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Trident High-Speed (THS) Connectors

A heavy and off-road vehicle series
that delivers high-speed data, power,
and signal in a single connector



ITT

We Connect

When it matters most

For more than a century, ITT Cannon has developed innovative interconnect solutions for the world's harshest environments. With facilities in the United States, Germany, Italy, Mexico, China and Japan, each with its unique strengths, we offer our customers interconnect solutions that are truly Engineered for Life.

In addition to this truly global footprint, we offer highly specialized, segmented industry expertise. We have a proven track record as an industry leader in harsh-environment applications. This has equipped us with the knowledge needed to continue to produce the most resilient, reliable connectors for our customers' most challenging conditions.

Interconnect solutions for the harshest environments.

The ITT Cannon difference

- Global capabilities & local support
- Proven application expertise
- A century of interconnect leadership
- A committed innovator & business partner

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About ITT

ITT is a diversified leading manufacturer of highly engineered critical components and customized technology solutions for the energy, transportation and industrial markets. Building on its heritage of innovation, ITT partners with its customers to deliver enduring solutions to the key industries that underpin our modern way of life. Founded in 1920, ITT is headquartered in Stamford, Connecticut, with employees in more than 35 countries and sales in a total of approximately 125 countries. For more information, visit www.itt.com.



Trident High-Speed (THS) Connectors

A hybrid customizable solution delivering high-speed data, power, and signal in a single connector.

Trident High-Speed connector solutions provide high-speed data up to 56 Gbps across the fully proven Trident series of industrial connectors. These harsh environment connectors, which are available in circular and rectangular variants, deliver the connectivity demanded by today's data-intensive applications, such as camera systems and sensors in autonomous commercial vehicles. Single Pair Ethernet (SPE) and coax combined with Trident signal and power contacts enables a true hybrid solution tailored to your specific requirements. Fast, highly engineered, and ultra-robust, you can rely on Trident High-Speed solutions when it matters most.

Key Features

- Data, power and signal in the same connector
- High-speed data up to 56 Gbps
- Flexible hybrid solutions
- Circular and rectangular variants
- Fully customizable
- Utilizes market leading Trident contacts
- Proven harsh environment capability
- Up to IP69k sealing
- Extensive range of accessories available



Up to
56 Gbps

Trident High-Speed Technical Overview

	THS Circular	THS Rectangular
Operating Voltage	48 Vac, 60 Vdc	
Insulation Resistance	5000 MΩ min. at 500 Vdc	
Operating Temperature	-55°C to +105°C (-67°F to +221°F)	
Durability	Up to 25 mating cycles	
Environmental Sealing (mated)	Up to IP67	Up to IP69k
Flammability	UL 94 V-0	
Coupling Method	Bayonet	Snap Lock
Connector Body Material	Thermoplastic	
Salt Spray	48 hrs	
Vibration Resistance max.	10g peak, 10-500Hz, 9 hrs, no loss of continuity > 10 μsec	
Mounting Options	Panel Mounting - Jam Nut or Flange	Cable-to-cable. Mounting clips available
Gender	Standard (plug for pin, receptacle for socket)	Reversed (plug for socket, receptacle for pin)
Environmental Compliance	RoHS and REACH	RoHS and REACH

Contact Performance Overview

Standard Contacts	Power	Light Power	Signal
Contact Size	Size 8	Size 12	Size 16
Current Rating	Up to 40 A	Up to 30 A	Up to 16 A
Wire Size	AWG 8 to 14	AWG 12 to 20 0.5 - 4 mm ²	AWG 14 to 26 0.14 - 2.5 mm ²

SPE Contacts	
Impedance	100 Ω
Frequency Range	DC up to 20 GHz
High Data	Up to 56 Gbps

Coaxial Contacts	
Coaxial Current Rating	5 A
Coaxial Dielectric Withstanding Voltage	1000 Vac at Sea Level
Coaxial Impedance	50 Ohm
Coaxial VSWR	Less than 1.40 + .03F for F up to 1GHz
Coaxial Insertion Loss	.2 dB loss at 1 GHz

Applications



Trident High-Speed Circular Size 24

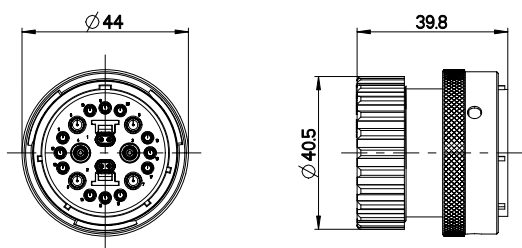


Receptacle (socket)	Plug (pin)
THSC7S24-124022S	THSC6S24-124022P

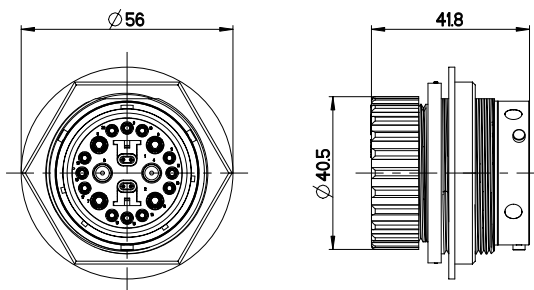
Circular panel mount connector with:

- 2 SPE contacts
- 12 signal contacts
- 4 light power contacts
- 2 coax contacts (or 2 power contacts)

IP67 sealing. Jam nut or flange mount. Accessories available.



Plug



Receptacle

Trident High-Speed Circular Size 24

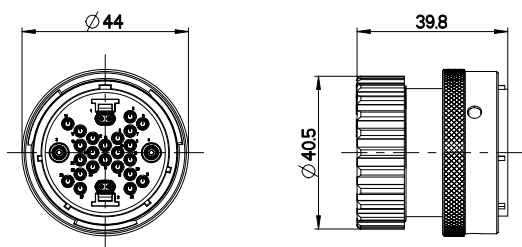


Receptacle (socket)	Plug (pin)
THSC7S24-230202S	THSC6S24-230202P

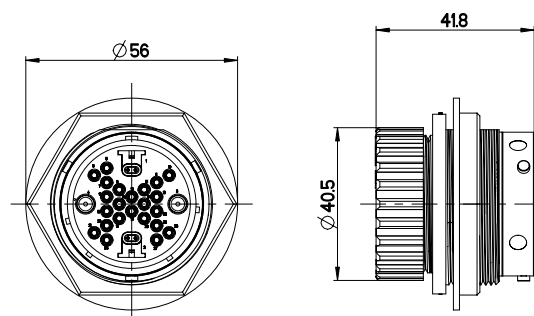
Circular panel mount connector with:

- 2 SPE contacts
- 23 signal contacts
- 2 power contacts (or 2 coax contacts)

IP67 sealing. Jam nut or flange mount. Accessories available.



Plug



Receptacle

Trident High-Speed Circular Size 16

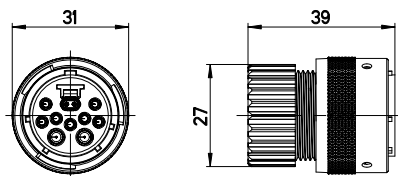


Receptacle (socket)	Plug (pin)
THSC7S16-072001S	THSC6S16-072001P

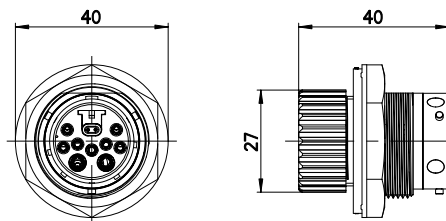
Circular panel mount connector with:

- 1 SPE contact
- 7 signal contacts
- 2 light power contacts

IP67 sealing. Jam nut or flange mount. Accessories available.



Plug



Receptacle

Trident High-Speed Rectangular Size 3

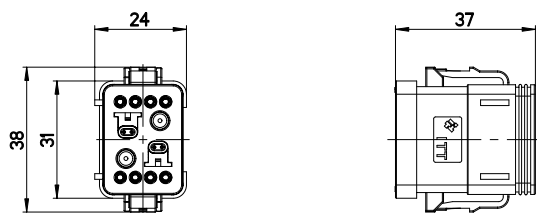


Receptacle (pin)	Plug (socket)
THSR1S3-080022P	THSR6S3-080022S

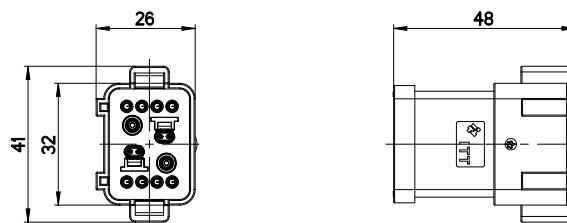
Cable-to-cable connector with:

- 2 SPE contacts
- 8 signal contacts
- 2 coax contacts (or 2 power contacts)

IP69k sealing. Snap lock mechanism. Mounting clips available.

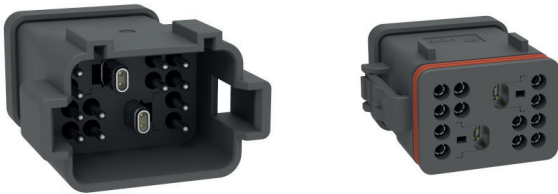


Plug



Receptacle

Trident High-Speed Rectangular Size 3

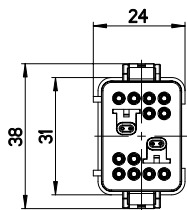


Receptacle (pin)	Plug (socket)
THSR1S3-120002P	THSR6S3-120002S

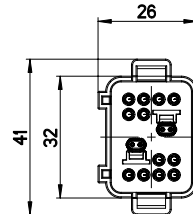
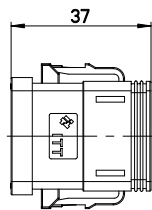
Cable-to-cable connector with:

- 2 SPE contacts
- 12 signal contacts

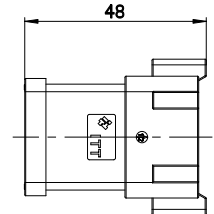
IP69k sealing. Snap lock mechanism. Mounting clips available.



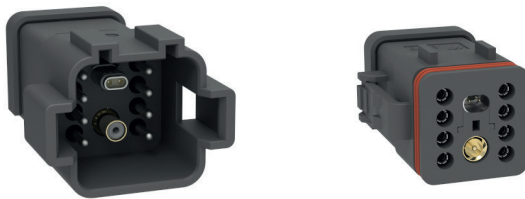
Plug



Receptacle



Trident High-Speed Rectangular Size 2

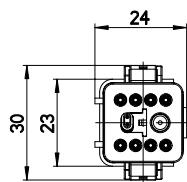


Receptacle (pin)	Plug (socket)
THSR1S2-080011P	THSR6S2-080011S

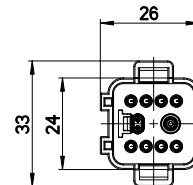
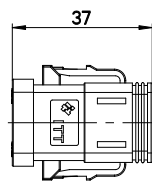
Cable-to-cable connector with:

- 1 SPE contact
- 8 signal contacts
- 1 coax contact (or 1 power contact)

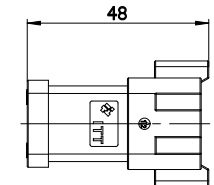
IP69k sealing. Snap lock mechanism. Mounting clips available.



Plug



Receptacle



Connect with your ITT Cannon representative today
or visit us at ittcannon.com

Connect with the experts


ITT's Cannon brand is a world leader in the design and manufacture of highly engineered connector solutions for multiple end markets.



Why ITT

ITT is a focused multi-industrial company that designs and manufactures highly engineered critical components and customized technology solutions. ITT's Cannon brand is a leading global manufacturer of connector products serving international customers in aerospace, defense, medical, industrial and transportation end markets. ITT's Connector business, which also includes the Veam and BIW Connector Systems brand, manufactures and supplies a variety of connectors and interconnects that make it possible to transfer data, signal and power in an increasingly connected world.

Connect with your ITT Cannon representative today or visit us at ittcannon.com

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