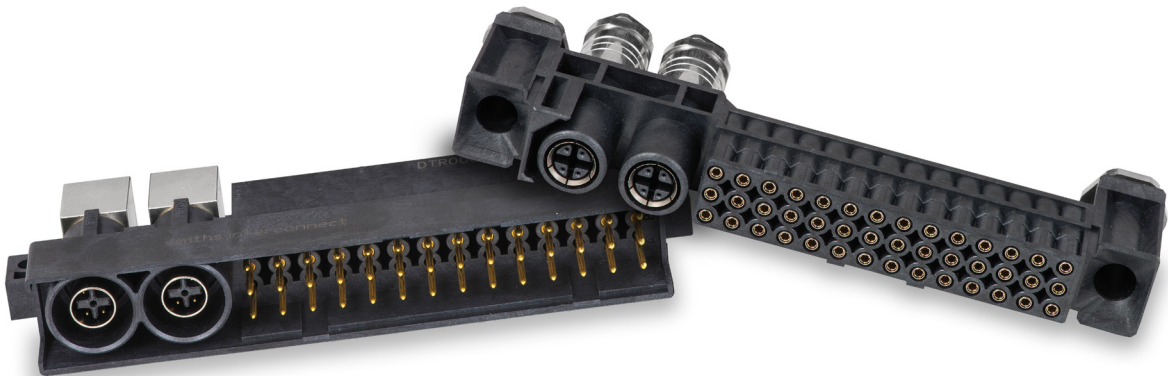


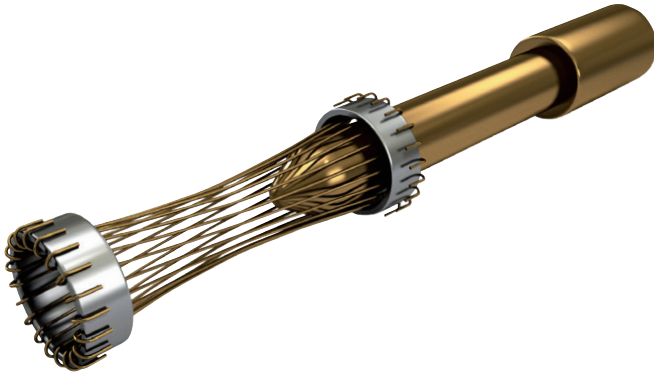
INTERCOMPACT Series

Compact Signal & Ethernet PCB connectors



Available Contact Technologies *(Features & Benefits)*

Hypertac® Hyperboloid contact



■ Long Contact Life

Industry-leading mating cycles (over 100,000) provide low cost of ownership

■ Low Insertion / Extraction Forces

Ergonomic mating without mate assist hardware for cost and space saving

■ Lower Contact Resistance

Low power consumption / lower voltage drop across connector

■ Higher Current Ratings

Smaller contacts needed to carry power reduce size and weight

■ Immunity to Shock & Vibration

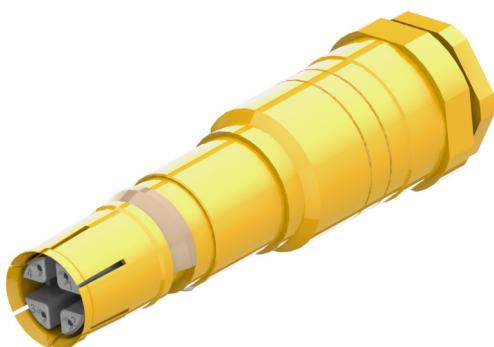
Reliability under harsh environmental conditions

■ 360° Contact Wipe

Self-cleaning contacts assure uninterrupted connection

■ Restricted materials

Quadrax contact



■ Contact layout

Consist of an outer shield with four inner paired conductors forming two 100 Ohm, controlled impedance differential pairs

■ High speed

Designed for transmission of Ethernet high speed signal up to 100 MHz in harsh environments where integrity and reliability are essential

■ Ethernet standard

Ethernet 10-Base-T / 100-Base-Tx - Category 5E

■ Cable features

Cable cross section 4 x 0,25 mm² (AWG24), performance of 100 Ohm between 1 to 100MHz.

■ Restricted materials

RoHS compliant with Exemption 6c

INTERCOMPACT Series



The Intercompact Series is Smiths Interconnect's answer to the rail and industrial market growing demand for compact, high-speed, and reliable connectivity for ECU boxes, in the respect of severe material and electric current requirements.

The new generation of Electronic Control Unit boxes requires a sophisticated interconnect solution able to support steadily all I/O signals that the advanced devices handle.

The Intercompact Series is an innovative solution for PCB to PCB and floating routing rack and panel applications currently offered in both signal and Ethernet versions. Designed to meet the requirements of the rail and industrial environments, it is also suitable for other demanding markets such as defence, space and test & measurement.

Optimized and qualified for the next generation of Electronic Control

Features & Benefits

- 60 and 41 way signal configurations with Hypertac® Hyperboloid contacts.
- 42 ways signal and 1 or 2 high speed quadax 100 Ohm contacts as Ethernet versions. Additional contact positions can be offered depending on the specific application requirements.
- Compliance with the main European Railway standards (EN45545-2, NF F61030, EN50155:2017, STM-S-001ind.D and more).
- Compliance with MIL-C-28748 and MIL-STD-202-301 standards and EIA and IEC standards for Contact Resistance and Environmental testing.
- Insulators in Liquid Cristal Polymer material for an optimized insulation resistance in severe environmental

Technical Characteristics

	Signal configurations	Ethernet configurations	Standards
Contact Arrangements	Up to 60	Up to 42 hyperboloid contacts Up to 2 quadrax contacts	
Contact Diameter	Ø 1.02 mm (0,402 in)	Ø 0.35 mm (0,014 in) for quadrax internal female contact	
Contact Technology	Hypertac® Hyperboloid sockets	Quadrax contacts	

Materials & Platings

Contacts	Gold over nickel plating	
Insulator	Liquid Cristal Polymer (LCP)	

Mechanical & Environmental

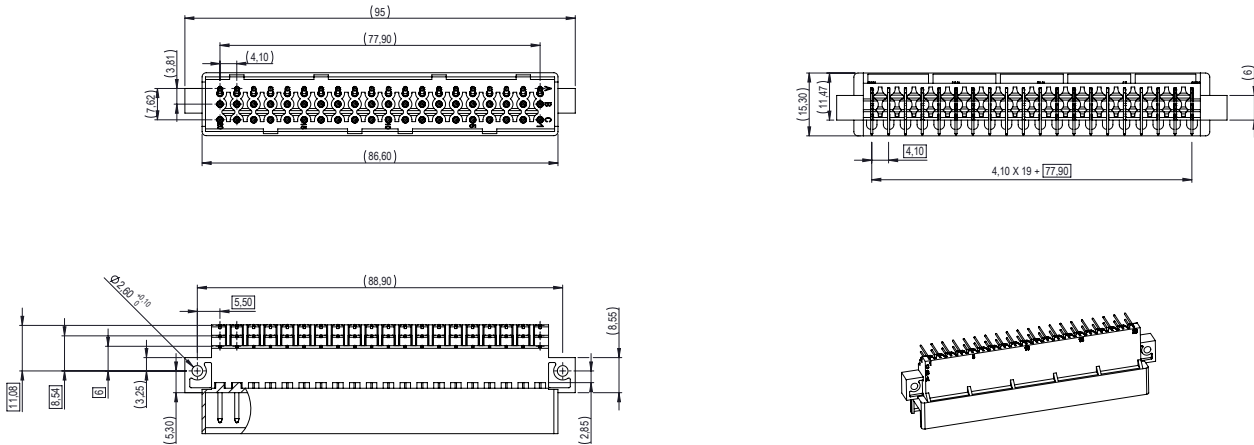
Mating Cycles	> 500 cycles	NFF61-030
Temperature Range	- 55°C to 125°C	-
Vibration	Category 1 Class B + Category 2	EN 61373
Flammability	HL3 - R22	EN 45545-2
Salt Spray	> 96 hours	NFF61-030
Fluid Resistance	Gas Oil, Mineral oil, Hydrochloric Acid and Base	NFF61-030

Electrical

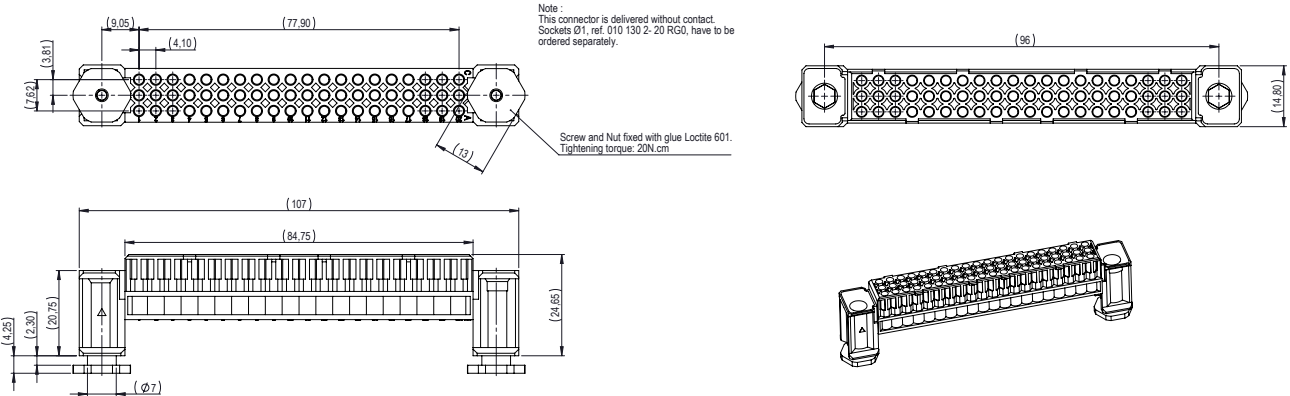
Current Rating	3 A per contact	0.75 A per contact	-
Nominal Voltage	110 V DC	72 V DC	EN 50124-1, OV2 PD2
Dielectric Withstanding Voltage	1500 V DC	800 V DC	EN 50124-1, OV PD2
Contact Resistance	< 4,5 mΩ	< 200 mΩ	
Insulation Resistance	>100 GΩ	>100 GΩ	

Signal configuration

60 Signal Way Plug

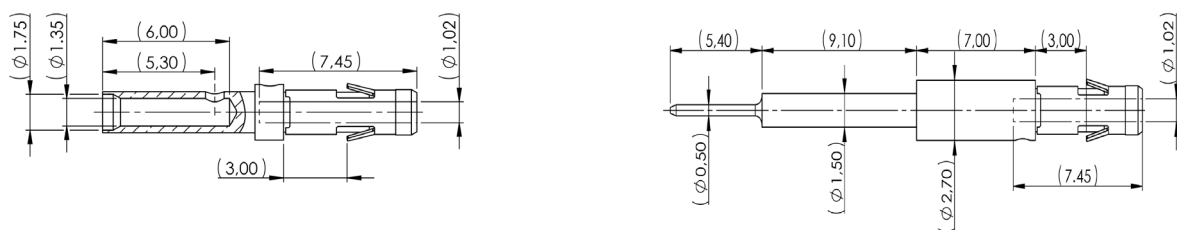


60 Signal Way Receptacle



Hyperboloid socket contacts

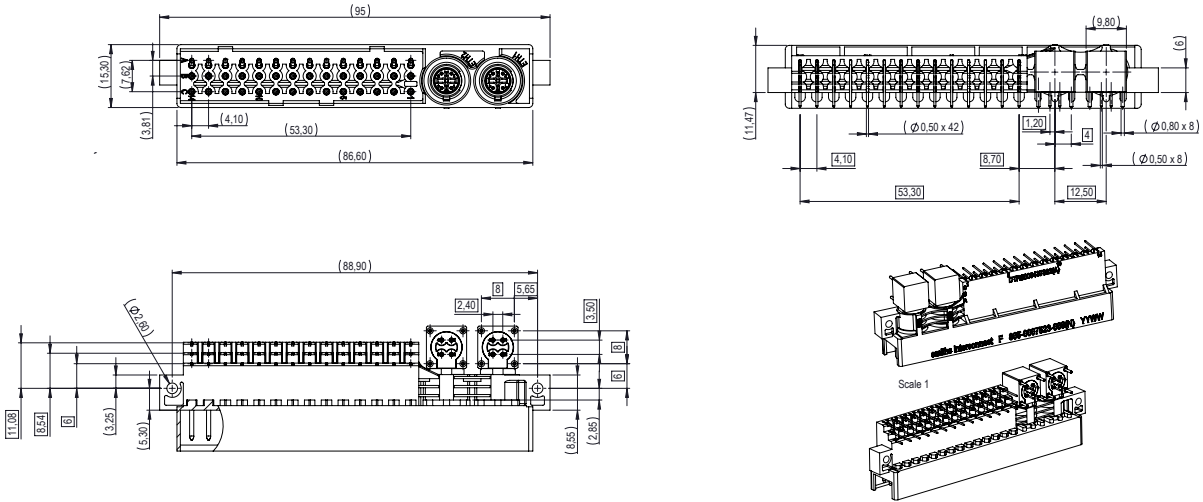
Ref: 0101302-20RG0 and 0101322-30RG0



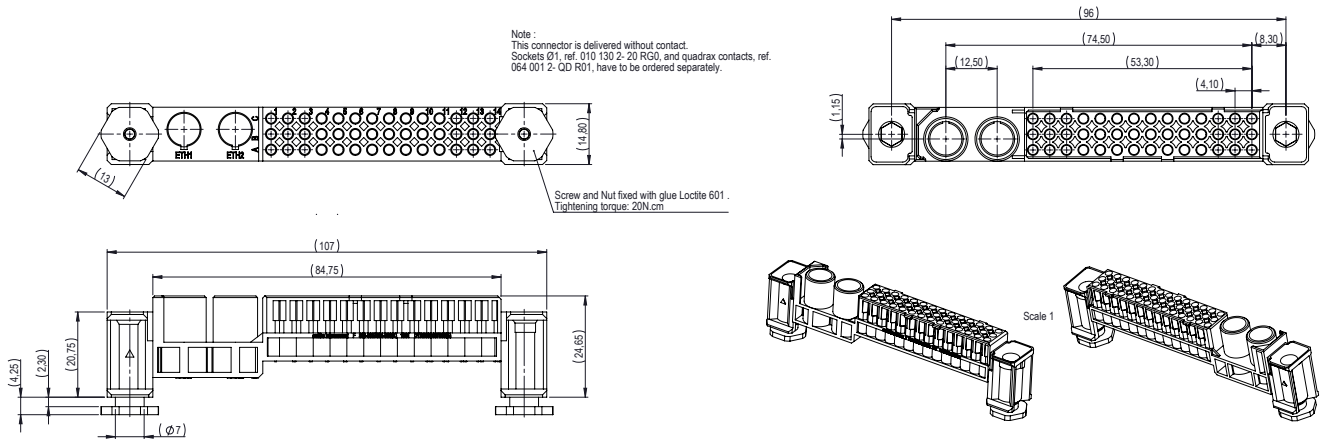
Dimensions are in mm

Signal & Ethernet configuration

42 Signal & 2 Quadrx Way Plug

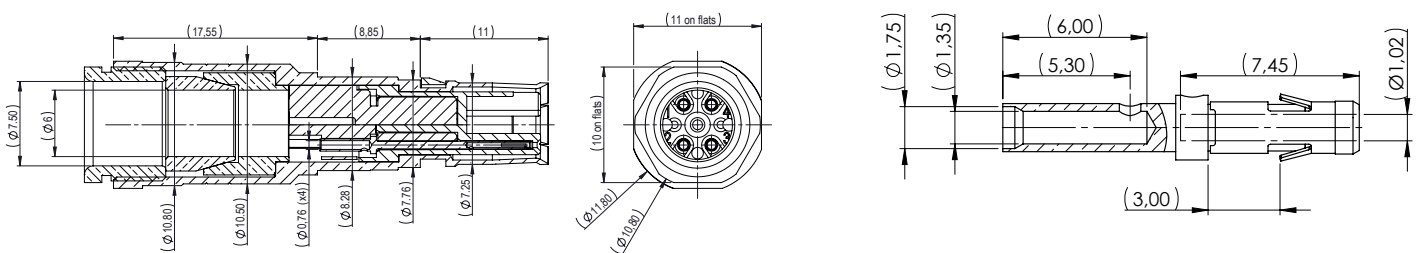


42 Signal & 2 Quadrx Way Receptacle



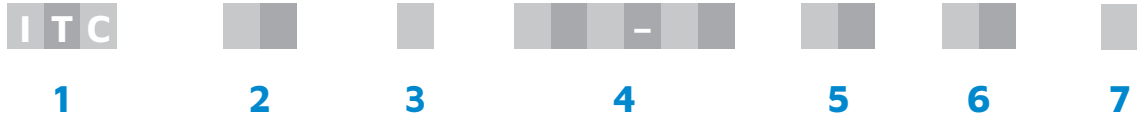
Quadrx and Hyperboloid socket contacts

Ref: 0640022-QDR01 and 0101302-20RG0



Dimensions are in mm

How to Order



1 Series	ITC Series (fixed)
2 Contact type*	S - Only signal contacts S E Signal and Quadrax contacts
3 Connector type	P Plug R Receptacle
4 Contact positions*	0 6 0 - 0 0 60 signal ways for Plug only** 0 6 0 - 0 0 60 empty signal ways for Receptacle only*** 0 4 2 - 0 0 42 signal ways and 2 empty quadrax ways for Plug only** 0 4 2 - 0 0 42 empty signal ways and 2 empty quadrax ways for Receptacle only*** 0 4 2 - 1 1 42 signal ways and 2 quadrax contacts (cavity n°1 + 2) for Plug only** 0 4 2 - 1 0 42 signal ways and 1 quadrax contact (cavity n° 2) for Plug only** 0 4 2 - 0 1 42 signal ways and 1 quadrax contact (cavity n°1) for Plug only**
5 Termination style	0 0 Without contacts (Receptacle only) 1 0 90° PCB tail solder for sockets and pins (Plug only) 2 0 Crimp contact for sockets (Receptacle only) 3 0 Straight termination for sockets (Receptacle only)
6 Fixing system	0 0 Without fixing (Plug only) 0 1 Floating fixing (Receptacle only) 0 2 Threaded (Receptacle only)
7 Version	S Standard R Rail Serial Test according to NFF61-030

*For different contact configurations please contact the factory.

** Plugs are sold equipped with contacts.

*** The receptacles are delivered without contacts. To order the contacts separately for the other parts please refer to page 5 and 6.

Crimping tool: DMC FT8, Turret TP1848

Worldwide Support

Connectors

Americas

Sales

connectors.uscsr@smithsinterconnect.com

Technical Support

connectors.ustechsupport@smithsinterconnect.com

Europe

Sales

connectors.emeacsr@smithsinterconnect.com

Technical Support

connectors.emeatechsupport@smithsinterconnect.com

Asia

Sales

asiacsr@smithsinterconnect.com

Technical Support

asiatechsupport@smithsinterconnect.com

Fibre Optics & RF Components

Americas

Sales

focom.uscsr@smithsinterconnect.com

Technical Support

focom.techsupport@smithsinterconnect.com

Europe

Sales

focom.emeacsr@smithsinterconnect.com

Technical Support

focom.techsupport@smithsinterconnect.com

Asia

Sales

focom.asiacsr@smithsinterconnect.com

Technical Support

focom.techsupport@smithsinterconnect.com

Semiconductor Test

Americas

Sales

semi.uscsr@smithsinterconnect.com

Technical Support

semi.techsupport@smithsinterconnect.com

Europe

Sales

semi.emeacsr@smithsinterconnect.com

Technical Support

semi.techsupport@smithsinterconnect.com

Asia

Sales

semi.asiacsr@smithsinterconnect.com

Technical Support

semi.techsupport@smithsinterconnect.com

RF/MW Subsystems

Americas, Europe & Asia

Sales

subsystems.csr@smithsinterconnect.com

Technical Support

subsystems.techsupport@smithsinterconnect.com

Connecting Global Markets

more > [smithsinterconnect.com](https://www.smithsinterconnect.com) | [in](#) [twitter](#) [youtube](#)

Copyright© 2022 Smiths Interconnect | All rights reserved | Version 1.2

All of the information included in this catalogue is believed to be accurate at the time of printing.

The information contained within this document is subject at all times to applicable Export Control regulations and legal requirements.