

## 387TV

Size 7 connector

Derived from MIL-DTL-38999 Series III





## Video, Ethernet, Data transmission...

*...a solution to every need.*

387TV connectors derived from MIL-DTL-38999 Series III dedicated to application where miniature size and low weight are critical is the size below Size 9: the size 7. This range can accommodate a size 8 High-Speed contacts (Coax, Twinax, Quadrax, 1Gb & 10 Gb Octomax), any 38999 size 9 contacts arrangement and Fiber Optics.

### Main features

#### DERIVED FROM MIL-DTL-38999 SERIES III CONNECTORS.

#### MATERIALS AND PLATINGS:



- Aluminum: Olive drab cadmium, Nickel, Black zinc nickel

#### AVAILABLE SHELLS:


- Plugs with integrated backshells.
- Receptacles :
  - Jam-nut receptacles : Standard, Reduced flange or Stand-off Reduced flange
  - Oval flange receptacles

**CRIMP VERSIONS SHELLS ARE ALWAYS DESIGNED WITH AN INTEGRATED BACKSHELL.**

#### MANY POSSIBILITIES :








- 07-05  : Grounded Size 8 Cavity (Coax, Twinax, Quadrax and Octomax)
- All size 9 38999 inserts including High density  (Contacts size 23 to 12)
- Fiber optics (387TV with MT ferrule, 387TV OP with double Luxbeam Q8D also available)

#### CONTACTS - COPPER VERSIONS:

- Crimp or PC tail contacts - several tinning available.
- For Grounded High-Speed version (07-05 ) , plugs are always delivered with sockets contacts and receptacles with pin contacts.

**IP68:** 48 hours under 2 meters of water for Jam nut receptacle and mated plug when using a heatshrink boot and adhesive between the plug and the cable.

### Contacts arrangements

					
Arrangement (TV-CTV)	07-05 	07-09 	07-12	07-35	07-98
Total contact	1	9	1	6	3
Contact size	8	23	12	22D	20



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


## How to order : Amphenol Designations - 387TV Crimp Connectors

Series	Shell type	Crimp contacts	Contact type	Material and platings	Contact arrangement	Contact gender	Keying	With or without contact	Deviation
387TV	07	R	GQ	W	07-05	P	-	-	F312

### 1. Shell type









Shell type	Associated materials and plating	Temperature
<b>06</b> <b>S06*</b>	Plugs with integrated backshell W, ZN, ZR F, K, S, B	+175°C +200°C*
<b>07</b> <b>S07*</b>	Jam nut receptacle with integrated backshell W, ZN, ZR F, K, S, B	+175°C +200°C*
<b>03</b> <b>S03*</b>	Oval flange receptacle with integrated backshell W, ZN, ZR F, K, S, B	+175°C +200°C*

\* «S» Stand for 200°C compatibility. Omit for High-density inserts , inserts with Quadrax contacts and differential Twinax contacts  are +175°C maxi compatible.

### 2. Crimp contacts

<b>R</b>	For W, F, K, S and B platings
<b>Blank</b>	For ZN & TZ platings

### 3. Contact type








<b>GC</b>	Coax 50Ω - 07-05  only
<b>GM</b>	Coax 75Ω for RG179 cable type - 07-05  only
<b>GV</b>	Coax 75Ω for PIC V75268 cable type - 07-05  only
<b>GT</b>	Twinax - 07-05  only
<b>GQ</b>	Quadrax 100Ω - 07-05  only
<b>GO</b>	Octomax - 07-05  only
<b>G</b>	Ground Plane without contact - Mandatory for 07-05  
<b>M</b>	Coax 75Ω #12 - 07-12 contact arrangement only
<b>Blank</b>	Standard signal Contact (07-09, 07-12, 07-35, 07-98)

### 4. Material and platings

Shell material	Shell finish
<b>W</b>	Olive drab cadmium
<b>F</b>	Nickel ✓
<b>ZN</b>	Black zinc nickel ✓
<b>ZR</b>	Black Zinc Nickel CRVI Free ✓

\* Copper aluminum alloy  
For other materials, please consult us

### 5. Contact arrangement

Layout	Contact size	Total contacts
 <b>07-05</b> 	8	1
 <b>07-09</b> 	23	9
 <b>07-12</b>	12	1
 <b>07-35</b>	22D	6
 <b>07-98</b>	20	3

### 6. Contact gender

<b>P</b>	Pin (500 cycles) - 07-05  Mandatory for receptacles
<b>S</b>	Socket (500 cycles) - 07-05  Mandatory for plugs

### 7. Keying

<b>Blank</b> (for normal)	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
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### 8. With or without contact

<b>Blank</b>	Delivered with contacts
<b>LC</b>	Delivered without contacts

### 9. Deviation

Deviation	Description	Shell type compatibility
<b>F312</b>	Reduced flange receptacle	07 / S07
<b>F506</b>	Oval flange equipped with clinch nuts	03 / S03*

For other deviations, please consult us

\*Oval flange receptacle equipped with clinch nuts are not available in Black Zinc Nickel, Bronze, or Stainless Steel.

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## Amphenol Designations - 387TV PCB Receptacles






	1.	2.	3.	4.	5.	6.	7.	8.
Series	Shell type	Contact type	Material and platings	PC Tail contacts	Contact arrangement	Contact gender	Keying	Deviation
387TV	07	M	W	CI	07-12	P	-	F059

### 1. Shell type (receptacles only)

	Shell type	Associated materials and plating	Temperature
07	Jam nut receptacles	W, ZN, ZR	+175°C
S07*		F, K, S, B	+200°C *
03	Oval flange receptacles	W, ZN, ZR	+175°C
S03*		F, K, S, B	+200°C *

\* For connectors with Quadrax and differential Twinax contacts please omit the 'S' corresponding to 200°C compatibility. Quadrax contacts and differential Twinax contacts are +175°C max compatible.

### 2. Contact type

GC	Coax 50Ω - 07-05  only
GM	Coax 75Ω - 07-05  only
GT	Twinax - 07-05  only
GQ	Quadrax 100Ω - 07-05  only
GO	Octomax - 07-05  only
M	Coax 75Ω #12 - 07-12 contact arrangement only
Blank	Standard signal Contact (07-09, 07-12, 07-35, 07-98)

### 3. Material and platings

	Shell material	Shell finish
W	Aluminum	Olive drab cadmium
F		Nickel ✓
ZN		Black zinc nickel ✓
ZR		Black Zinc Nickel CRVI Free ✓








\* Copper aluminum alloy  
For other materials, please consult us

### 4. PC Tail contacts


CI	Standard length
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For other length, please consult us

### 5. Contact arrangement

	Layout	Contact size	Total contacts
	07-05 	8	1
	07-09 	23	9
	07-12	12	1
	07-35	22D	6
	07-98	20	3

### 6. Contact gender

P	Pin (500 cycles) - 07-05  Mandatory for receptacles
S	Socket (500 cycles)

### 7. Keying

Blank (for normal)	A	B	C	D
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### 8. Deviation

Shell style	PC Tail finish / Tinning				Shell type compatibility
	Tin lead	Silver tin ✓	Silver tin copper ✓	Gold ✓	
Standard	F404	F404LF	F404LFC	Blank	All
Stand-off Reduced flange	F059	F059LF	F059LFC	F059H	07 / S07
Oval flange with clinch nuts	F506G	F506LF	F506LFC	F506	03 / S03*

For other deviations, please consult us

\*Oval flange receptacle equipped with clinch nuts are not available in Black Zinc Nickel, Bronze, or Stainless Steel.

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## Material and platings

Same performances as MIL-DTL-38999 Series III connector in terms of Temperature, Salt Spray resistance.

	Shell material	Shell finish	Operating Temperature (C°)		Salt spray exposure per EIA 364.26 (hours)
			min	max	
W	Aluminium	Olive drab cadmium	-65	+175	500
F		Nickel ✓	-65	+200 <sup>HD</sup>	48
ZN, ZR		Black zinc nickel ✓	-65	+175	500

For other Materials and platings, please consult us.

## Differences with standard TV - MIL-DTL-38999 series III

<b>Thread coupling</b>	Double start instead of triple start
<b>Shell style for crimp versions (plug and receptacle)</b>	Always with integrated backshell
<b>Lightning strike</b>	Composite 38999 level (MIL-DTL-38999 class M)
<b>EMI performances</b>	82dB min at 100MHz (vs 90dB min for 38999 standard) 65dB min at 1000MHz (vs 85dB for 38999 standard)
<b>Shocks &amp; vibrations</b>	<p><b>Shock</b> Half sine wave of 300 G magnitude during 3ms per EIA-364-27</p> <p><b>Vibration</b></p> <p><b>Sine vibrations:</b></p> <ul style="list-style-type: none"> <li>- 60G between 140Hz and 1500Hz</li> <li>- Temperatures (x3 axes) :</li> <li>@ Room temperature for 4H</li> <li>@ -55°C for 4H</li> <li>@ 175°C for 4H</li> </ul> <p><b>Random vibrations:</b> per EIA-364-28:</p> <ul style="list-style-type: none"> <li>- 37.83 grms at 175°C (Aluminum with Olive drab cadmium and Black zinc nickel), 50 to 1500 Hz</li> <li>- 50.09 grms at ambient air, 10 to 1500 Hz</li> </ul>

<sup>HD</sup> 387TV is only available in Grounded version with the 07-05 layout

<sup>HD</sup> High density 38999, Quadrax and differential Twinax arrangements not rated over 175°C

✓ RoHS compliant





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## 387TV Multipin version - The smallest shell around a size 9 MIL-DTL-38999 insert

This series accommodates size 9 38999 series III contacts arrangements in a size 7 shell offering a smaller & lighter solution.

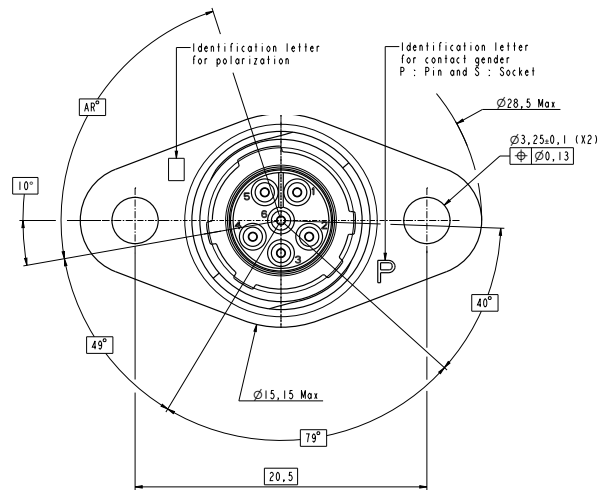
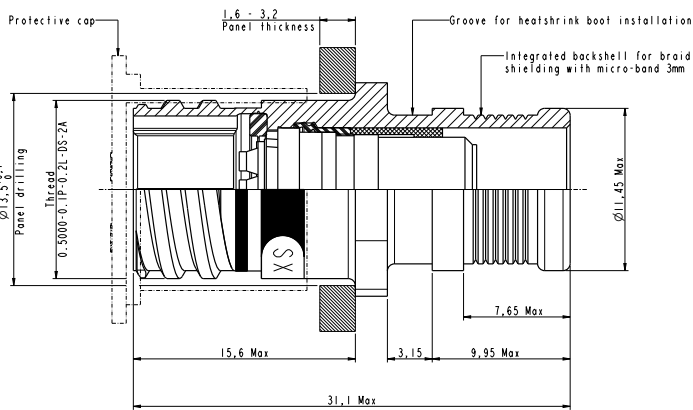
### Contacts arrangements

Contact arrangement	07-09 <small>HD</small>	07-12	07-35	07-98
Total contacts	9	1	6	3
Contact size	23	12	22D	20

### Overall dimensions Oval flange receptacle

Crimp version - Consult us for the PCB version

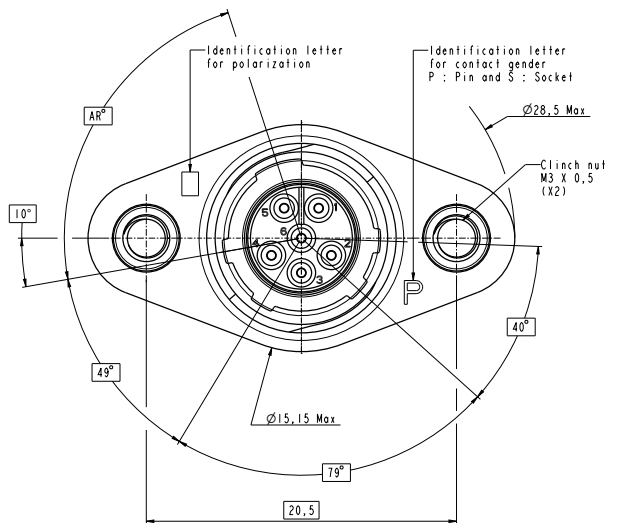
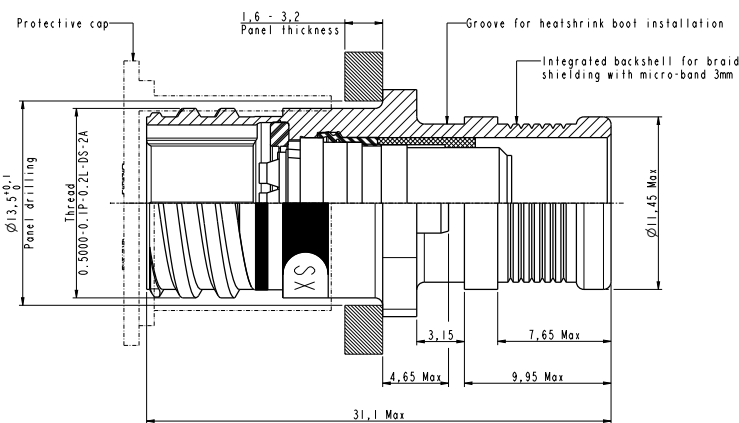
387TV\*03\*\*07\*\*



### Oval flange receptacle equipped with clinch nuts

Crimp version - Consult us for the PCB version

387TV\*03\*\*07\*\*F506



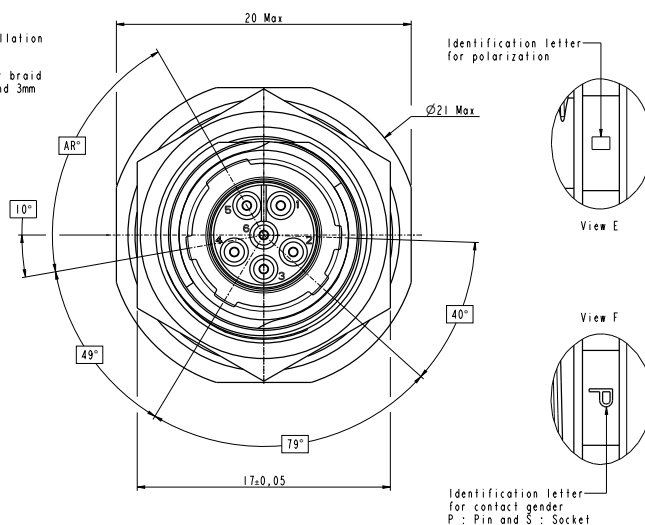
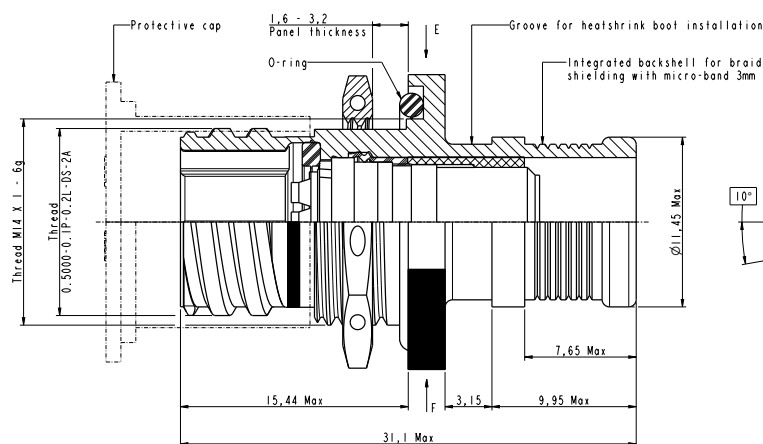
# 387TV - SIZE 7 CONNECTOR

## Jam nut receptacle



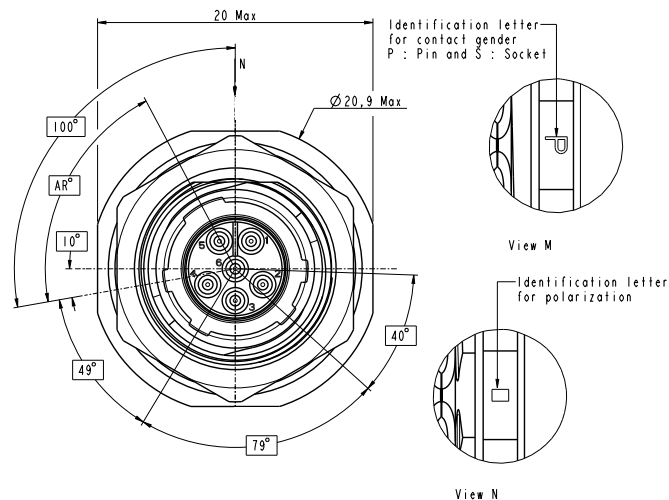
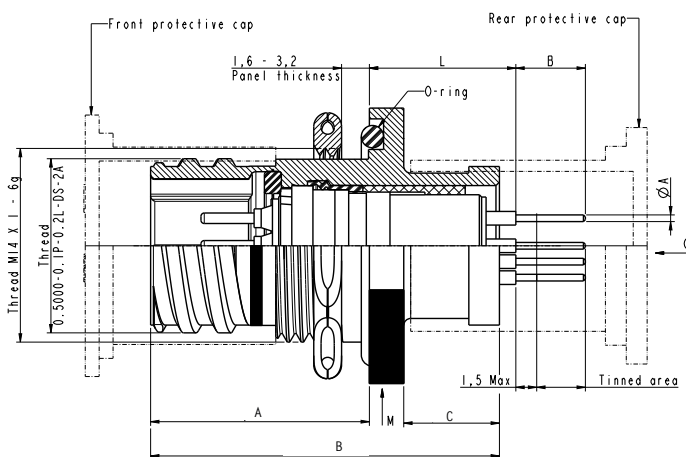
### Crimp version

387TV\*07\*\*07\*\*

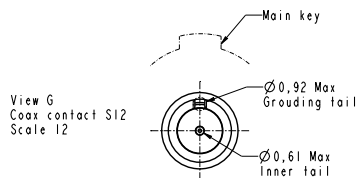


### PC-Tail version

387TV\*07\*CI\*07\*\*



Arrangement	L Max	L Min	B Max	B Min	Ø A	
7-09	11,85	10,14	5,1	4,9	0,6	
7-12	Standard	11,68	10,10	5,1	4,9	1,8
	Coax 75Ω	11,18	9,60	5,9	5,1	View G
7-35	11,18	10,14	5,1	4,9	0,6	
7-98	11,18	10,14	5,1	4,9	0,8	



Gender	A MAX	B MAX	C MAX
Pin - 387TV*07**CI**P	15.86	25.31	6.98
Socket - 387TV*07**CI**S	21.25	30.84	7.12

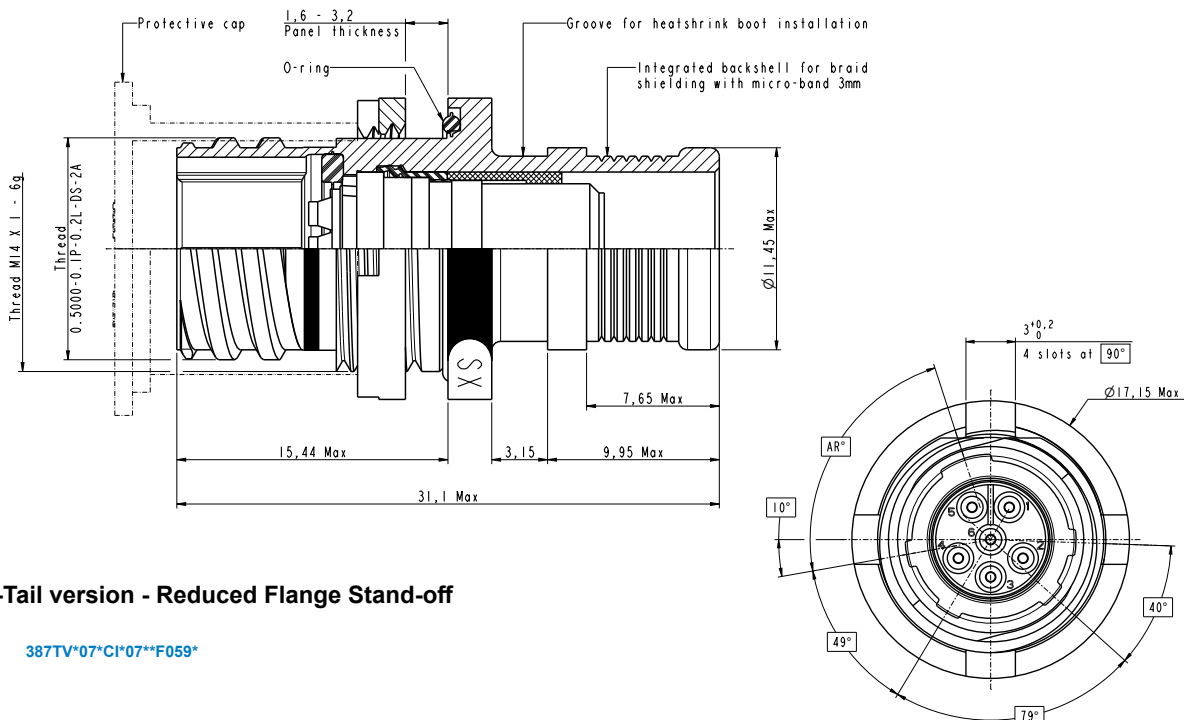
# 387TV - SIZE 7 CONNECTOR

## Jam nut Reduced flange receptacle



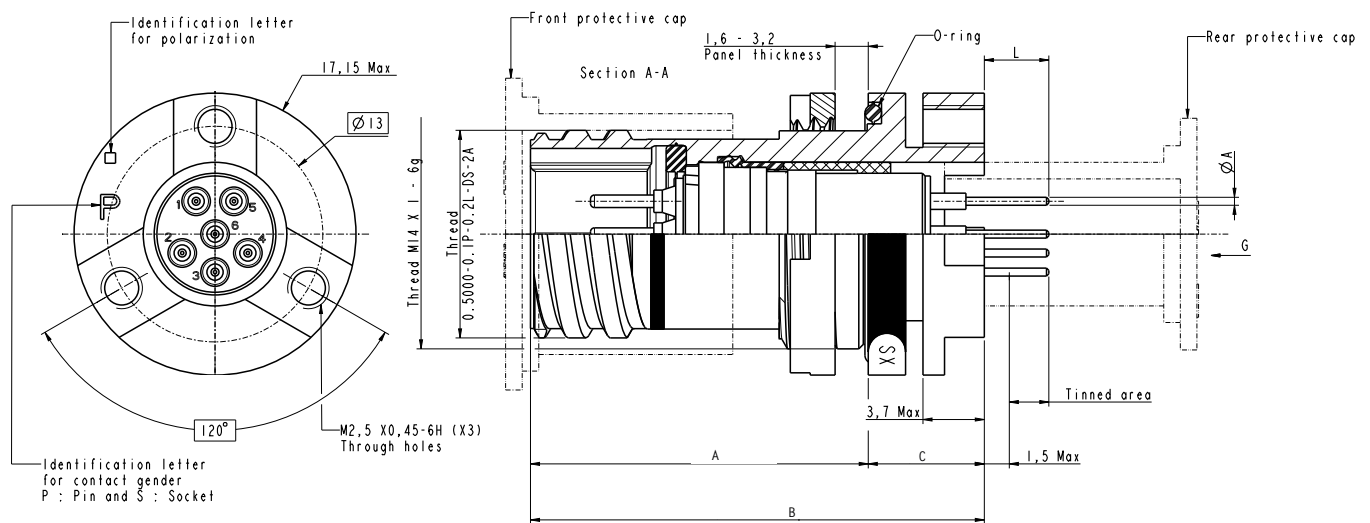
### Crimp version - Reduced Flange

387TV\*07\*\*07\*\*F312

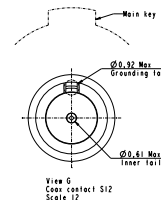


### PC-Tail version - Reduced Flange Stand-off

387TV\*07\*\*CI\*07\*\*F059\*



Arrangement	L1 Max	L1 Min	∅A
7-09	5,38	3,25	0,6
7-12	Standard	5,21	3,21
	Coax 75Ω	5,31	3,11
7-35	4,71	3,25	0,6
7-98	4,71	3,25	0,8



Gender	A <sub>MAX</sub>	B <sub>MAX</sub>	C <sub>MAX</sub>
Pin - 387TV*07**CI**PF059*	20.50	27.37	7.1
Socket - 387TV*07**CI**SF059*	26.13	33.00	

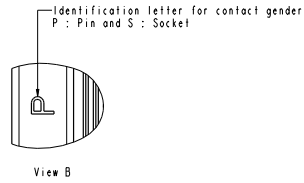
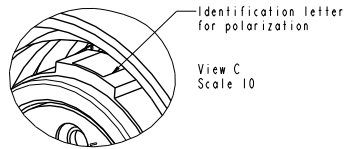
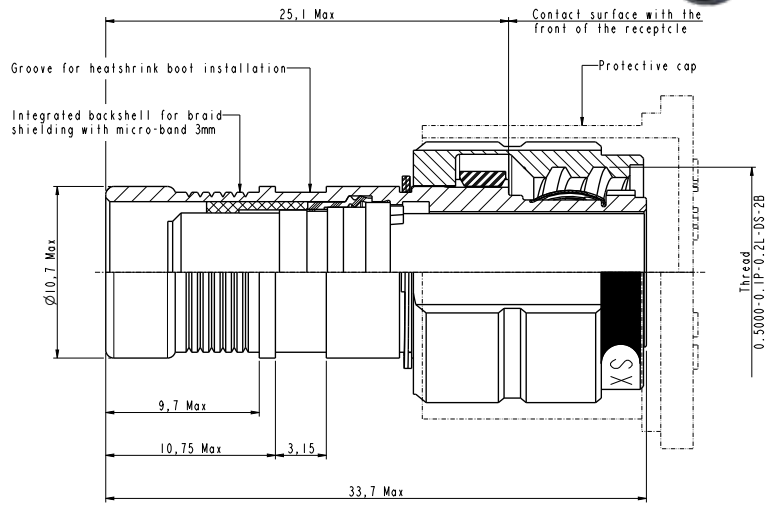
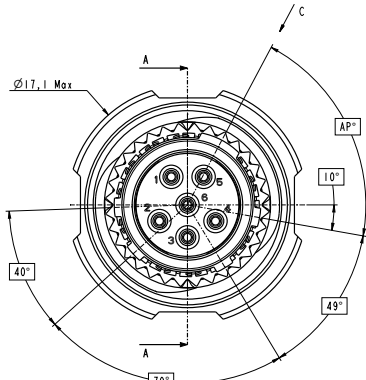


# 387TV - SIZE 7 CONNECTOR

## Plug with Integrated Backshell



387TV\*06\*\*07\*\*

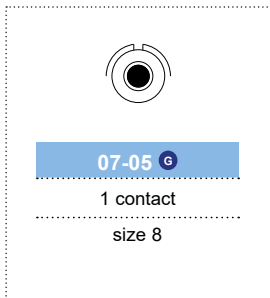


# 387TV - SIZE 7 CONNECTOR

## 387TV 07-05 - The smallest shell around a Size 8 contact

### Contacts possibilities

As a reminder, in 07-05 layout version, receptacles are only compatible with pin contact and plugs with socket contact.



	Pin contacts		Socket contacts	Piggy back grommet for crimp contacts
	Crimp	PC-Tail	Crimp only	
Coax 50Ω	900130	612570	900140	
Coax 75Ω (PIC V75268 cable type)*	603578	-	603748	
Coax 75Ω (RG 179 cable type)	603838	-	603828	900472
Coax 75Ω (PC Tail)	-	612008	-	
Twinax	077517	600797	077516	
Quadrax 100Ω**	603330	900210	603338	
Octomax	603072	603471	603069	900471

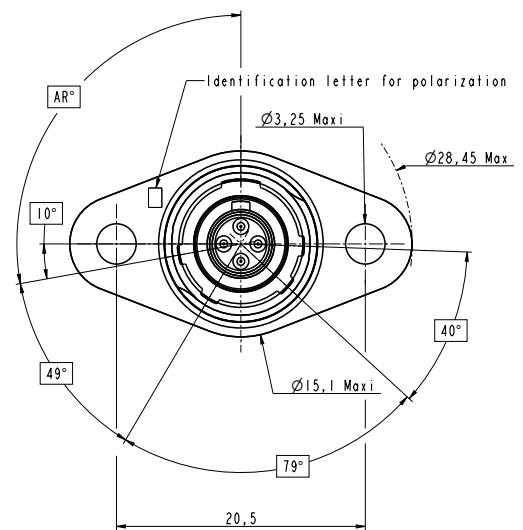
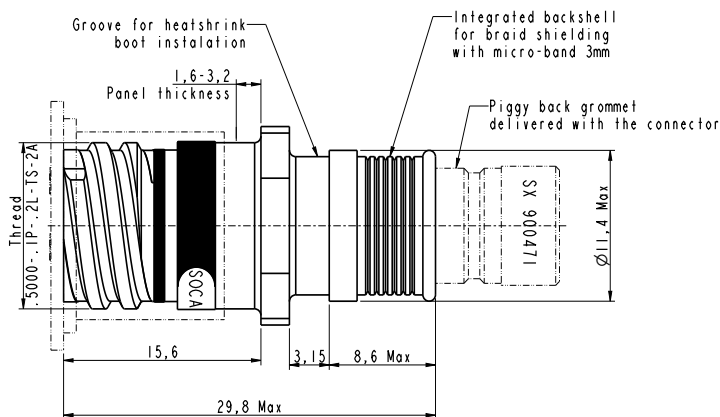
\* Also compatible with PIC V76261, PIC73263 and EMTQ TFLX 125-075-01 cable types.  
\*\* Also compatible with Raychem 10612, EPD44690 and EPD44691 cable types.

## Overall dimensions - 387TV 07-05 layout Oval flange receptacle (Pin contact only)



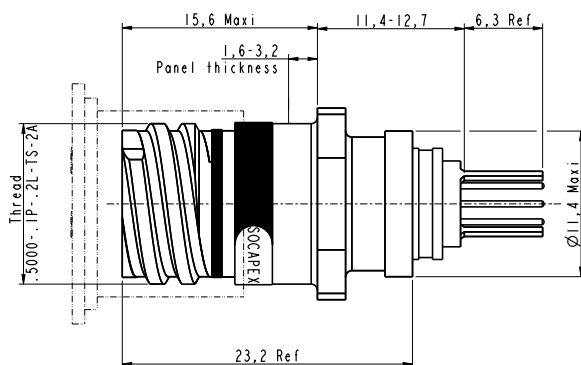
### Crimp version

387TV\*03\*\*07-05P\*\*



### PC-Tail version

387TV\*03\*\*CI07-05P



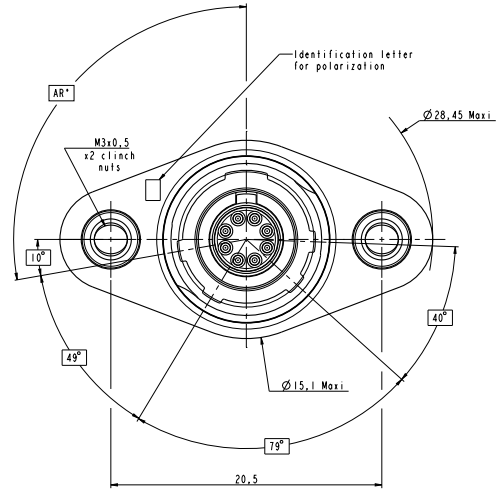
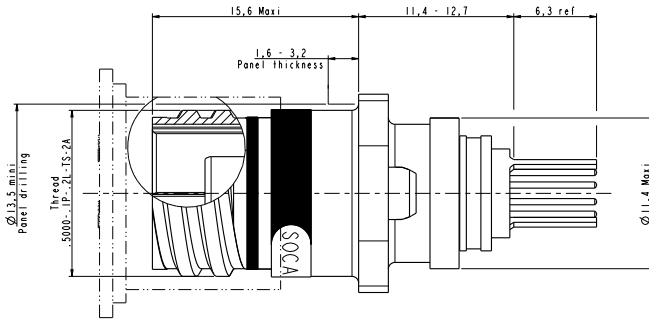
# 387TV - SIZE 7 CONNECTOR

## Oval flange receptacle equipped with clinch nuts (Pin contact only)



### PC tail version

387TV\*03\*\*CI07-05P\*F506

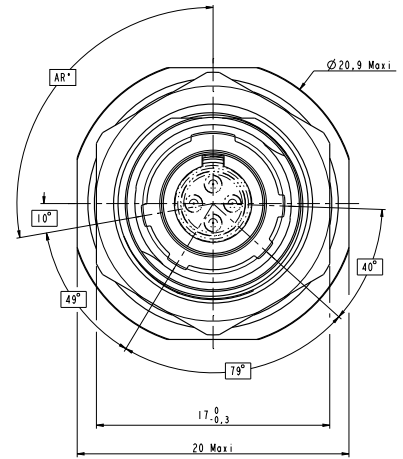
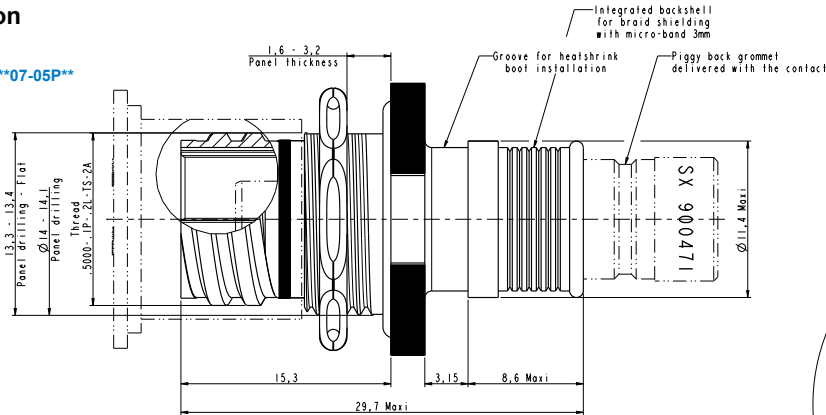


## Jam nut receptacle (Pin contact only)



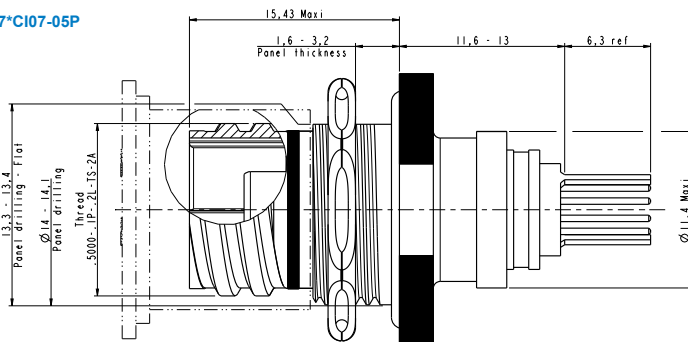
### Crimp version

387TV\*07\*\*07-05P\*\*



### PC tail version

387TV\*07\*CI07-05P



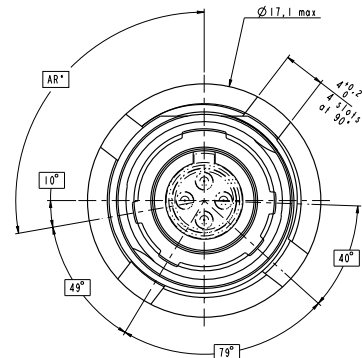
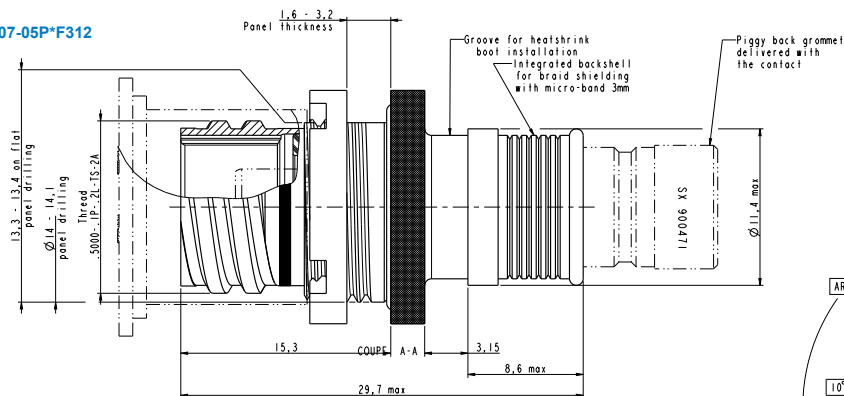
# 387TV - SIZE 7 CONNECTOR

## Reduced flange Jam nut receptacle (Pin contact only)



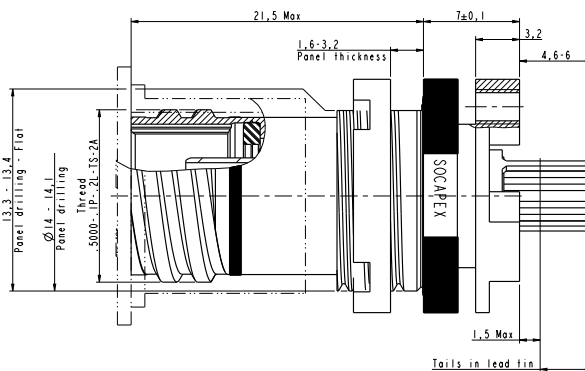
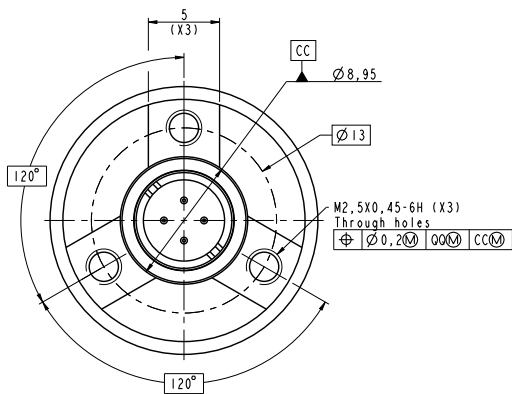
### Crimp version - Reduced Flange

387TV\*07\*\*07-05P\*F312



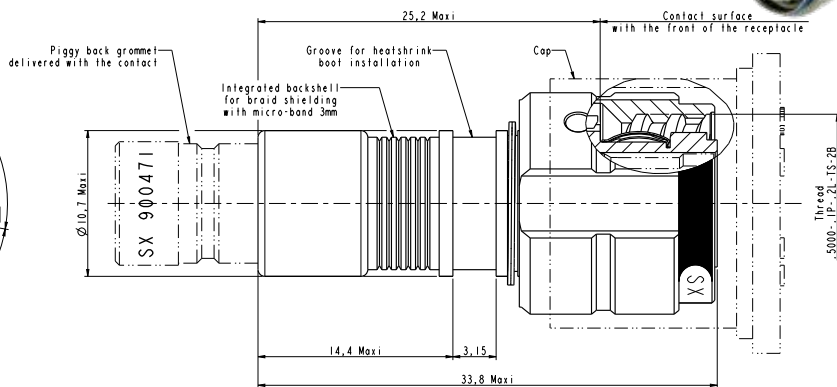
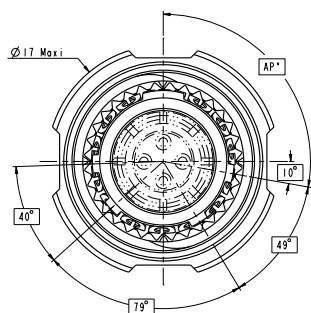
### PC-Tail version - Stand-off Reduced Flange

387TV\*07\*CI07-05P\*F059



## Plug (Socket contact only)

387TV\*06\*\*07-05S\*\*



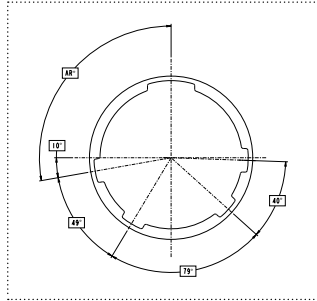
# 387TV - SIZE 7 CONNECTOR

## Keyway positions - Connectors polarization

The angles for a given connector are the same whether it contains pins or sockets. Master key rotates, minors keys stay fixed. Inserts are not rotated in conjunction with the master key/keyway.

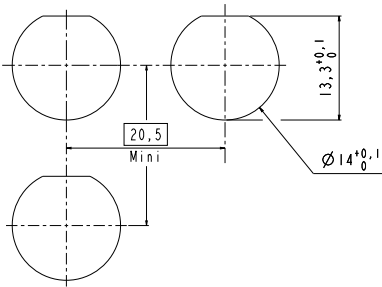
Polarization	AR°
N (Blank)	100°
A	82°
B	72°
C	128°
D	118°

RECEPTACLE (front face shown)  
Main keyway

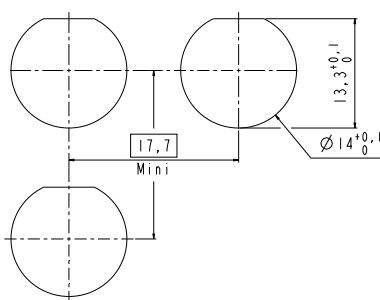


## Panel hole dimensions

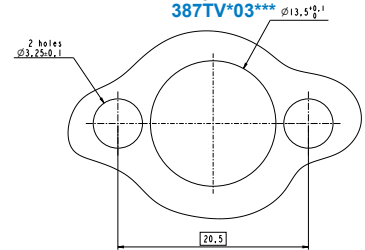
Jam nut receptacle  
387TV\*07\*\*\*



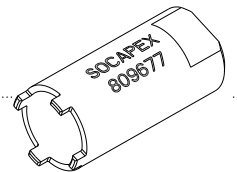
Jam nut Reduced flange receptacle  
387TV\*07\*\*\*F312 / 387TV\*07\*\*\*F059



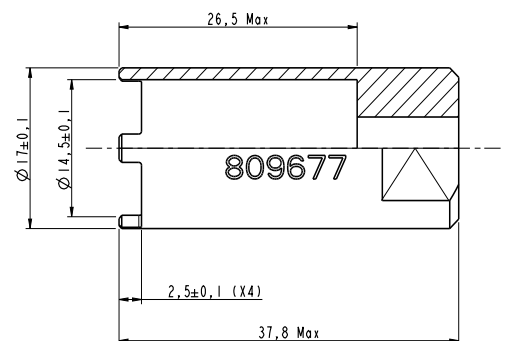
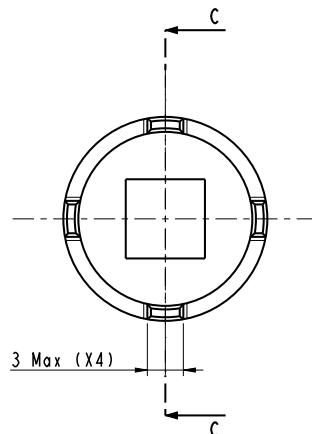
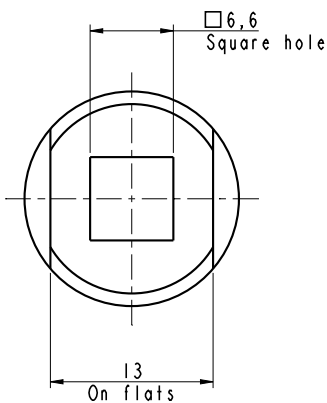
Oval flange receptacle  
387TV\*03\*\*\*



## Tool for 387TV Jam nut Reduced flange Castle nut



809677



✓ RoHS compliant



# 387TV - SIZE 7 CONNECTOR - How to order 387TV accessories

## Amphenol Designations - 387TV Metal Caps

1.	2.	3.	4.	5.	
Cap type - Metal	Cap Style	Wire type	Series	Material and plating	Deviation
B	EC	N	387TV	W	-

### 1. Cap style

EC	For Oval flange receptacle - Cord with eyelet
ER	For Jam nut receptacle - Cord with ring
P	For receptacle - Cord with cable tie
F	For plug - Cord with cable tie

### 2. Wire type

N	Nylon Cord
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### 3. Series

387TV	Size 7 connector
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### 4. Material and platings

Shell material		Shell finish
W	Aluminum	Olive drab cadmium
F		Nickel ✓
ZN		Black zinc nickel ✓

### 5. Deviation

Deviation	Description	Shell type compatibility
F057	For Reduced flange receptacle	F312 / F059
F419	Cap without cord	All

For other deviations, please consult us

## Amphenol Designations - 387TV Rubber Cap

1.	2.	3.	4.	
Cap type - Rubber Cap	Cap Style	Wire type	Series	Deviation
RC	EC	N	387TV	-

### 1. Cap style

03	For Oval flange receptacle - Cord with eyelet
07	For Jam nut receptacle - Cord with ring
06	For plug - Cord with cable tie

### 2. Wire type

N	Nylon Cord
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### 3. Series

387TV	Size 7 connector
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### 4. Deviation

Deviation	Description	Shell type compatibility
F057	For Reduced flange receptacle	F312 / F059
F419	Cap without cord	All

For other deviations, please consult us

## Amphenol Designations - Panel Stopper for 387TV Jam nut receptacle

1.	2.	3.	
Panel Stopper	Series	Style	Material and Plating
S	387TV	N	-

### 1. Series

387TV	Size 7 connector
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### 2. Style

07	For Jam nut receptacle
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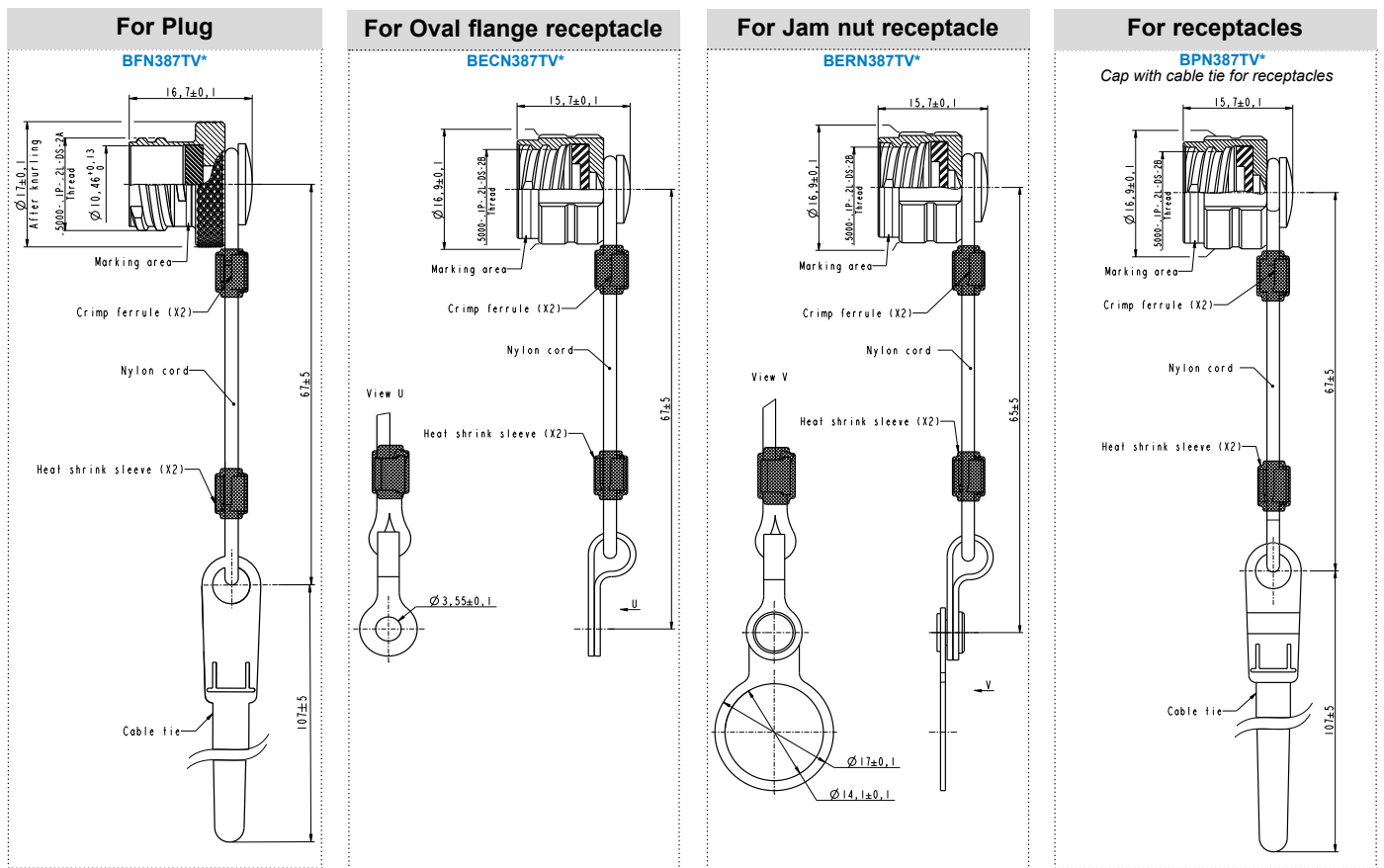
### 3. Material and platings

Shell material		Shell finish
W	Aluminum	Olive drab cadmium
F		Nickel ✓
ZN		Black zinc nickel ✓

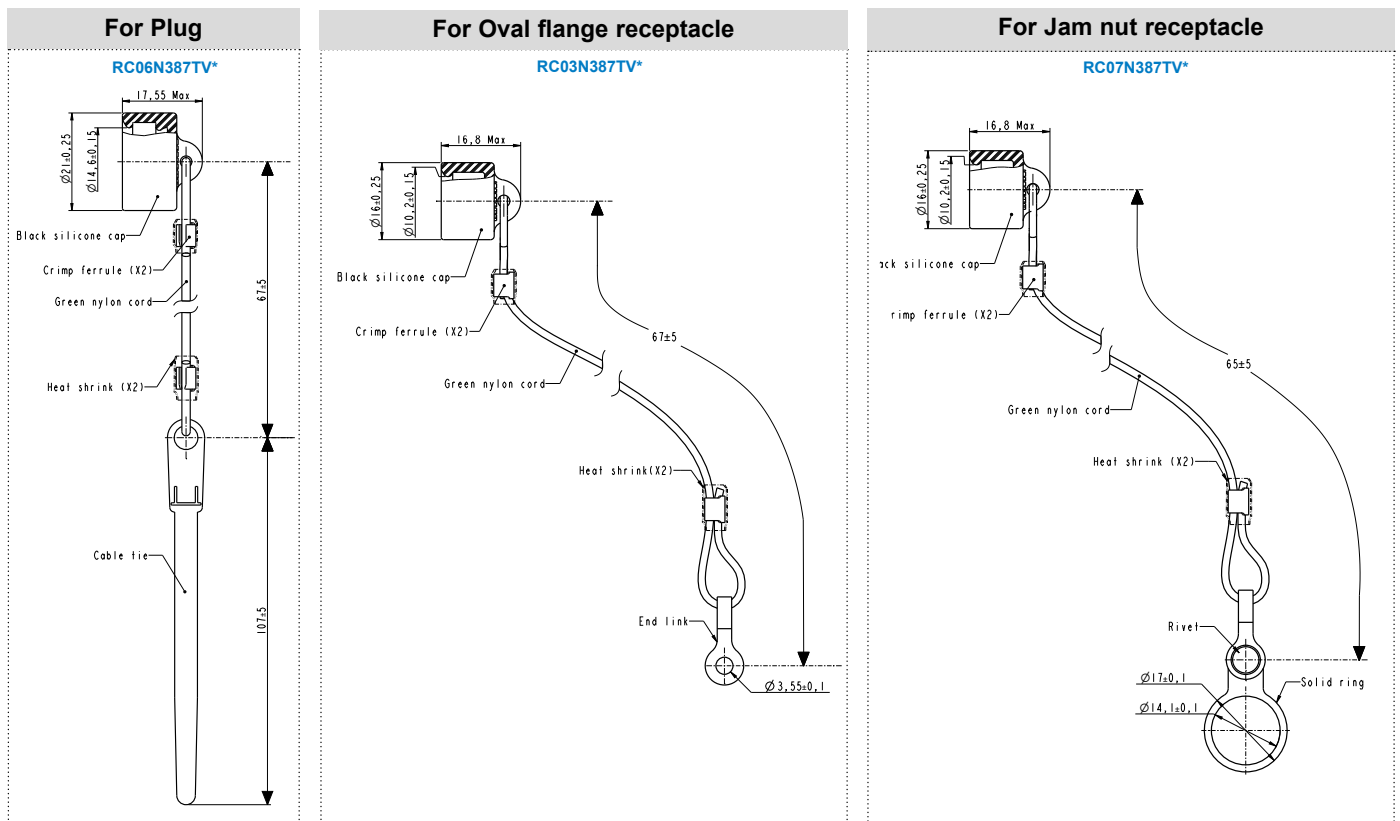
# 387TV - SIZE 7 CONNECTOR



## Metal Caps Size 7 for 387TV Series



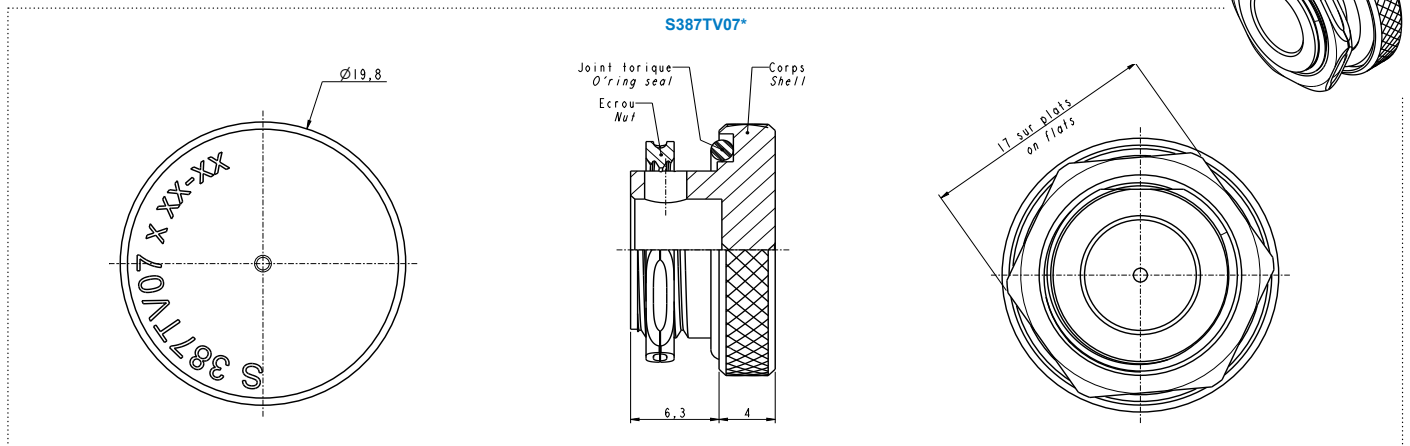
## Silicon Caps Size 7 for 387TV Series



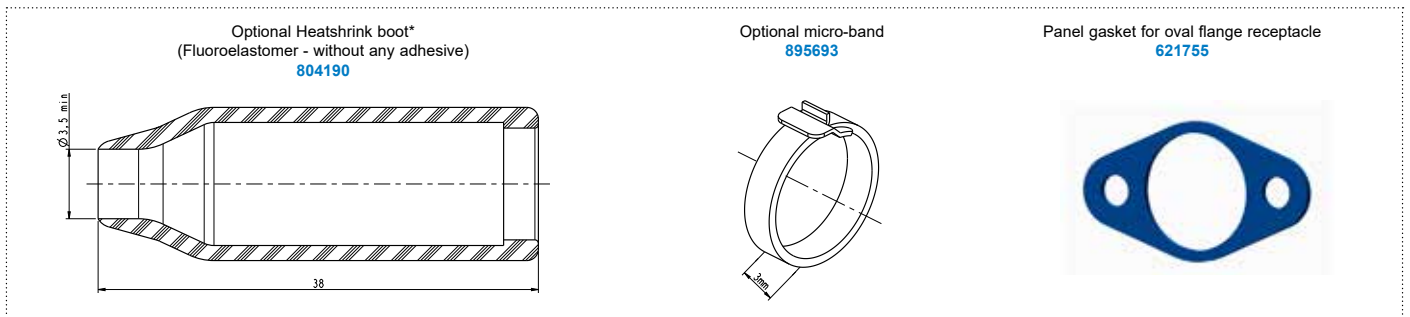
✓ RoHS compliant

# 387TV - SIZE 7 CONNECTOR

## Panel stopper (Jam nut receptacle) for 387TV Series



## Others accessories



\* Shorter piggy back grommet and realignment ring available for the use of heatshrink boot

