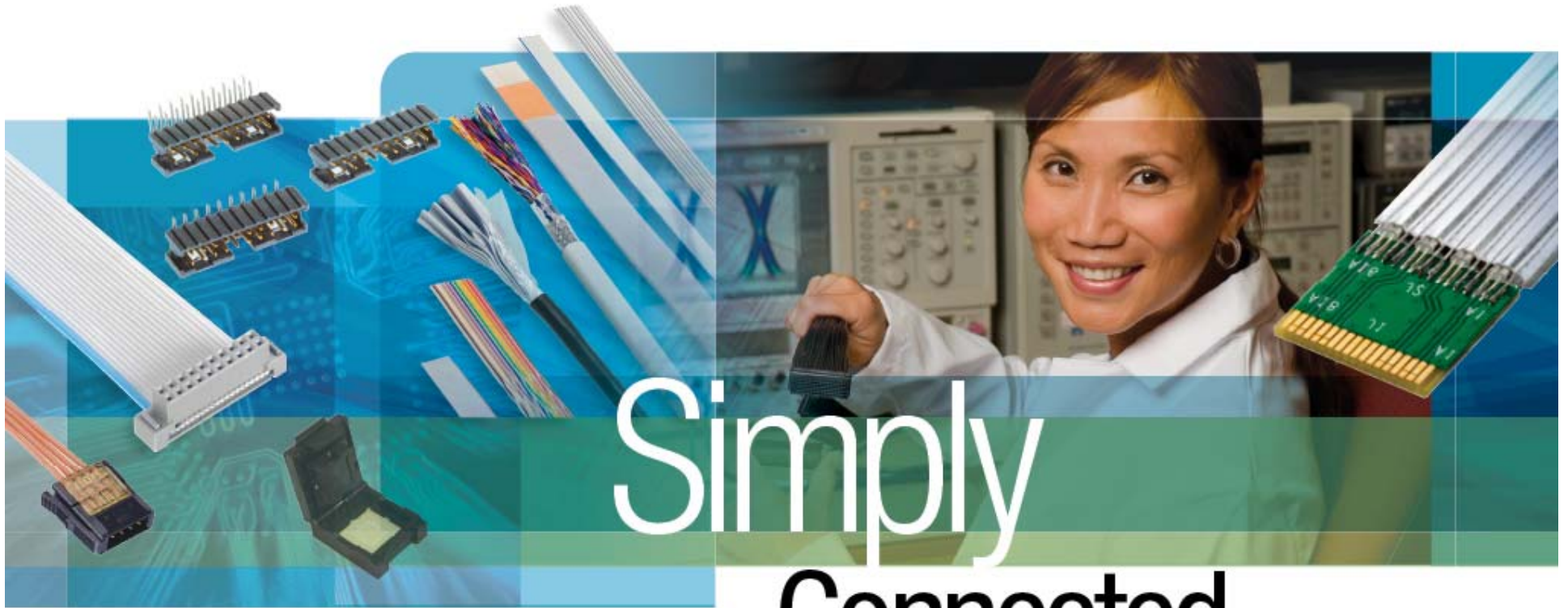


3M Electronic Solutions Division

3M™ Power Clamp System

Power/Signal Distribution I/O Connector System



Simply Connected



Introduction

- Purpose
 - *To explain the features and benefits of the 3M™ Power Clamp System*
- Objectives
 - *Highlight the key features and describe applications*
- Content
 - *18 pages*
- Learning Time
 - *12 minutes*

Overview

- In collaboration with the CC-Link Partner Association (CLPA) and Mitsubishi Electric, 3M has developed a new platform for Fieldbus and other power/signal distribution I/O applications
- Low cost installation
 - *Uses proven insulation displacement contact (IDC) technology for termination*
- Compatible with discrete wire and ribbon cable
- No special tooling required
 - *'Just squeeze' termination for time and labor cost savings*

Applications

- Discrete wire and ribbon cabling applications in:
 - *Factory Automation/Industrial (e.g. Fieldbus with PLC to terminal block, semiconductor/LCD manufacturing equipment)*
 - *Logistics (e.g. packaging equipment, conveyor systems)*
 - *Medical (e.g. electronic beds, electric wheelchairs/scooters)*
 - *Lab test (e.g. motion test and measurement systems)*
 - *ITS (intelligent traffic systems, e.g. traffic light controllers)*

CC-Link Example

CC-Link Master Communication and Network Module

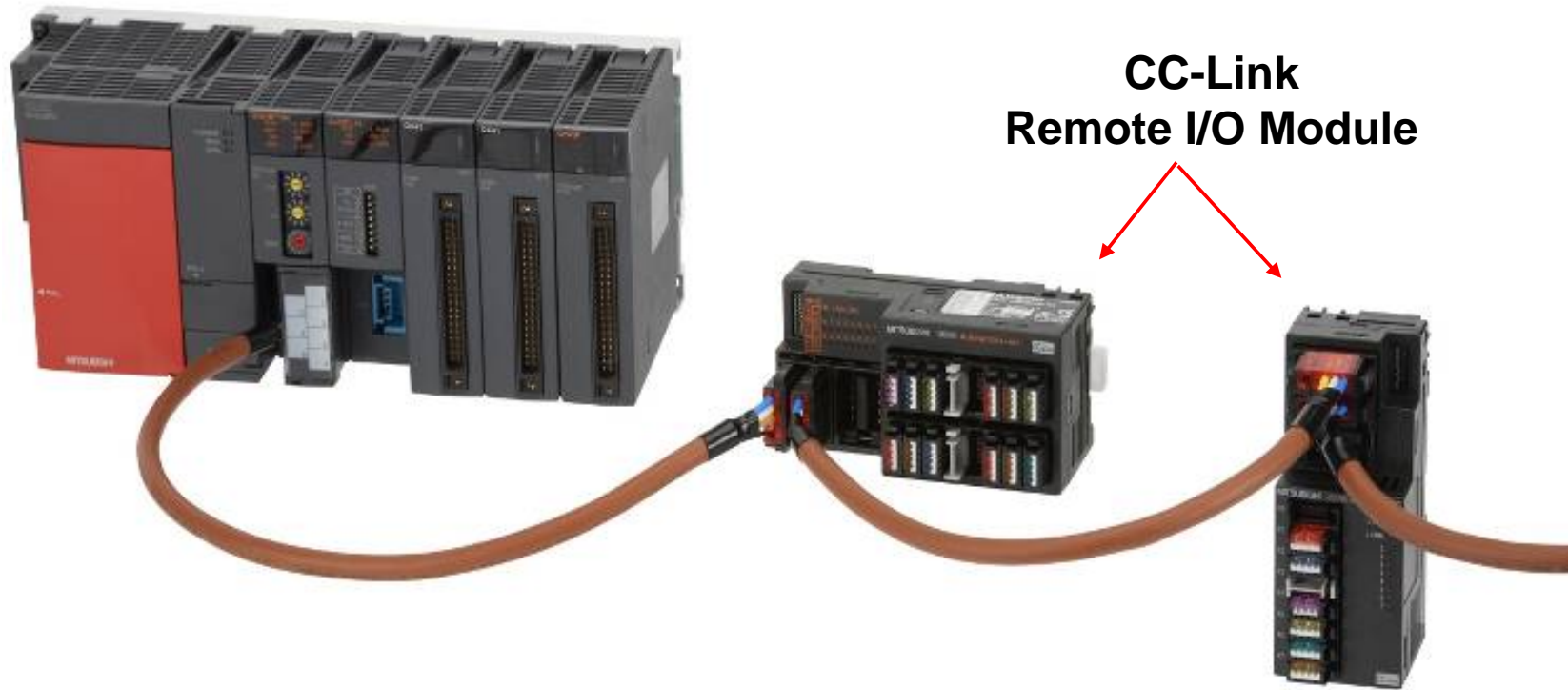


Photo: Courtesy of Mitsubishi Electric

For more information go to http://www.cc-link.org/eng/t_html/cclink/feature.html

3M™ Power Clamp System Features

- 5 Positions
- 18 and 20 AWG wire
- 250 Volt
- 10 Amps max. (1 line)
- 7 Amps max. (all lines)
- 2 Polarization styles
- One-touch positive latching
- Optional dust cover



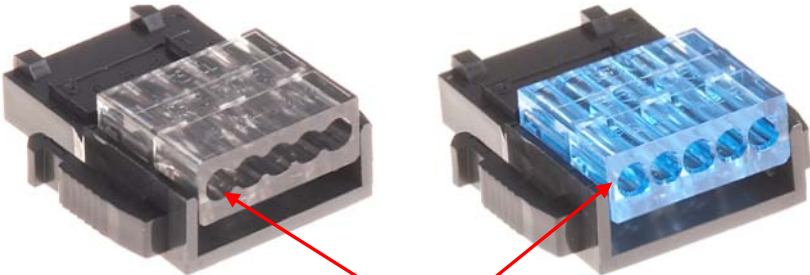
3M™ Power Clamp System

- Wiremount Socket
- Wiremount Plug for cable extension
- Branch Connectors
 - *Type H*
 - *Type Y*
- Boardmount Headers
 - *5 position (straight, right angle)*
 - *10 position (straight, right angle)*
- Cable



3M™ Power Clamp Wiremount Socket, 355 Series

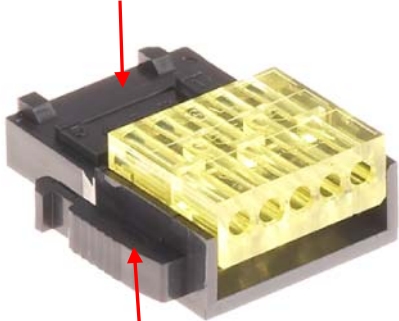
18 AWG



Ribbon cable and discrete wire compatibility

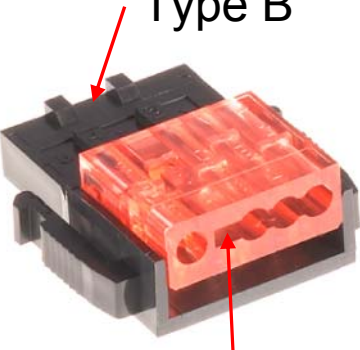
20 AWG

Polarization,
Type A

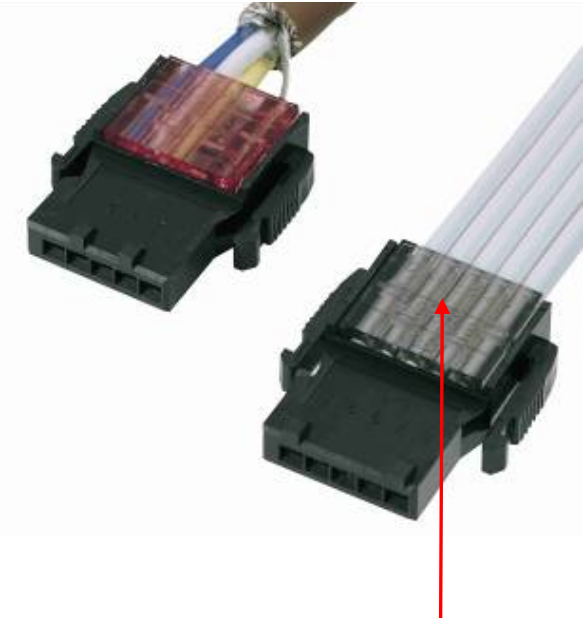


One-touch latch

Polarization,
Type B



Drain wire termination design

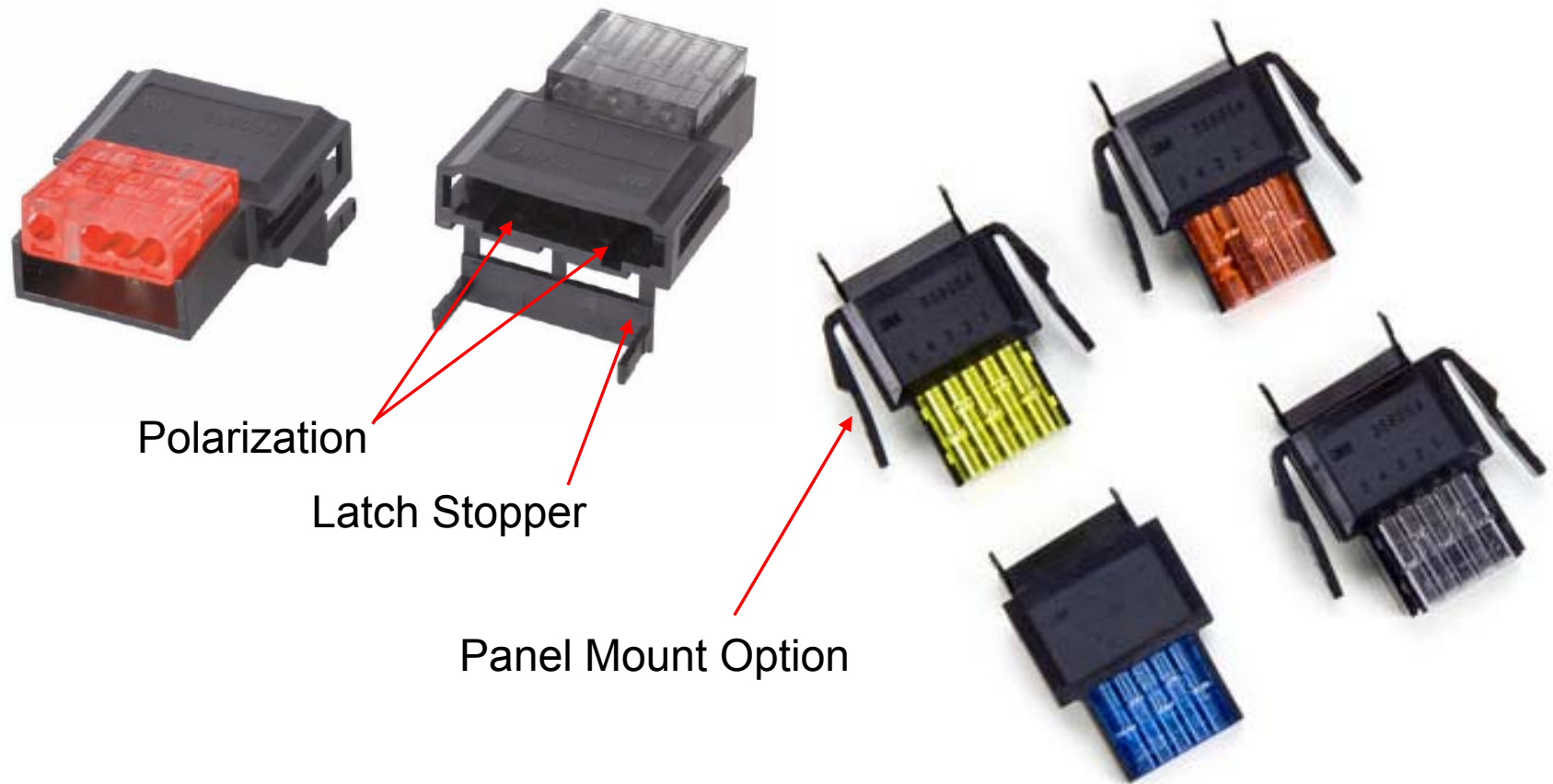


Semi-transparent color-coded inspection cover

RoHS compliant*

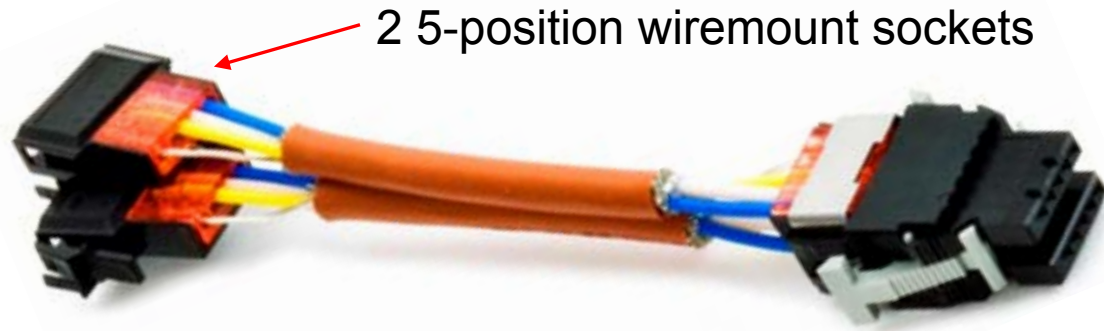


3M™ Power Clamp Wiremount Plug, 358 Series



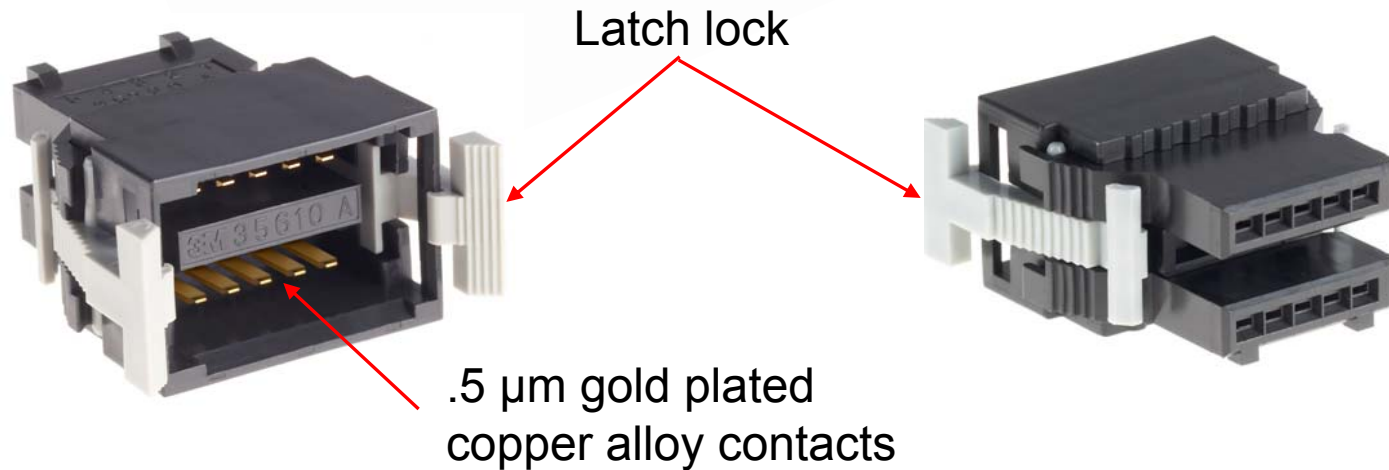
RoHS compliant*

3M™ Power Clamp Branch Connector, 357 Series Type H



Note: Socket attaches to two cable connectors

Note: Plug attaches to BM connector



3M™ Power Clamp Branch Connector, 357 Series Type Y

- 2 to 1: divides one input line into two output lines
- Polarization key helps to prevent errors during insertion
- One-touch lock mechanism



3M™ Round Conductor Cable for CC-Link 79100-110SBH (CC-Link V1.10 Standard Cable)

Features:

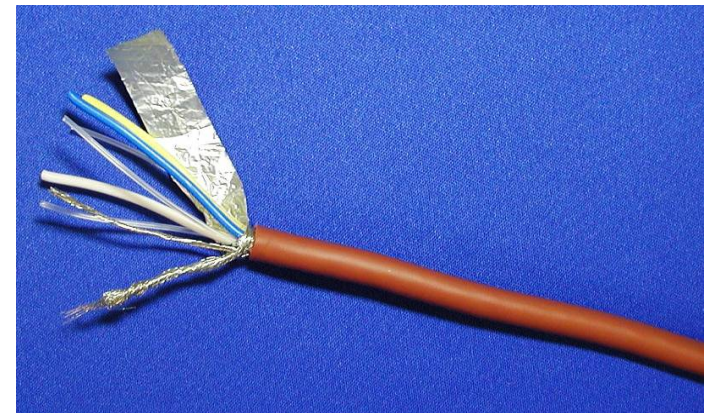
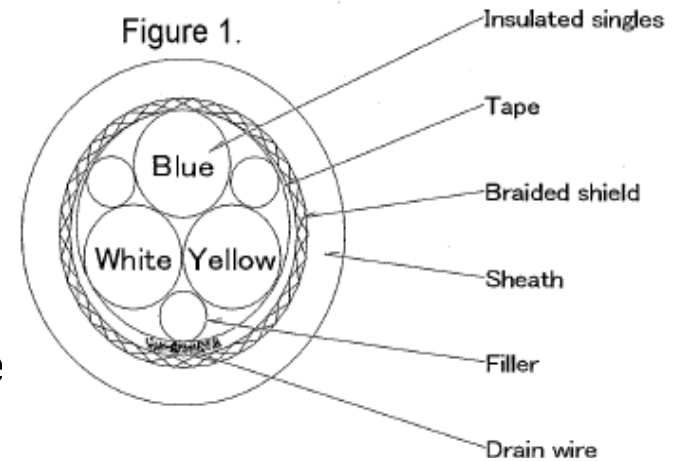
- CLPA conformance tested
- 10 Mbps Max. high-speed transmission
- 30V UL AWM Rating
- Cable can be used for CC-Link Ver. 1.00

Specifications:

- 20 AWG (7x 0.32)X3 /Stranded, Shield/Drain wire
- Foamed PE Insulation Material
- 110 Ohm Characteristic Impedance
- Oil Resistant PVC Sheath
- CC-Link version Ver.1.10
- UL AWM Style Number 20276

Applicable Connectors:

- 35505-6000-B0M GF (CLPA CC-Link Standard)
- 35605-6114-B00 PE (CLPA CC-Link Standard)
- (20 AWG 20, 2.2-3.0 mm Diameter)



3M™ Round Conductor Cable for CC-Link 79100-110SBZ-5 (CC-Link V1.10 Flexible Cable)

Features:

- CLPA conformance tested
- 10 Mbps Max. high-speed transmission
- Flexibility Suitable for non-static applications*
- 30V UL AWM Rating
- Cable can be used for CC-Link Ver. 1.00

Specifications:

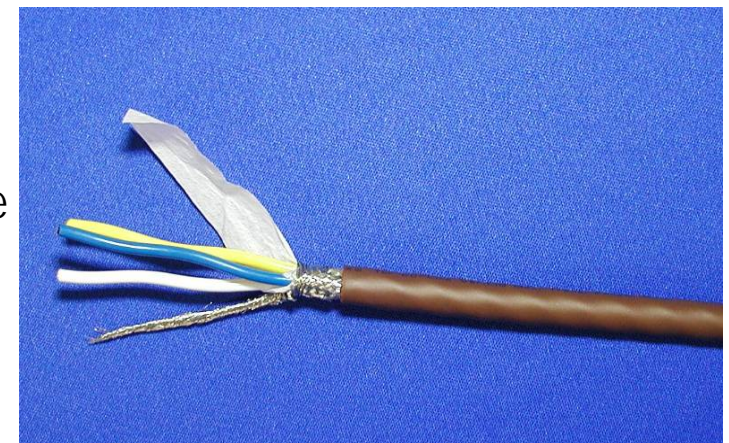
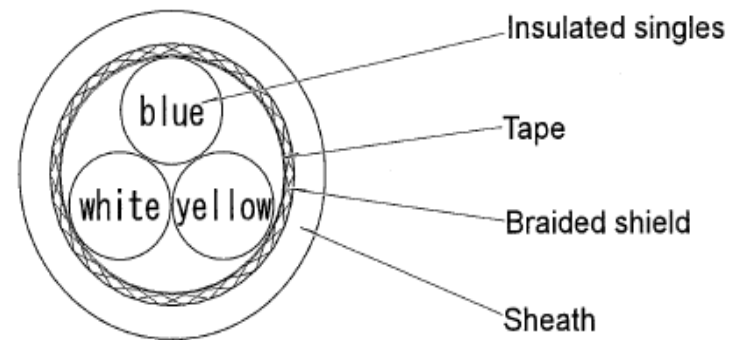
- 20 AWG 3/33/0.08 Rope-lay Stranded Conductors
- Solid PE Insulation Material
- 110 Ohm Characteristic Impedance
- Oil Resistant PVC Sheath
- CC-Link version Ver.1.10
- Data transmission length is 50% of the standard cable
- UL AWM Style Number 20276

Applicable Connectors:

35505-6000-B0M GF

35605-6114-B00 PE

(20 AWG, 2.2-3.0 mm Diameter)

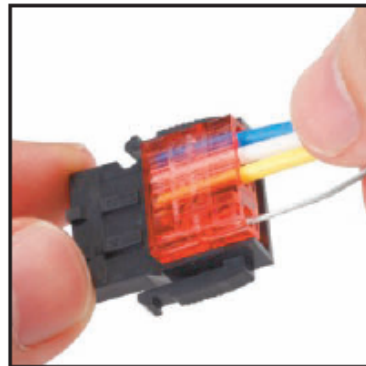


* 3M Does Not Warrant Flex Life

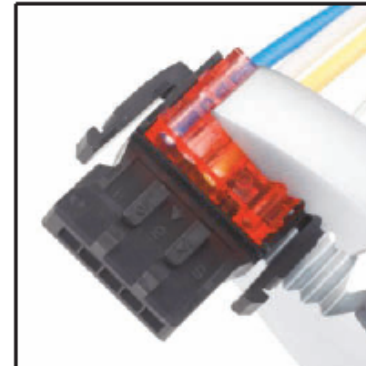


Wire Termination Process

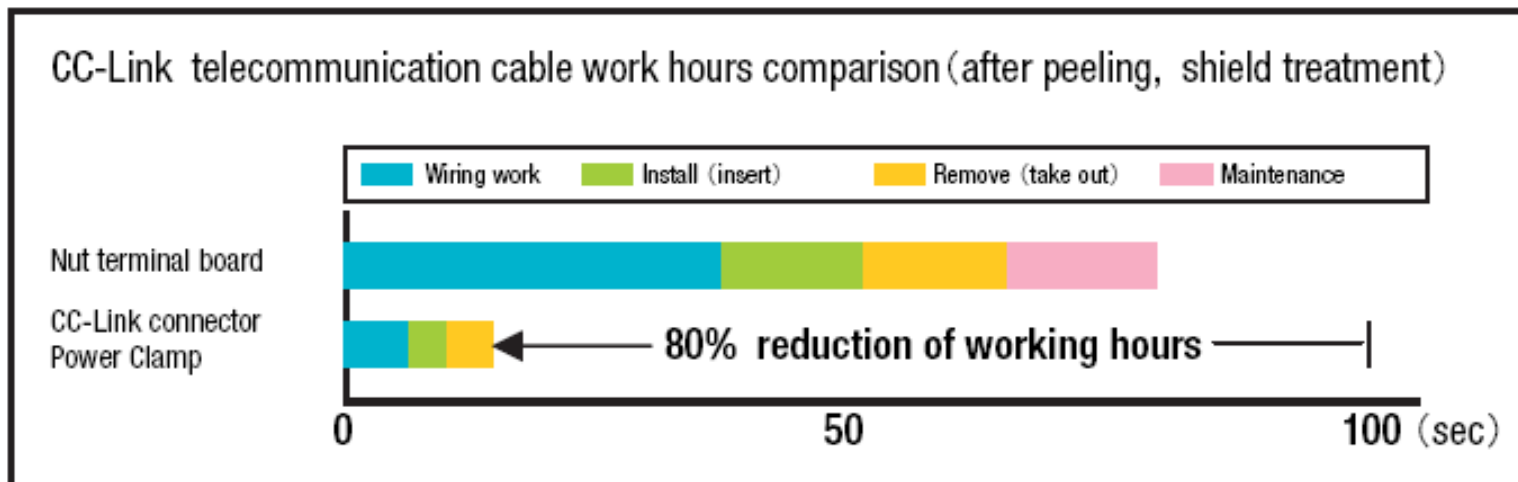
- **80% less working hours in connector installation**



Insert cable



Press the cover



Source: CLPA

3M™ Power Clamp Boardmount Header, 356 Series

- Right Angle (5 and 10 Position)



- Straight (5 and 10 Position)



3M™ Power Clamp Connector Product Selector

Wire Mount connector	Product Number	Color	Adaptability	AWG No.
Wire Mount Socket	35505-6000-B0M GF	Red	For CC-Link cable	20
	35505-6080-A00 GF	Gray	Power ϕ 2.2~3.0mm	18
	35505-6180-A00 GF	Blue	Power ϕ 2.0~2.3mm	18
	35505-6200-A00 GF	Yellow	Power ϕ 1.6~2.0mm	20
Wire Mount Header for Flying Use	35805-6000-B0M GF	Red	For CC-Link cable	20
	35805-6080-A00 GF	Gray	Power ϕ 2.2~3.0mm	18
	35805-6180-A00 GF	Blue	Power ϕ 2.0~2.3mm	18
	35805-6200-A00 GF	Yellow	Power ϕ 1.6~2.0mm	20
Wire Mount Header for Panel Mount Use	35805-6000-BPM GF	Red	For CC-Link cable	20
	35805-6080-AP0 GF	Gray	Power ϕ 2.2~3.0mm	18
	35805-6180-AP0 GF	Blue	Power ϕ 2.0~2.3mm	18
	35805-6200-AP0 GF	Yellow	Power ϕ 1.6~2.0mm	20

Accessory	Product Number
Latch support metal for WM Socket	79116-PCL-01M

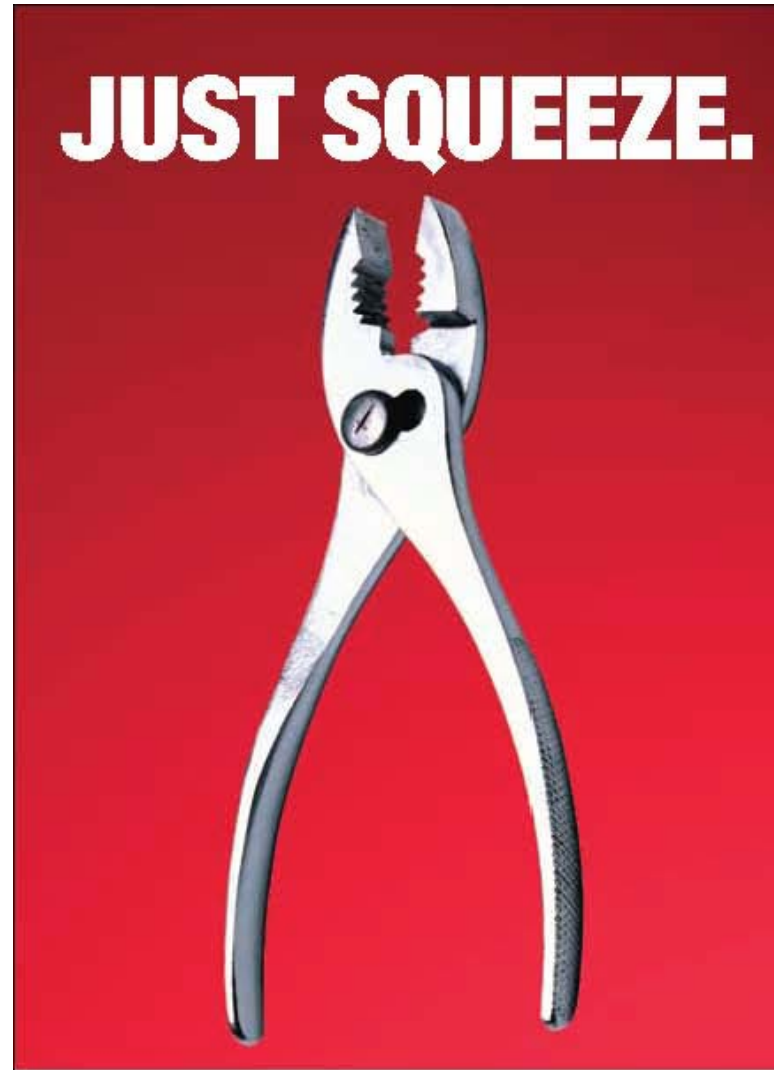
Board Mount connector	Product Number
Board Mount Header Straight One Row	35605-6114-A00 PE
Board Mount Header Straight Two Row	35610-6224-A00 PE
Board Mount Header Right Angle One Row	35605-5153-A00 PE
Board Mount Header Right Angle One Row (PCI)	35605-5153-B00 PE
Board Mount Header Right Angle Two Row	35610-5253-A00 PE
	35610-5253-B00 PE

Branch connector	Product Number
Branch Connector Type-H	35720-L200-A00 AK
	35720-L200-B00 AK
Branch Connector Type-Y	35715-L010-A00 AK
	35715-L010-B00 AK

- *Red cover is the CLPA CC-Link Standard*

Summary

- Complete I/O cable and connector system
- For power/signal distribution cabling applications
 - *Discrete wire and ribbon cable, 18-20 AWG*
 - *10 Amps max. (1 line), 7 Amps max. (all lines)*
- Time and labor cost saving IDC termination
- Integrated one-touch positive latching
- Chosen by CLPA as IP20 connector of CC-Link
- RoHS compliant*



Important Notice

3M is a trademark of 3M Company.

CC-Link, CCLink/LT and CLPA are trademarks of CC-Link Partners Association.

* "RoHS Compliant 2005/95/EC" means that the product or part ("Product") does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is an application that is exempt under EU RoHS. This information represents 3M's knowledge and belief, which may be based in whole or in part on information provided by third party suppliers to 3M. In the event any product is proven not to conform with 3M's Regulatory Information Appendix, then 3M's entire liability and Buyer's exclusive remedy will be accordance with the Warranty stated below.

Important Notice

Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use.

Warranty; Limited Remedy; Limited Liability

3M's product warranty is stated in its Product Literature available upon request. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**