

# Amphenol®



## TS1 Series



## Company Profile



### Amphenol Industrial Operations

Amphenol Industrial Operations, headquartered in a 30,000 square foot facility in Endicott, N.Y., provides a full range of high reliability power/signal connectors and interconnection systems specifically for the industrial markets including rail/mass transit, process control, automotive manufacturing, heavy equipment, wireless base stations and petrochemical/power generation.

Products include ruggedized-for-industry cylindrical, rectangular, fiber optic, signal and power, RADSOK power and power-to-board solutions, cable and harness assemblies, as well as industrialized versions of Amphenol's SAE AS 50151 cylindrical, MIL-DTL-26482 miniature cylindrical and GT reverse bayonet cylindrical connectors. Amphenol Industrial Operations employs more than 1,400 people globally and is ISO9001, TS96949 and MIL-STD-790 certified.



### Amphenol Technology (Zhuhai) Co., Ltd

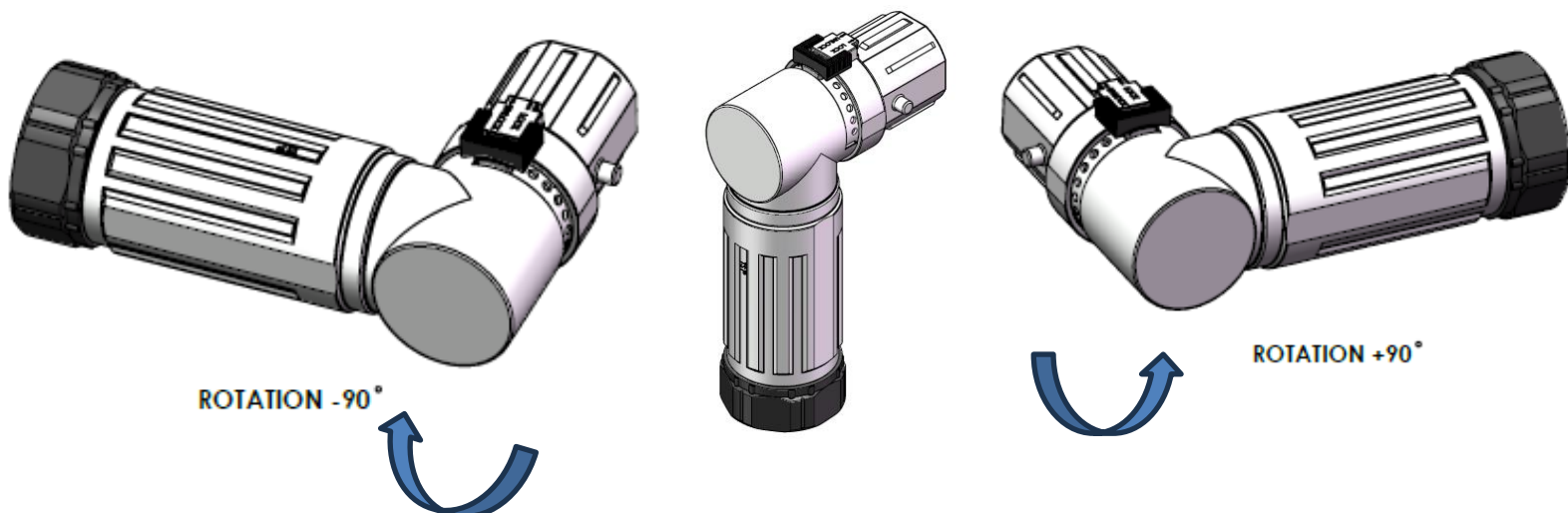
Established in 2007, Amphenol Technology (Zhuhai) Co., Ltd. is a manufacturing facility for Amphenol Industrial Operations, which serves a number of industrial markets. Included but not limited to Factory Automation, Transportation, Heavy Equipment, Alternative Energy, Energy Storage. Server/Data Comm and Power Distribution. Amphenol Technology (Zhuhai) Co., Ltd. covers an area of 276,000 ft<sup>2</sup> and is equipped with CNC, plating, injection molding and assembly workshops. This plant specializes in the design and manufacturing of industrial connectors featuring high power, high density, medium to high voltage electrical properties, and harsh environment applications. With industry leading engineering, design and manufacturing expertise, Amphenol Technology(Zhuhai) Co., Ltd. has earned more than 60 utility patents on its innovative interconnects. Many of the products produced have been certified by independent standards including UL, IEC/TUV, ATEX, IECEx and MA. The facility is also certified to ISO 9001, ISO 14001 and IATF 16949.

## TS1 Connector Design Overview

The increased demand for electrification expects a high performance power connector to fulfill harsh environment applications like E-heavy commercial vehicle and E-construction and E-boat and EVTOL etc Amphenol Industrial Operation TS1 series connector is proven to be reliable to satisfy these requirements .

### Key Features & Benefits:

- 2000V DC
- 600A&15min
- Rigid metal shell and adaptor 360° shielding provides excellent EMI protection
- IP6K9K&IP67&IP68
- Vibration 20G with rated current
- 180 degree rotation



## Product Description

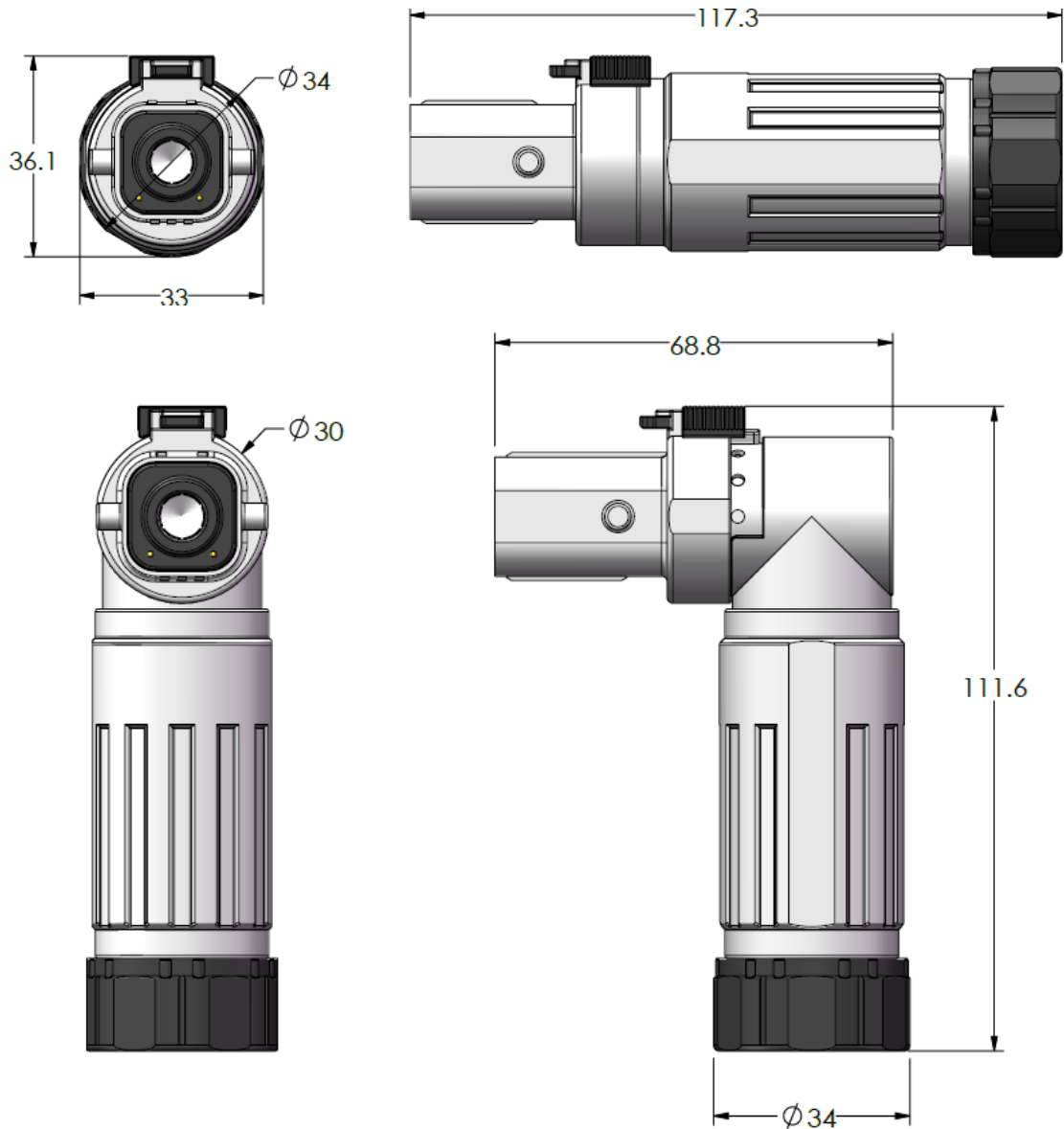
Product: TS1 Series 8.0/12.0

Market Segment: E-heavy Truck And E-construction and E-Boat and Low attitude economy

Application: OBC/PDU/Battery/Pump/Controller/DC-DC/Motor

Product Definition	
Contact pole	1
EMI	Yes( could be optional)
HVIL	Yes( could be optional)
Protection level	IP2XB
Standards/Regulation	J2030 USCAR2 UL4128
Compliance	ROHS REACH
Origin	China
HS CODE	8535900090
Mechanical	
Mating Cycles	500
Vibration	20G with rated current
Electrical	
Voltage Rating Of Power	2000V DC
Voltage Rating Of HVIL	25V DC
Insulation Resistance	≥500MΩ
Current Rating Of Power	USCAR2:200A/35mm <sup>2</sup> ; UL4128: 2 AWG150A
Current Rating Of Power	USCAR2:250A/50mm <sup>2</sup> ; UL4128: 1/0 AWG200A
Current Rating Of Power	USCAR2:300A/70mm <sup>2</sup> ; UL4128: 2/0 AWG250A
Current Rating Of Power	USCAR2:350A/95mm <sup>2</sup> ; UL4128: 4/0 AWG350A
Current Rating Of Power	USCAR2:450A/120mm <sup>2</sup> ; UL4128: 250KCMIL400A 600A&15Min
Current Rating Of Power	HVIL Contact: 5A(0.5-0.75 mm <sup>2</sup> 20-22AWG)
Environmental	
Salt Spray	500H
Water Proof mated condition	IP6K9K IP67 IP68
Temperature(Operation)	-40~+125°C
Cable OD 8.0	11-20mm
Cable OD 12.0	14-23.5mm
Material	
Shell	Zinc Diecasting
Contact	Copper
Sealing	Silicone
Insert	PA
Latch	Stainless steel 304

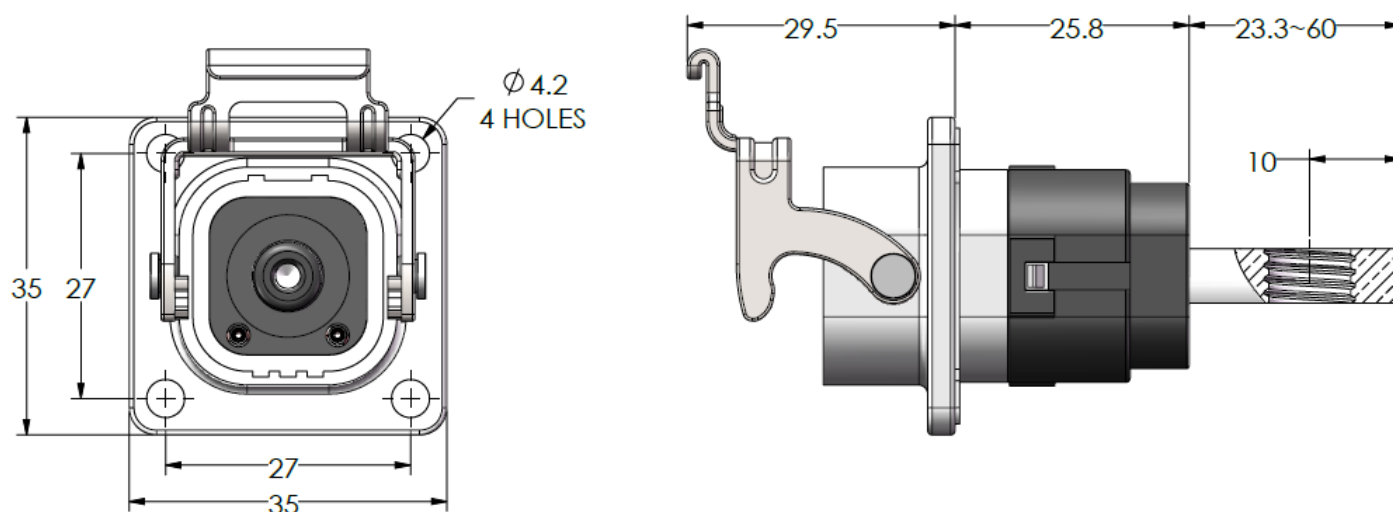
Cable Plug (In mm)



How to order

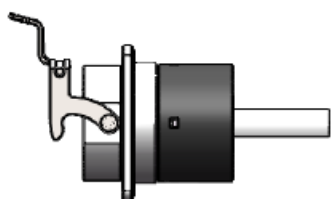
TS	06	80	12	N	C7	U	(XXX)
TS1 Product type	06: Straight Plug	8.0 series : size 8.0 contact	12: 1 Power Contact+2 HVIL contacts	Polarization: N/W/X/Y/Z	C7: Crimp 35mm <sup>2</sup> (2 AWG)	Omit: EMI U: no EMI	(001)-(999): Customer specific modification
	08: Right angle Plug		10: 1 Power contact, no HVIL contact		C8: Crimp 50mm <sup>2</sup> (1/0 AWG)		
					C9: Crimp 70mm <sup>2</sup> (2/0 AWG)		

## Receptacle (In Mm)

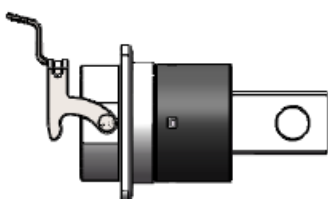


## How To Order

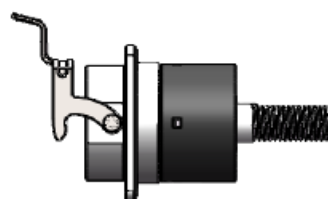
TS	02	80	12	N	LM	(XXX)
TS1 Product type	02: Receptacle	8.0 series: size8.0 contact	12: 1 Power Contact+2 HVIL contacts	Polarization: N/W/X/Y/Z	LM: Busbar Terminal with M10 thread hole M8: Busbar Terminal with M8 thread hole M6: Busbar Terminal with M6 thread hole	(001)-(999): Customer specific modification
			10: 1 Power contact, no HVIL contact		90LM: 90° Busbar Terminal with M10 thread hole 90M8: 90° Busbar Terminal with M8 thread hole 90M6: 90° Busbar Terminal with M6 thread hole	
					TLM: Thread Pin With M10 thread TM8: Thread Pin With M8 thread TM6: Thread Pin With M6 thread	
					PLM: M10 Nut PM8: M8 Nut PM6: M6 Nu	



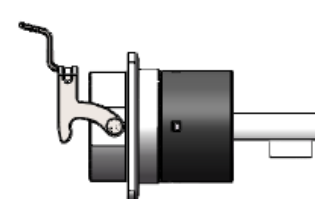
BUSBAR TERMINAL



90° BUSBAR TERMINAL



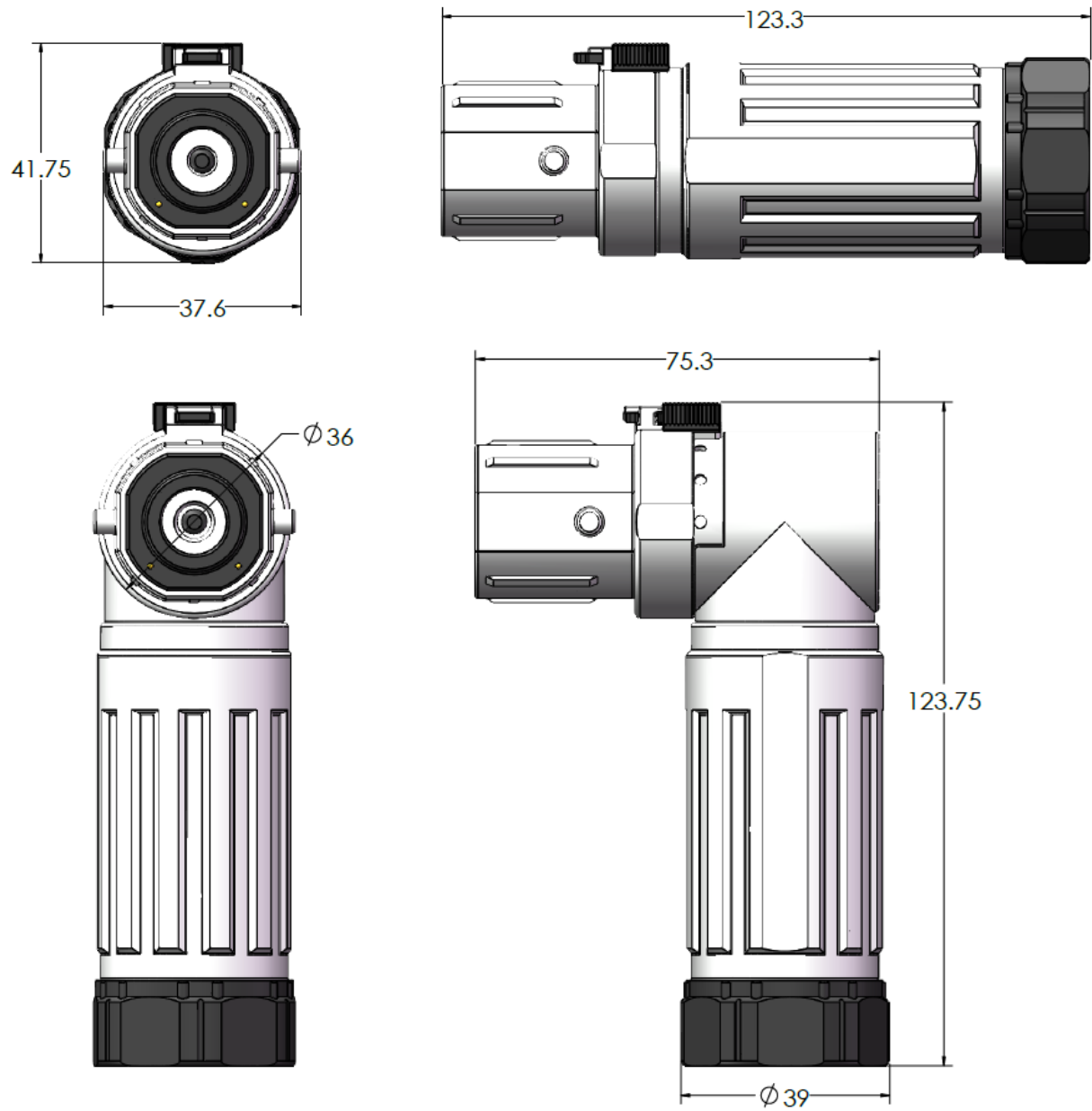
THREAD PIN TERMINAL



NUT TERMINAL



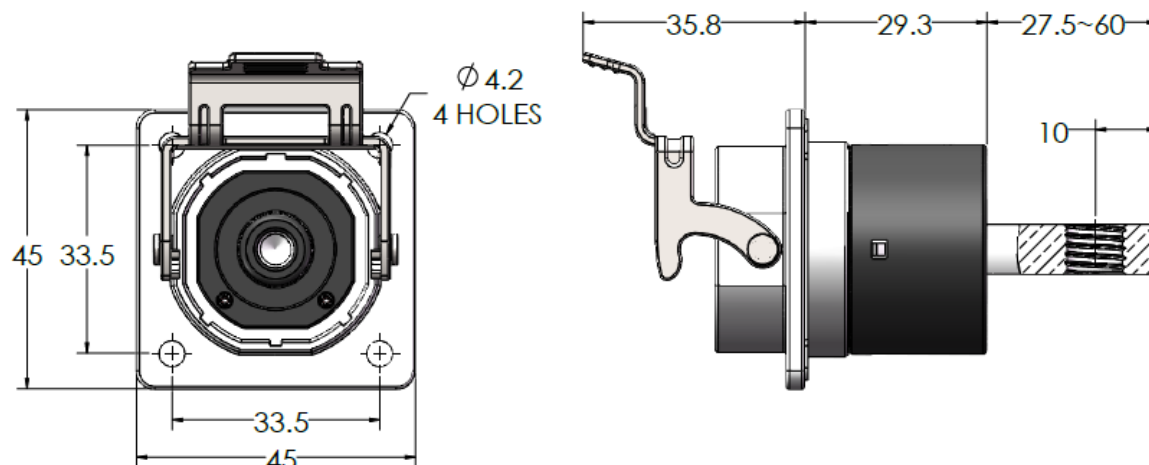
CABLE PLUG (in mm)



How to order

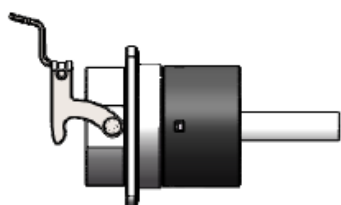
TS	06	12	12	N	C9	U	(XXX)
TS1 Product type	06: Straight Plug	12.0 series : size12.0 contact	12: 1 Power Contact+2 HVIL contacts	Polarization: N/W/X/Y/Z/T	C9: 70 mm^2 2/0 AWG Cable	Omit: EMI U: no EMI	(001)-(999): Customer specific modification
	08: Right angle Plug		10: 1 Power contact, no HVIL contact		C10: 95 mm^2 4/0 AWG Cable		
					C11: 120mm^2 250 KCMIL		

# Receptacle (in mm)

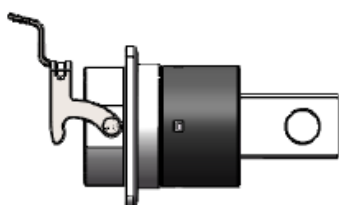


## How To Order

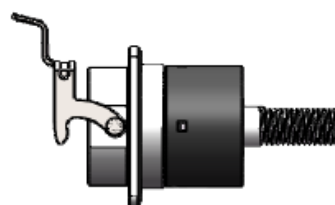
TS	02	12	12	N	LM	(XXX)
TS1 Product type	02: Receptacle	12.0 series: size 12.0 contact	12: 1 Power Contact+2 HVIL contacts	Polarization: N/W/X/Y/Z	LM: Busbar Terminal with M10 thread hole M8: Busbar Terminal with M8 thread hole	(001)-(999): Customer specific modification
			10: 1 Power contact, no HVIL contact		90LM: 90° Busbar Terminal with M10 thread hole 90M8: 90° Busbar Terminal with M8 thread hole	
					TLM: Thread Pin With M10 thread TM8: Thread Pin With M8 thread	
					PLM:M10 Nut PM8:M8 Nut	



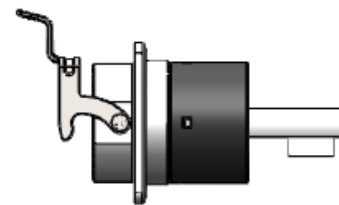
BUSBAR TERMINAL



90° BUSBAR TERMINAL



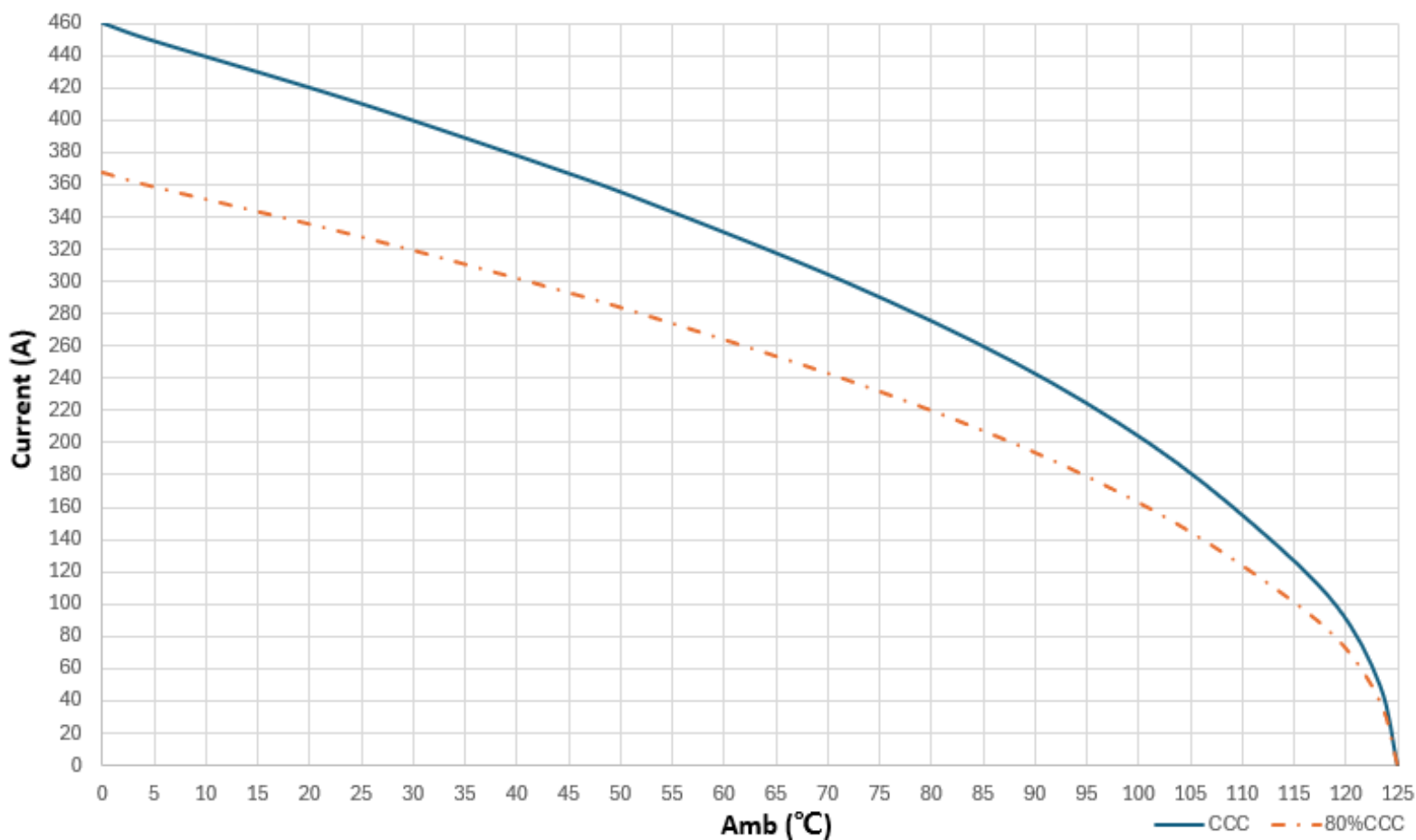
THREAD PIN TERMINAL



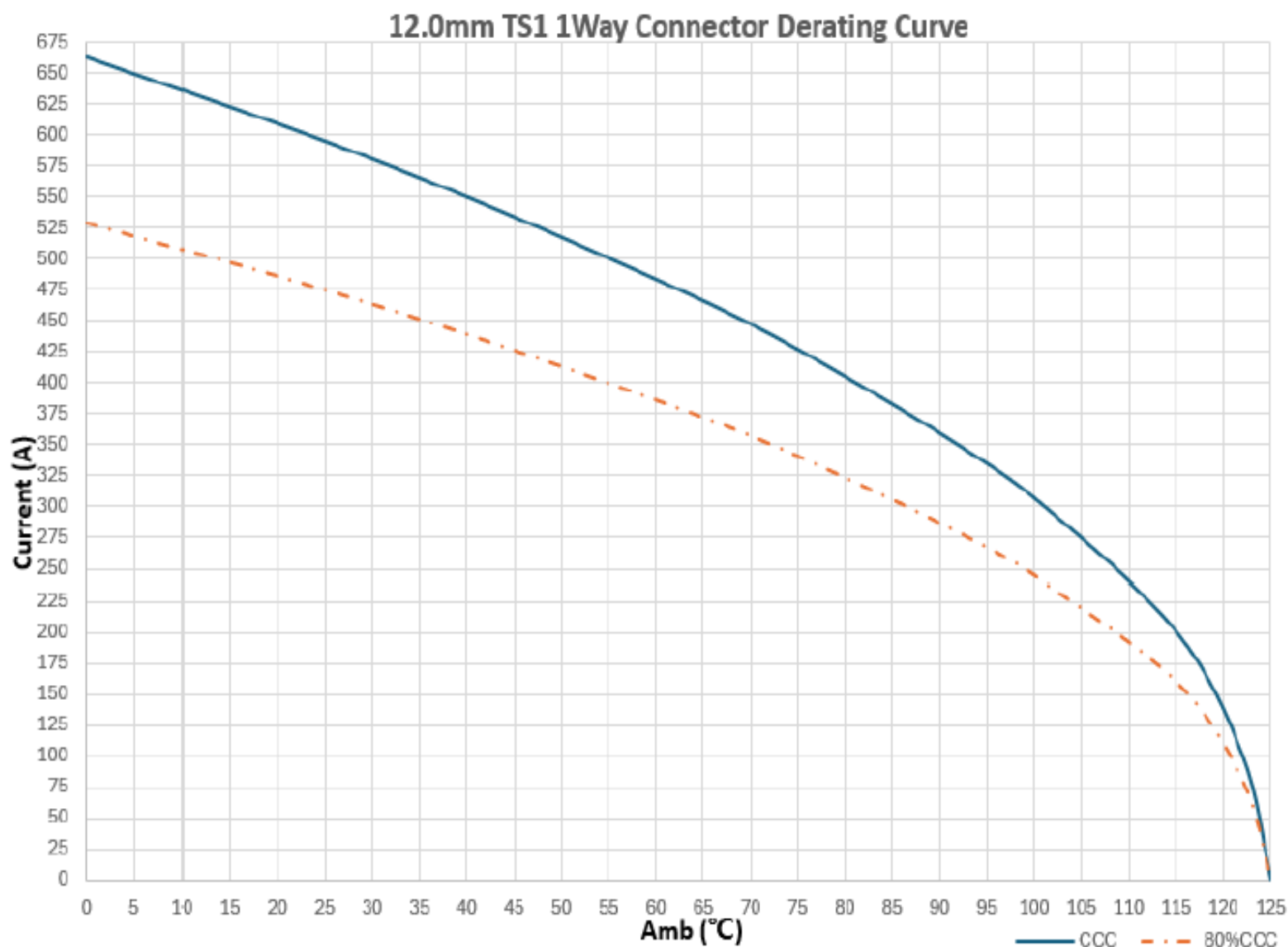
NUT TERMINAL



## TS1 8.0 Connector With 2/0 AWG Tinned Cable Derating Curve



## TS1 12.0 Connector With 250 KCMIL Tinned Cable Derating Curve





**AMPHENOL CORPORATION**

**Amphenol Industrial**

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