



A connectivity solution offering high integration of data, signal and power transmission in a circular hybrid design according to the VARAN standard

TE Connectivity (TE) introduces the Circular Hybrid Connector (CHC) with 8 power and 4 data contacts for Industrial Ethernet Connections. The Circular Hybrid Connector has been designed for machine automation applications that require a higher performance data connection and power of up to 10 Amps. The connector provides highly reliable connection technology and meets the demanding durability and quality requirements of real-time Ethernet applications in industrial automation. Combining power supply and data into one single connector provides customers with greater flexibility in machine architecture. With VARAN-bus standard compatibility, the connector supports, for example, fast change over times of molds in molding machines. Simplified cabling reduces installation time by up to 50%.

Features and Benefits

- Helps to save time and cost in one hybrid connector design, combining power and data communication
- Helps achieve more connections in less space with 8 power contacts and fast Ethernet interface in one housing
- Offers optional housing with 11+ PE (Protected Earth) contacts in retrofit option platform design
- Enables design flexibility with a broad portfolio of wire-to-board and wire-to-panel options
- Designed for harsh environments with radial sealing elements that provide IP65 sealing performance
- Benefit from fast data transfer with VARAN bus compatibility

Applications

- Molding Machines, Transport and Sorting machines
- High-performance process control systems applications
- Machine automation applications
- Factory automation systems
- Control valves and control units
- Stand-alone or remote power units

Standards & Specifications

- Meets the VARAN standard (Versatile Automation Random Access Network), an Industrial Ethernet based protocol used in factory automation
- Cat5e fast Ethernet (ISO/IEC11801)
- DIN EN 61984
- Robust metal enclosure fits for tough industrial environments
- Supports industry standards and fast processes

Performance Data

Mechanical:

- Shock: 25 g (DIN EN 50155)
- EMC: min -60 dB to 1 GHz
- Isolation level: 1.5 kV AC
- Durability: 50 mating/un-mating cycles
- IP65 (according to IEC 60529)
- 180° metal

Electrical:

- 60 V (pollution degree 3, according to EN 61984)
- 10 A @ 40°C
- -20°C up to +80°C
- Cat5e (ISO/IEC 11801 Edition 2.0 Connector Category 5)

Product Specification

- 108-94485

Application Specification

- 114-94369

CHC Overview Matrix



CHC Parts

Part Description	Part Number	Item
MALE INSERT, CRIMP, 4-POS., 22DF CONTACTS	1103426-1	
FEMALE INSERT, CRIMP, 4-POS., 22DF CONTACTS	1103427-2	
MALE INSERT ASSEMBLY CRIMP, 8-POS., TYPE III+	1103428-1	
FEMALE INSERT, CRIMP, 8-POS., TYPE III+	1245611-1	
MALE INSERT ASSEMBLY, CRIMP, 12-POS., TYPE III+	1103431-1	
FEMALE INSERT, CRIMP, 12-POS., TYPE III+	1245615-1	
BULKHEAD HOUSING ASS'Y	1103436-1	
CAT5e HYBRID CABLE SERIES	1103536-3	
BULKHEAD HOUSING WITH SOLDER UNIT SERIES	1108846-1	

Circular Hybrid Connector Overview

Part Description	Part Number	Item
LOOSE PIECE PIN TYPE III+ CONTACT SIZE 16	163086-2	
LOOSE PIECE SOCKET TYPE III+ CONTACT SIZE 16	163088-2	
PIN CONTACT, 22-28 AWG, 22 DF, AMPLIMITE	1658670-2	
SOCKET CONTACT, 22-28 AWG, 22 DF, AMPLIMITE	1658686-2	
PIN ASSEMBLY, LOOSE PIECE, TYPE III+	66361-4	
SOCKET ASSEMBLY, LOOSE PIECE, TYPE III+	66360-4	
CLAMPING RING	2287895-1	
CHC-HOUSING	2290258-1	
CHC-CABLE SEAL	2290260-1	
ADJUSTER CHC	2287892-1	
SHIELDING ELEMENT	2290270-1	

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