

# M8 M12 SMT



ALTW

# M8 M12 SMT | Introduction

## M8



## M12



- Waterproof capacity: IP68(Mated)/IP65(Unmated)
- SMT process for easy and stable mass production
- UL 94V-0 flammability rating
- Designed with the shield spring for further shielding function
- Tape&Reel packing for automated assembly
- IEC Compliance
  - M12: IEC 61076-2-101
  - M8: IEC 61076-2-104

# M8 M12 SMT | Applications



IP CCTV & Security



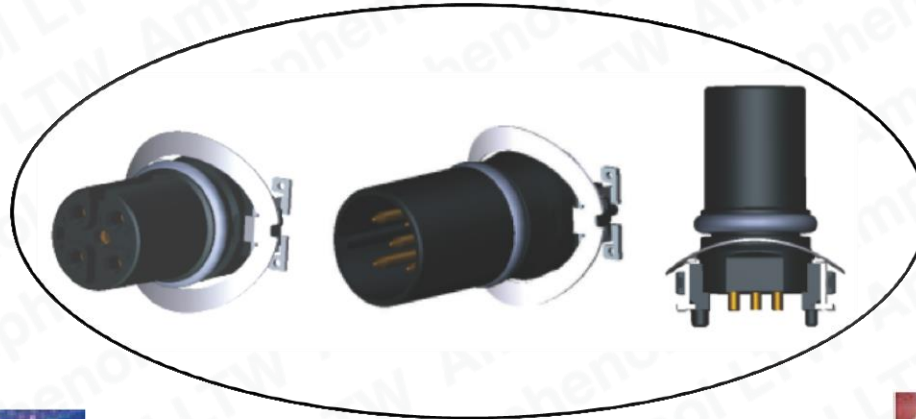
Industrial Automation



MRT / Railway



Broadband Wireless  
Access



Communication  
Systems



LED Lighting

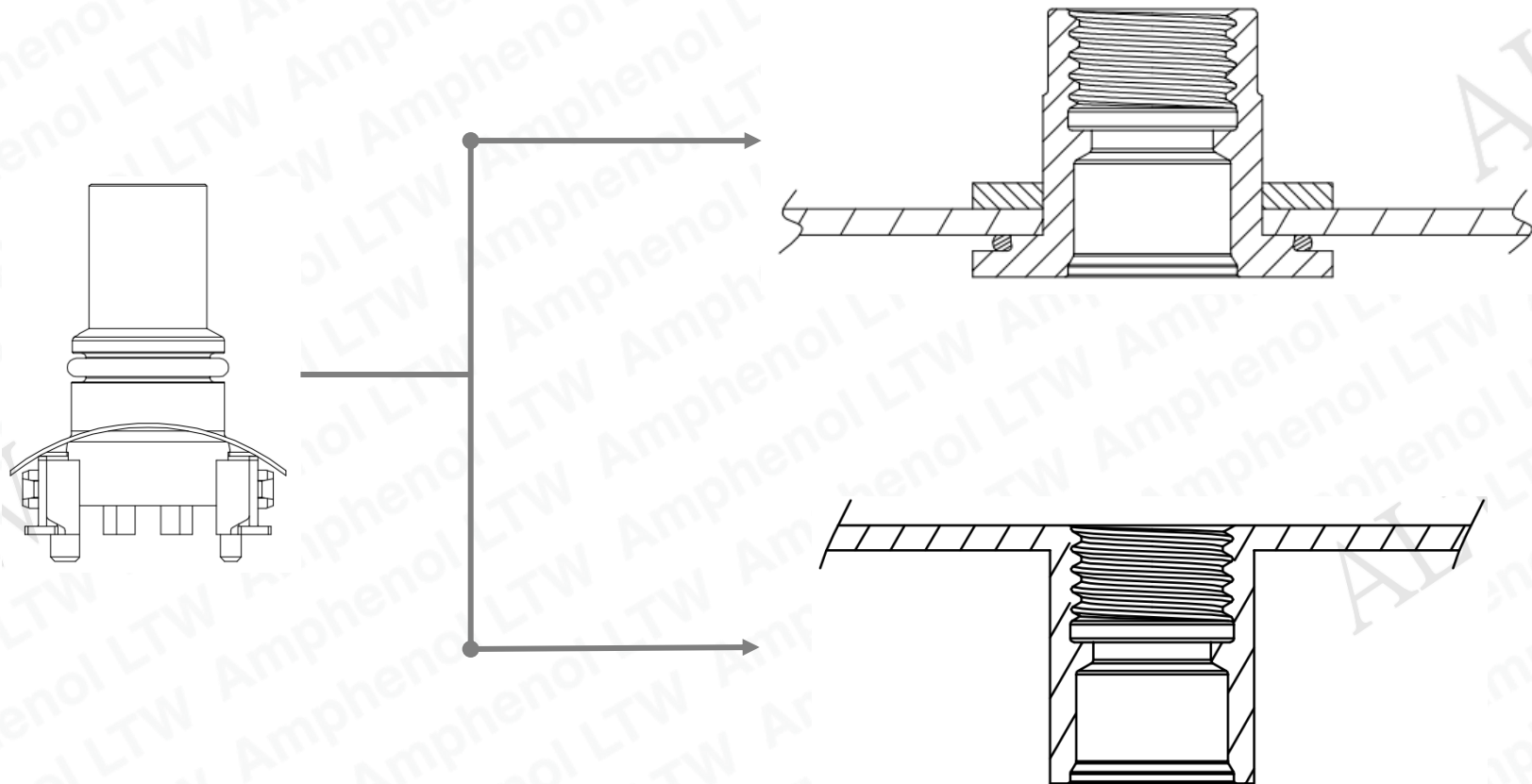


Marine







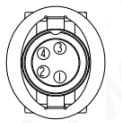






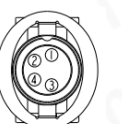


Electric  
Vehicle

# M8 M12 SMT | Applications



# M8 M12 SMT | Range Overview & Contact Configuration

		M12				M8	
Code	A Code			B Code	D Code	-	
Pin Number	4	5	8	5	4	3	4
Male							
Female							

# M12 SMT | Specification

## Specifications :

<b>Number of Positions</b>	A Code: 4, 5 & 8 Pin B Code: 5 Pin D Code: 4 Pin	<b>Vibration</b>	10 ~ 500Hz, 5G
<b>Current Rating</b>	4 Pin: 5A (IEC: 4A) 5 Pin: 5A (IEC: 4A) 8 Pin: 2A	<b>Insertion Force</b>	4 & 5 Pin: 10N (1.02kgf) Max. 8 Pin: 23N (2.35kgf) Max.
<b>Voltage Rating</b>	4 Pin: 250Vac/dc 5 Pin: 60Vac/dc 8 Pin: 30Vac/dc	<b>Withdrawal Force</b>	4 & 5 pin: 15N (1.53kgf) Max. 8 pin: 30N (3.06kgf) Max.
<b>Dielectric Withstand Voltage</b>	4 Pin: 1400Vac 5 Pin: 1000Vac 8 Pin: 650Vac	<b>Temperature Range</b>	-55°C ~ 125°C
<b>Insulation Resistance</b>	100 MΩ(Min.)	<b>Connector Color</b>	Black
<b>Contact Resistance</b>	10mΩ(Max.)	<b>Waterproof Rating</b>	IP65, IP68 (Mated, 1M/24Hrs)
<b>Durability</b>	100 Cycles	<b>Safety Compliance</b>	UL2238, IEC 61076-2-101
		<b>RoHS Compliant</b>	Yes

# M8 SMT | Specification

## Specifications :

<b>Number of Positions</b>	3 & 4 Pin	<b>Vibration</b>	10 ~ 500Hz, 5G
<b>Current Rating</b>	3A	<b>Insertion Force</b>	10N (1.02kgf) Max.
<b>Voltage Rating</b>	3 Pin: 60Vac/dc 4 Pin: 60Vac/dc	<b>Withdrawal Force</b>	15N (1.53kgf) Max.
<b>Dielectric Withstand Voltage</b>	3 Pin: 1000Vac , 4 Pin: 650Vac	<b>Temperature Range</b>	-55°C ~ 125°C
<b>Insulation Resistance</b>	100 MΩ (Min.)	<b>Connector Color</b>	Black
<b>Contact Resistance</b>	10 mΩ (Max.)	<b>Waterproof Rating</b>	IP65, IP68 (Mated, 1M/24Hrs)
<b>Durability</b>	100 Cycles	<b>Safety Compliance</b>	UL2238, IEC 61076-2-104
		<b>RoHS Compliant</b>	Yes

# M8 M12 SMT | Ordering Information

## Ordering Information | M12 SMT

	1	2	3	4	5	6	7	8	9	10
<b>Specification / Size</b>										
> <u>A-Coded</u>										
(MSAS) M12 A-Coded, Shielded										
> <u>B-Coded</u>										
(MSBS) M12 B-Coded, Shielded										
> <u>D-Coded</u>										
(MSDS) M12 D-Coded, Shielded										
<b>Number of Contacts</b>										
04, 05, 08 Contacts										
EX. (04) = 4 Contacts										
<b>Connector Body (Style)</b>										
> <u>For Receptacle</u>										
(P) Panel										
<b>Connector (Housing) Gender</b>										
(M) Male Connector						(F) Female Connector				
<b>Contact Gender</b>										
(M) Male						(F) Female				
<b>Assemble Style</b>										
> <u>For Receptacle</u>										
(T) SMT Type										
<b>Mating Style</b>										
(S) Screw Thread										
<b>Backshell</b>										
> <u>For Receptacle</u>										
(C) Circular, Rear Fastened										
<b>Waterproof Rating</b>										
(8) IP 68 (Mated), IP65 (Uumated)										
<b>Cable Information</b>										
> <u>For Receptacle</u>										
(001), (002), (003)...										



# M8 M12 SMT | Ordering Information

## Ordering Information | M8 SMT

	1	2	3	4	5	6	7	8	9	10
<b>Specification / Size</b> (M8S) M8, Shielded										
<b>Number of Contacts</b> 03, 04 Contacts EX. (03) = 3 Contacts										
<b>Connector Body (Style)</b> > <a href="#">For Receptacle</a> (P) Panel										
<b>Connector (Housing) Gender</b> (M) Male Connector      (F) Female Connector										
<b>Contact Gender</b> (M) Male      (F) Female										
<b>Assemble Style</b> > <a href="#">For Receptacle</a> (T) SMT Type										
<b>Mating Style</b> (S) Screw Thread										
<b>Backshell</b> > <a href="#">For Receptacle</a> (C) Circular, Rear Fastened										
<b>Waterproof Rating</b> (8) IP 68 (Mated), IP65 (Uumated)										
<b>More Information</b> > <a href="#">For Receptacle</a> (001), (002), (003).....										

# M12 SMT | Physical Dimension

REV.	ECN NO.	DATE	SIGN	DESCRIPTION
A	Initial Release	2017/12/15	Arvin Chan	Change Rev.01 To Rev.A

**MSAS: M12 A Code Shield**

**MSBS: M12 B Code Shield**

**MSDS: M12 D Code Shield**

04: 4Pin

05: 5Pin

08: 8Pin

P: Panel

F: Female Connector

**001: Serial Number**

8: IP68 (Mated, 1M/24Hours)

IP65 (Unmated)

C: Rear Fasten

S: Screw Type (With Shield)

T: SMT Type

F: Female Pin

**Note:**

- ⊕ Important Dimension
- Material Specification:
- Housing: Thermoplastic
- Female Pin: Copper Alloy, Gold Plated
- Ground: Copper Alloy, Tin Plated
- Spring: Stainless Steel
- O-Ring: Silicone, Gray
- Electrical Specification:
- Contact Resistance: 10mΩ Max.
- Insulation Resistance: 100MΩ min.
- Dielectric Withstanding Voltage: 1KV
- Rated Voltage: 4Pin 250V dc or ac  
5Pin 60V dc or ac  
8Pin 30V dc or AC
- Rated Current: 4Pin&5Pin 4A  
8Pin 2A
- Mechanical Specification:
- Durability: 100 Cycles
- Environmental Specification:
- Temperature Range: -55-125°C
- Salt Spray: 48h
- SMT Temperature & Time: 260°C/5Sec
- SMT Paste: 0.12mm min.
- Recommended PCB Thickness: 1.0mm

**UNIT: mm**

TOLERANCE	M12 F CONN F PIN SMT TYPE
.X	SCALE 1:1
.XX	SIZE A4
.XXX	SHEET 1 OF 4
ANGLES	REV. A
	REV. A.2

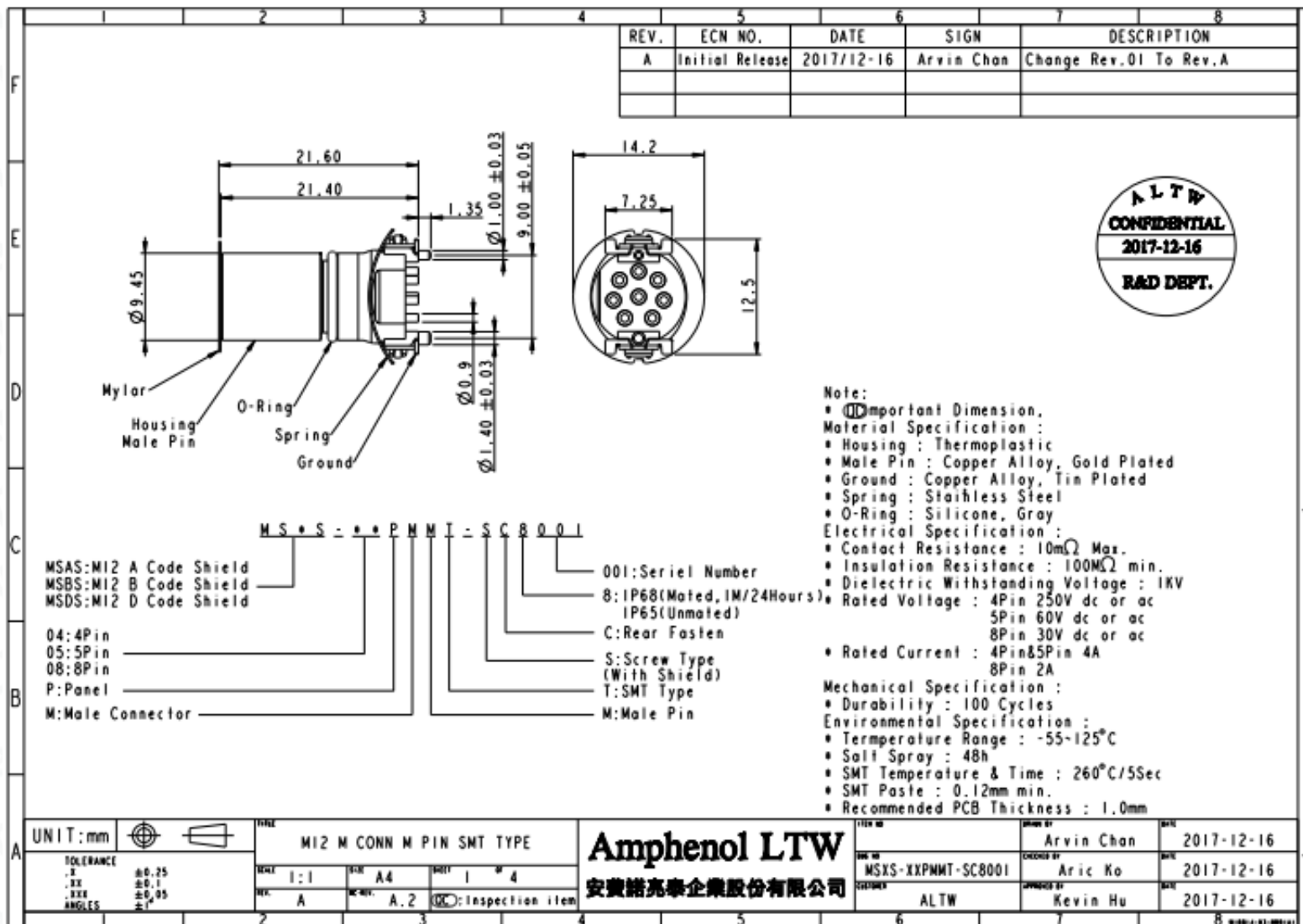
**Amphenol LTW**  
安費諾高事企業股份有限公司

ITEM NO	DRAWN BY	DATE	
MSXS-XXPFFT-SC8001	Arvin Chan	2017-12-15	
DESIGNED BY	Arvic Ko	2017-12-15	
CHECKED BY	Kevin Hu	2017-12-15	



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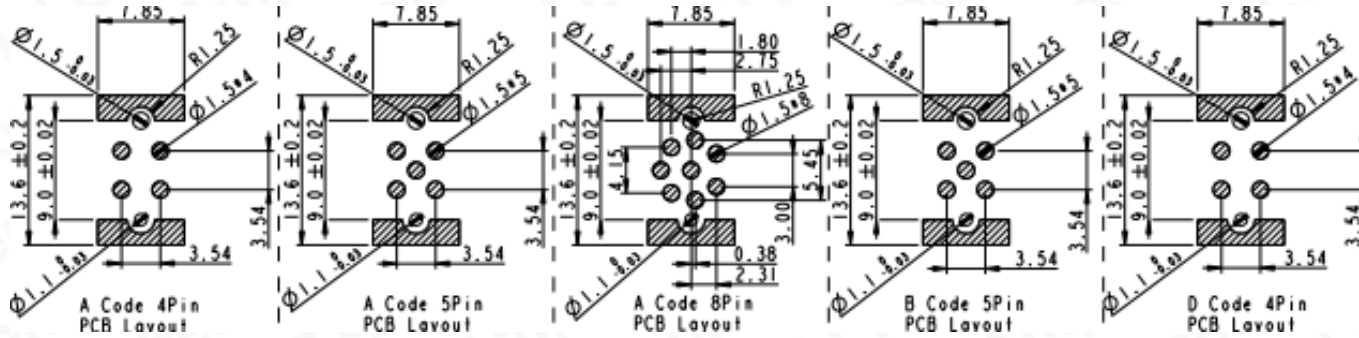
# M12 SMT | Physical Dimension



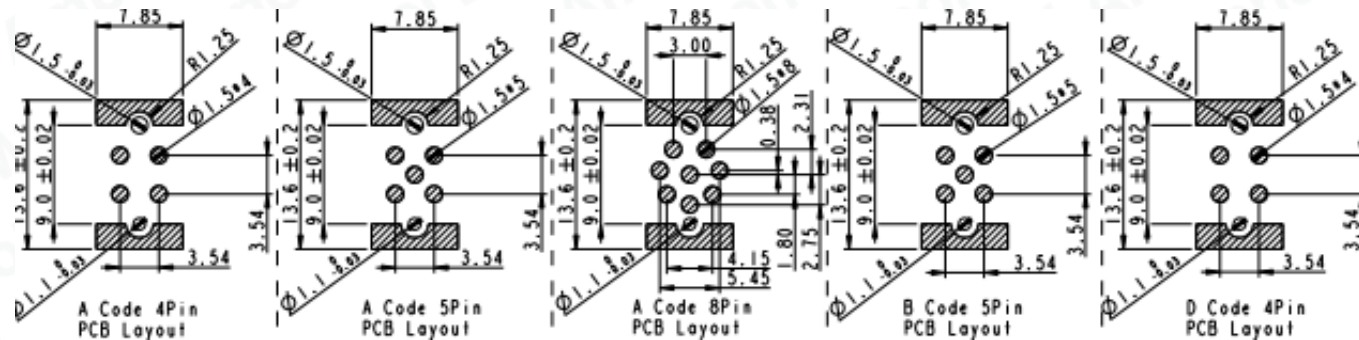
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# M12 SMT | Recommended PCB Layout

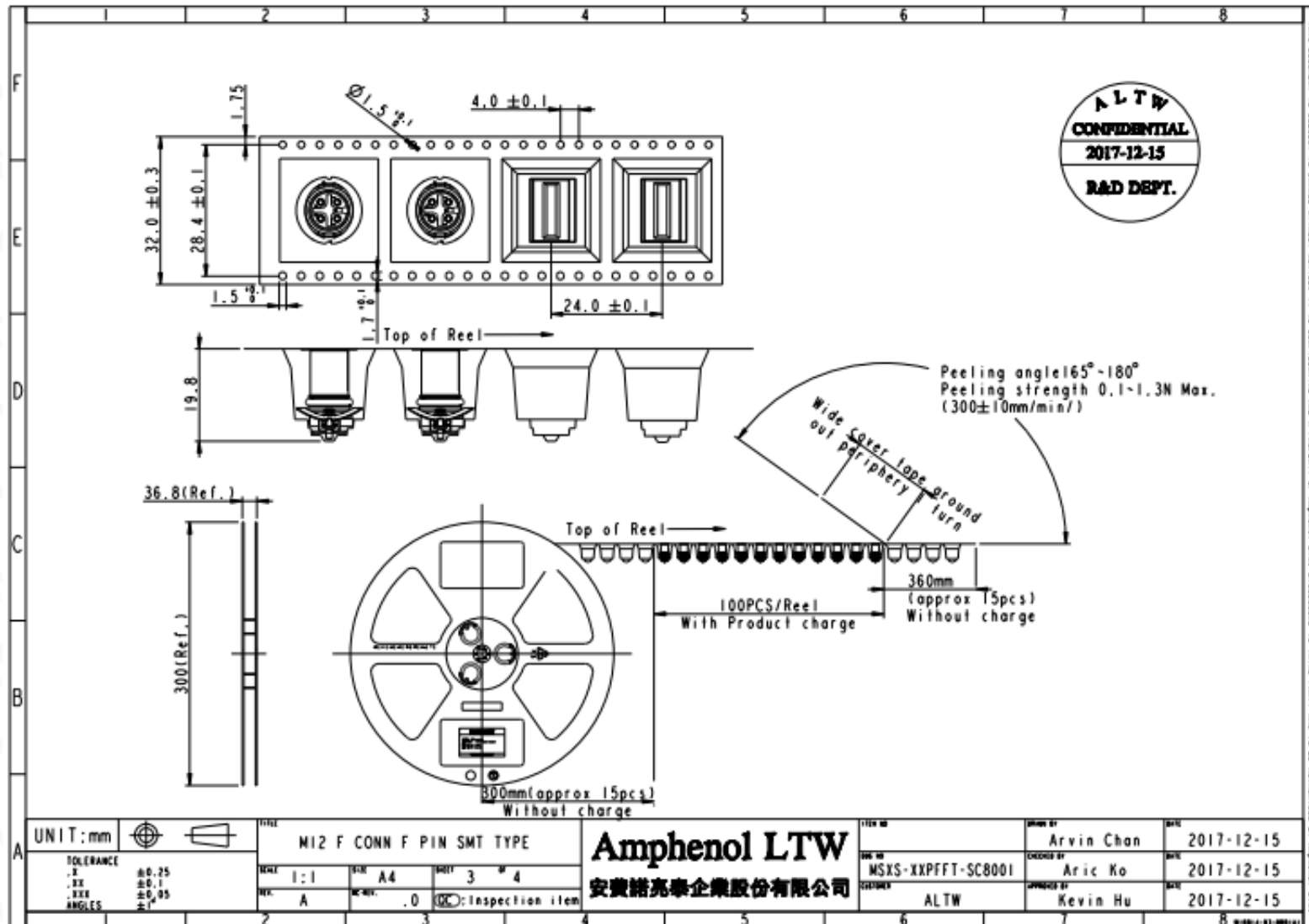
## M12 Male



## M12 Female



# M12 SMT | Packaging Information



# M8 SMT | Physical Dimension

REV.	ECN NO.	DATE	SIGN	DESCRIPTION
A	Initial Release	2017/12/19	Jason Yu	New Item

**Note:**

- ⌀ Important Dimension to Check
- Material Specification:
  - Housing: Thermoplastic
  - Female Pin: Copper Alloy, Gold Plated
  - Ground: Copper Alloy, Tin Plated
  - Spring: Stainless Steel
- Electrical Specification:
  - Contact Resistance: 10mΩ (Max.)
  - Insulation Resistance: 100MΩ (Min.)
  - Dielectric Withstanding Voltage: 1KV
  - Rated Voltage: 60V dc or ac
  - Rated Current: 3A
- Mechanical Specification:
  - Durability: 100 Cycles
- Environmental Specification:
  - Temperature Range: -55~+125°C
  - Salt Spray: 48 Hrs
  - SMT Temperature & Time: 260°C / 5 sec

**M8S - XX PFFT - SC8001**

- M8S: MB Shield
- 03: 3Pin
- 04: 4Pin
- P: Panel
- F: Female Connector
- F: Female Pin
- 001: Serial Number
- 8: IP68(Mated), IP65(Unmated) (IM depth of water in 24Hrs)
- C: Rear Fasten
- S: Screw Type (With Shield)
- T: SMT Type

UNIT: mm		TITLE: M8 F CONN F PIN SMT TYPE SHEET: 3:1    SERIAL: A4    SHEET: 1 of 4 REV: A    ECN NO: A.1 <input checked="" type="checkbox"/> Inspection Item	<b>Amphenol LTW</b> 安費諾亮泰企業股份有限公司
TOLERANCE .1    ±0.25 .XX    ±0.1 .XXX    ±0.05 ANGLES    ±1°		DRAWN BY: Jason Yu    DATE: 2017/12/19 CHECKED BY: Arvin Chan    DATE: 2017/12/19 APPROVED BY: Kevin Hu    DATE: 2017/12/19	DWG NO: M8S-XXPFFT-SC8001 CUSTOMER: ALTW

# M8 SMT | Physical Dimension

REV.	ECN NO.	DATE	SIGN	DESCRIPTION
A	Initial Release	2017/12/19	Jason Yu	New Item

**M8S - XXPMMT - SC8001**

<p>M8S: MB Shield</p> <p>03: 3Pin</p> <p>04: 4Pin</p> <p>P: Panel</p> <p>M: Male Connector</p> <p>M: Male Pin</p>	<p>001: Serial Number</p> <p>8: IP68(Mated), IP65(Unmated) (1M depth of water in 24Hrs)</p> <p>C: Rear Fasten</p> <p>S: Screw Type (With Shield)</p> <p>T: SMT Type</p>
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**Note:**

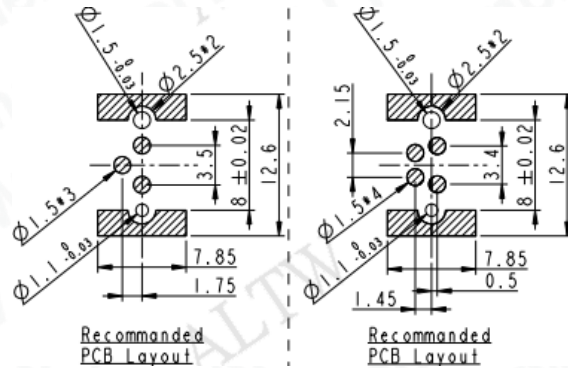
- Important Dimension to Check
- Material Specification:
  - Housing: Thermoplastic
  - Male Pin: Copper Alloy, Gold Plated
  - Ground: Copper Alloy, Tin Plated
  - Spring: Stainless Steel
- Electrical Specification:
  - Contact Resistance: 10mΩ(Max.)
  - Insulation Resistance: 100MΩ(Min.)
  - Dielectric Withstanding Voltage: 1KV
  - Rated Voltage: 60V dc or ac
  - Rated Current: 3A
- Mechanical Specification:
  - Durability: 100 Cycles
- Environmental Specification:
  - Temperature Range: -55~+125°C
  - Salt Spray: 48 Hrs
  - SMT Temperature & Time: 260°C / 5 sec

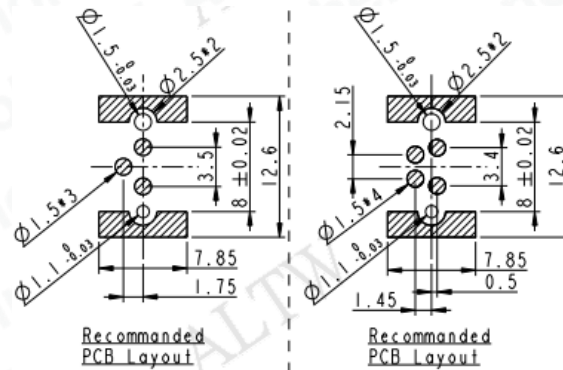
UNIT: mm			TITLE <b>M8 M CONN M PIN SMT TYPE</b>	<b>Amphenol LTW</b>	DRAWN BY Jason Yu	DATE 2017/12/19
TOLERANCE	±0.25	±0.1	SCALE 3:1	SIZE A4	CHECKED BY Arvin Chan	DATE 2017/12/19
XX	±0.1	±0.05	SHEET 1 OF 4	REV. A	APPROVED BY Kevin Hu	DATE 2017/12/19
XXX	±0.05	±0.02	INSPECTION ITEM <input checked="" type="checkbox"/>	安費諾亮泰企業股份有限公司		
ANGLES	±1°	±0.5°	ALTW			

# M8 SMT | Recommended PCB Layout

## M8 Male

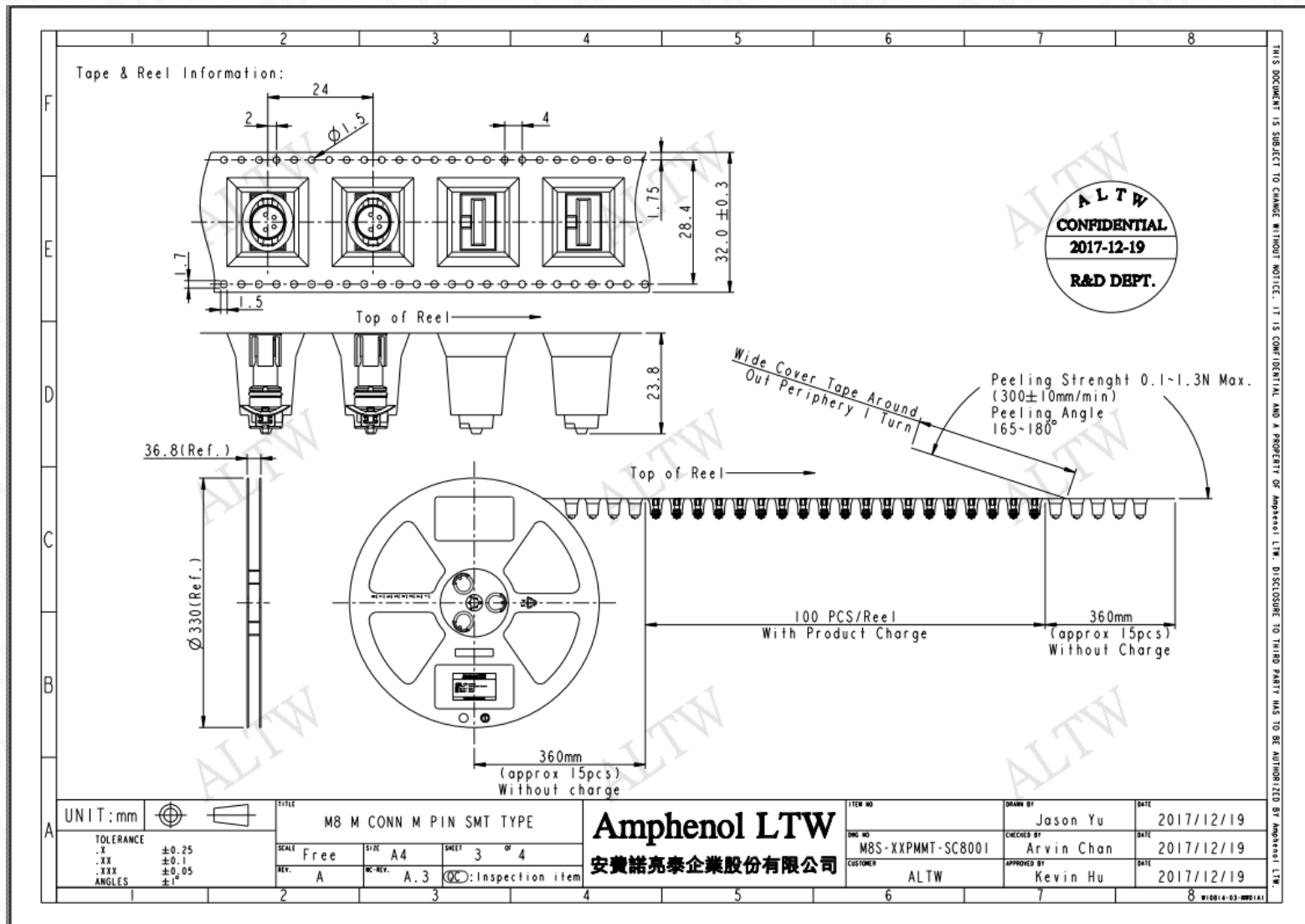


## M8 Female






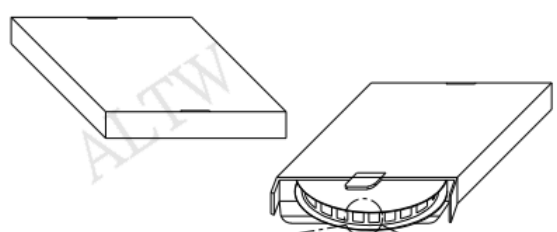
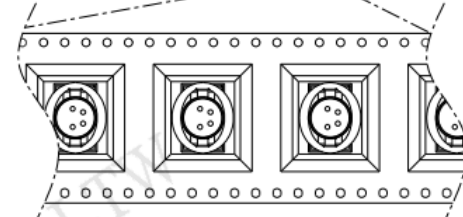
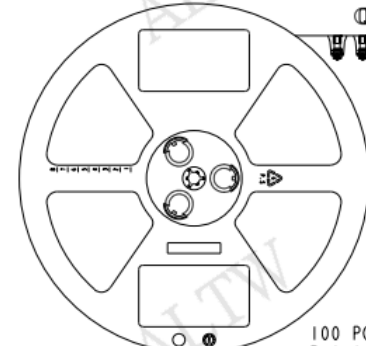
# M8 SMT | Packaging Information



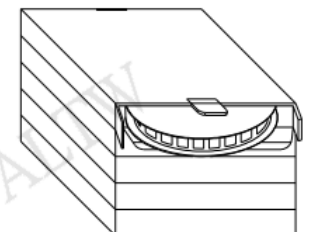
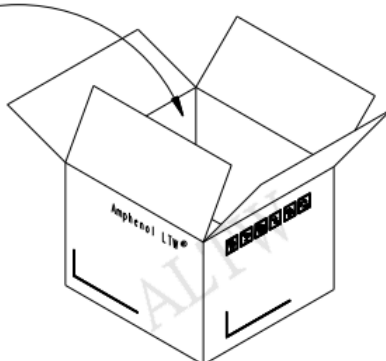
# M8 SMT | Packaging Information

Package:



100 PCS(Connector)/Tape&Reel,  
Put in a Box

One Carton can put in the 5PCS(Max.) Box  
(500 PCS/Carton)

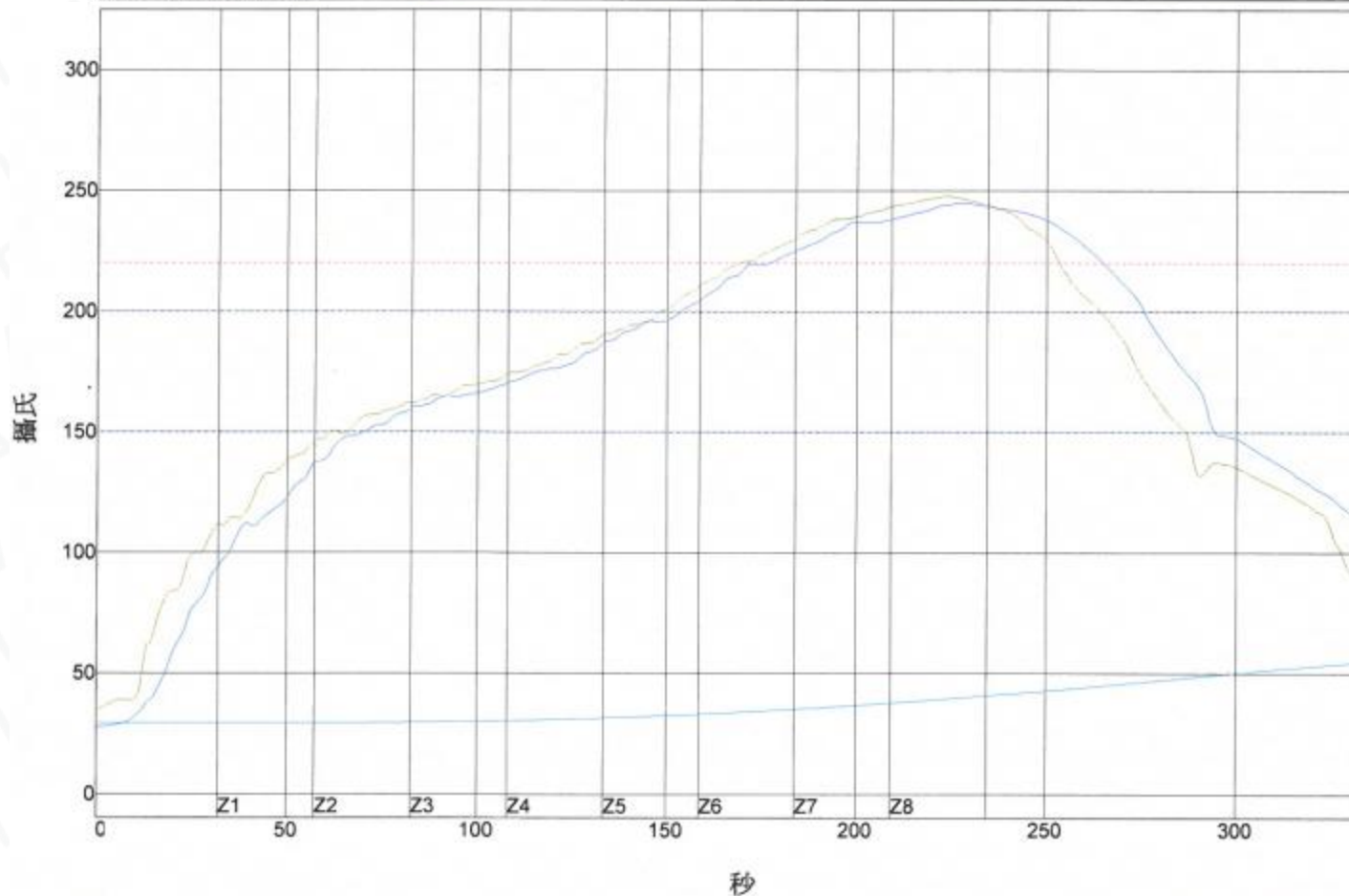
UNIT: mm		TITLE <b>M8 M CONN M PIN SMT TYPE</b>		<b>Amphenol LTW</b>		ITEM NO	DRAWN BY	DATE			
TOLERANCE	±0.25	SCALE	Free	SIZE	A4	SHEET	4	OF	4	DATE	2017/12/19
.XX	±0.1	REV.	A	EC.REV.	A.3	NO	M8S-XXPMT-SC8001	CHECKED BY	Arvin Chan	DATE	2017/12/19
.XXX	±0.05			◎: Inspection item		CUSTOMER	ALTW	APPROVED BY	Kevin Hu	DATE	2017/12/19
ANGLES	±1°									W10014-03-0001A1	

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# M8 M12 SMT | Reflow condition

溫度設置 (攝氏)								
溫區	1	2	3	4	5	6	7	8
上溫區	160	180	180	190	215	250	265	265
下溫區	160	180	180	190	215	250	265	265
傳送帶速度 (米/分):	0.90							



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**Thank You!**

