALE LOCKING LANCE TERMINALS



CTS 12 Locking Lance  
Female Terminals

## BENEFITS

- Patented system provides best in class performance over the full temperature range
- 90/180° cable orientation thanks to welding pad solution
- Welding pad designed for cross sections of: 10 - 35 mm<sup>2</sup>
- Aluminum and copper wire versions available
- Improved contact point overlapping comparing to competition

## FEATURES

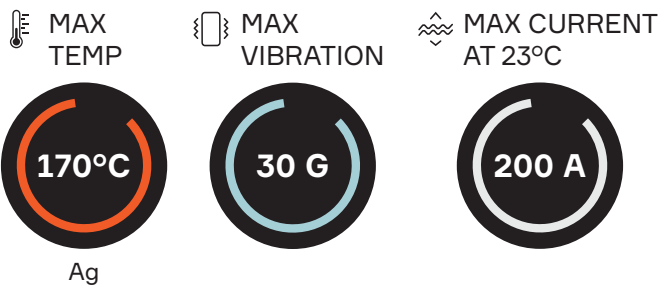
- Mechanical locking of terminal box assures ultrasonic welding robustness
- Improved pull-out force
- Protected against mis-engagement
- Best in class vibration and power capability

## AVAILABLE CONFIGURATIONS

Terminal Construction	Two-piece
Locking Mechanism	Tanged / Lanced
Blade Size (mm)	12
Wire Gage Range (AWG)	7 - 2
Wire Gage Range (mm <sup>2</sup> )	10 - 35
Genders	Female
Sealing Options	Unsealed, Sealed
Plating Options	Sn, Ag
Mating Tab Dimension (mm)	12 x 0.8

## TECHNICAL CHARACTERISTICS

Contact Resistance	< 5 mΩ
Contact Mating Force	< 17 N
Contact Unmating Force	> 4 N
Mating Cycles	20 (Sn) / 20 (Ag)



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm <sup>2</sup> )	Part number	Other available platings	Other available configurations
Unsealed, Sealed	F	Sn	7 - 2	10 - 35	33312673	Ag	90° version

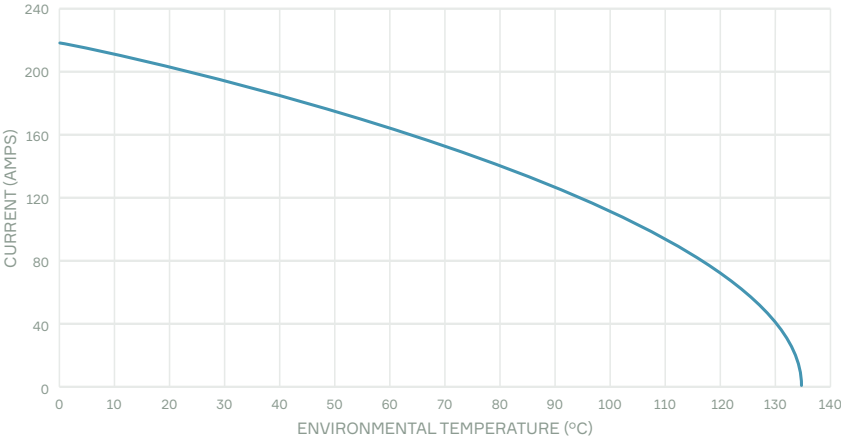
## DERATING CURVES

Cable range: 10 - 35 mm<sup>2</sup>  
Crimp method: Standard  
Contact plating: Sn  
Test method: Single circuit in free air\*  
Mated to: Tab 12 x 0.8

\* For reference only

Terminal without housing

acc. to DIN EN 60512-5-2





# NanoPack™ CTS

## UNSEALED SERIES

USCAR



NanoPack™ CTS  
8W Female

### BENEFITS

- Heavy-duty performance
- Ergonomic design
- Robust contact geometry

### FEATURES

- Compliant with USCAR design guidelines and performance standards
- Industry standard footprint
- Independent Secondary Lock (ISL) to detect partially installed terminals
- Best-in-class lock overstress protection

### AVAILABLE CONFIGURATIONS

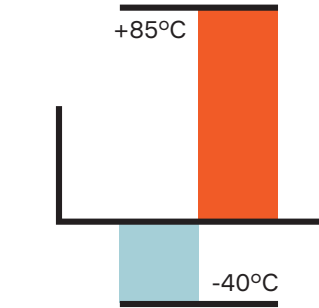
Cavity Count (ways)	4, 8, 12, 16*, 20
Cavity Configurations (mm)	0.5
Genders	Female
Sealing Type	Unsealed
Centerline Spacing (mm)	2.0

\* available upon request

### APPLICATIONS

Interior, Multimedia, HVAC

### TEMPERATURE



### VIBRATION



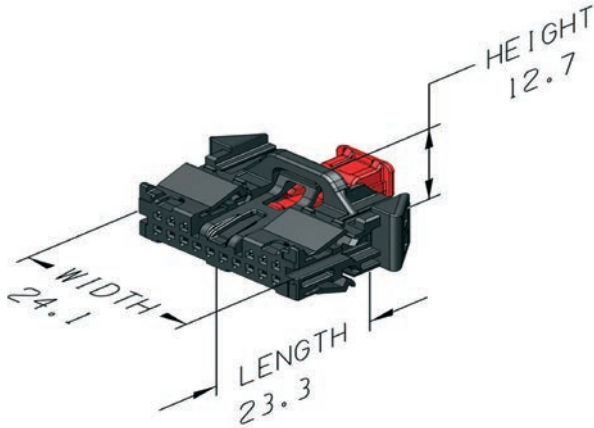
### SEALING CLASS



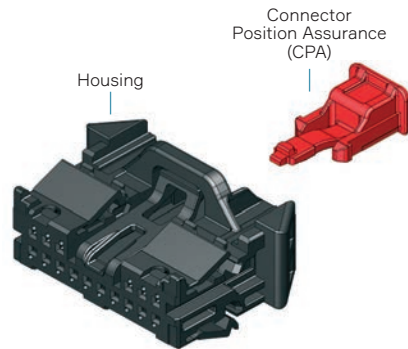
Cavity count	Blade size (mm)	Gender	Dimensions W x H x L (mm)	Part number	Index	Color	CPA	Other indexes offered	USCAR footprint
4	0.5	F	12.1 x 12.7 x 23.3	35068218	A	Black	Yes	B, C, D	050-U-004-1-Z02
8	0.5	F	20.1 x 12.7 x 23.3	35068228	A	Black	Yes	B, C, D	050-U-008-1-Z02
12	0.5	F	20.1 x 12.7 x 23.3	35068239	A	Black	Yes	B, C, D	050-U-012-2-Z02
16*	0.5	F	24.1 x 12.7 x 23.3	33365975	A	Black	Yes	B, C, D	050-U-016-2-Z01
20	0.5	F	35.1 x 12.7 x 23.3	35068196	A	Black	Yes	B, C, D	050-U-020-2-Z01

\* available upon request

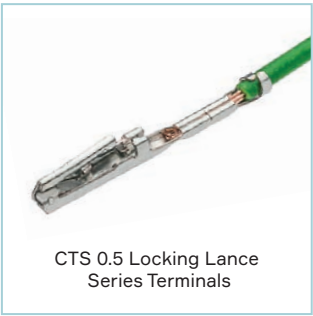
### DIMENSION MEASUREMENT SAMPLE



### EXPLODED VIEW



### COMPATIBLE WITH



# NanoPack™ CTS

## UNSEALED SERIES AK



### BENEFITS

- Miniaturized packages for low pin count interfaces
- Industry standard solution
- Designed for automated harness assembly

### FEATURES

- According to VDA/AK interface standard S1034801 (1 row) & S1051201 (2 row)
- Centerlines miniaturized interfaces
- CPA (Connector Position Assurance) version is possible for 2 row configurations, like the 20 way which has the outer dimensions of a 22 way without CPA

### AVAILABLE CONFIGURATIONS

Cavity Count (ways) 1 row	2, 3, 4, 5, 6*, 7, 8*, 9*, 10, 11
Cavity Count (ways) 2 rows	4*, 6, 8, 10, 12*, 14, 16*, 18*, 20, 22
Cavity Configurations (mm)	0.5
Cable range (mm²)	0.08 - 0.35
Genders	Female
Sealing Type	Unsealed
Centerline Spacing (mm)	1.8 (1 row); 1.8 x 1.5 (2 row)

\* Available upon request.

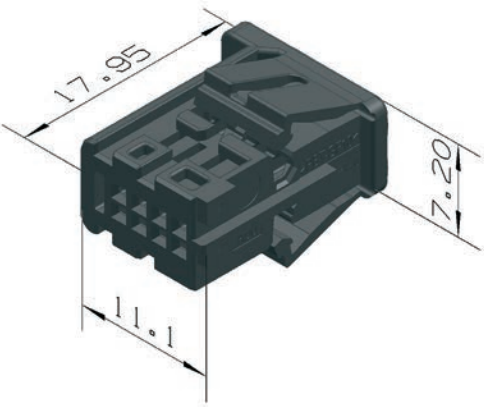
### APPLICATIONS

Cockpit, Dashboard, Ambient lightning, Ethernet

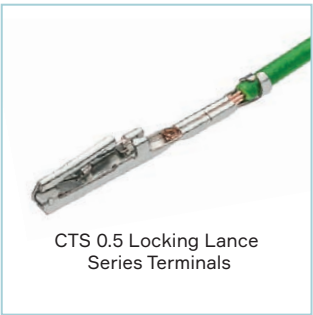
Cavity count	Blade size (mm)	Gender	Dimensions W x H x L (mm)	Part number	Number of rows	Index	Color	Other indexes offered
2	0.5	F	4.2 x 7.7 x 17.9	33257462	1	A	Black	B, C, D, Z
3	0.5	F	4.2 x 9.5 x 17.9	33257463	1	A	Black	B, C, D, Z
4	0.5	F	4.2 x 13.1 x 17.9	33257466	1	A	Black	B, C, D, Z
5	0.5	F	4.2 x 14.9 x 17.9	33266274	1	A	Black	B, C, D, Z
7	0.5	F	4.2 x 16.7 x 17.9	33257467	1	A	Black	B, C, D, Z
10	0.5	F	4.2 x 22.1 x 17.9	33257468	1	A	Black	B, C, D, Z
11	0.5	F	4.2 x 23.9 x 17.9	33257469	1	A	Black	B, C, D, Z
6	0.5	F	7.2 x 9.3 x 17.9	33322916	2	A	Black	B, C, D, Z
8	0.5	F	7.2 x 11.1 x 17.9	33322907	2	A	Black	B, C, D, Z
10	0.5	F	7.2 x 12.9 x 17.9	33322906	2	A	Black	B, C, D, Z
14	0.5	F	7.2 x 16.5 x 17.9	33322904	2	A	Black	B, C, D, Z
20	0.5	F	7.2 x 21.9 x 17.9	33322902	2	A	Black	B, C, D, Z
20*	0.5	F	7.2 x 21.6 x 26.8**	35192072	2	A	Black	B, C, D, Z
22	0.5	F	7.2 x 23.7 x 17.9	33329555	2	A	Black	B, C, D, Z

\* with CPA (Backshell PN : 35192068)  
\*\* dimensions with open CPA

### DIMENSION MEASUREMENT SAMPLE



### COMPATIBLE WITH





# NanoPack™ CTS

## SEALED SERIES AK



NanoPack™ CTS 8W Female

### AVAILABLE CONFIGURATIONS

Cavity Count (ways)	8, 12*
Cavity Configurations (mm)	0.5
Cable range (mm²)	0.13 - 0.35
Genders	Female
TPA Type	Pre-assembled ASL**
CPA	Optional
Sealing Type	Multi wire mat seal
Centerline Spacing (mm)	1.8
Specification	VW75174-LV214; IEC68; DIN: IEC60512; EN60068

\* Other cavities available, please consult us  
\*\* ASL – Active Secondary lock

### APPLICATIONS

Mid and short range radars, Cameras, Tire pressure sensors exposed to humidity and liquid splashes

### BENEFITS

- Connector Position Assurance (CPA) is optional for 8W version. Optimized space saving version without CPA, bottom or top locking latch possible
- Housings & terminals are designed as per VDA/AK guidelines

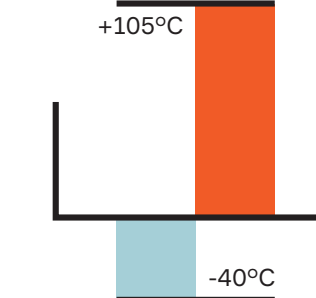
### FEATURES

- Designed for high temperatures and vibration profiles
- Aptiv is responsible for the sealed 0.5 footprint at VDA/AK
- Ergonomic handling and touching surface as per manual mating guideline (USCAR)

### TECHNICAL CHARACTERISTICS

Mating force	75 N
Contact pull out force	≥ 25 N primary ≥ 35 N secondary
Contact insertion force	~ 2 N
Automated terminal insertion	Capable & compatible

#### TEMPERATURE



\* Peak temperature: 130°C

#### VIBRATION



#### SEALING PROTECTION

IP67  
IPx9K\*

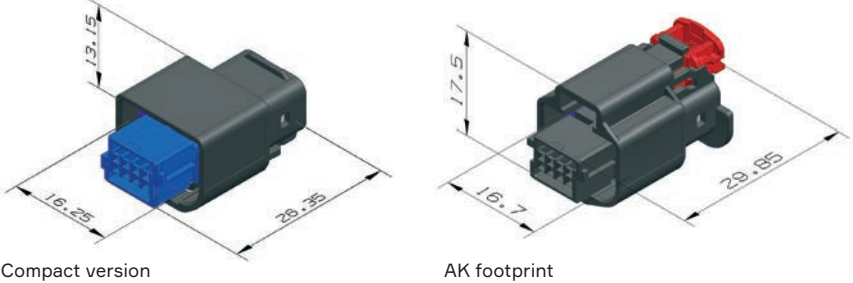
\* with back shell cover

Cavity count	Blade size (mm)	Gender	AK footprint	Dimensions W x H x L (mm)	Part number	Index	Color
8	0.5	F	Yes	16.7 x 17.5 x 29.85	35364118	A	Black
8	0.5	F	Yes	16.7 x 17.5 x 29.85	35371049	B	Black
8	0.5	F	Yes	16.7 x 17.5 x 29.85	35371050	C	Black
8	0.5	F	No	16.25 x 13.15 x 26.35	35355142	A	Black
8	0.5	F	No	16.25 x 13.15 x 26.35	35355143	B	Black
8	0.5	F	No	16.25 x 13.15 x 26.35	35355144	C	Black
12	0.5	F	Yes	20.3 x 17.5 x 29.85	35511141	A	Black

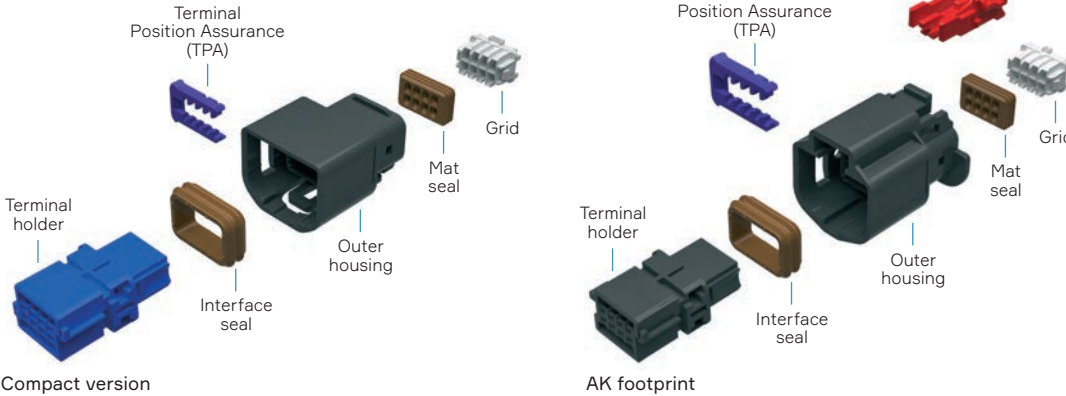
### REQUIRED ACCESSORIES

Type	Color	Angle	Part number
Cover	Black	180°	Consult us
Cover	Black	90° right	Consult us
Cover	Black	90° left	Consult us

### DIMENSION MEASUREMENT SAMPLE



### EXPLODED VIEW



### COMPATIBLE WITH



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.

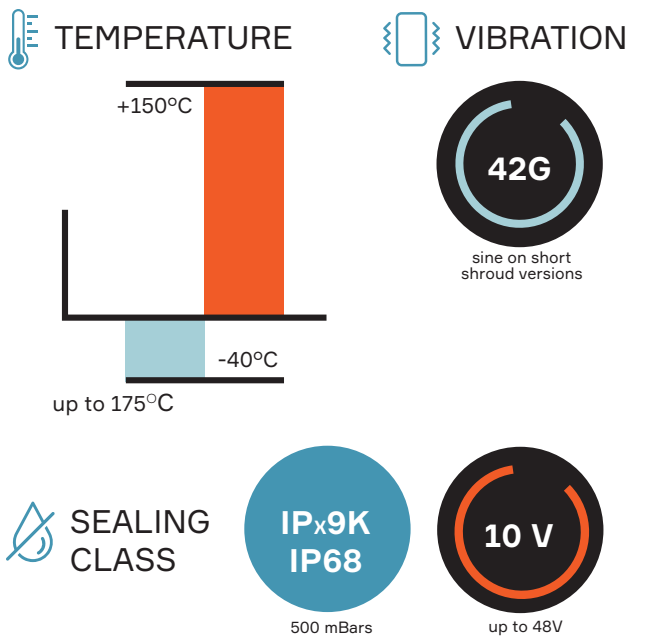
# CTS 1.2 SensoMate™ SERIES



AVAILABLE CONFIGURATIONS	
Cavity Count (ways)	2, 3, 4, 5, 6
Cavity Configurations (mm)	1.2
Genders	Female, Male (2-4W only)
Sealing Type	Cable Sealed
Centerline Spacing (mm)	4.0
Indexes	Varies, See Part List
TPA Type	Independent Secondary Lock (ISL)
CPA	Yes
Validation	GMW 3191; RND5-B-00029 V.2 for short shroud; Others please consult us

APPLICATIONS	
Chassis, Engine compartment, On-Engine-Mount, Severe Gearbox Applications, Sensors/Actuators	

- BENEFITS**
  - VDA/USCAR 1.2 mm at 4 mm pitch interface compatible (universal)
  - Industry standard 1.2 terminal cavity capability
  - Short shroud design for small packaging footprint and long shroud design for easy mating device
- FEATURES**
  - One piece molded housing to ensure best in class sealing performance (short shroud version)
  - Increased sealing performance through a unique 3 rib robust seal design (175°C version)
  - Patented Smart Locking System version of the CPA to improve assembly cycle time (short shroud version)
  - Compatible with wire dress back shells (short shroud version)

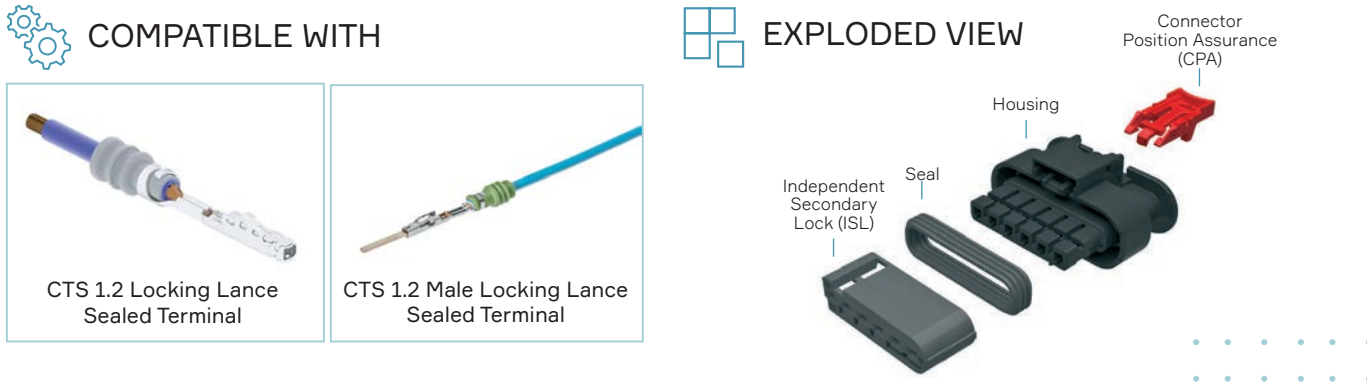


Cavity count	Blade size	Gender	Part number	Temperature Class	CPA	Shroud	Clip Slot	Dimensions (W x H x D)	Index	Other Indexes offered
2	1.2	F	35126363	150°C	Type 1	Short	No	15.2 x 15 x 29.5	A	B, C
3	1.2	F	35126369	150°C	Type 1	Short	No	19.2 x 15 x 29.5	A	B, C, D
4	1.2	F	35126375	150°C	Type 1	Short	No	24.5 x 16.3 x 29.5	A	B, C, D, F, G
5	1.2	F	35126383	150°C	Type 1	Short	No	28.5 x 16.3 x 29.5	A	B
6	1.2	F	35020435	150°C	Type 1	Short	No	32.5 x 16.3 x 29.5	A	B, C, E
2	1.2	F	35387382	150°C	Type 2	Short	No	15.2 x 15 x 26	A	B, C
3	1.2	F	35387389	150°C	Type 2	Short	No	19.2 x 15 x 26	A	B, C, D
2	1.2	F	35449381	175°C	Type 1	Short	No	15.2 x 15 x 29.5	A	B, C
3	1.2	F	35449383	175°C	Type 1	Short	No	19.2 x 15 x 29.5	A	B, C, D
4	1.2	F	35449387	175°C	Type 1	Short	No	24.5 x 16.3 x 29.5	A	B, C, D, F, G
5	1.2	F	35449388	175°C	Type 1	Short	No	28.5 x 16.3 x 29.5	A	B
6	1.2	F	35449389	175°C	Type 1	Short	No	32.5 x 16.3 x 29.5	A	B, C, E
2	1.2	F	35747313	150°C	Yes	Long	No	25.2 x 14.6 x 32.8	A	B, C, E, F
3	1.2	F	35748524	150°C	Yes	Long	No	26.2 x 14.6 x 32.8	A	B, C, D
4	1.2	F	35748643	150°C	Yes	Long	No	30.2 x 15.6 x 32.8	A	B, C, D, E, F, G, H
2	1.2	F	35747322	150°C	Yes	Long	Yes	25.2 x 18.8 x 32.8	A	B, C, E, F
3	1.2	F	35748527	150°C	Yes	Long	Yes	25.2 x 18.8 x 32.8	A	B, C, D
4	1.2	F	35748651	150°C	Yes	Long	Yes	30.2 x 19.9 x 32.8	A	B, C, E, F, G
2	1.2	M	35147458	150°C	Not Applicable		Yes	18.8 x 15.4 x 46.8	A	B, C, USCAR* E, F
3	1.2	M	35148571	150°C	Not Applicable		Yes	18.8 x 15.4 x 46.8	A	B, C, D
4	1.2	M	35147457	150°C	Not Applicable		Yes	24.1 x 16.5 x 46.8	A	B, C, USCAR* E, F, G

\* USCAR interface on device

COMPATIBLE SEALS AND ACCESORIES					
Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number	
Cable Seal	0.13 - 0.35	Black	No	33120594	
Cable Seal	0.35 - 0.5	Red	No	15327913	
Cable Seal	0.5 - 1.0	Gray	No	15327918	
Cable Seal	1.0 - 1.25	Yellow	No	15339412	
Cavity Plug	NA	White	No	12198198	
Cable Seal	0.13 - 0.35	Yellow	Yes	13887349	
Cable Seal	0.5 - 1.0	Green	Yes	13887350	
Cavity Plug	NA	Blue	Yes	13887353	
Fixing clip for male housing slot**	NA	Black	NA	33119512	
Back shell***	NA	-	NA	Consult us	

Other cable seals and cavity plugs available, please consult us. \*\* USCAR 7 mm. \*\*\* Lateral 90°, up/down 90°, 0°



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# CTS 2.8 SEALED SERIES



CTS 2.8 2W, 3W Female

### BENEFITS

- Heavy-duty performance
- Ergonomic design
- Robust contact geometry

### FEATURES

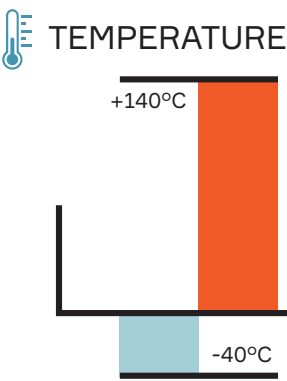
- Compliant with USCAR design guidelines and performance standards
- Industry standard footprint
- Superior single-piece housing construction
- Independent Secondary Lock (ISL) to detect partially installed terminals

### AVAILABLE CONFIGURATIONS

Cavity Count (ways)	2, 3, 4
Cavity Configurations (mm)	2.8
Genders	Female
Sealing Type	Cable Sealed
Centerline Spacing (mm)	5.0

### APPLICATIONS

On-engine sensors



### ENVIRONMENTAL PROTECTION



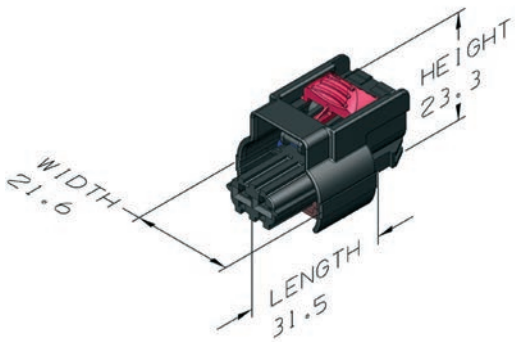
Cavity count	Blade size (mm)	Gender	Dimensions W x H x L (mm)	Part number	Index	Color	Other indexes offered
2	2.8	F	21.6 x 23.3 x 31.5	35182447	A	Black	B, C, D
3	2.8	F	26.6 x 25.8 x 31.5	35133579	A	Black	B, C, D
4	2.8	F	31.6 x 27.8 x 31.5	35133588	A	Black	B, C, D

### COMPATIBLE SEALS

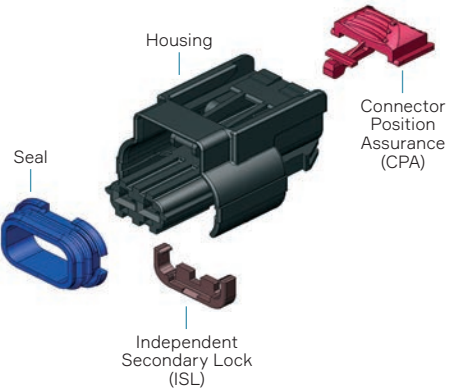
Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 1.0	Blue	Yes	15339967
	1.25 - 2.5	White	Yes	15339838
Cable Seal	0.35 - 0.75	Blue	No	15324974
	0.5 - 1.0	Red	No	15327786
	1.25 - 2.0	Red	No	15324973
	2.5	Yellow	No	10779161
	N/A	Green	No	10730124
	N/A	Red	No	12059168

Please, contact an Aptiv representative for the full part number list.

### DIMENSION MEASUREMENT SAMPLE



### EXPLODED VIEW



### COMPATIBLE WITH



CTS 2.8 Series Terminals

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.





# CTCS CONNECTORS



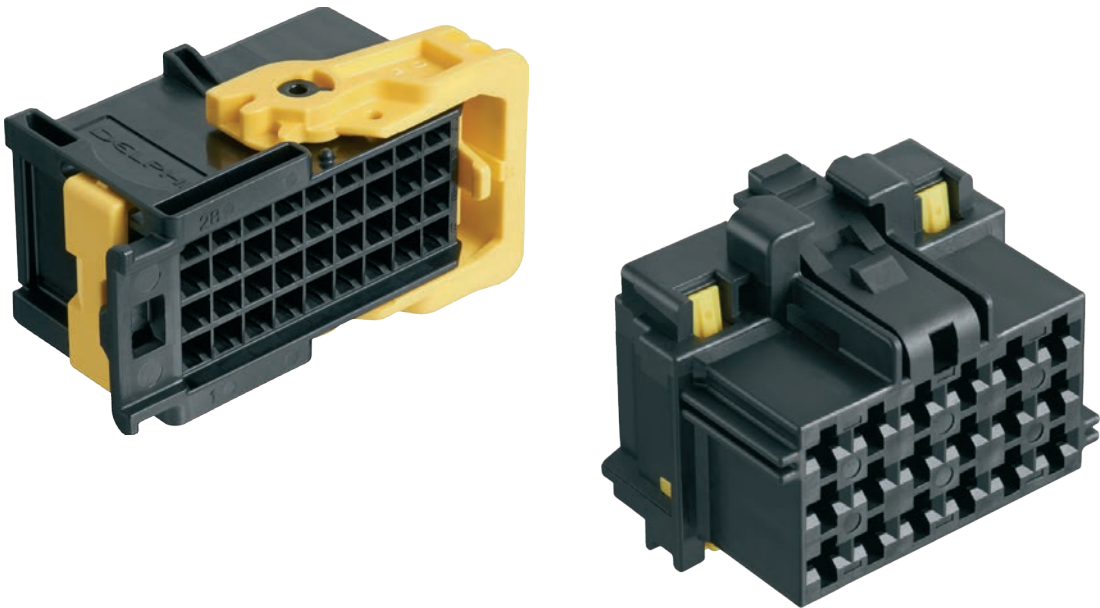
# CTCS CONNECTORS



## SELECTOR GUIDE

Compact Transportation Connection Systems - A versatile solution with designed in reliability and superior performance, this connection family was designed specifically for the transportation market and heavy duty applications.

The CTCS connector families have been designed to meet the demanding requirements of commercial and heavy duty applications, specifically to address new emission regulations and enable the generation of environmentally friendly vehicles.

- Application versatility
- Unparalleled reliability & performance
- Designed for the commercial vehicle market



			
	CTCS Unsealed	CTCS SP	CTCS XP
Application	Interior	Chassis, Engine compartment	Chassis, Engine compartment, On-engine
Blade Size	1.5, 2.8, 6.3, Mixed	1.5, 2.8, 6.3, Mixed	1.5, 2.8, 6.3, Mixed
# of Cavities	4, 18, 25, 36	15, 21, 26, 39, 62	2, 3, 4, 6, 7, 8, 10, 12, 15, 16, 18
Gender	F	F, M	F, M
Lock assist type	Standard, Lever lock	Lever lock	Slider lock
Temperature Class	T1	T3	T3 (+140°C)
IP Rating	NA	IP67, IP6K7 IP69, IP69K	IP67, IP6K7 IP69, IP69K
CPA	No	No	No
See Pages	90-91	92-93	94-95

*This document is non-contractual and is for information purpose only*

# CTCS UNSEALED SERIES



## BENEFITS

- Versatile connection system
- Unparalleled reliability and performance
- Designed for the transportation market

## FEATURES

- Connector locks tethered in position to prevent lock arm droop and provide consistent audible click
- Modular design for decreased number of parts
- Secondary lock for terminal unseat detection

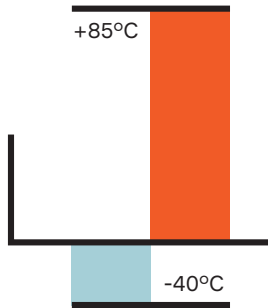
## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	4, 18, 25, 36
Cavity Configurations (mm)	1.5, 2.8, 6.3, Mixed
Materials	HB Flammability
Genders	Female
Lock Assist Type	Standard or Lever

## APPLICATIONS

Cab

## TEMPERATURE



## VIBRATION



Random (Grms)

## SEALING PROTECTION (IEC, ISO)

IP5,  
IP5K

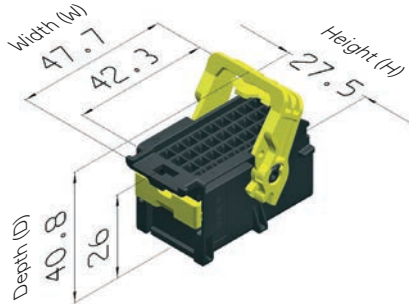
Cavity count	Blade size (mm)	Gender	Dimensions W x H x D (mm)	HB part number	Mounting type	Index	Color	Other indexes offered
4	6.3	F	30.9 x 21 x 24	33136690	Universal	A	Black	B
18	2.8	F	36 x 29.15 x 24.2	35129604	Universal	A	Gray	B, C, D
25	1.5 (18) + 2.8 (7)	F	47.7 x 27.5 x 40.8	33219796	Universal	A	Black	B, C, D
36	1.5	F	47.7 x 27.5 x 40.8	33252408	Universal	A	Brown	B, C, D

Please, refer to the CTCS catalogue for the full part number list.

## REQUIRED ACCESSORIES

Cavity count	Accessory	HB part number
25	Secondary Lock	33219801
36	Secondary Lock	33252407

## DIMENSION MEASUREMENT SAMPLE

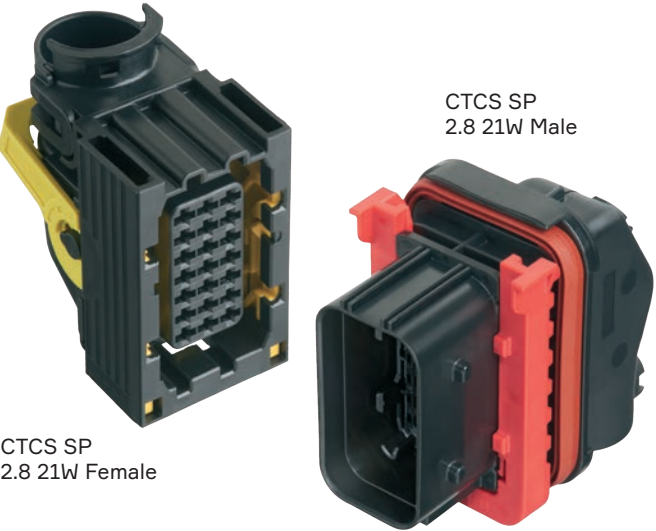


## COMPATIBLE WITH





# CTCS SP SERIES



CTCS SP  
2.8 21W Female

CTCS SP  
2.8 21W Male

## BENEFITS

- Versatile connection system
- Unparalleled reliability and performance
- Designed for the transportation market

## FEATURES

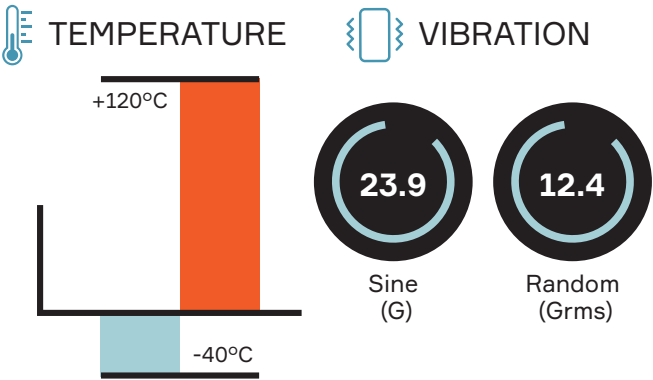
- Lever lock integrated into the back shell for easier plugging
- Locking features on slides prevent accidental release of connectors prior to full mating

## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	15, 21, 26, 39, 62
Cavity Configurations (mm)	1.5, 2.8, 6.3, Mixed
Materials	V0, HB Flammability
Genders	Female, Male
Lock Assist Type	Lever lock
Mounting Options	Panel, Bracket

## APPLICATIONS

Chassis  
Engine compartment



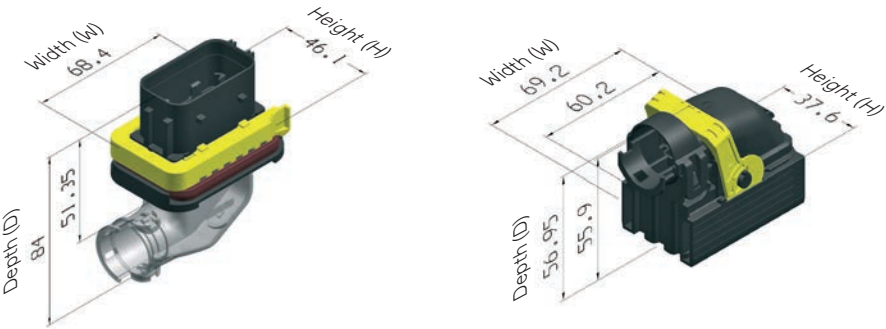
Cavity count	Blade size (mm)	Gender	Dimensions W x H x D (mm)	V0 part number	HB part number	Mounting type	Index	Color	Other indexes offered
15	2.8	F	59.2 x 37.6 x 54.6	33276638	33188785	Universal	A	Black	B, C
21	2.8	F	69.2 x 37.6 x 56.95	33276630	33101162	Universal	A	Black	B, C, D
21	2.8	M	68.4 x 46.1 x 84	33276634	33237993	Panel	A	Black	B, C, D
26	1.5 (12) + 2.8 (12) + 6.3 (2)	F	92.15 x 41.4 x 64.71	33283998	33207220	Universal	A	Black	B, C, D
26	1.5 (12) + 2.8 (12) + 6.3 (2)	M	75.9 x 51 x 77.6	33284519	33207134	Panel	A	Black	B, C, D
39	2.8	F	120.1 x 44.15 x 64.13	33273782	33111401	Universal	A	Green	B
39	2.8	M	108 x 78 x 89.9	33276705	33198862	Panel	A	Green	B
62	1.5 (56) + 2.8 (6)	F	120.55 x 44.1 x 64.55	33337581	33337577	Universal	A	Black	B, C, D
62	1.5 (56) + 2.8 (6)	M	108 x 78 x 89.9	33276719	33213199	Panel	A	Black	B, C, D

Please, refer to the CTCS catalogue for the full part number list.

## REQUIRED ACCESSORIES

Cavity count	Accessory	V0 part number	HB part number
15	Female back shell / Lever	33276642	33200044
21	Female back shell / Lever	33276641	33106893
26	Female back shell / Lever	33284004	33207232
39	Female back shell / Lever	33273779	33111591
62	Female back shell / Lever	33273779	33111591

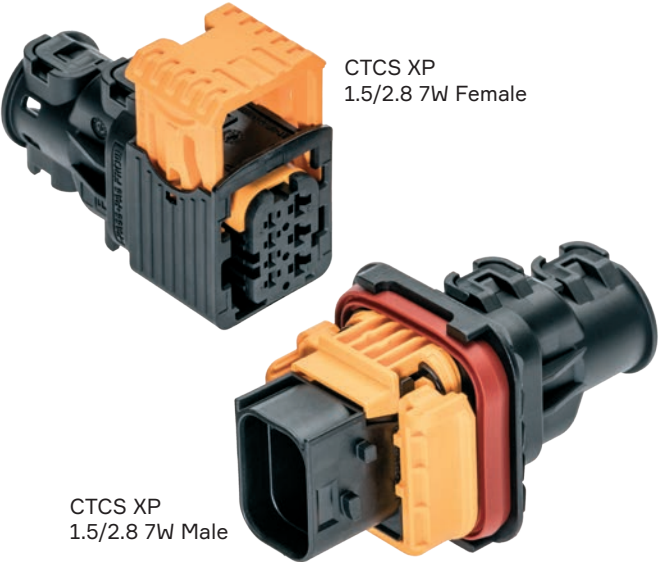
## DIMENSION MEASUREMENT SAMPLE



## COMPATIBLE WITH



# CTCS XP SERIES



## BENEFITS

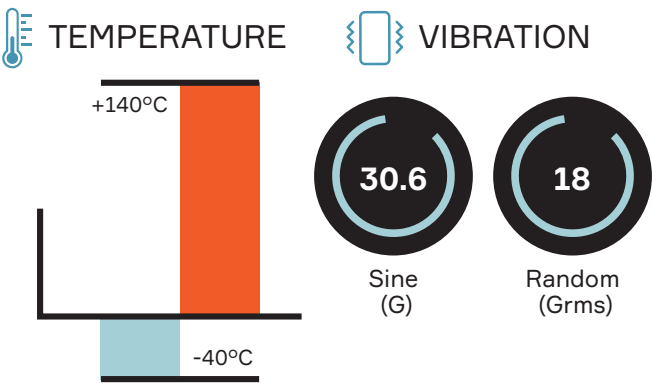
- Versatile connection system
- Unparalleled reliability and performance
- Designed for the transportation market

## FEATURES

- Optional back shells in 180° and 90° angles with additional ribbing for improved vibration performance
- 0-gap design of back shells provides superior protection against dust and debris ingress
- Locking features on slides prevent accidental release of connectors prior to full mating

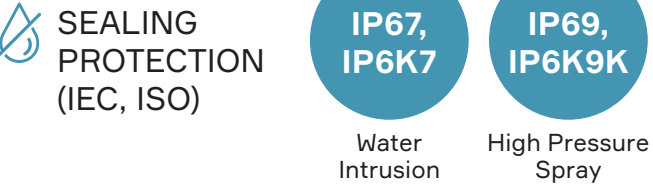
## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	2, 3, 4, 6, 7, 8, 10, 12, 15, 16, 18
Cavity Configurations (mm)	1.5, 2.8, 6.3, Mixed
Materials	V0
Genders	Female, Male
Lock Assist Type	Slider lock
Mounting Options	Panel, Strap/Clip



## APPLICATIONS

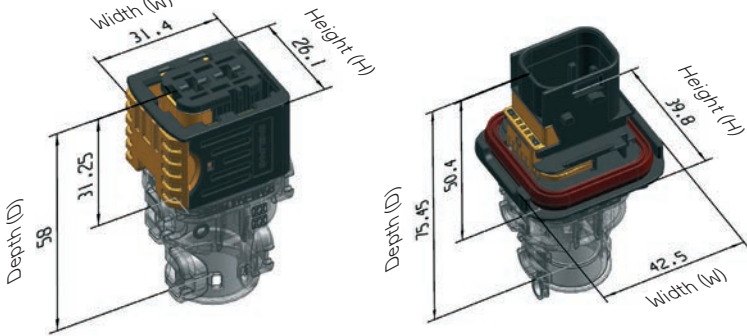
Chassis
Engine compartment
On-engine



Cavity count	Blade size (mm)	Gender	Dimensions W x H x D (mm)	V0 part number	Mounting type	Index	Color	Other indexes offered
2	1.5	F	25.8 x 18.9 x 31.25	33253266	Universal	A	Black	B, C, D
2	2.8	F	25.8 x 18.9 x 31.25	33253554	Universal	A	Black	B, C, D
2	2.8	M	37.5 x 29.8 x 48.3	33254221	Panel	A	Black	B, C, D
2	6.3	F	31.4 x 26.1 x 31.25	33285119	Universal	A	Black	B, C, D
2	6.3	M	42.5 x 39.8 x 50.4	33285118	Panel	A	Black	B, C, D
2	6.3	M	33.2 x 27 x 50.4	33341148	Strap/Clip	A	Black	B, C, D
3	1.5	F	25.8 x 18.9 x 31.25	33253275	Universal	A	Black	B, C, D
3	1.5	M	37.5 x 29.8 x 48.3	33254285	Panel	A	Black	B, C, D
3	1.5	M	27.6 x 19 x 48.3	33254098	Strap/Clip	A	Black	B, C, D
4	2.8	F	30.5 x 26.1 x 31.25	33308974	Universal	A	Black	B, C, D
4	2.8	M	37.5 x 39.8 x 48.3	33308731	Panel	A	Black	B, C, D
4	2.8	M	27.6 x 27 x 48.3	33308978	Strap/Clip	A	Black	B, C, D
6	1.5	F	30.5 x 26.1 x 31.25	33308961	Universal	A	Black	B, C, D
6	1.5	M	37.5 x 39.8 x 48.3	33308982	Panel	A	Black	B, C, D
6	1.5	M	27.6 x 27 x 48.3	33308912	Strap/Clip	A	Black	B, C, D
7	1.5 (4) + 2.8 (3)	F	31.4 x 26.1 x 31.25	33285164	Universal	A	Black	B, C, D
7	1.5 (4) + 2.8 (3)	M	42.5 x 39.8 x 48.3	33285120	Panel	A	Black	B, C, D
7	1.5 (4) + 2.8 (3)	M	33.2 x 27 x 48.3	33341403	Strap/Clip	A	Black	B, C, D
8	1.5	F	31.4 x 26.1 x 31.25	33341417	Universal	A	Black	B, C, D
8	1.5	M	42.5 x 39.8 x 48.3	33341408	Panel	A	Black	B, C, D
8	1.5	M	33.2 x 27 x 48.3	33341413	Strap/Clip	A	Black	B, C, D
8	2.8	F	39.65 x 26.1 x 31.25	33343499	Universal	A	Black	B, C, D
8	2.8	M	40.6 x 27 x 48.3	35015736	Strap/Clip	A	Black	B, C, D
10	1.5 (6) + 2.8 (4)	F	39.65 x 26.1 x 31.25	33344008	Universal	A	Black	B, C, D
10	1.5 (6) + 2.8 (4)	M	50.5 x 39.8 x 48.3	33343722	Panel	A	Black	B, C, D
12	1.5	F	39.65 x 26.1 x 31.25	33340130	Universal	A	Black	B, C, D
12	1.5	M	50.5 x 39.8 x 48.3	33340243	Panel	A	Black	B, C, D
15	1.5 (9) + 2.8 (6)	F	51.5 x 26.1 x 31.25	33344005	Universal	A	Black	B, C, D
15	1.5 (9) + 2.8 (6)	M	62.5 x 39.8 x 48.3	33343701	Panel	A	Black	B, C, D
16	1.5 (12) + 2.8 (4)	F	51.5 x 26.1 x 31.25	33285172	Universal	A	Black	B, C, D
16	1.5 (12) + 2.8 (4)	M	62.5 x 39.8 x 48.3	33285171	Panel	A	Black	B, C, D
16	1.5 (12) + 2.8 (4)	M	52.6 x 27 x 48.3	33342243	Strap/Clip	A	Black	B, C, D
18	1.5	F	51.5 x 26.1 x 31.25	33342277	Universal	A	Black	B, C, D
18	1.5	M	62.5 x 39.8 x 48.3	33342293	Panel	A	Black	B, C, D
18	1.5	M	52.6 x 27 x 48.3	33342234	Strap/Clip	A	Black	B, C, D

Please, refer to the CTCS catalogue for the full part number list.

## DIMENSION MEASUREMENT SAMPLE



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# ERGOMATE™ CONNECTORS



# ErgoMate™ 38 WAY



ErgoMate™ 38W Connector

## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	38
Cavity Configurations (mm)	OCS 1.2, CTS 2.8, CTS 6.3
Genders	Female, Male
Sealing Type	OCS 1.2 Mat Sealed CTS 2.8 & 6.3 Cable Sealed
Indexes	A, B, C, D
Terminal Position Assurance (TPA) Type	ISL
Connector Position Assurance (CPA)	Yes

## APPLICATIONS

Passenger Compartment, Trunk, Underhood, Chasis, On Engine, Transmission

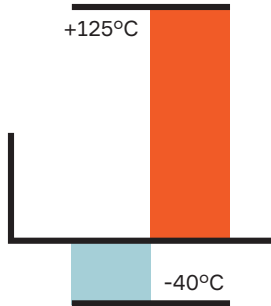
## BENEFITS

- Ergonomic mating
- Robust and durable design
- Compact packaging size
- High application versatility

## FEATURES

- Large grasping surface
- High tactile feedback
- Simplified engagement system reduces the possibility of mis-mating of connection system
- Unique geared cam and slider system is fully self-contained, provides a 3:1 mechanical advantage
- A lower-profile ergonomically friendly alternative to traditional lever assist
- Low connector mating force at ~65 N
- Retractable Male Blade Stabilize
- Wide cable guage compatibility from 0.35 mm<sup>2</sup> to 4.0 mm<sup>2</sup>

## TEMPERATURE



## VIBRATION



## SEALING CLASS



Cavity count	Blade size (mm)	Gender	Dimensions W x H x L (mm)	Part number	Index	Color	Other indexes offered
38	1.2 (32) + 2.8 (4) + 6.3 (2)	F	71.25 x 42 x 60	35730037	A	Black	B, C, D
38	1.2 (32) + 2.8 (4) + 5.8* (2)	M	56.25 x 39.2 x 64.5	35730043	A	Black	B, C, D

\* Non Aptiv terminal, please consult us

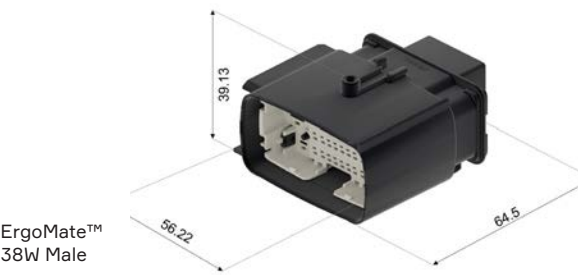
## COMPATIBLE SEALS & ACCESSORIES

Type	Applicable Wire Size	Color	Angle	Part number
Cavity Plug	2.8	Red	-	12059168
Cavity Plug	6.3	Gray	-	35232480
Back Shell	16mm Conduit	Black	0°	35283288
Back Shell	19mm Conduit	Black	0°	35104748
Back Shell	16mm Conduit	Black	90°	35283609
Back Shell	19mm Conduit	Black	90°	35104749

## DIMENSION MEASUREMENT SAMPLE

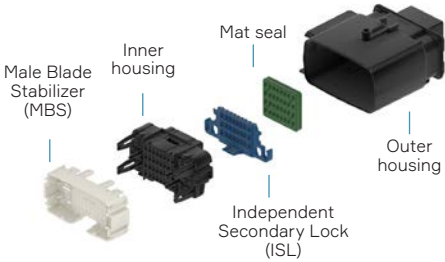
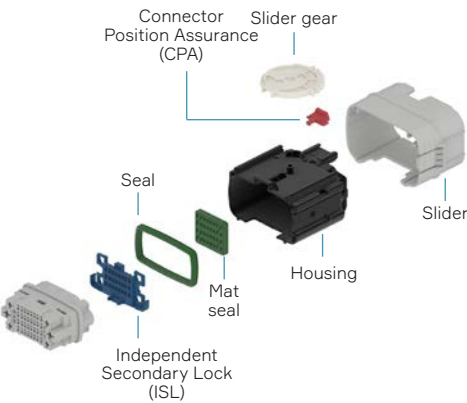


ErgoMate™ 38W Female



ErgoMate™ 38W Male

## EXPLODED VIEW



## COMPATIBLE WITH



OCS 1.2 Series Terminals



CTS 2.8 Series Terminals



CTS 6.3 Series Terminals

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# ErgoMate™ 55 WAY



ErgoMate™ 55W  
Female & Male

## BENEFITS

- Ergonomic mating
- Robust and durable design
- Compact packaging size
- High application versatility

## FEATURES

- High reliability one-handed mating
- Large grasping surface
- High tactile feedback
- Simplified engagement system reduces the possibility of mis-mating of connection system
- Unique geared cam and slider system is fully self-contained, provides a 3:1 mechanical advantage
- A lower-profile ergonomically friendly alternative to traditional lever assist
- Low connector mating force at ~65 N
- Wide cable guage compatibility from 0.35 mm<sup>2</sup> to 6.0 mm<sup>2</sup>

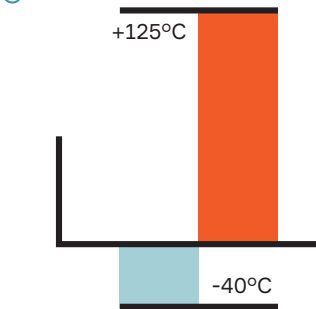
## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	55
Cavity Configurations (mm)	OCS 1.2 CTS 2.8 CTS 6.3
Genders	Female, Male
Sealing Type	OCS 1.2 Mat Sealed CTS 2.8 & 6.3 Cable Sealed

## APPLICATIONS

Sealed inline applications

## TEMPERATURE



## VIBRATION



## SEALING CLASS

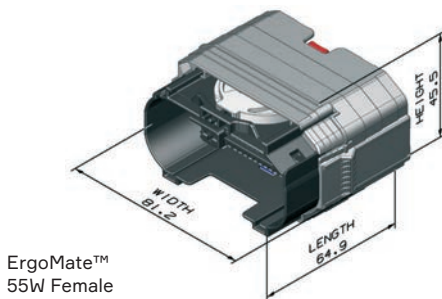


Cavity count	Blade size (mm)	Gender	Dimensions W x H x L (mm)	Part number	Index	Color	Other indexes offered
55	1.2 (46) + 2.8 (4) + 6.3 (5)	F	81.2 x 45.5 x 64.9	35016652	A	Black	B
55	1.2 (46) + 2.8 (4) + 6.3 (5)	M	69.3 x 41.4 x 64.4	35205173	A	Black	B

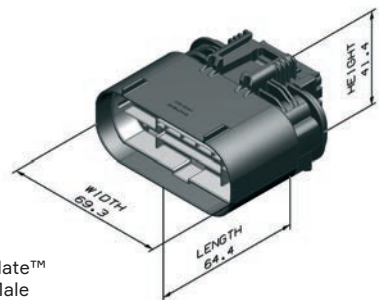
## COMPATIBLE ACCESSORIES

Type	Orientation	Color	Part number
Dress Cover	90°	Black	35017218
Dress Cover	180°	Black	35056875

## DIMENSION MEASUREMENT SAMPLE

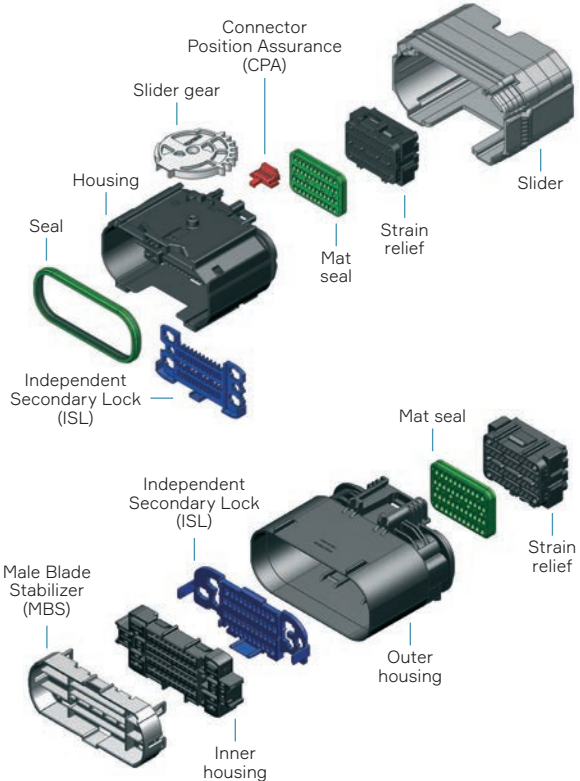


ErgoMate™ 55W Female



ErgoMate™ 55W Male

## EXPLODED VIEW



## COMPATIBLE WITH



OCS 1.2 Series Terminals



CTS 2.8 Series Terminals



CTS 6.3 Series Terminals

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# GTS TERMINALS AND CONNECTORS



# GTS 0.64 TERMINALS



GTS 0.64  
Female & Male Terminals

## BENEFITS

- Stable contact force with high performing copper alloy
- Proven reliability in door-to-body connection system

## FEATURES

- Clean body design to go through a mat seal
- Easy and smooth insertion through mat seals

## AVAILABLE CONFIGURATIONS

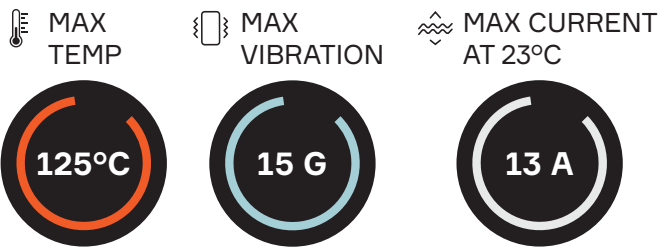
Terminal Construction	Two-piece
Locking Mechanism	Tangless / Lanceless
Crimp Validated to	SsangYong, Ferrari, RSA, PSA
Blade Size (mm)	0.64
Wire Gage Range (AWG)	22 - 18
Wire Gage Range (mm²)	0.22 - 0.85
Genders	Female, Male
Sealing Options	Unsealed, Mat Sealed
Plating Options	Sn, Au
Mating Tab Dimension (mm)	0.64 x 0.64

## APPLICATIONS

EMS (Engine Management System)

## TECHNICAL CHARACTERISTICS

Contact Resistance	< 6 mΩ
Contact Mating Force	< 3 N
Contact Unmating Force	< 0.5 N
Mating Cycles	20
Cavity Pullout Force	> 80 N
Center Line Spacing	2.5 mm



Type	Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number
GTS-1*	Unsealed	F	Sn	24 - 22	0.22 - 0.35	13955989
GTS-1*	Unsealed	F	Sn	20	0,5	13648598
GTS-1*	Unsealed	F	Sn	18	0.75 - 0.85	13768627
GTS-3	Unsealed	F	Sn	24 - 22	0.22 - 0.35	33500712
GTS-3	Unsealed	F	Sn	20	0,5	33502051
GTS-3	Unsealed	F	Sn	18	0.75 - 0.85	33500713
GTS-3	Unsealed	M	Sn	24 - 22	0.22 - 0.35	33510990
GTS-3	Unsealed	M	Au	24 - 22	0.22 - 0.35	33285109

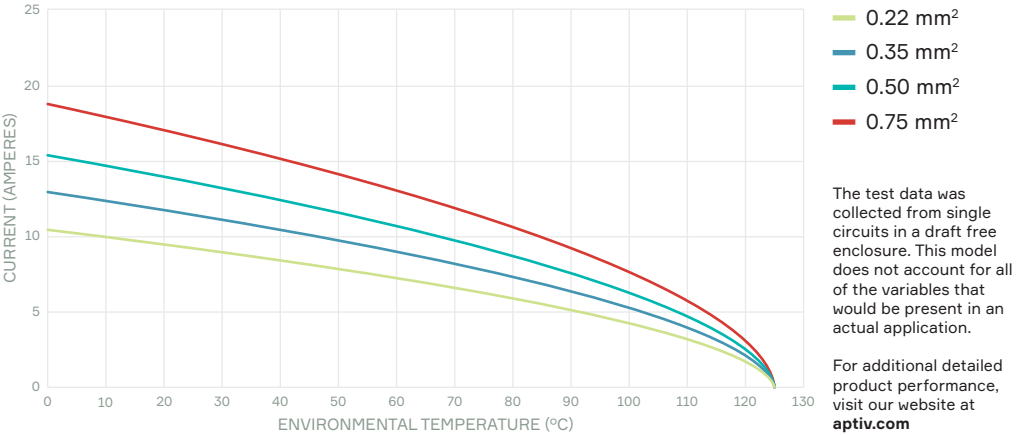
\* CMC application

## DERATING CURVE

Cable range: 0.22 - 0.85 mm²  
Crimp method: Standard  
Contact plating: Sn  
Test method: Single circuit in free air\*  
Mated to: GTS 0.64 male terminals 0.22 - 0.35 mm²

\* For reference only

One terminal loaded, in housing wire-to-wire configuration



## COMPATIBLE WITH



# GTS 1.5 TERMINALS



GTS 1.5  
Female & Male Terminals

## BENEFITS

- Stable contact force with high performing copper alloy
- Best ratio of base material usage for a 1.5 mm female terminal in the market
- High vibration performance in 2 and 3 Way housings (up to 42 G at 85 °C)

## FEATURES

- Easy and smooth insertion through mat seals
- Clean Body geometry without any sharp edges, preventing operator injury and wire damage
- Wide range of crimping cable section gauges
- Compatible with cable seals

## AVAILABLE CONFIGURATIONS

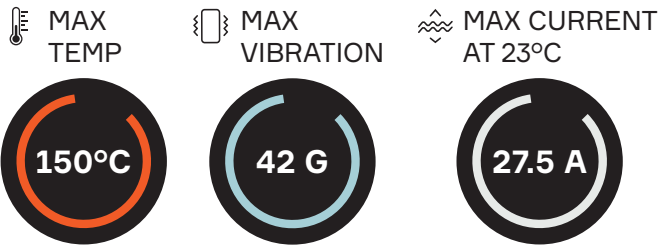
Terminal Construction	Two-piece
Locking Mechanism	Tangless / Lanceless
Crimp Validated to	RSA, GM, PSA
Blade Size (mm)	1.5
Wire Gage Range (AWG)	24 - 14
Wire Gage Range (mm²)	0.22 - 2.0
Genders	Female, Male
Sealing Options	Unsealed, Mat Sealed, Cable Sealed
Plating Options	Sn, Au
Mating Tab Dimension (mm)	1.5 x 0.8

## APPLICATIONS

Engine compartment, ECU, sensors, actuators

## TECHNICAL CHARACTERISTICS

Contact Resistance	< 1.5 mΩ
Contact Mating Force	< 4 N
Contact Unmating Force	< 0.5 N
Cavity Pullout Force	> 120 N
Center Line Spacing	3.5 mm



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings
Unsealed	F	Sn	24 - 22	0.22 - 0.35	33510898	Au
Unsealed	F	Sn	20 - 18	0.50 - 0.85	13648599	Au
Unsealed	F	Sn	16	1.0 - 1.3	13741954	Au
Unsealed	F	Sn	14	1.4 - 2.0	13749482	Au
Unsealed	M	Sn	20 - 18	0.50 - 0.85	33510912	-
Unsealed	M	Sn	16	1.0 - 1.3	33500741	-
Unsealed	M	Sn	14	1.4 - 2.0	33510913	-
Cable Sealed	F	Sn	20 - 18	0.50 - 0.85	29828026	Au
Cable Sealed	F	Sn	16	1.0 - 1.3	13860784	Au
Cable Sealed	F	Sn	14	1.4 - 2.0	13737773	Au

## COMPATIBLE SEALS

Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 0.75	Yellow	Yes	10736278
Cable Seal	0.5 - 1.0	Blue	Yes	15484426
Cable Seal	0.75 - 2.0	Green	Yes	10736279
Cable Seal	1.25 - 1.5	Yellow	Yes	13582732

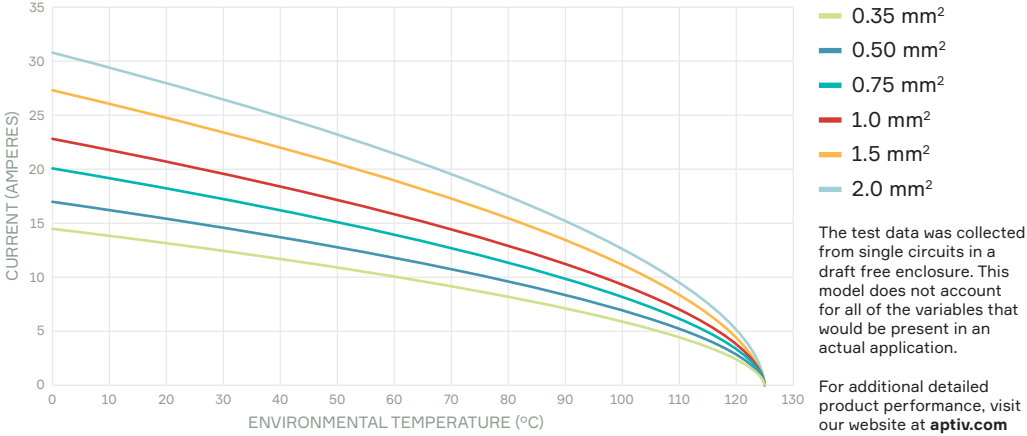
Please, contact an Aptiv representative for the full part number list.

## DERATING CURVE

Cable range: 0.22 - 2.0 mm²  
Crimp method: Standard  
Contact plating: Sn  
Test method: Single circuit in free air\*  
Mated to: GTS 1.5 male terminals

\* For reference only

One terminal loaded, in housing wire-to-wire configuration



## COMPATIBLE WITH



CMC Connectors  
(32, 48, 64 & 86 Way)



GTS SensoMate™  
(2 & 3 Way)



# GTS 1.5 SensoMate™ SERIES



GTS SensoMate™ 2W  
Female

### BENEFITS

- Footprint interface compatible with Mini-Sealed Series released by all major OEMs
- Engine and body harsh environment applied to EURO 7 regulations
- Compatible with back shell cover for a convenient guiding of cable bundle

### FEATURES

- Withstanding high vibration up to 42 G sine
- High temperature 150°C (T4), enduring additionally 175°C during 240 hours
- Rear latch for easiness to unmate connector from device
- Connector Position Assurance
- Inertial effect while mating the connector to the device which guarantees an easy mating

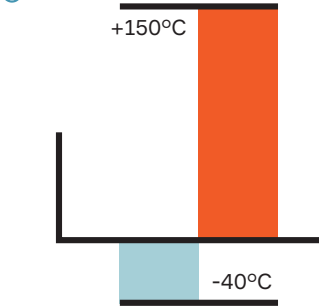
### AVAILABLE CONFIGURATIONS

Cavity Count (ways)	2, 3
Cavity Configurations (mm)	1.5
Genders	Female
Sealing Type	Mat Sealed
Centerline Spacing (mm)	3.33
CPA	Premounted

### APPLICATIONS

Engine compartment, ECU (electronic control unit), sensors, actuators inline or device

### TEMPERATURE



### VIBRATION

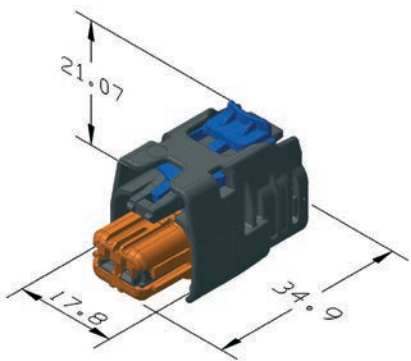


### SEALING PROTECTION

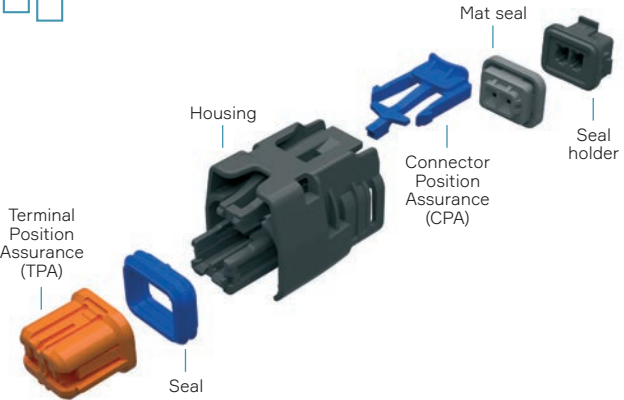


Cavity count	Blade size (mm)	Gender	Dimensions L x W x H (mm)	Part number	Color	Indexes offered
2	1.5	F	18 x 21 x 35	33150308	Orange	8
3	1.5	F	21 x 21 x 35	33150316	Orange	8

### DIMENSION MEASUREMENT SAMPLE



### EXPLODED VIEW



### COMPATIBLE WITH



GTS 1.5 Unsealed  
Female Terminal





# HDK TERMINALS AND CONNECTORS



# HDK FEMALE 1.2 TERMINALS



HDK 1.2 Series Female Terminals

## AVAILABLE CONFIGURATIONS

Terminal Construction	Two-piece
Locking Mechanism	Lanceless / Tangless
Crimp Validated to	VW 75174-2
Blade Size (mm)	1.2
Wire Gage Range (mm²)	0.12 - 1.0
Genders	Female
Sealing Options	Cable Sealed / SWS*
Plating Options	SnAg
Mating Tab Dimension (mm)	1.2 x 0.6

\* Single Wire Seal

## BENEFITS

- High vibration (up to 50 G) high temperature (up to 150 °C) terminal system
- Unique high contact force terminal system for high vibration load
- Two-piece contact body

## FEATURES

- 4 contact points
- Ultrasonic welding compatible
- High contact pressure by scratching
- Pin motion control

## TECHNICAL CHARACTERISTICS

Contact Resistance	< 3 mΩ
Contact Mating Force	6 N max
Contact Unmating Force	6 N max
Mating Cycles	10 / 25
Cavity Pullout Force	> 60 N
Center Line Spacing	3.5 / 4 mm



Sealing	Gender	Plating	Wire size range (mm²)	Part number
Cable Sealed	F	SnAg	0.50 - 0.75	33232096
Cable Sealed	F	SnAg	1.0 - 1.5	33232097

## COMPATIBLE SEALS

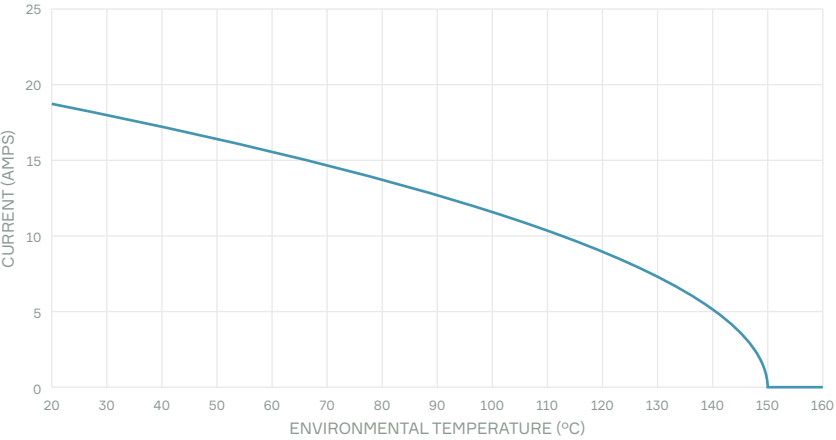
Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.5 - 1.0	Green	Yes	13887350
Cable Seal	0.5 -1.0	Gray	No	15327918
Cable Seal	1.0 - 1.5	Yellow	No	15460621

Please, contact an Aptiv representative for the full part number list.

## DERATING CURVES

Cable range: 1.0 mm²  
Crimp method: Standard  
Contact plating: SnTop  
Test method: Single circuit in free air\*  
Mated to: Delphi header

\* For reference only



The test data was collected from single circuits in a draft free enclosure. This model does not account for all of the variables that would be present in an actual application.

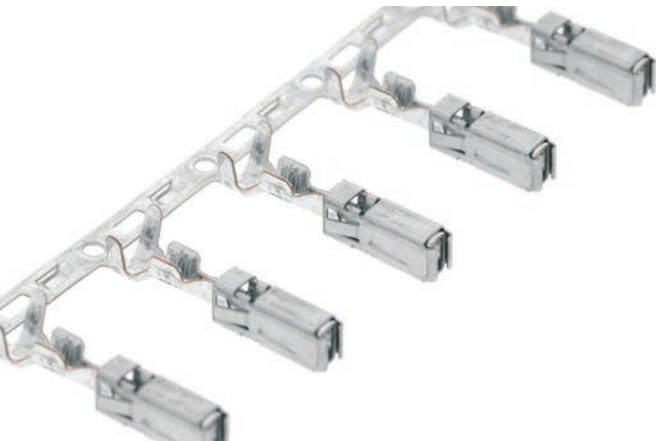
For additional detailed product performance, visit our website at [aptiv.com](https://www.aptiv.com)

## COMPATIBLE WITH



HDK 1.2 Sealed Series Housings

# HDK FEMALE 2.8 TERMINALS



HDK 2.8 Series Female Terminals

## AVAILABLE CONFIGURATIONS

Terminal Construction	Two-piece
Locking Mechanism	Lanceless / Tangless
Crimp Validated to	VW 75174-2
Blade Size (mm)	2.8
Wire Gage Range (mm²)	0.22 - 2.5
Genders	Female
Sealing Options	Cable Sealed / SWS*
Plating Options	SnAg, Ag
Mating Tab Dimension (mm)	2.8 x 0.6

\* Single Wire Seal

## BENEFITS

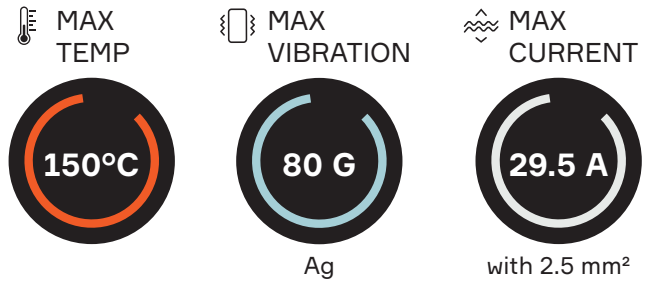
- High vibration (up to 80 G with silver) high temperature (up to 150 °C) terminal system
- Related movements are blocked thanks to the high contact pressure
- Two-piece contact system

## FEATURES

- 4 contact points
- Ultrasonic welding compatible
- High contact pressure

## TECHNICAL CHARACTERISTICS

Contact Resistance	< 3 mΩ
Contact Mating Force	< 20 N / < 35 N
Contact Unmating Force	< 20 N / < 32 N
Mating Cycles	10 / 25
Cavity Pullout Force	> 80 N
Center Line Spacing	5 / 6 mm



Sealing	Gender	Plating	Wire size range (mm²)	Part number	Other available platings
Cable Sealed	F	SnAg	0.22 - 0.35	33515099	Ag
Cable Sealed	F	SnAg	0.5 - 1.0	33515098	Ag
Cable Sealed	F	SnAg	1.0 - 2.5	33515097	Ag

## COMPATIBLE SEALS

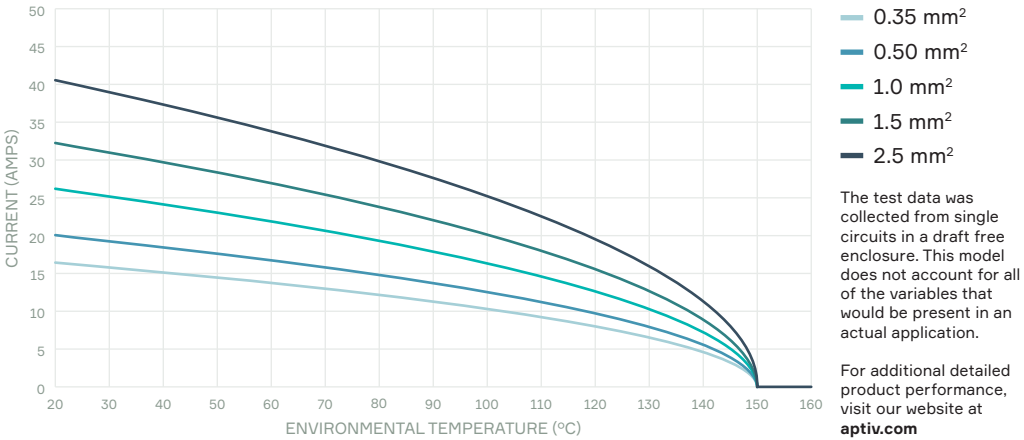
Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 1.0	Blue	Yes	15339967
	1.25 - 2.5	White	Yes	15339838
Cable Seal	0.35 - 0.75	Blue	No	15324974
	0.5 - 1.0	Red	No	15327786
	1.25 - 2.0	Red	No	15324973
	2.5	Yellow	No	10779161

Please, contact an Aptiv representative for the full part number list.

## DERATING CURVES

Cable range: 0.35 - 2.5 mm²  
Crimp method: Standard  
Contact plating: Ag  
Test method: Single circuit in free air\*  
Mated to: Delphi header

\* For reference only



## COMPATIBLE WITH





# HDK 1.2 SEALED SERIES

AK



HDK 1.2 2W  
Female

## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	2
Cavity Configurations (mm)	1.2
Materials	PA66
Genders	Female

## APPLICATIONS

Engine compartment  
On-engine

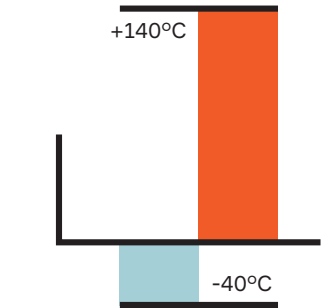
## BENEFITS

- High performance solution for the AK standard
- Superior connection reliability
- Validated to harsh environment profiles
- AK 1.2 footprint interface (USCAR 120 short shroud)

## FEATURES

- Pre-staged CPA with SLS (Smart Locking System) technology
- Optional strain relief allows to increase performance to 80G and operation in temperatures from -40 up to +140 °C

## TEMPERATURE



## VIBRATION



## SEALING CLASS (DIN 40050-9)



High Pressure  
Spray

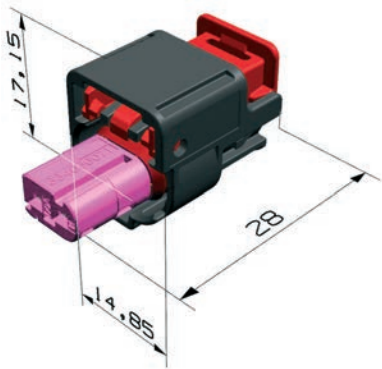
Cavity count	Blade size (mm)	Gender	Dimensions W x H x D (mm)	Part number	Index	Housing color	TPA color
2	1.2	F	14.8 x 17 x 31.5	33405607	A	Black	Violet
2	1.2	F	14.8 x 17 x 31.5	33405608	B	Black	Blue
2	1.2	F	14.8 x 17 x 31.5	33405609	C	Black	White

## COMPATIBLE SEALS

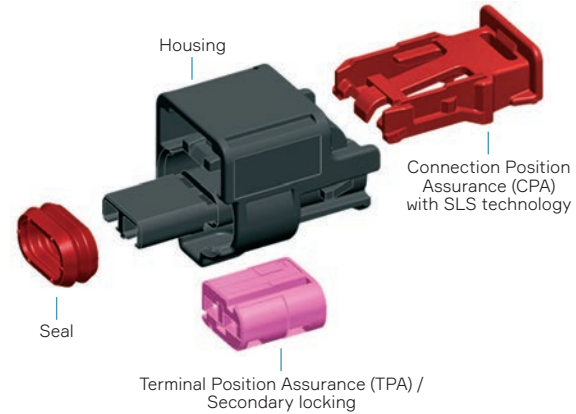
Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.5 - 1.0	Green	Yes	13887350
Cavity Plug	N/A	Blue	Yes	13887353
Cable Seal	0.5 - 1.0	Gray	No	15327918
Cable Seal	1.0 - 1.5	Yellow	No	15460621
Cavity Plug	N/A	White	No	12198198

Please, contact an Aptiv representative for the full part number list.

## DIMENSION MEASUREMENT SAMPLE



## EXPLODED VIEW



## COMPATIBLE WITH



HDK 1.2 Series Terminals



Strain Relief

# HDK 2.8 SEALED SERIES AK



HDK 2.8 3W  
Female

## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	2, 3, 4
Cavity Configurations (mm)	2.8
Materials	PBT GF 10
Genders	Female

## APPLICATIONS

Engine compartment

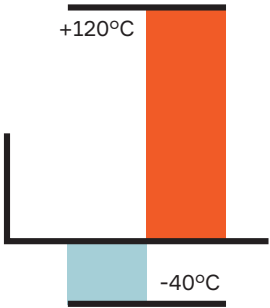
## BENEFITS

- High performance solution for the AK standard
- Superior connection reliability
- Validated to harsh environment profiles

## FEATURES

- Lateral secondary lock for terminal position assurance
- Mechanical polarization

## TEMPERATURE



## VIBRATION



## SEALING CLASS (DIN 40050-9)

IPX9K  
IP68

High Pressure  
Spray

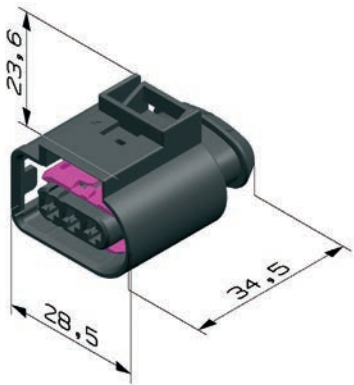
Cavity count	Blade size (mm)	Gender	Dimensions W x H x D (mm)	Part number	Index	Housing color	TPA color
2	2.8	F	23.6 x 23.5 x 34.5	33500745	A	Black	Violet
2	2.8	F	23.6 x 23.5 x 34.5	33503772	B	Black	Blue
2	2.8	F	23.6 x 23.5 x 34.5	13887338	C	Black	Orange
3	2.8	F	23.6 x 28.5 x 34.5	33105660	A	Black	Violet
3	2.8	F	23.6 x 28.5 x 34.5	33109024	B	Black	Blue
3	2.8	F	23.6 x 28.5 x 34.5	33109332	C	Black	Orange
4	2.8	F	23.7 x 37 x 33	13853167	A	Black	Violet

## COMPATIBLE SEALS

Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 1.0	Blue	Yes	15339967
	1.25 - 2.5	White	Yes	15339838
Cable Seal	0.35 - 0.75	Blue	No	15324974
	0.5 - 1.0	Red	No	15327786
	1.25 - 2.0	Red	No	15324973
	2.5	Yellow	No	10779161
	N/A	Green	No	10730124
	N/A	Red	No	12059168

Please, contact an Aptiv representative for the full part number list.

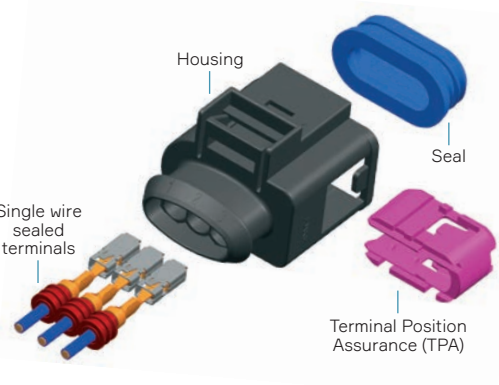
## DIMENSION MEASUREMENT SAMPLE



## COMPATIBLE WITH



## EXPLODED VIEW







# HES CONNECTORS



# HES SERIES



## BENEFITS

- Interchangeable industry mating interface
- Superior environmental protection
- Designed to outperform competition

## FEATURES

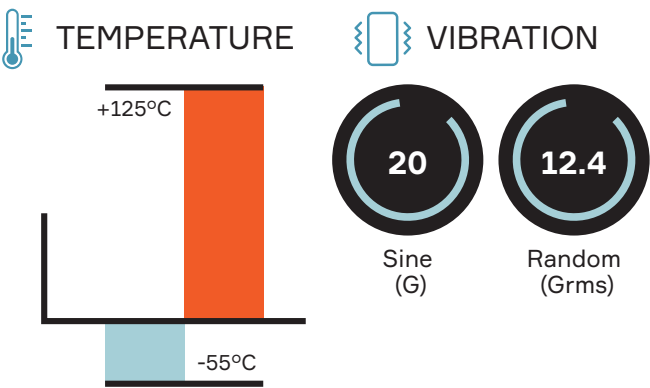
- 3-rib seal design provides up to 30% higher performance
- Specialized lock finger design to eliminate terminal unseats
- Forward/backward compatibility
- HES terminals provide improved electrical performance
- Validated to SAE J2030

## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	19, 21, 23, 29, 31, 47
Cavity Configurations (mm)	1.0, 1.6, 2.4
Materials	PBT, PA66
Genders	Female, Male

## APPLICATIONS

Cab
Engine compartment
Chassis



## ENVIRONMENTAL PROTECTION (IEC, ISO)



Cavity count	Blade size (mm)	Gender	Dimensions W x H x D (mm)	Part number	Configuration	Other configurations
19	2.4/1.6	M	47.5 x 50.5 x 45.4	15544333	Thin	Thick, Reverse
19	2.4/1.6	F	49.4 x 49.4 x 42	15544902	Thin	Thick, Reverse
21	2.4/1.6	M	47.5 x 50.5 x 45.4	15544331	Thin	Thick
21	2.4/1.6	F	49.4 x 49.4 x 42	15544899	Thin	Thick
23	1.6	M	47.5 x 50.5 x 45.4	15544329	Thin	Thick
23	1.6	F	49.4 x 49.4 x 42	15544897	Thin	Thick
29	2.4/1.6/1.0	M	47.5 x 50.5 x 45.4	15544327	Thin	Thick
29	2.4/1.6/1.0	F	49.4 x 49.4 x 42	15544895	Thin	Thick
31	1.6	M	47.5 x 50.5 x 45.4	15544326	Thin	Thick, Reverse
31	1.6	F	49.4 x 49.4 x 42	15544894	Thin	Thick, Reverse
47	1.6/1.0	M	47.5 x 50.5 x 45.4	15544324	Thin	-
47	1.6/1.0	F	49.4 x 49.4 x 42	15544892	Thin	-

## COMPATIBLE ACCESSORIES

Size	Accessory	Part number
19	Back Shell 180°	13767802
19	Back Shell 90°	13767805
22	Back Shell 180°	13767803
22	Back Shell 90°	13767806
25	Back Shell 180°	13667839
25	Back Shell 90°	13667840
16 & 20	Cavity seal plug	13756464
12	Cavity seal plug	13756465

## CAVITY CONFIGURATIONS

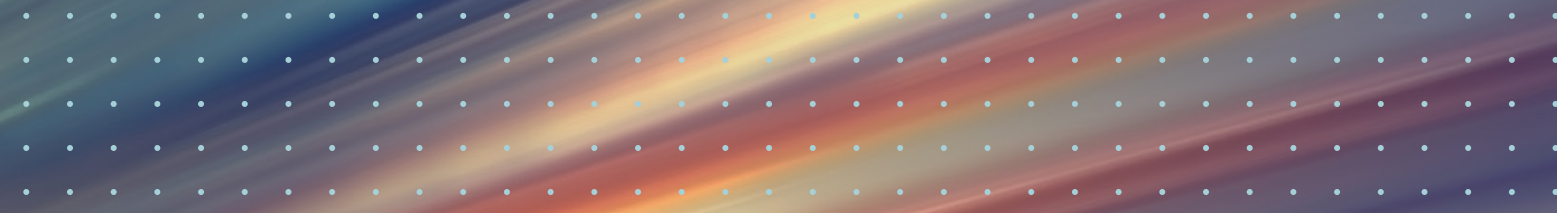


## COMPATIBLE WITH



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.





# OCS TERMINALS AND CONNECTORS

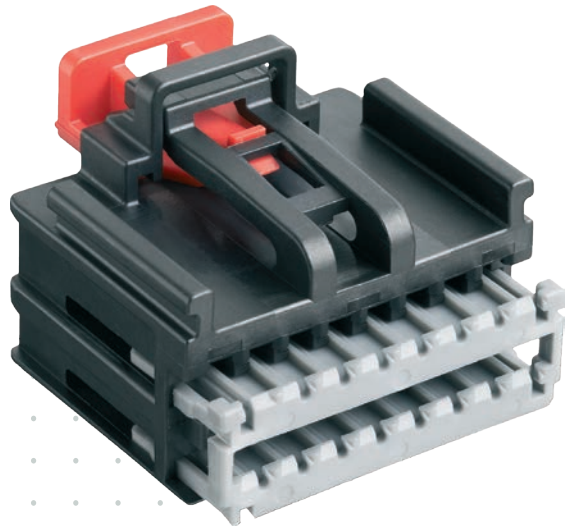
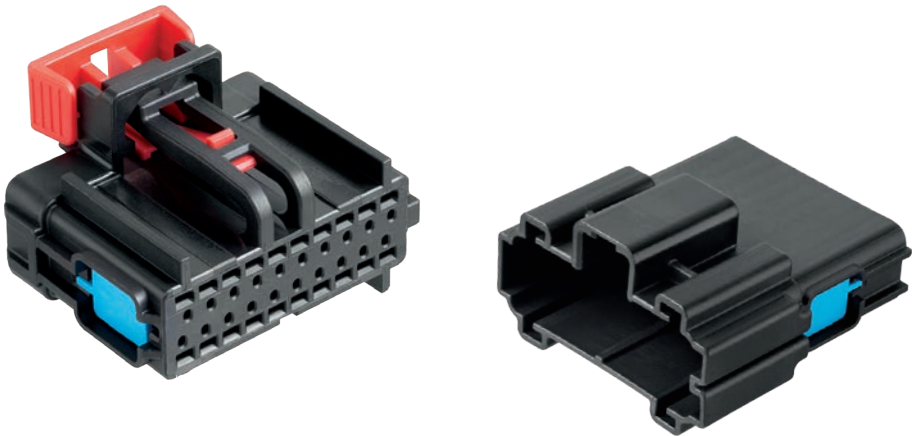




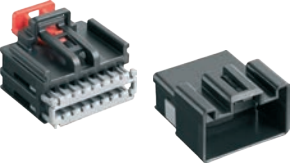


# OCS CONNECTORS

## SELECTOR GUIDE

Optimal Component Series – OCS offers an industry standard mating interface and family of terminal cavities to enable interchangeability with other compatible systems in the market. The optimized design features provide maximum performance and benefits.

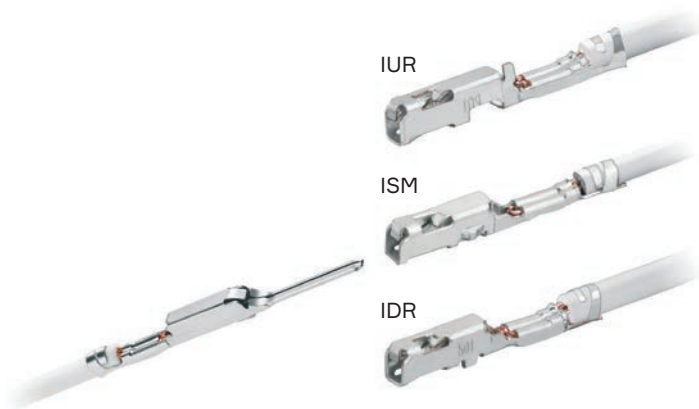


			
	OCS 1.2 Unsealed	OCS 1.5 Sealed	OCS 1.5 Unsealed
Application	Passenger compartment inline applications	Inline applications	Inline applications
Blade Size	1.2	1.5	1.5, 2.8, 6.3, Mixed
# of Cavities	2, 4, 6, 8, 12, 16, 20	2, 3, 4, 6, 8, 10, 12, 16	2, 3, 4, 6, 8, 10, 12, 16
Gender	F, M	F, M	F, M
Temperature Class	T2 (+105°C)	T3	T2 (+105°C)
IP Rating	NA	IP69K	IP69K
CPA	Optional	Optional	Optional
See Pages	140-141	142-143	144-145

*This document is non-contractual and is for information purpose only*



# OCS 0.64 TERMINALS



OCS 0.64  
Female & Male Terminals

## BENEFITS

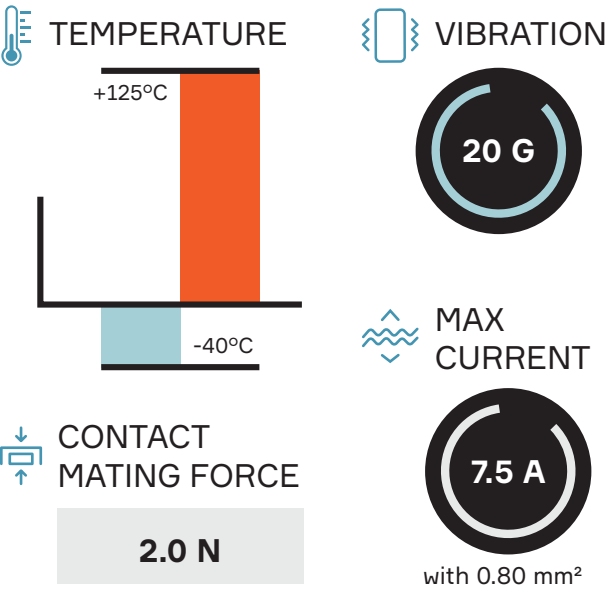
- Cavity compatible with industry standards and/or major OEM cavity preferences
- Wide range of crimp sizes with Aptiv proven crimp technology
- Meets or exceeds major OEM test protocols and requirements
- Contact tongue overstress and nose protection
- High performance copper alloy
- One-piece terminal construction

## FEATURES

- 6+ sigma projected reliability at 150,000 miles (241,401 km)
- Multiple index features available
  - ISM (Index Side Middle) sealed and unsealed applications
  - IUR (Index Up Rear) unsealed applications
  - IDR (Index Down Rear) sealed and unsealed applications
- Up to 18% less material than the competition
- For use in 0.64 applications
- Independent secondary lock compatible

## AVAILABLE CONFIGURATIONS

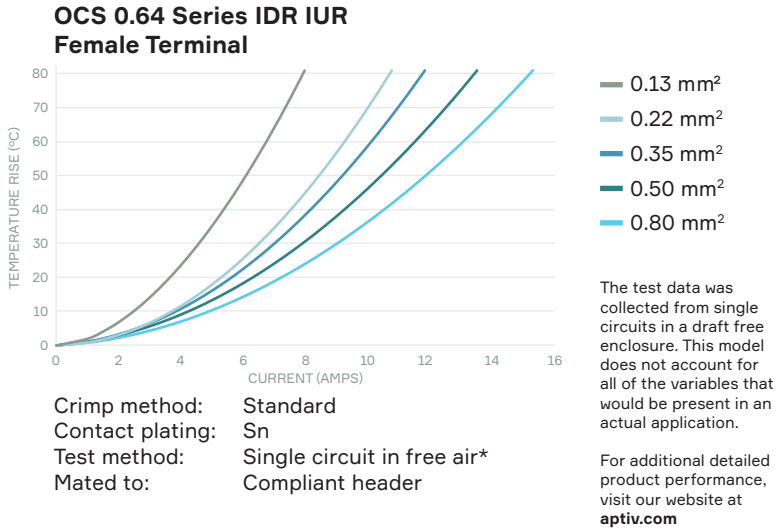
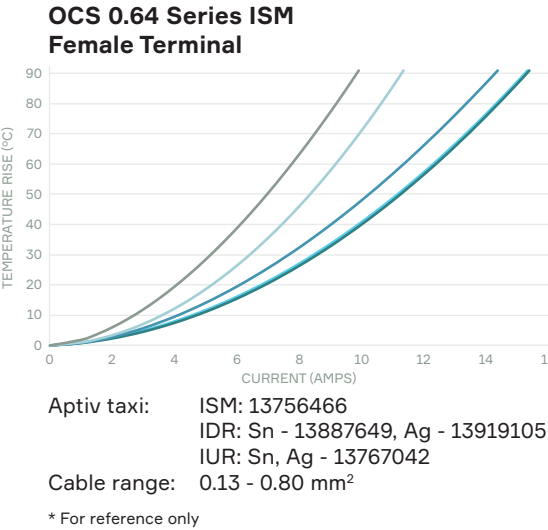
Terminal Type	Box & Blade
Locking Mechanism	Tangless / Lanceless
Crimp Validated to	USCAR-21
Blade Size (mm)	0.64
Wire Gage Range (AWG)	25 - 18
Wire Gage Range (mm²)	0.13 - 0.80
Genders	Female, Male
Sealing Options	Unsealed, matte/block sealed
Plating Options	Sn, Ag



Index	Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings
ISM	Unsealed/Matte Sealed	F	Sn	18	0.75 - 0.80	13726148	N/A
ISM	Unsealed/Matte Sealed	F	Sn	21	0.35 - 0.50	13726147	N/A
ISM	Unsealed/Matte Sealed	F	Sn	25	0.13 - 0.22	13726146	N/A
IDR	Unsealed/Matte Sealed	F	Sn	18	0.75 - 0.80	35088738	Ag
IDR	Unsealed/Matte Sealed	F	Sn	21	0.35 - 0.50	35088739	Ag
IDR	Unsealed/Matte Sealed	F	Sn	25	0.13 - 0.22	35088740	Ag
IUR	Unsealed	F	Sn	18	0.75 - 0.80	35088745	Ag
IUR	Unsealed	F	Sn	21	0.35 - 0.50	35088746	Ag
IUR	Unsealed	F	Sn	25	0.13 - 0.22	35088747	Ag
	Unsealed/Matte Sealed	M	Sn	18	0.75 - 0.8	15504520	Ag
	Unsealed/Matte Sealed	M	Sn	21	0.35 - 0.50	15504521	Ag
	Unsealed/Matte Sealed	M	Sn	25	0.13 - 0.22	15504522	Ag

Please, contact an Aptiv representative for the full part number list.

## TEMP RISE CURVE



## COMPATIBLE WITH



OCS 0.64 Series Housings

# OCS 1.2 TERMINALS



OCS 1.2  
Female & Male Terminals

### BENEFITS

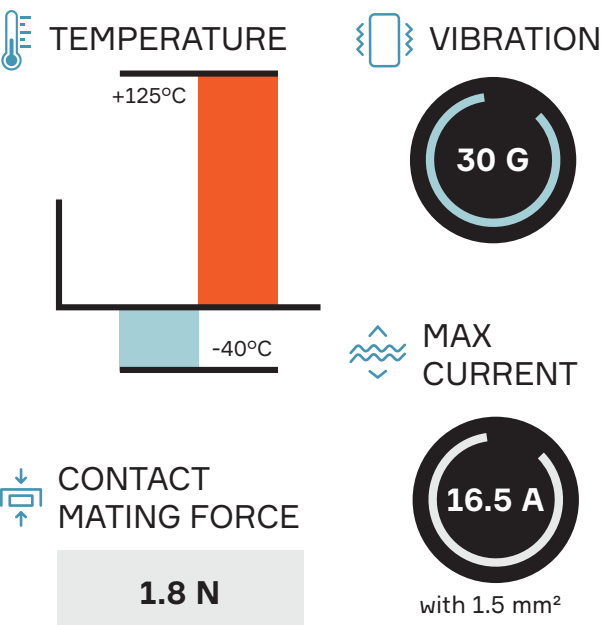
- Cavity compatible with industry standards and/or major OEM cavity preferences
- Wide range of crimp sizes with Aptiv proven crimp technology
- Meets or exceeds major OEM test protocols and requirements
- Contact tongue overstress and nose protection
- High performance copper alloy
- One-piece terminal construction

### FEATURES

- 6+ sigma projected reliability at 150,000 miles (241,401 km)
- Robust powertrain contact geometry that is severe vibration capable
- Up to 11% less mass than competing product
- For use in unsealed & mat sealed 1.2 applications
- Independent secondary lock compatible

### AVAILABLE CONFIGURATIONS

Terminal Type	Box & Blade
Locking Mechanism	Tangless / Lanceless
Crimp Validated to	USCAR-21
Blade Size (mm)	1.2
Wire Gage Range (AWG)	25 - 15
Wire Gage Range (mm²)	0.13 - 1.5
Genders	Female, Male
Sealing Options	Unsealed, matte/block sealed
Plating Options	Sn, Sn/Ag, Ag, Au/Pd



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings	Other available configurations
Unsealed/Matte Sealed	F	Sn	21	0.35 - 0.5	35072391	Sn/Ag, Ag, Au/Pd	N/A
Unsealed/Matte Sealed	F	Sn	18	0.75 - 0.8	35072392	Sn/Ag, Ag, Au/Pd	N/A
Unsealed/Matte Sealed	F	Sn	17	0.8 - 1.0	35072393	Sn/Ag, Ag, Au/Pd	N/A
Unsealed/Matte Sealed	F	Sn	25	0.13 - 0.22	35072402	Ag	N/A
Unsealed/Matte Sealed	F	Sn	21	0.35 - 0.5	35072403	Ag	N/A
Unsealed/Matte Sealed	F	Sn	18	0.75 - 0.8	35072404	Ag	N/A
Unsealed/Matte Sealed	F	Sn	17	0.8 - 1.0	35072405	Ag	N/A
Unsealed/Matte Sealed	F	Sn	15	1.25 - 1.5	35072406	Ag	N/A
Unsealed/Matte Sealed	M	Sn	15	1.25 - 1.5	35091060	Ag	N/A
Unsealed/Matte Sealed	M	Sn	18	0.75 - 1.0	35091061	Ag	N/A
Unsealed/Matte Sealed	M	Sn	21	0.35 - 0.50	35091062	Ag	N/A
Unsealed/Matte Sealed	M	Sn	25	0.13 - 0.22	35091063	Ag	N/A

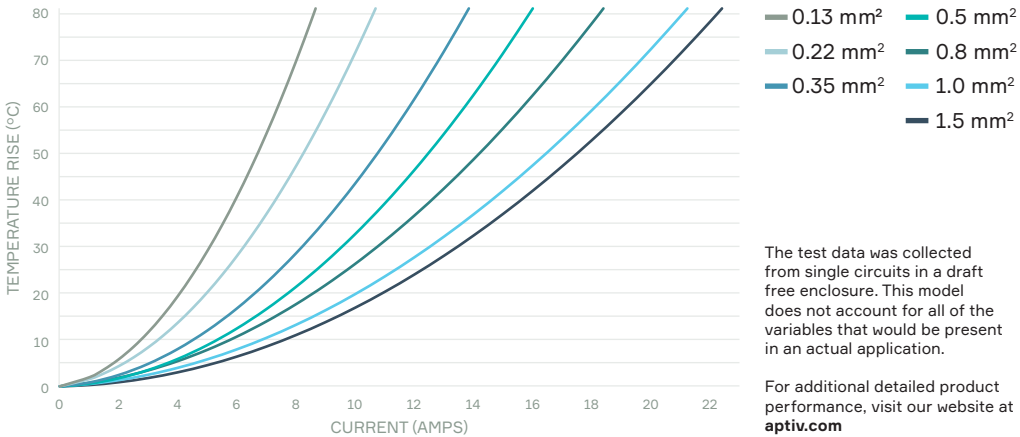
Please, contact an Aptiv representative for the full part number list.

### TEMP RISE CURVE

#### OCS 1.2 Series Female Terminal

Aptiv taxi: 13543112  
Cable range: 0.13 - 1.5 mm²  
Crimp method: Standard  
Contact plating: CuNiSi  
Test method: Single circuit in free air\*  
Mated to: OCS 1.2 male terminals

\* For reference only



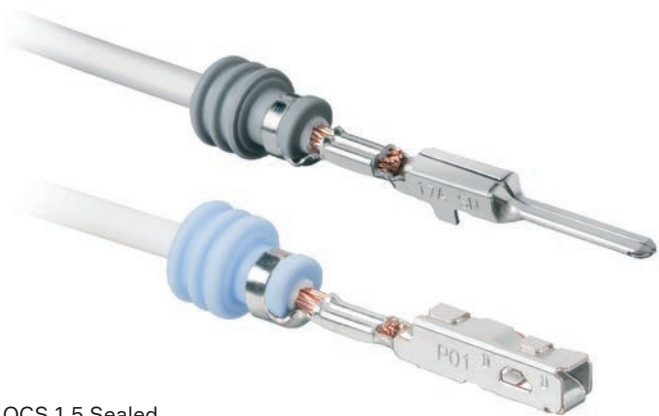
### COMPATIBLE WITH



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.



# OCS 1.5 SEALED TERMINALS



OCS 1.5 Sealed  
Female & Male Terminals

## BENEFITS

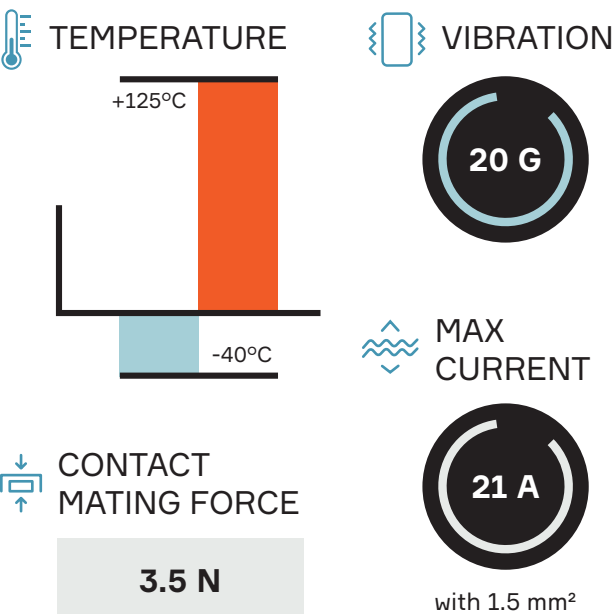
- Cavity compatible with industry standards and/or major OEM cavity preferences
- Wide range of crimp sizes with Aptiv proven crimp technology
- Meets or exceeds major OEM test protocols and requirements
- Contact tongue overstress and nose protection
- High performance copper alloy
- One-piece terminal construction

## FEATURES

- 6+ sigma projected reliability at 150,000 miles (241,401 km)
- Available in slippery tin plating to minimize terminal engage
- Up to 38% less material than the competition
- For use in 1.5 cable sealed applications

## AVAILABLE CONFIGURATIONS

Terminal Type	Box & Blade
Locking Mechanism	Tangless / Lanceless
Crimp Validated to	USCAR-21
Blade Size (mm)	1.5
Wire Gage Range (AWG)	21 - 15
Wire Gage Range (mm²)	0.35 - 1.5
Genders	Female, Male
Sealing Options	Cable Sealed
Plating Options	Sn, Ag



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings	Other available configurations
Cable Sealed	F	Sn	15	1.25 - 1.5	35138798	Ag	N/A
Cable Sealed	F	Sn	17	0.75 - 1.0	35138799	Ag	N/A
Cable Sealed	F	Sn	21	0.35 - 0.50	35138800	Ag	N/A
Cable Sealed	F	Sn	21	0.35 - 0.50	35138801	Ag	N/A
Cable Sealed	M	Sn	17	0.75 - 1.0	13964786	Ag	N/A
Cable Sealed	M	Sn	21	0.35 - 0.50	13964785	Ag	N/A
Cable Sealed	M	Sn	21	0.35 - 0.50	13964784	Ag	N/A

Please, contact an Aptiv representative for the full part number list.

## COMPATIBLE SEALS

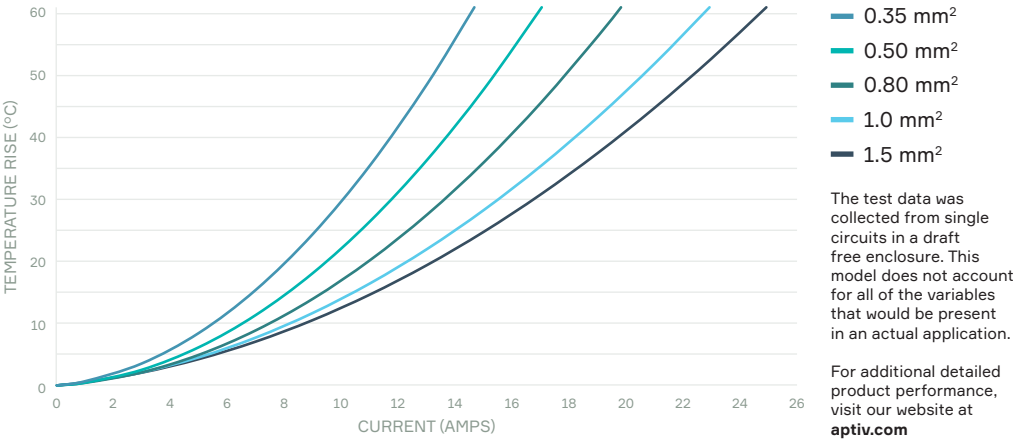
Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 0.75	Red	Yes	13834630
Cable Seal	0.75 - 1.5	Blue	Yes	13834623
Cable Seal	1.5 - 2.0	Gray	Yes	13834614

## TEMP RISE CURVE

### OCS 1.5 Sealed Series Female Terminal

Aptiv taxi: 13887280  
Cable range: 0.35 - 1.5 mm²  
Crimp method: Standard  
Contact plating: Sn  
Test method: Single circuit in free air\*  
Mated to: OCS 1.5 male terminals

\* For reference only



## COMPATIBLE WITH



# OCS 1.5 UNSEALED TERMINALS



OCS 1.5 Unsealed  
Female & Male Terminals

### BENEFITS

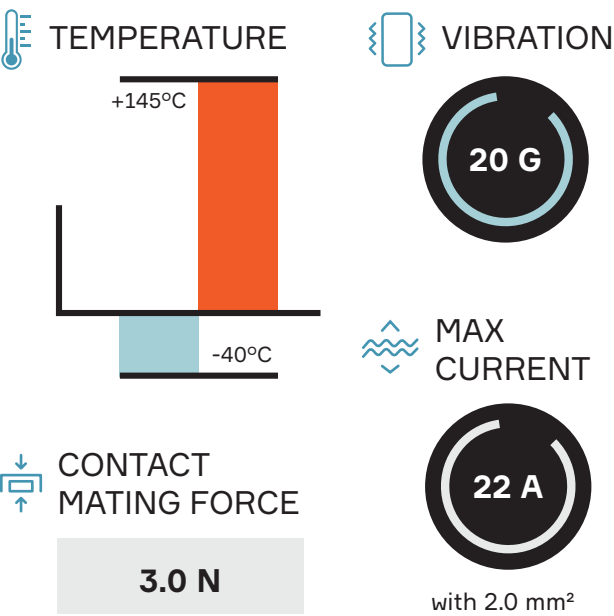
- Cavity compatible with industry standards and/or major OEM cavity preferences
- Wide range of crimp sizes with Aptiv proven crimp technology
- Meets or exceeds major OEM test protocols and requirements
- Contact tongue overstress and nose protection
- High performance copper alloy
- One-piece terminal construction

### FEATURES

- 6+ sigma projected reliability at 150,000 miles (241,401 km)
- Available with LIF contact geometry and slippery tin plating to minimize terminal engage
- Up to 40% less material than the competition
- For use in unsealed & mat sealed 1.5 applications

### AVAILABLE CONFIGURATIONS

Terminal Type	Box & Blade
Locking Mechanism	Tangless / Lanceless
Crimp Validated to	USCAR-21
Blade Size (mm)	1.5
Wire Gage Range (AWG)	25 - 14
Wire Gage Range (mm²)	0.13 - 2.0
Genders	Female, Male
Sealing Options	Unsealed, matte/block sealed
Plating Options	Sn, Ag



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings	Other available configurations
Unsealed/Matte Sealed	F	Sn	14	1.5 - 2.0	35031565	Ag	N/A
Unsealed/Matte Sealed	F	Sn	17	0.75 - 1.0	35031566	Ag	N/A
Unsealed/Matte Sealed	F	Sn	21	0.35 - 0.50	35031567	Ag	N/A
Unsealed/Matte Sealed	F	Sn	25	0.13 - 0.22	35031568	Ag	N/A
Unsealed/Matte Sealed	M	Sn	14	1.5 - 2.0	13964792	Ag	N/A
Unsealed/Matte Sealed	M	Sn	15	1.25 - 1.5	13964791	Ag	N/A
Unsealed/Matte Sealed	M	Sn	17	0.75 - 1.0	13964790	Ag	N/A
Unsealed/Matte Sealed	M	Sn	21	0.35 - 0.50	13964789	Ag	N/A
Unsealed/Matte Sealed	M	Sn	25	0.13 - 0.22	13964788	Ag	N/A

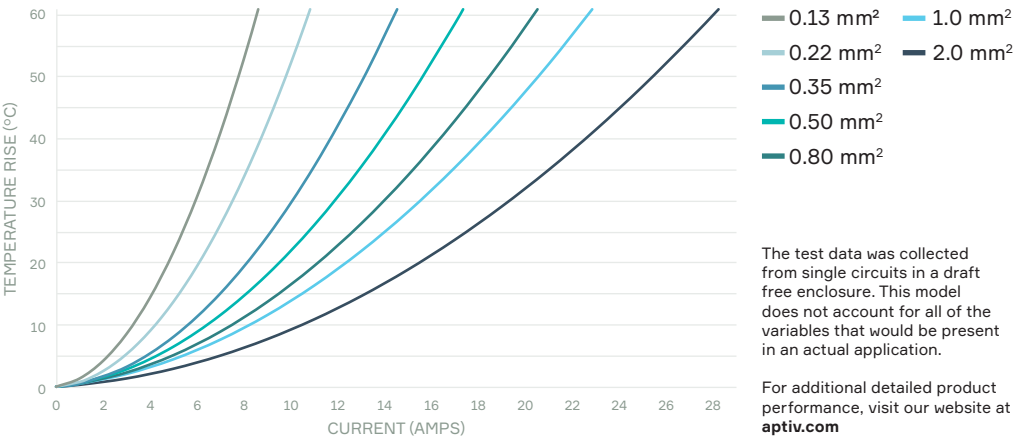
Please, contact an Aptiv representative for the full part number list.

### TEMP RISE CURVE

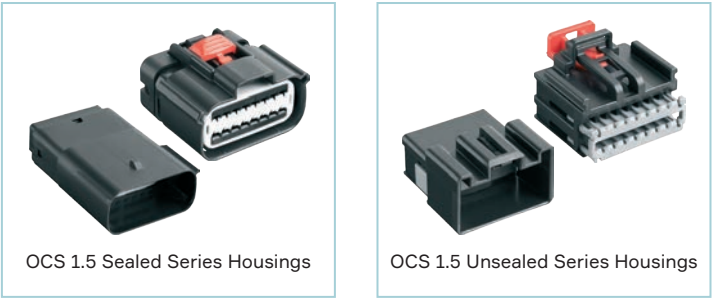
#### OCS 1.5 Unsealed Series Female Terminal

Aptiv taxi: 13849927  
Cable range: 0.13 - 2.0 mm²  
Crimp method: Standard  
Contact plating: Sn  
Test method: Single circuit in free air\*  
Mated to: OCS 1.5 male terminals

\* For reference only



### COMPATIBLE WITH





# OCS 2.8 SEALED TERMINALS



OCS 2.8 Sealed  
Female & Male Terminals

## BENEFITS

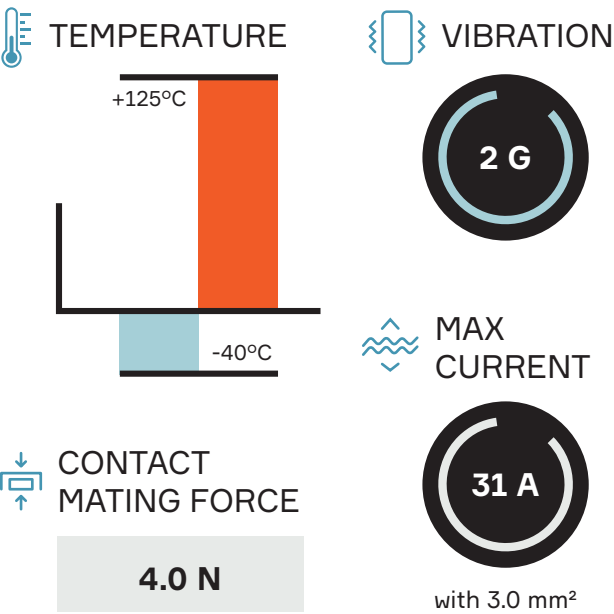
- Cavity compatible with industry standards and/or major OEM cavity preferences
- Wide range of crimp sizes with Aptiv proven crimp technology
- Meets or exceeds major OEM test protocols and requirements
- Contact tongue overstress and nose protection
- High performance copper alloy
- One-piece terminal construction

## FEATURES

- 6+ sigma projected reliability at 150,000 miles (241,401 km)
- Patented contact geometry
- Up to 36% less mass than competing product
- For use in 2.8 cable sealed applications

## AVAILABLE CONFIGURATIONS

Terminal Type	Box & Blade
Locking Mechanism	Tangless / Lanceless
Crimp Validated to	USCAR-21
Blade Size (mm)	2.8
Wire Gage Range (AWG)	21 - 13
Wire Gage Range (mm²)	0.35 - 3.0
Genders	Female, Male
Sealing Options	Cable Sealed
Plating Options	Sn



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings	Other available configurations
Cable Sealed	F	Sn	13	2.0 - 3.0	35126209	N/A	N/A
Cable Sealed	F	Sn	14	1.25 - 2.5	35126211	N/A	N/A
Cable Sealed	F	Sn	17	0.75 - 1.0	35126212	N/A	N/A
Cable Sealed	F	Sn	21	0.35 - 0.50	35126213	N/A	N/A
Cable Sealed	M	Sn	14	2.0 - 2.5	13964777	N/A	N/A
Cable Sealed	M	Sn	15	1.25 - 1.5	13964776	N/A	N/A
Cable Sealed	M	Sn	17	0.75 - 1.0	13964775	N/A	N/A
Cable Sealed	M	Sn	21	0.35 - 0.50	13964774	N/A	N/A

Please, contact an Aptiv representative for the full part number list.

## COMPATIBLE SEALS

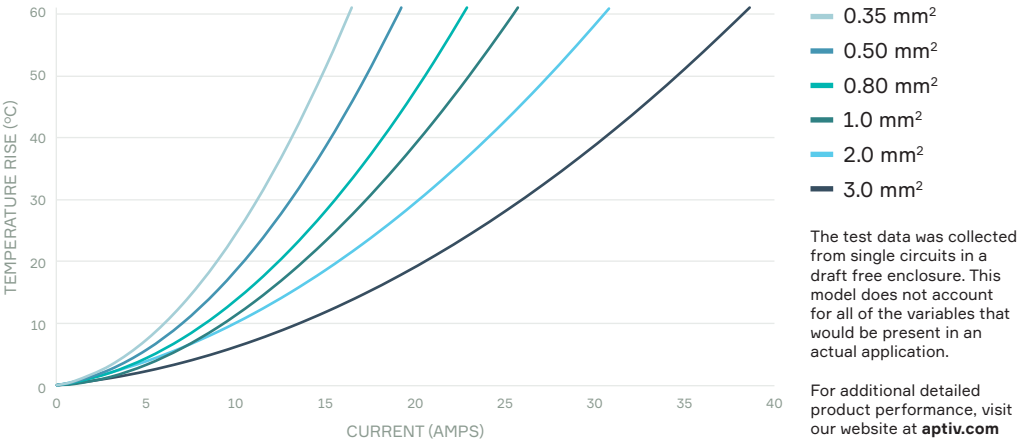
Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 0.75	Green	Yes	13834633
Cable Seal	1.0 - 2.5	Blue	Yes	35545727
Cable Seal	2.0 - 4.0	Gray	Yes	35545726

## TEMP RISE CURVE

### OCS 2.8 Sealed Series Female Terminal

Aptiv taxi: 13887281  
Cable range: 0.35 - 3.0 mm²  
Crimp method: Standard  
Contact plating: Sn  
Test method: Single circuit in free air\*  
Mated to: OCS 2.8 male terminals

\* For reference only



## COMPATIBLE WITH



OCS 2.8 Unsealed Series Housings

# OCS 2.8 UNSEALED TERMINALS



OCS 2.8 Unsealed  
Female & Male Terminals

### BENEFITS

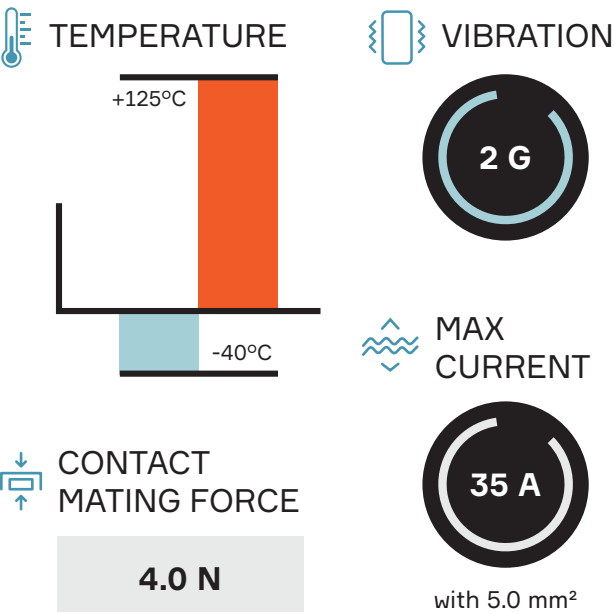
- Cavity compatible with industry standards and/or major OEM cavity preferences
- Wide range of crimp sizes with Aptiv proven crimp technology
- Meets or exceeds major OEM test protocols and requirements
- Contact tongue overstress and nose protection
- High performance copper alloy
- One-piece terminal construction

### FEATURES

- 6+ sigma projected reliability at 150,000 miles (241,401 km)
- Patented contact geometry
- Up to 37% less material than the competition
- For use in unsealed 2.8 applications

### AVAILABLE CONFIGURATIONS

Terminal Type	Box & Blade
Locking Mechanism	Tangless / Lanceless
Crimp Validated to	USCAR-21
Blade Size (mm)	2.8
Wire Gage Range (AWG)	25 - 10
Wire Gage Range (mm²)	0.13 - 5.0
Genders	Female, Male
Sealing Options	Unsealed
Plating Options	Sn



Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings	Other available configurations
Unsealed	F	Sn	10	4.0 - 5.0	35063083	N/A	N/A
Unsealed	F	Sn	13	2.0 - 3.0	35063084	N/A	N/A
Unsealed	F	Sn	14	1.25 - 2.5	35063085	N/A	N/A
Unsealed	F	Sn	17	0.75 - 1.0	35063086	N/A	N/A
Unsealed	F	Sn	21	0.30 - 0.60	35063087	N/A	N/A
Unsealed	F	Sn	25	0.13 - 0.22	35063088	N/A	N/A
Unsealed	M	Sn	13	2.5 - 3.0	13964783	N/A	N/A
Unsealed	M	Sn	14	2.0 - 2.5	13964782	N/A	N/A
Unsealed	M	Sn	15	1.25 - 1.5	13964781	N/A	N/A
Unsealed	M	Sn	17	0.75 - 1.0	13964780	N/A	N/A
Unsealed	M	Sn	21	0.35 - 0.50	13964779	N/A	N/A

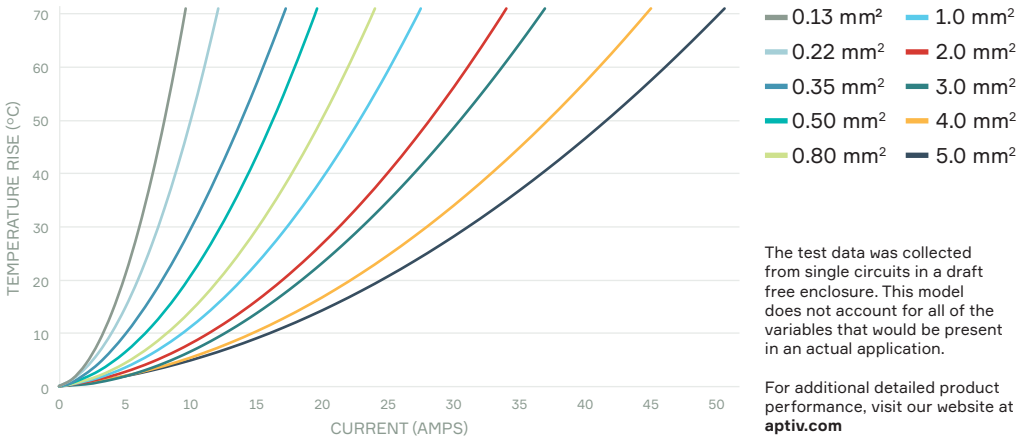
Please, contact an Aptiv representative for the full part number list.

### TEMP RISE CURVE

#### OCS 2.8 Unsealed Series Female Terminal

Aptiv taxi: 13819334  
Cable range: 0.13 - 5.0 mm²  
Crimp method: Standard  
Contact plating: Sn  
Test method: Single circuit in free air\*  
Mated to: OCS 2.8 male terminals

\* For reference only



### COMPATIBLE WITH



OCS 2.8 Unsealed Series Housings

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# OCS 1.2 UNSEALED SERIES



### BENEFITS

- Enhanced connection system warranty performance
- Robust reliability and design-in durability

### FEATURES

- Optimized connector face to prevent terminal stubbing
- Full Locking System (FLS) for superior terminal locking detection and retention
- Outer cavities accept 1.5mm<sup>2</sup> cable for greater flexibility (4-20 way)
- Optional Connector Position Assurance (CPA) for higher reliability

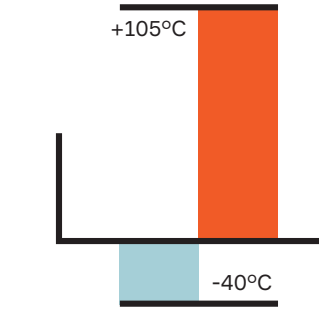
### AVAILABLE CONFIGURATIONS

Cavity Count (ways)	2, 4, 6, 8, 12, 16, 20
Cavity Configurations (mm)	1.2
Genders	Female, Male
Materials	PA, PBT
Mating Type	Hand-Mate

### APPLICATIONS

Passenger compartment inline applications

### TEMPERATURE



### VIBRATION



### SEALING CLASS



Cavity count	Blade size (mm)	Gender	Dimensions W x H x L (mm)	Part number	Index	Color	CPA	Other indexes offered
2	1.2	F	23 x 10.53 x 11.14	33277559	A	Black	Yes	B, C, D
2	1.2	M	35.55 x 14 x 11.93	33277549	A	Black	Yes	B, C, D
4	1.2	F	30.5 x 18.14 x 20.48	33198617	A	Black	Yes	B, C, D, E, F
4	1.2	M	38.95 x 18.83 x 21.61	33198634	A	Black	Yes	B, C, D, E, F
6	1.2	F	30.5 x 23.42 x 20.48	33257488	A	Black	Yes	B, C, D, E, F
6	1.2	M	38.95 x 24.63 x 20.17	33257503	A	Black	Yes	B, C, D, E, F
8	1.2	F	30.5 x 17.53 x 23.01	33255744	A	Black	Yes	B, C, D, E, F
8	1.2	M	38.95 x 19.96 x 24.1	33255759	A	Black	Yes	B, C, D, E, F
12	1.2	F	30.5 x 23.33 x 23.01	33250071	A	Black	Yes	B, C, D, E, F
12	1.2	M	38.95 x 25.76 x 22.75	33250086	A	Black	Yes	B, C, D, E, F
16	1.2	F	30.5 x 29.13 x 23.01	33257519	A	Black	Yes	B, C, D, E, F
16	1.2	M	38.95 x 31.56 x 22.75	33257537	A	Black	Yes	B, C, D, E, F
20	1.2	F	30.5 x 34.93 x 23.01	33239497	A	Black	Yes	B, C, D, E, F
20	1.2	M	38.95 x 37.36 x 22.75	33239518	A	Black	Yes	B, C, D, E, F

Please, contact an Aptiv representative for the full part number list.

### COMPATIBLE WITH



# OCS 1.5 SEALED SERIES

OCS 1.5 Sealed Female



OCS 1.5 Sealed Male

## BENEFITS

- Compatibility with industry standard mating interfaces
- Robust reliability and designed-in durability
- Enhanced connection system warranty performance

## FEATURES

- Housing lock overstress protection to prevent lock relaxation or damage
- Polyester resins for enhanced audible click for improved operator build feedback and dimensional stability in all seasons
- Optimized Primary Lock Reinforcement (PLR) for improved unseated terminal detection
- Cavity designed with positive forward stop to prevent terminal push through
- Optimized optional Connector Position Assurance (CPA) to provide additional lock performance to ensure connectors stay mated



## AVAILABLE CONFIGURATIONS

Cavity count (ways)	2, 3, 4, 6, 8, 10, 12, 16
Genders	Female, Male
Indexes	4 USCAR standard, +2
Primary Lock Reinforcement (PLR)	Yes
Connector Position Assurance (CPA)	Optional

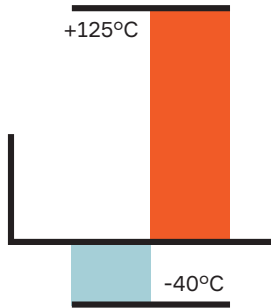


## APPLICATIONS

Inline applications



## TEMPERATURE



## VIBRATION



## SEALING CLASS



Cavity count	Blade size (mm)	Gender	Dimensions W x H x L (mm)	Part number	CPA	Index	Color	Other indexes offered
2	1.5	F	36.6 x 20.9 x 24.2	15514573	Y	A	Black	B, C, D, E, F
2	1.5	M	56.8 x 17.6 x 18.8	15514550	N	A	Black	B, C, D, E, F
3	1.5	F	36.6 x 24.5 x 24.3	15514762	Y	A	Black	B, C, D, E, F
3	1.5	M	56.8 x 21.2 x 18.8	15514744	N	A	Black	B, C, D, E, F
4	1.5	F	36.6 x 27.9 x 24.1	15514524	Y	A	Black	B, C, D, E, F
4	1.5	M	56.8 x 24.6 x 18.8	15514500	N	A	Black	B, C, D, E, F
6	1.5	F	36.6 x 24.0 x 27.6	15513504	Y	A	Black	B, C, D, E, F
6	1.5	M	56.8 x 20.7 x 22.3	15513474	N	A	Black	B, C, D, E, F
8	1.5	F	36.6 x 27.5 x 27.6	15514667	Y	A	Black	B, C, D, E, F
8	1.5	M	56.8 x 24.2 x 21.9	15514651	N	A	Black	B, C, D, E, F
10	1.5	F	36.6 x 31.0 x 27.6	15514821	Y	A	Black	B, C, D, E, F
10	1.5	M	56.8 x 27.7 x 21.9	15514807	N	A	Black	B, C, D, E, F
12	1.5	F	36.6 x 34.5 x 27.6	15514623	Y	A	Black	B, C, D, E, F
12	1.5	M	56.8 x 31.2 x 21.9	15521147	N	A	Black	B, C, D, E, F
16	1.5	F	36.6 x 41.6 x 27.4	15514473	Y	A	Black	B, C, D, E, F
16 <sup>1</sup>	1.5	M	56.8 x 38.2 x 22.3	15521020	N	A	Black	B, C, D, E, F
16 <sup>2</sup>	1.5	M	56.8 x 38.2 x 22.3	35021687	N	A	Black	B, C, D, E, F

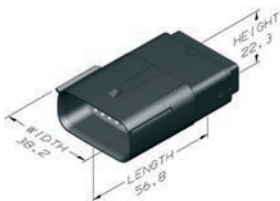
<sup>1</sup> with 7 mm clip slot  
<sup>2</sup> with 11 mm clip slot  
Please, contact an Aptiv representative for the full part number list.



## DIMENSION MEASUREMENT SAMPLE



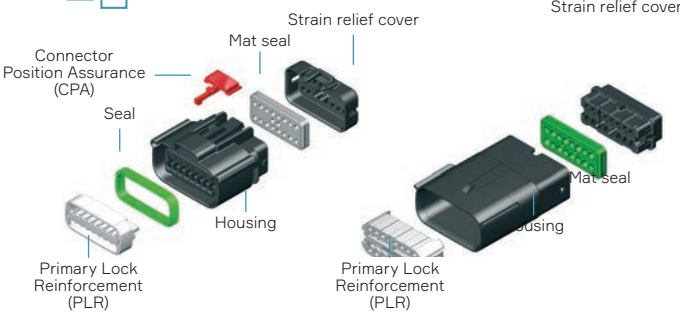
OCS 1.5 Sealed Female



OCS 1.5 Sealed Male



## EXPLODED VIEW

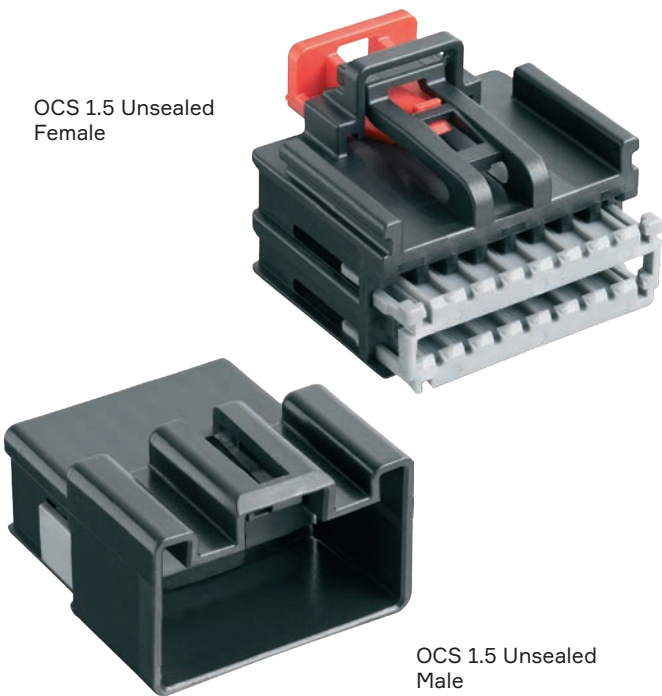


## COMPATIBLE WITH





# OCS 1.5 UNSEALED SERIES



### BENEFITS

- Compatibility with industry standard mating interfaces
- Robust reliability and designed-in durability
- Enhanced connection system warranty performance

### FEATURES

- Housing lock overstress protection to prevent lock relaxation or damage
- Polyester resins for enhanced audible click for improved operator build feedback and dimensional stability in all seasons
- Optimized Primary Lock Reinforcement (PLR) for improved unsealed terminal detection
- Cavity designed with positive forward stop to prevent terminal push through
- Optimized optional Connector Position Assurance (CPA) to provide additional lock performance to ensure connectors stay mated

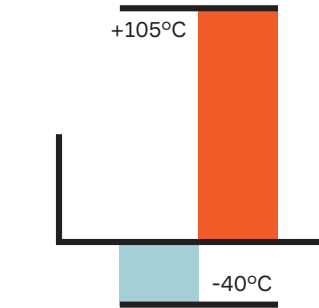
### AVAILABLE CONFIGURATIONS

Cavity count (ways)	2, 3, 4, 6, 8, 10, 12, 16
Genders	Female, Male
Indexes	4 USCAR standard, +2
Primary Lock Reinforcement (PLR)	Yes
Connector Position Assurance (CPA)	Optional

### APPLICATIONS

Inline applications

### TEMPERATURE



### VIBRATION



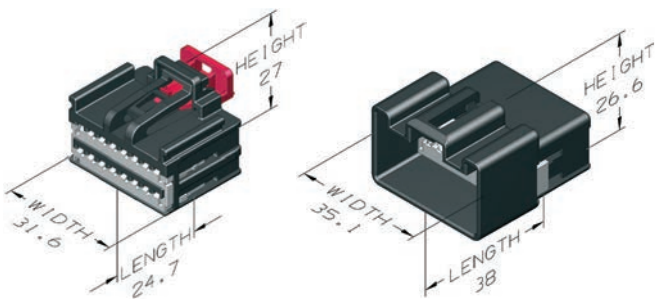
### SEALING CLASS



Cavity count	Blade size (mm)	Gender	Dimensions W x H x L (mm)	Part number	CPA	Index	Color	Other indexes offered
2	1.5	F	24.7 x 13.8 x 21.1	15509274	Y	A	Black	B, C, D, E, F
2	1.5	M	38.0 x 15.9 x 23.1	15509260	N	A	Black	B, C, D, E, F
3	1.5	F	24.7 x 14.2 x 21.1	15509304	Y	A	Black	B, C, D, E, F
3	1.5	M	38.0 x 19.4 x 21.3	15509290	N	A	Black	B, C, D, E, F
4	1.5	F	24.7 x 17.7 x 21.1	15509333	Y	A	Black	B, C, D, E, F
4	1.5	M	38.0 x 22.9 x 21.8	15509319	N	A	Black	B, C, D, E, F
6	1.5	F	24.7 x 14.0 x 27.6	15512461	Y	A	Black	B, C, D, E, F
6	1.5	M	38.0 x 19.4 x 29.6	13968716	N	A	Black	B, C, D, E, F
8	1.5	F	24.7 x 17.5 x 27.6	15509366	Y	A	Black	B, C, D, E, F
8	1.5	M	38.0 x 22.4 x 29.6	15509351	N	A	Black	B, C, D, E, F
10	1.5	F	24.7 x 21.2 x 27.0	15512475	Y	A	Black	B, C, D, E, F
10	1.5	M	38.0 x 24.6 x 26.6	13968808	N	A	Black	B, C, D, E, F
12	1.5	F	24.7 x 24.5 x 27.0	15512489	Y	A	Black	B, C, D, E, F
12	1.5	M	38.0 x 28.1 x 26.6	13968810	N	A	Black	B, C, D, E, F
16	1.5	F	24.7 x 31.6 x 27.0	15512506	Y	A	Black	B, C, D, E, F
16	1.5	M	38.0 x 35.1 x 26.6	13968813	N	A	Black	B, C, D, E, F

Please, contact an Aptiv representative for the full part number list.

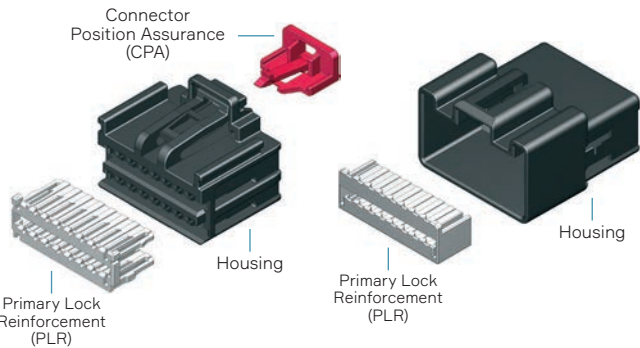
### DIMENSION MEASUREMENT SAMPLE



OCS 1.5 Unsealed Female

OCS 1.5 Unsealed Male

### EXPLODED VIEW



### COMPATIBLE WITH



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# SICMA TERMINALS, CONNECTORS AND HEADERS



# SICMA CONNECTORS SELECTOR GUIDE





Versatile family of housings and one piece terminals that can be used throughout the vehicle.  
A comprehensive product portfolio for full interconnect system.  
SICMA is our high performance solution with superior compatibility in the industry.

- Heavy-duty performance
- Easy assembly
- High compatibility

					
Product Series	SICMA Inline Sealed	SICMA Inline Unsealed	SICMA Mini-Sealed	SICMA Panel-Through Sealed	SICMA Panel-Through Unsealed
Application	Exterior, chassis, engine compartment, inline, female mated to device	Inline, interior, cockpit	Body and Chassis, Engine compartment	Door-to-body connection, EV to battery control	Door-to-body
Blade Size	1.5, 2.8	1.5, 2.8	1.5, 2.8	0.64, 1.5, 2.8	0.64, 1.5, 2.8
# of Cavities	6, 8, 24	10, 24, 36	2, 3, 4, 6, 6 Mixed	14, 16, 24, 26, 33, 34, 50	24, 29, 42
Gender	F, M	F, M	F, M	F, M	F, M
Temperature Class	T3	T1 (24, 36 W) T3 (10 W)	T3	T3	T3
IP Rating	IP68 (6, 8 W) IP67 (24 W)	NA	IP68, IPX9K	IP67 (14, 16, 24, 26, 33, 34 Way) IP64 (50 W)	NA
CPA	No	No	Optional for 2 W	No	No
See Pages	156-157	158-159	160-161	162-163	164-165

*This document is non-contractual and is for information purpose only*



			
SICMA SensoMate™	SICMA Sealed Relays	SICMA OBD	SICMA Headers Interconnect
Sensors, actuators on engine mount	Engine compartment	Cockpit	Engine compartment, Body
1.5	2.8, 8.0	1.5	1.5, 2.8, Mixed
4, 5, 6	8	16	6, 24, 56, 90
F, M	F	F	F, Header
T4	T3	T2	T3
IP68, IPX9K	IP68, IPX9K	NA	IP68, IPX9K
Pre-mounted	No	No	No
166-167	168-169	170-171	172-173

# SICMA 0.64 TERMINALS



SICMA 0.64  
Female & Male Terminals

## BENEFITS

- Optimized design to keep stable contact pressure
- Standard terminal cavity compatibility

## FEATURES

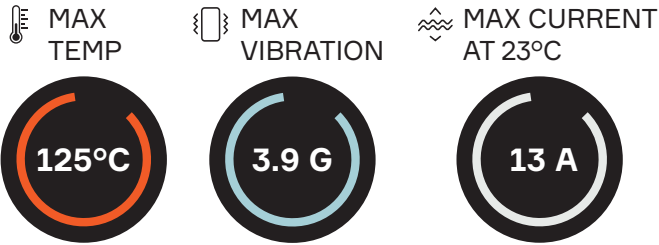
- Clean body design, preventing tearing of mat seal
- One-piece construction with high pressure contact
- Two crimping gauges for strong slow motion and vibration performance

## AVAILABLE CONFIGURATIONS

Terminal Construction	One-piece
Locking Mechanism	Tangless / Lanceless
Crimp Validated to	RSA
Blade Size (mm)	0.64
Wire Gage Range (AWG)	24 - 20
Wire Gage Range (mm²)	0.22 - 0.75
Genders	Female, Male
Sealing Options	Unsealed, Mat Sealed
Plating Options	Sn, Au
Mating Tab Dimension (mm)	0.64 x 0.9

## TECHNICAL CHARACTERISTICS

Contact Resistance	< 6 mΩ
Contact Mating Force	< 3 N
Contact Unmating Force	> 0.8 N
Mating Cycles	10
Cavity Pullout Force	> 80 N
Center Line Spacing	2.5 mm

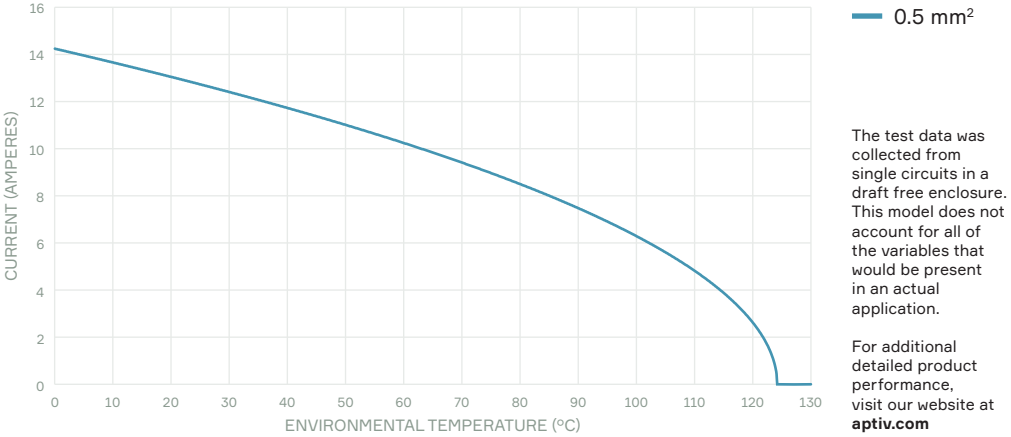


Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings
Unsealed	F	Sn	24 - 20	0.22 - 0.5	33504063	Au
Unsealed	F	Sn	22 - 18	0.35 - 0.75	10811966	Au
Unsealed	M	Sn	24 - 20	0.22 - 0.5	10811967	Au
Unsealed	M	Sn	22 - 18	0.35 - 0.75	10819388	Au

## DERATING CURVE

Cable range: 0.22 - 0.75 mm²  
Crimp method: Standard  
Contact plating: Sn  
Test method: Single circuit in free air\*  
Mated to: MicroSICMA Male Tab

\* For reference only



## COMPATIBLE WITH





SICMA 1.5 TERMINALS



SICMA 1.5  
Female & Male Terminals

BENEFITS

- Optimized design to keep stable contact pressure
- Standard terminal cavity compatibility

FEATURES


- Clean body design, preventing tearing of mat seal
- One-piece construction with high pressure contact
- Several crimping gauges for strong slow motion and vibration performance

AVAILABLE CONFIGURATIONS

Terminal Construction	One-piece
Locking Mechanism	Tangless / Lanceless
Crimp Validated to	PSA, RN, FCA, GM, Ford, Volvo
Blade Size (mm)	1.5
Wire Gage Range (AWG)	26 - 14
Wire Gage Range (mm²)	0.13 - 2.0
Genders	Female, Male
Sealing Options	Unsealed, Mat Sealed, Cable Sealed
Plating Options	Sn, Au, Ag (only for Male)
Mating Tab Dimension (mm)	1.5 x 0.8


TECHNICAL CHARACTERISTICS

Contact Resistance	< 4 mΩ
Contact Mating Force	< 4 N
Contact Unmating Force	> 0.8 N
Mating Cycles	10 / 20 (Au)
Cavity Pullout Force	120 N
Center Line Spacing	3.33 mm (Unsealed) 4.25 mm (Sealed)




MAX  
TEMP

125°C



MAX  
VIBRATION

25 G



MAX CURRENT  
AT 23°C

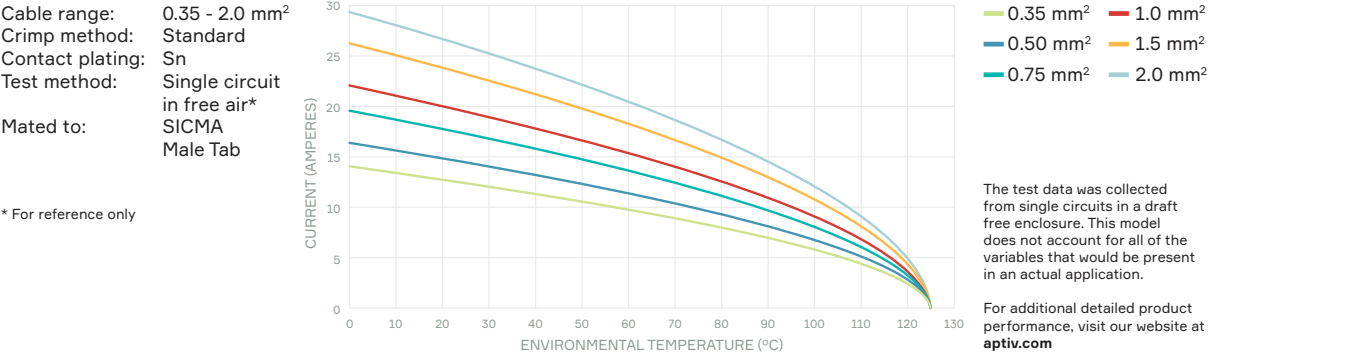
26 A

Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings
Unsealed	F	Sn	26 - 24	0.13 - 0.22	33308333	Au
Unsealed	F	Sn	24	0.22	13625048	Au
Unsealed	F	Sn	22 - 18	0.35 - 0.70	10863984	Au
Unsealed	F	Sn	18 - 16	0.75 - 1.30	10865152	Au
Unsealed	F	Sn	16 - 14	1.35 - 2.0	10863985	Au
Unsealed	M	Sn	26 - 24	0.13 - 0.22	33400435	Ag
Unsealed	M	Sn	22 - 18	0.35 - 0.70	33501792	Au, Ag
Unsealed	M	Sn	18 - 16	0.75 - 1.30	33512109	Ag
Unsealed	M	Sn	16 - 14	1.35 - 2.0	33512190	Ag
Cable Sealed	F	Sn	22 - 18	0.35 - 0.70	13761154	Au
Cable Sealed	F	Sn	18 - 16	0.75 - 1.30	13761651	Au
Cable Sealed	F	Sn	16 - 14	1.35 - 2.0	13761648	Au
Cable Sealed	M	Sn	22 - 18	0.35 - 0.70	35174381	Ag
Cable Sealed	M	Sn	18 - 16	0.75 - 1.30	35174382	Ag
Cable Sealed	M	Sn	16 - 14	1.35 - 2.0	35174383	Ag

COMPATIBLE SEALS

Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 0.75	Yellow	Yes	10736278
Cable Seal	0.75 - 2.0	Green	Yes	10736279

DERATING CURVE



COMPATIBLE WITH SICMA HOUSINGS



SICMA 2.8 TERMINALS



SICMA 2.8  
Female & Male Terminals

AVAILABLE CONFIGURATIONS	
Terminal Construction	One-piece
Locking Mechanism	Tangless / Lanceless
Crimp Validated to	RSA, PSA, Ford, Hyundai, GM
Blade Size (mm)	2.8
Wire Gage Range (AWG)	22 - 14
Wire Gage Range (mm²)	0.35 - 2.5
Genders	Female, Male
Sealing Options	Unsealed, Mat Sealed, Cable Sealed
Plating Options	Sn, SnAg, Au
Mating Tab Dimension (mm)	2.8 x 0.8


BENEFITS

- Optimized design to keep stable contact pressure
- Standard terminal cavity compatibility

FEATURES


- Clean body design, preventing tearing of mat seal
- One-piece construction with high pressure contact
- Several crimping gauges for strong slow motion and vibration performance

TECHNICAL CHARACTERISTICS	
Contact Resistance	< 3 mΩ
Contact Mating Force	< 6 N
Contact Unmating Force	> 1.5 N
Mating Cycles	10
Cavity Pullout Force	120 N
Center Line Spacing	5 mm




MAX  
TEMP

125°C



MAX  
VIBRATION

25 G



MAX CURRENT  
AT 23°C

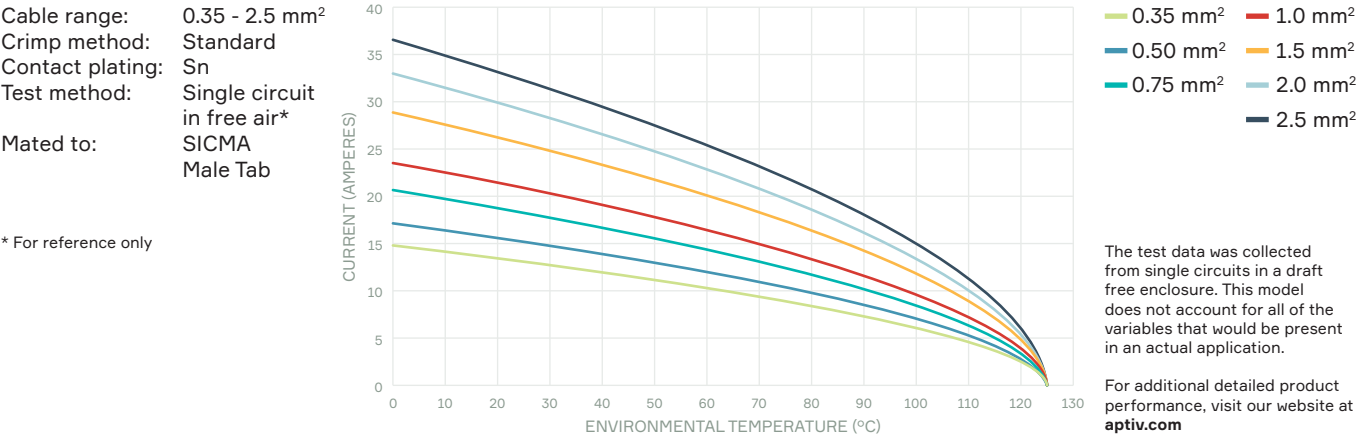
33 A

Sealing	Gender	Plating	Wire size range (AWG)	Wire size range (mm²)	Part number	Other available platings
Unsealed	F	Sn	22 - 18	0.35 - 0.70	10781041	SnAg, Au
Unsealed	F	Sn	18 - 16	0.75 - 1.30	15522621	SnAg, Au
Unsealed	F	Sn	16 - 12	1.35 - 2.5	10725649	SnAg, Au
Unsealed	M	Sn	22 - 18	0.35 - 0.75	10779316	-
Unsealed	M	Sn	18 - 12	1.0 - 2.5	10756743	-
Cable Sealed	F	Sn	22 - 18	0.35 - 0.70	10740375	-
Cable Sealed	F	Sn	18 - 16	0.75 - 1.30	13873373	-
Cable Sealed	F	Sn	16 - 12	1.35 - 2.5	10740376	-
Cable Sealed	M	Sn	22 - 18	0.35 - 0.75	10781143	-
Cable Sealed	M	Sn	18 - 12	1.0 - 2.5	10793682	-


COMPATIBLE SEALS

Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 1.0	Red	No	15327786
Cable Seal	1.0 - 2.5	Blue	No	10757056


DERATING CURVE




COMPATIBLE WITH SICMA HOUSINGS




SICMA  
Inline  
Sealed Series  
24 Way (Mixed)




SICMA  
Inline  
Unsealed Series  
24 & 36 Way  
(Mixed)




SICMA  
Header Interconnect  
Sealed Series  
6 & 24 Way  
(Mixed)




SICMA  
Sealed  
Relay Sockets  
8 Way (Mixed)



SICMA  
Mini-Sealed  
Series  
6 Way (Mixed)



SICMA  
Panel-Through  
Sealed Series  
14, 24, 26, 33,  
34 Way (Mixed)



SICMA  
Panel-Through  
Unsealed Series  
24, 29, 42 Way  
(Mixed)



# SICMA INLINE SEALED SERIES



## BENEFITS

- Clean body SICMA/BTS terminals are easily inserted in housing cavity
- Tin, silver, gold plated terminals available

## FEATURES

- Perfect solution for engine compartment at body mount, highly exposed to dirt and water
- Reliable IP68 watertight 6 and 8 Way connector and IP67 for the 24 Way connector
- 6 Way connector is equipped with a casing or holder for corrugated pipe by hinge principle

AVAILABLE CONFIGURATIONS	
Cavity Count (ways)	6, 8, 24
Cavity Configurations (mm)	1.5, 2.8
Centerline Spacing	2-rows 6W: 5 x 6 pitch 2-rows 8W: 4.25 x 6 pitch 3-rows 24W: 3.33 x 5 pitch
Material	PBT
Genders	Female, Male
Sealing Type	6W, 8W – Cable Sealed 24W – Mat Sealed
Terminal Position Assurance (TPA) Type	PLR (Active Secondary Lock on 6W Female)
Connector Position Assurance (CPA)	No

APPLICATIONS	
Exterior, chassis, engine compartment, inline, female mated to device	

TEMPERATURE

VIBRATION

V1

CONNECTOR MATING FORCE

< 60 N

SEALING PROTECTION

Corrugated pipe type is IPx9K guaranteed.

IP68

6, 8 Way

IP67

24 Way

Cavity count	Blade size (mm)	Gender	Dimensions W x H x D (mm)	Fixing type	Part number	Color	Indexes offered
6	2.8 (SICMA 2&3)	F	35 x 40 x 17	N/A	10723553	Black	2
		M	30 x 65 x 21	Fixing grooves for panel cut-out	10752307		
8	1.5 (SICMA 2&3 Plus)	F	25 x 36x 31	N/A	13800077	Black	1
		M	25 x 27 x 50	Slot for fixing clip	13799643		
24	1.5 (18) + 2.8 (6)	F	50 x 34 x 33	N/A	33504115	Black	3
		M	50 x 44 x 33	Clip 15396451 or 33504091	15470023		
		M	59 x 44 x 38	Mount on Metal Panel 0.7 mm thick	33500427		

## COMPATIBLE SEALS

Type	Cavity	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	1.5	0.35 - 0.75	Yellow	Yes	10736278
		0.75 - 2.0	Green	Yes	10736279
		N/A	White	Yes	10787316
Cable Seal	2.8	0.35 - 1.0	Red	No	15327786
		1.0 - 2.5	Blue	No	10757056
		N/A	White	No	15340264

DIMENSION MEASUREMENT SAMPLE

13800077

13799643

EXPLODED VIEW

13800077

13799643

SICMA 1.5 Series Terminals

SICMA 2.8 Series Terminals

BTS 1.5 and 2.8 Series Terminals

SICMA Pin Header (24 Way) P/N 33501039

# SICMA INLINE UNSEALED SERIES



SICMA Inline Unsealed 36W  
Female & Male

### BENEFITS

- Reliable inline harness sectioning solution
- Compact male and female housings for convenient wire-to-wire mating

### FEATURES

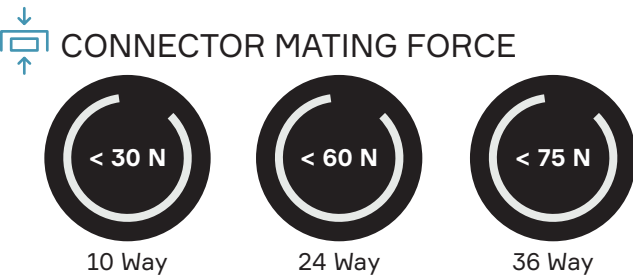
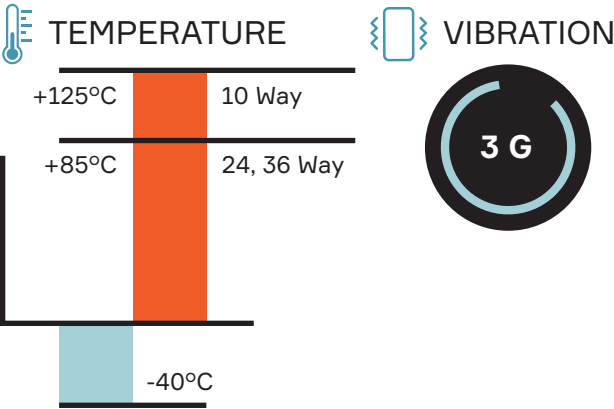
- Mixed sizes of 1.5 and 2.8 mm terminals populating 24 and 36 Way connectors
- Standard fixing slide

### AVAILABLE CONFIGURATIONS

Cavity Count (ways)	10, 24, 36
Cavity Configurations (mm)	1.5, 2.8
Material	PBT
Genders	Female, Male

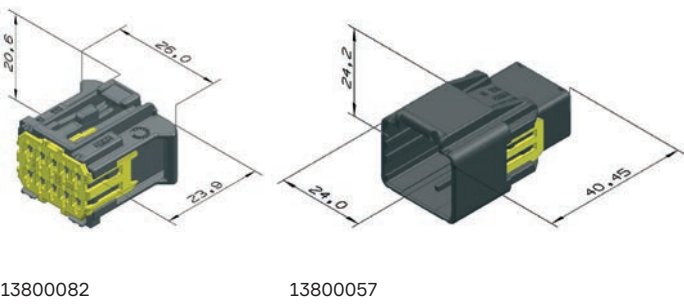
### APPLICATIONS

Harness sectioning in cockpit
Dashboard
Interior connections

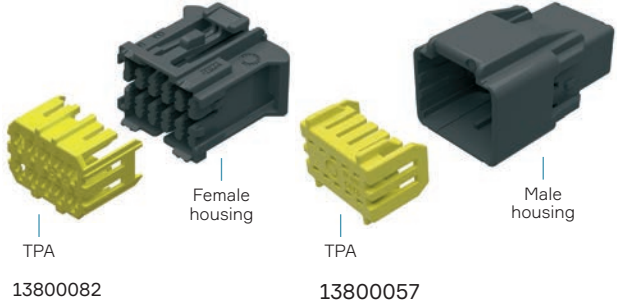


Cavity count	Blade size (mm)	Gender	Dimensions L x W x H (mm)	Part number	Color	Index	Indexes offered
10	1.5	F	36.85 x 26.95 x 29.70	13800082	Black	A	5
		M	24.20 x 24.00 x 40.45	13800057			
24	1.5 (18) + 2.8 (6)	F	49.10 x 32.65 x 33.30	13751295	Black	A	3
		M	49.10 x 32.65 x 43.90	33500326			
36	1.5 (30) + 2.8 (6)	F	60.84 x 34.40 x 28.70	33500789	Black	A	2
		M	54.20 x 25.30 x 47.15	13651194			

### DIMENSION MEASUREMENT SAMPLE



### EXPLODED VIEW



### COMPATIBLE WITH





# SICMA MINI-SEALED SERIES



SICMA Mini-Sealed 3W  
Female & Male

## BENEFITS

- Standard connection system
- Reliable inline harness sectioning connectors featuring a mechanical coding

## FEATURES

- Compatible with standard interface footprint of several devices used in automotive and commercial vehicles
- Jet spray water protection
- Compact design around 1.5 and 2.8 mm terminal

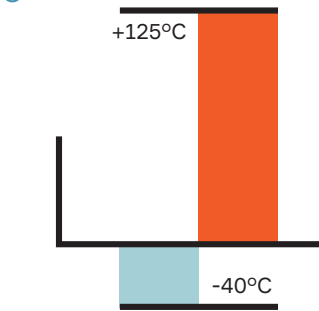
## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	2, 3, 4, 5, 6, 6 Mixed
Cavity Configurations (mm)	1.5, 2.8
Material	PBT GF 30
Genders	Female, Male
Sealing Type	Mat Sealed
CPA	Optional for 2 Way

## APPLICATIONS

- Body and chassis
- Engine compartment

## TEMPERATURE



## VIBRATION



## CONNECTOR MATING FORCE

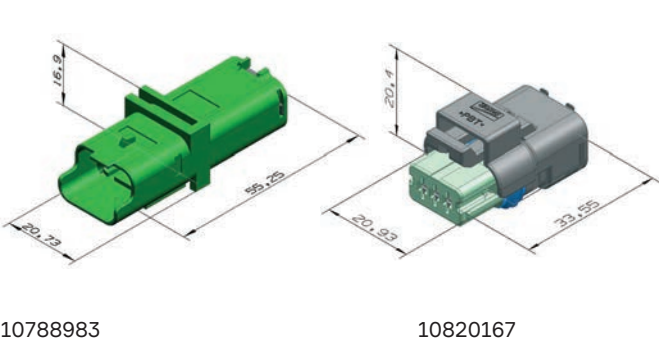


## SEALING PROTECTION

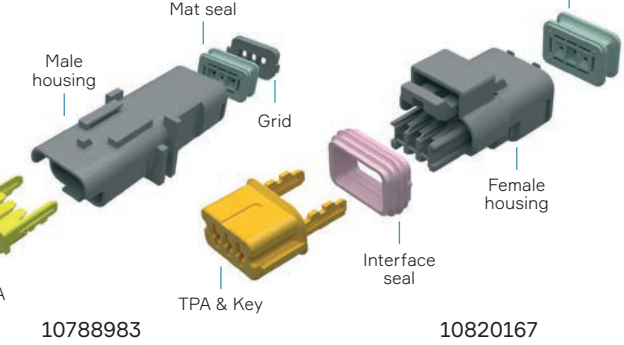


Cavity count	Blade size (mm)	Gender	Dimensions L x W x H (mm)	Part number	Color	Indexes offered
2	1.5	F	17.60 x 18.70 x 33.50	10820158	Black	9
		M	17.40 x 16.90 x 55.20	10787262		7
3	1.5	F	20.93 x 20.40 x 33.55	10820167	Black	8
		M	20.73 x 16.90 x 55.25	10788983		6
4	1.5	F	25.00 x 20.30 x 33.60	10763691	Black	3
		M	23.85 x 12.90 x 55.65	10768812		
5	1.5	F	27.10 x 20.55 x 33.80	10820113	Black	3
		M	27.30 x 16.60 x 55.45	33500323		
6	1.5	F	34.90 x 21.60 x 33.75	10866615	Black	3
		M	34.95 x 16.55 x 55.70	13716617		
6 Mixed	1.5 (4) + 2.8 (2)	F	34.90 x 21.60 x 33.75	10866611	Black	3
		M	34.95 x 16.55 x 55.70	15396354		

## DIMENSION MEASUREMENT SAMPLE



## EXPLODED VIEW



## COMPATIBLE WITH



# SICMA PANEL-THROUGH SEALED SERIES



### BENEFITS

- Compact size for a panel mount solution and electrical link passing through a wall
- Circular through hole convenient for implementation

### FEATURES

- Pass-through bulk head type, mounted on a metal panel sheet
- Door-to-body, cockpit-to-engine or battery-to-inverter (HEV/EV) solution

### AVAILABLE CONFIGURATIONS

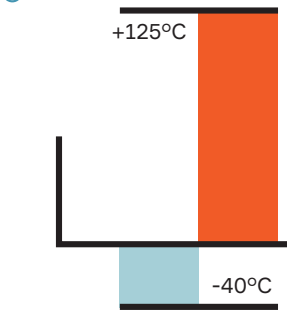
Cavity Count (ways)	14, 16, 24, 26*, 33, 34, 50
Cavity Configurations (mm)	0.64, 1.5, 2.8
Sealing Type	Mat Sealed
Material	PBT
Genders	Female, Male

\* 26 Way female sealed housing mates with 29 Way male unsealed housing (3 ways are neutralized).

### APPLICATIONS

- Door-to-body connection
- Firewall between cockpit and engine interconnection
- Bulkhead for battery control in HV/EHV

### TEMPERATURE



### VIBRATION



### CONNECTOR MATING FORCE



14, 16, 24, 26, 33, 34 Way



50 Way

### SEALING PROTECTION



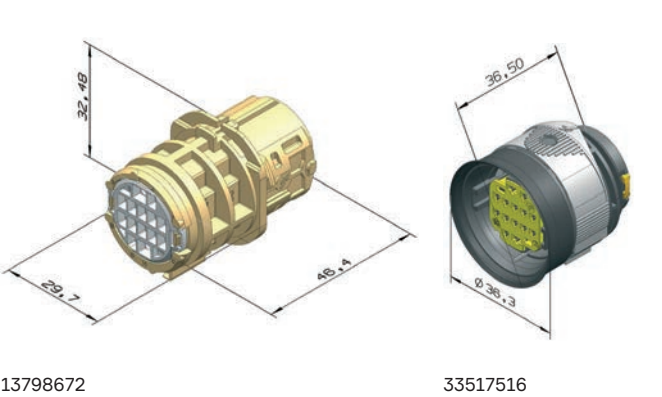
14, 16, 24, 26, 33, 34 Way



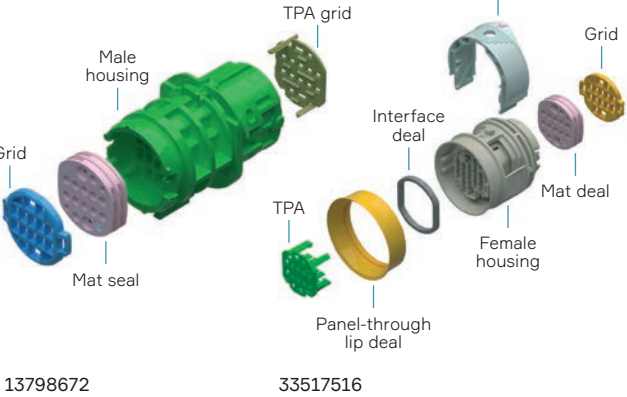
50 Way

Cavity count	Blade size (mm)	Gender	Dimensions L x W x H (mm)	Part number	Color	Indexes offered
14	1.5 (10) + 2.8 (4)	F	ø 36.50 x 33.40	33517516	Black	1
		M	ø 29.70 x 46.40	13798672		
16	1.5	F	ø 36.30 x 33.40	10779313	Black	1
		M	ø 29.70 x 46.40	33500530		
24	1.5 (18) + 2.8 (6)	F	49.10 x 32.65 x 33.30	10820454	Black	4
		M	59.40 x 37.90 x 43.90	33500427		
26	0.64 (18) + 1.5 (4) + 2.8 (4)	F	35.00 x 59.65 x 7.55	10811873	Black	1
		M	79.00 x 37.00 x 41.60	10811880		
33	1.5 (28) + 2.8 (5)	F	ø 42.70 x 40.60	33503444	Black	2
		M	ø 40.00 x 51.60	33503443		
34	1.5 (30) + 2.8 (4)	F	ø 40.30 x 38.75	10763095	Black	2
		M	ø 42.00 x 48.60	10889065		
50	1.5	F	44.50 x 51.60 x 38.20	10867079	Black	1
		M	47.60 x 89.50 x 54.90	10866552		

### DIMENSION MEASUREMENT SAMPLE



### EXPLODED VIEW



### COMPATIBLE WITH



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.



# SICMA PANEL-THROUGH UNSEALED SERIES



SICMA Panel-Through Unsealed 29W  
Female & Male

AVAILABLE CONFIGURATIONS	
Cavity Count (ways)	24, 29, 42
Cavity Configurations (mm)	0.64, 1.5, 2.8
Material	PBT
Genders	Female, Male

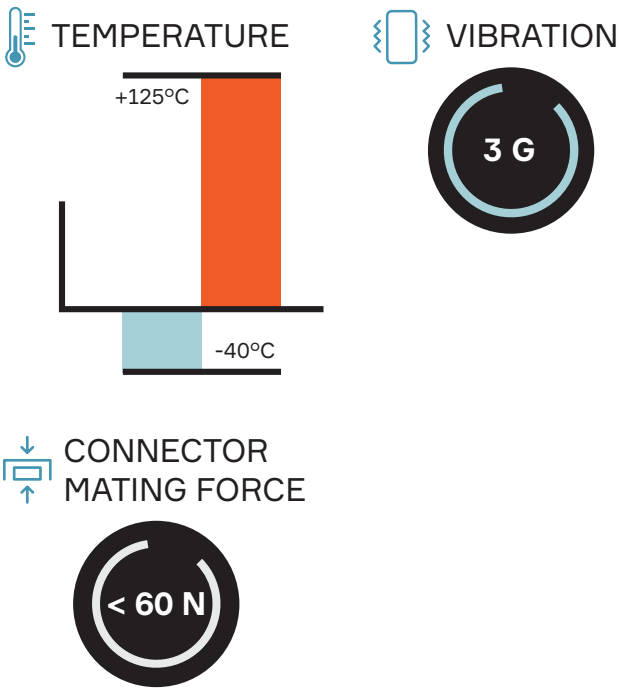
APPLICATIONS	
Door-to-body connection	
Firewall between cockpit and engine interconnection	
Bulkhead for battery control in HV/EHV	

## BENEFITS

- Compact size for a panel mount solution and electrical link passing through a wall
- Retractable protecting grid for male terminals to avoid pin bending

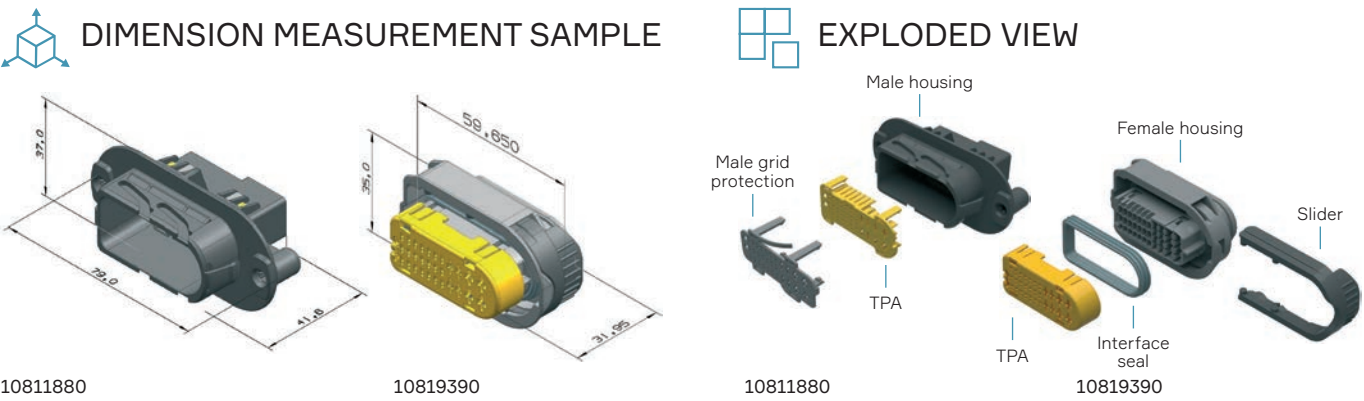
## FEATURES

- Pass-through bulk head type, mounted on a metal panel sheet
- Providing a convenient door-to-body or a reliable cockpit-to-engine solution



Cavity count	Blade size (mm)	Gender	Dimensions L x W x H (mm)	Part number	Color	Indexes offered
24	0.64 (12) + 1.5 (8) + 2.8 (4)	F	35.00 x 59.65 x 31.95	33500458	Black	1
		M	37.00 x 79.00 x 41.60	33500459		
29	0.64 (21) + 1.5 (4) + 2.8 (4)	F	35.00 x 59.65 x 31.95	10819390	Black	1
		M	37.00 x 79.00 x 41.60	10811880		
42	1.5 (34) + 2.8 (8)	F	44.20 x 63.50 x 29.20	10811874	Black	1
		M	47.00 x 83.50 x 42.70	10811875		

Cover						
24 & 29	N/A	N/A	59.65 x 25.00 x 21.20	33508013	Black	N/A



# SICMA 1.5 SensoMate™ SERIES



SICMA SensoMate™ 6W  
Female & Male

## BENEFITS

- High performance connector featuring T4 / V3 performance
- Back shell covers available

## FEATURES

- Suitable for harsh environment
- CPA is pre-mounted
- Compatible with Mini-Sealed family

## AVAILABLE CONFIGURATIONS

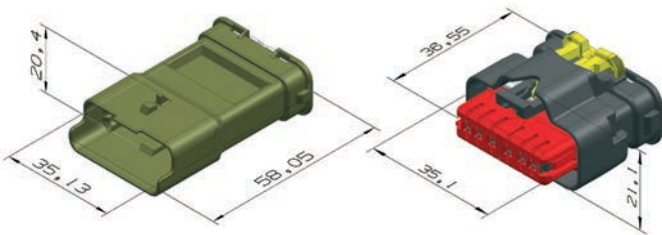
Cavity Count (ways)	4, 5, 6
Cavity Configurations (mm)	1.5
Material	PBT
Genders	Female, Male
Sealing Type	Mat Sealed

## APPLICATIONS

- Sensors and actuators on engine mount
- Air filter and pressure devices

Cavity count	Blade size (mm)	Gender	Dimensions L x W x H (mm)	Part number	Color	Indexes offered
4	1.5	F	24.50 x 20.30 x 36.55	13876521	Black	5
		M	24.50 x 15.30 x 58.05	33502133		
5	1.5	F	27.80 x 20.30 x 36.55	13893671	Black	5
		M	27.80 x 15.30 x 58.05	13855072		
6	1.5	F	35.01 x 21.10 x 32.80	13885362	Yellow	5
		M	35.01 x 16.10 x 58.05	13967810		

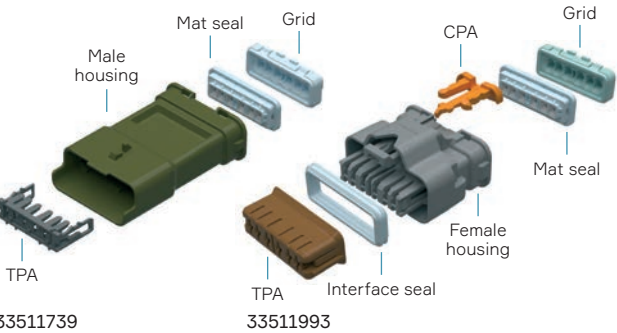
## DIMENSION MEASUREMENT SAMPLE



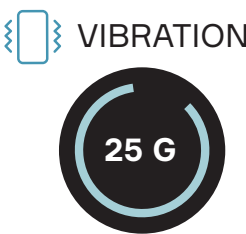
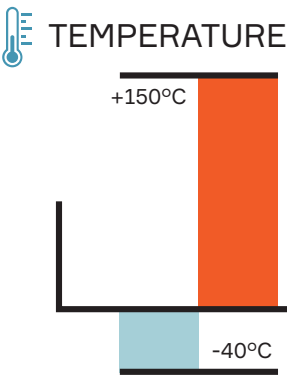
33511739

33511993

## EXPLODED VIEW



## COMPATIBLE WITH





# SICMA SEALED RELAYS



SICMA Sealed Relay Socket 8W Female

### BENEFITS

- Reliable connection to relay lasting throughout entire vehicle life cycle
- Easily disconnected and reconnected during relay change

### FEATURES

- Sliding lever mate assist for easy mating to the relay switch
- Standard to different EOBD (European on Board Diagnostics) devices

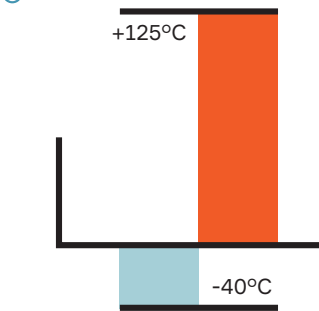
### AVAILABLE CONFIGURATIONS

Cavity Count (ways)	8
Cavity Configurations (mm)	2.8, 8.0
Material	PBT GF 15
Genders	Female
Sealing Type	Cable Sealed

### APPLICATIONS

- Pre-heating of diesel engines
- Comfort heating of cockpit
- Antipollution systems by EOBD

### TEMPERATURE



### VIBRATION



### CONNECTOR MATING FORCE



### SEALING PROTECTION



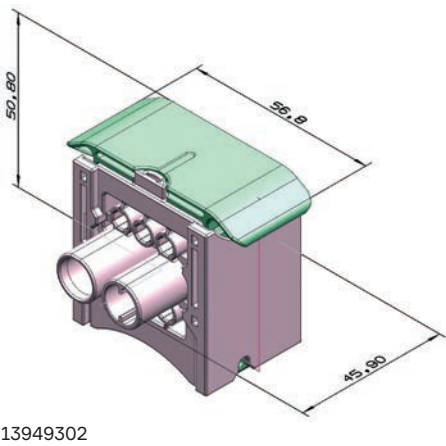
Cavity count	Blade size (mm)	Gender	Dimensions L x W x H (mm)	Part number	Color
8	2.8 (6) + 8* (2)	F	56.8 x 50.8 x 45.9	10812007	Black
8	2.8 (6) + 8* (2)	F	56.8 x 50.8 x 45.9	13949302	Grey

\* Please, consult Aptiv.

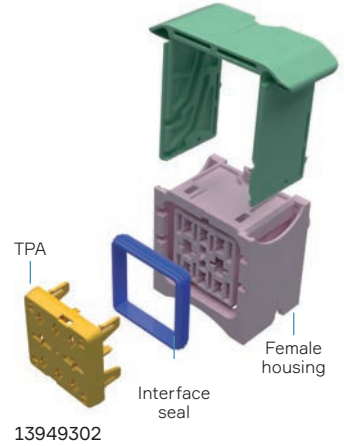
### COMPATIBLE SEALS

Type	Applicable Wire Size (mm²)	Color	Restraint Ring	Part Number
Cable Seal	0.35 - 1.0	Red	No	15327786
Cable Seal	1.0 - 2.5	Blue	No	10757056
Cavity Plug	N/A	White	No	15340264

### DIMENSION MEASUREMENT SAMPLE



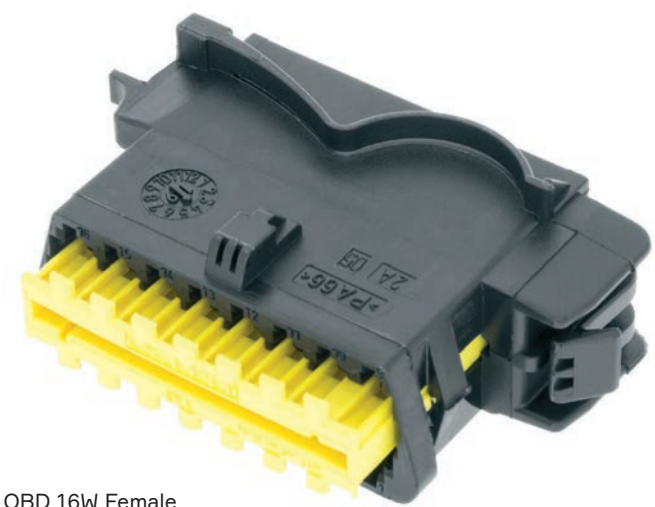
### EXPLODED VIEW



### COMPATIBLE WITH



# SICMA OBD (ON-BOARD DIAGNOSTIC) SERIES



OBD 16W Female

## BENEFITS

- Optional protection cap cover with hinge against liquid splashes
- Pass-through panel mount inside cockpit
- Easiness of wiring and small shape housing

## FEATURES

- Unsealed housing for SICMA clean body terminal with lock reinforcement (TPA)
- Standard “On-Board Diagnostic (OBD)” receptacle with 16 Ways

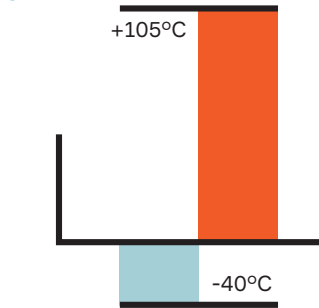
## AVAILABLE CONFIGURATIONS

Cavity Count (ways)	16
Cavity Configurations (mm)	1.5
Genders	Female
Sealing Type	Unsealed
Centerline Spacing (mm)	4.0
Terminal Position Assurance (TPA) Type	Primary Lock Reinforcement (PLR)

## APPLICATIONS

Cockpit

## TEMPERATURE

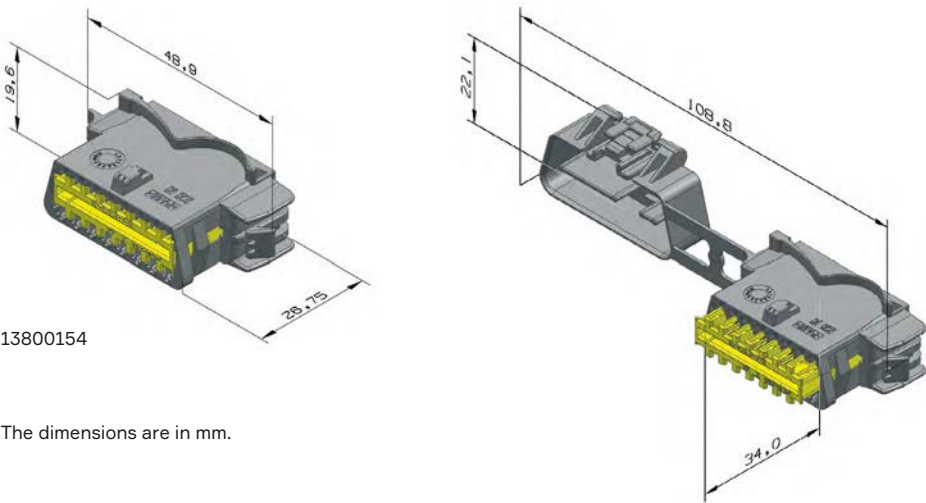


## VIBRATION



Cavity count	Blade size (mm)	Gender	Dimensions W x H x D (mm)	Part number	Index	Color
16	1.5	F	108.8 x 22.1 x 31.85	13800155	with cap	Gray
16	1.5	F	49.3 x 19.6 x 31.85	13800154	without cap	Black

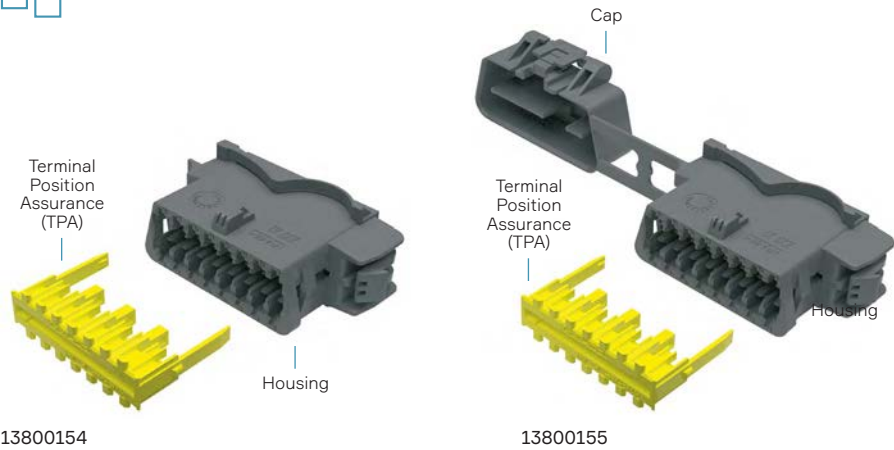
## DIMENSION MEASUREMENT SAMPLE



13800154

The dimensions are in mm.

## EXPLODED VIEW



13800154

13800155

## COMPATIBLE WITH



SICMA 1.5 Series Female Terminal



BTS 1.5 Series Female Terminal



# SICMA HEADERS

## INTERCONNECT SEALED



SICMA Full Interconnect Sealed 56W  
Female & Pin Header

### BENEFITS

- Market standard footprint interface-to-device headers
- Sliding lever can be installed in right and left position

### FEATURES

- Wire-to-Electronic Printed Circuit Board (PCB) solution for electronic control units
- Sealed connection from harness wiring to electronic equipment

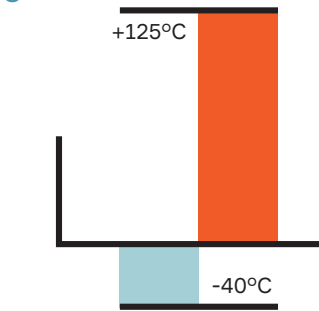
### AVAILABLE CONFIGURATIONS

Cavity Count (ways)	6	24	56	90
Number of Rows	1	3	1	3
Pitch Between Rows (mm)	-	5	6	6
Cavity Configurations (mm)	1.5, 2.8, Mixed			
Material	PBT GF 30			
Genders	Female, Pin Header			
Sealing Type	Mat Sealed			

### APPLICATIONS

- Engine management with gas converter
- Automatic gear box management

### TEMPERATURE



### SEALING PROTECTION

IP68  
IPX9K

### VIBRATION



6, 24 Way



56, 90 Way

Cavity count	Blade size (mm)	Gender	Dimensions L x W x H (mm)	Part number	Orientation	Locking cam	Color	Indexes offered
6	1.5 (4) + 2.8 (2)	F	34.90 x 21.60 x 33.50	10866611	180°	No	Black	1
24	1.5 (18) + 2.8 (6)	F	32.65 x 49.10 x 35.20	10820454	180°	No	Black	4
24	1.5 (18) + 2.8 (6)	F	32.65 x 49.10 x 35.20	33504115	180°	Yes	Black	4
56	1.5	F	136.30 x 30.70 x 43.65	13669859	180°	No	Black	1
90	1.5	F	136.00 x 36.65 x 42.65	10776517	180°	No	Black	1
90	1.5	F	136.20 x 36.50 x 42.65	33525675	180°	Yes	Black	1

### Pin Header

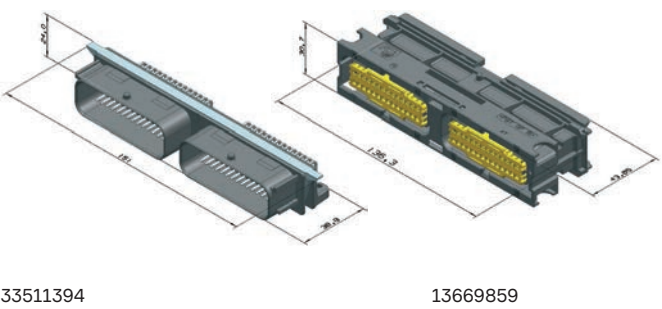
6	N/A	Pin Header	38.00 x 19.00 x 29.58	33508361	90°	N/A	Black	1
24	N/A	Pin Header	42.80 x 25.60 x 45.50	33503978	180°	N/A	Black	3
24	N/A	Pin Header	46.20 x 27.30 x 40.20	33501039	90°	N/A	Black	3
56	N/A	Pin Header	152.00 x 24.00 x 33.65	33511394	90°	N/A	Black	1
90	N/A	Pin Header	147.02 x 32.00 x 27.00	33508365	180°	N/A	Black	1

### Cover

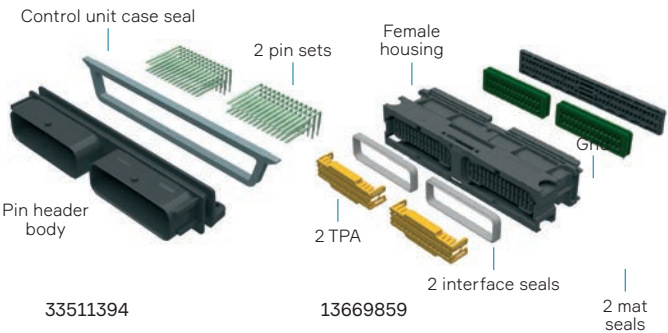
56	N/A	N/A	150.00 x 21.80 x 23.30	15340261	180°	N/A	Black	N/A
90	N/A	N/A	152.00 x 35.90 x 27.30	15340257	180°	N/A	Black	N/A



### DIMENSION MEASUREMENT SAMPLE



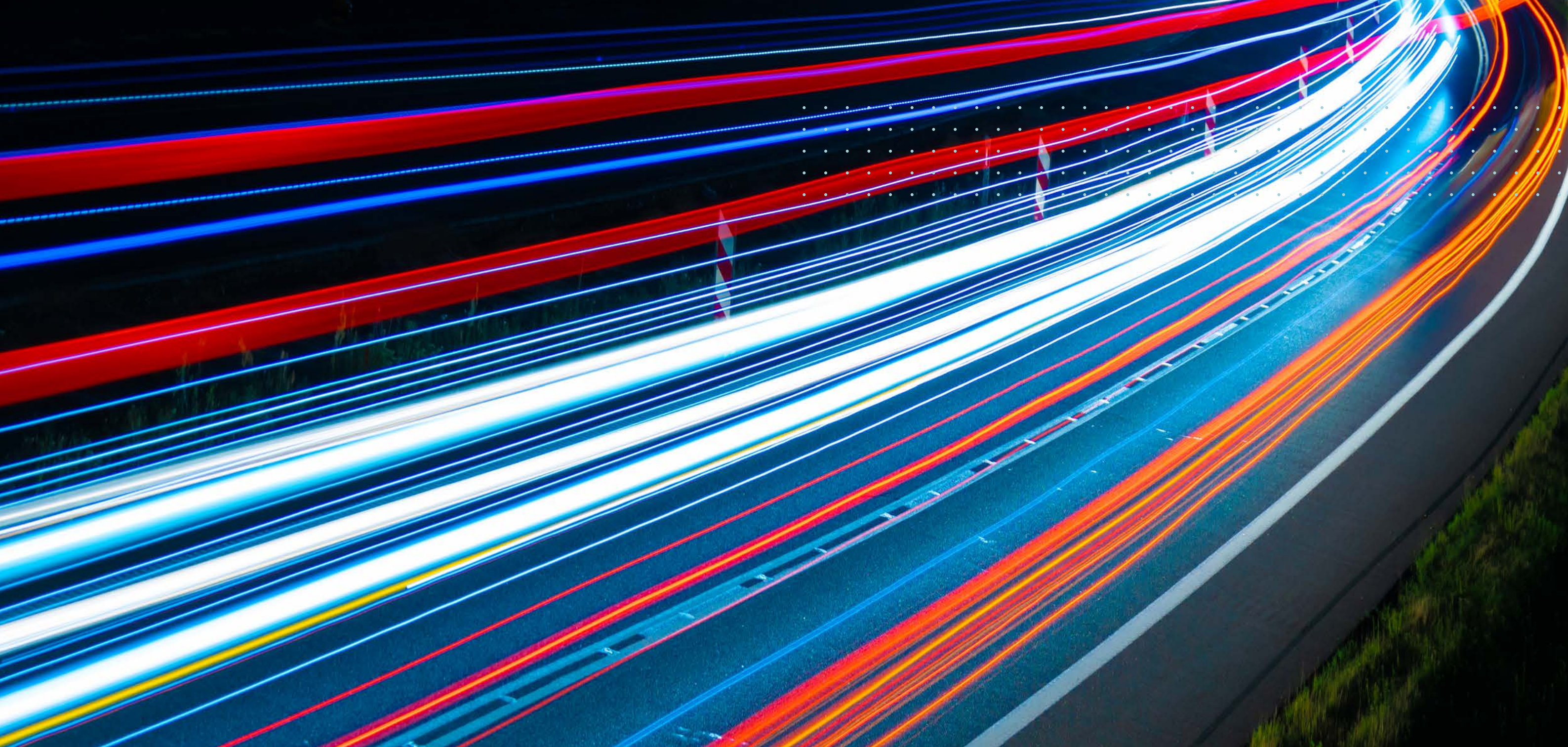
### EXPLODED VIEW



### COMPATIBLE WITH







# HEADERS



# CMC HEADERS

## 32, 48, 64 Way



CMC 32W Pin Header

### BENEFITS

- Compact and small form factor
- Sealable pin header by cover and gasket
- Tin-plated pins, silver-plated upon demand
- Through hole solder type

### FEATURES

- Standard interface interchangeable with multiple female housing suppliers
- Easy solder process to a PCB\*
- Small occupancy on the PCB\*

\* Printed circuit board

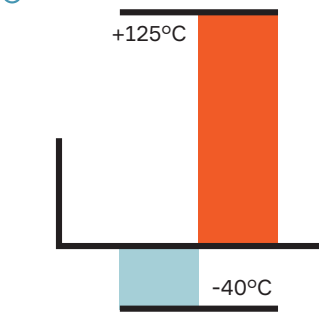
### TECHNICAL CHARACTERISTICS

Orientation	90°
Materials	PA4.6 GF30%, CuZn30
Genders	Male

### APPLICATIONS

Engine management
Gas converter
Body control

### TEMPERATURE



### VIBRATION



### SEALING PROTECTION

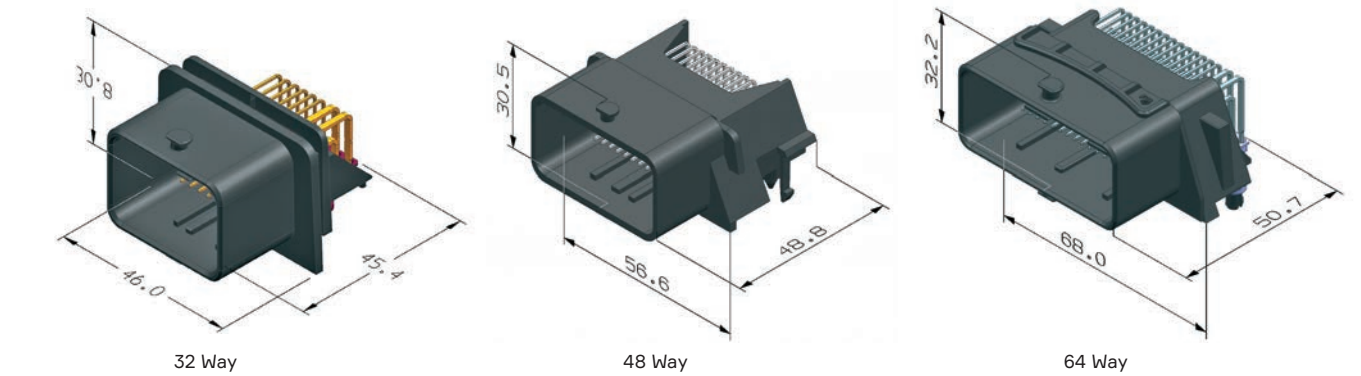


### CONNECTOR MATING FORCE

< 60 N

Part number	Cavity count (ways)	Color coding
33503152	32	Blue
33503150		Black
33503149		Grey
33503151		Brown
33503457	48	Black
35110623	64	Grey
33504510		Black

### DIMENSION MEASUREMENT SAMPLE

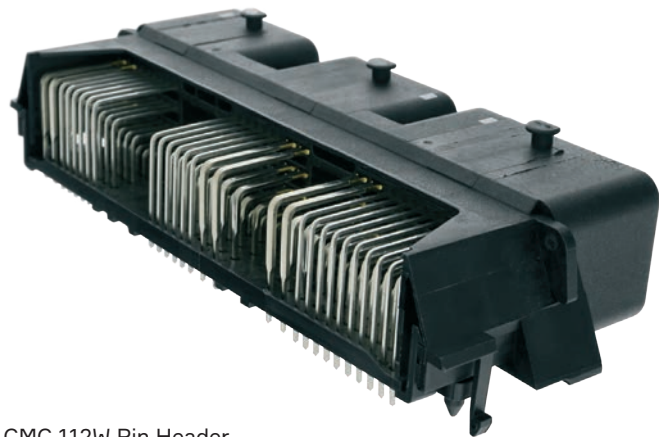


### COMPATIBLE WITH



# CMC PIN HEADER

## 112 Way



CMC 112W Pin Header

### BENEFITS

- Compact and small form factor
- Sealable pin header by cover and gasket
- Tin-plated pins, silver-plated upon demand
- Through hole solder type

### FEATURES

- Standard interface interchangeable with multiple female housing suppliers
- Easy solder process to a PCB\*
- Small occupancy on the PCB\*

\* Printed circuit board

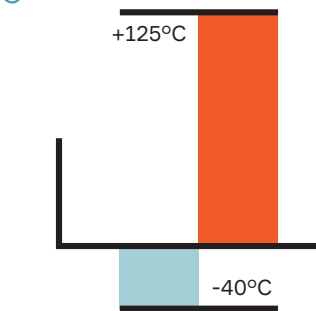
### TECHNICAL CHARACTERISTICS

Orientation	90°
Materials	PA4.6 GF30%, CuZn30
Genders	Male

### APPLICATIONS

Engine management
Gas converter
Body control

### TEMPERATURE



### VIBRATION



### CONNECTOR MATING FORCE

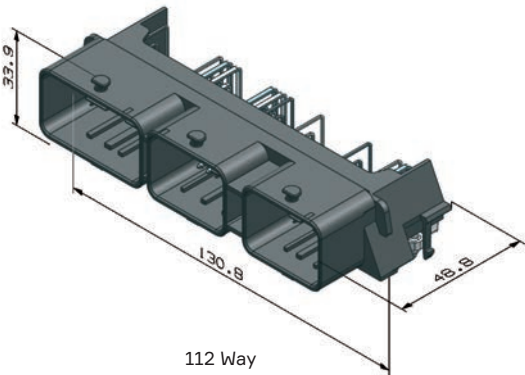


### SEALING PROTECTION



Part number	Cavity count (ways)	Color coding
33504045	112 (48+32+32)	Black + Grey + Brown

### DIMENSION MEASUREMENT SAMPLE



### COMPATIBLE WITH





# SICMA HEADERS SEALED



SICMA Sealed 56 W Header

### BENEFITS

- Market standard footprint interface-to-device headers
- Sliding lever can be installed in right and left position

### FEATURES

- Wire-to-Electronic Printed Circuit Board (PCB) solution for electronic control units
- Sealed connection from harness wiring to electronic equipment

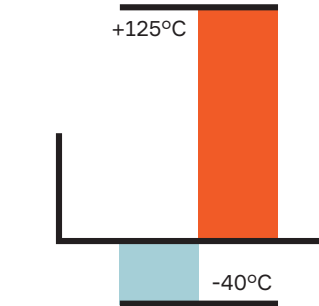
### TECHNICAL CHARACTERISTICS

Cavity Count (ways)	6	24	56	90
Number of Rows	1	3	1	3
Pitch Between Rows (mm)	-	5	6	6
Cavity Configurations (mm)	1.5, 2.8, Mixed			
Material	PBT GF 30			
Genders	Pin Header			
Sealing Type	Mat Sealed			

### APPLICATIONS

- Engine management with gas converter
- Automatic gear box management

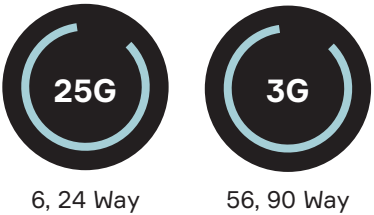
### TEMPERATURE



### SEALING PROTECTION

IP68  
IPX9K

### VIBRATION



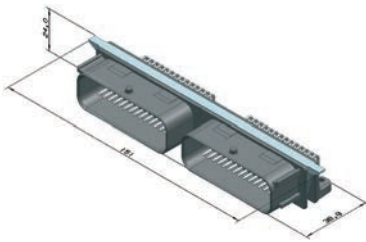
Cavity count	Blade size (mm)	Gender	Dimensions L x W x H (mm)	Part number	Orientation	Color	Indexes offered
6	N/A	Pin Header	38.00 x 19.00 x 29.58	33508361	90°	Black	1
24	N/A	Pin Header	42.80 x 25.60 x 45.50	33503978	180°	Black	3
24	N/A	Pin Header	46.20 x 27.30 x 40.20	33501039	90°	Black	3
56	N/A	Pin Header	152.00 x 24.00 x 33.65	33511394	90°	Black	1
90	N/A	Pin Header	147.02 x 32.00 x 27.00	33508365	180°	Black	1

### Cover

56	N/A	N/A	150.00 x 21.80 x 23.30	15340261	180°	Black	N/A
90	N/A	N/A	152.00 x 35.90 x 27.30	15340257	180°	Black	N/A



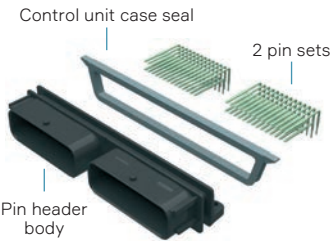
### DIMENSION MEASUREMENT SAMPLE



33511394



### EXPLODED VIEW



33511394



### COMPATIBLE WITH



Cover



Locking Cam

• • • • • For **more** information:  
• • • • • Visit our website: **<https://aptiv.com>**  
• • • • • Browse our E-catalog: **<https://www.aptiv.com/en/solutions/connection-systems>**  
• • • • • Contact your local distributor:

