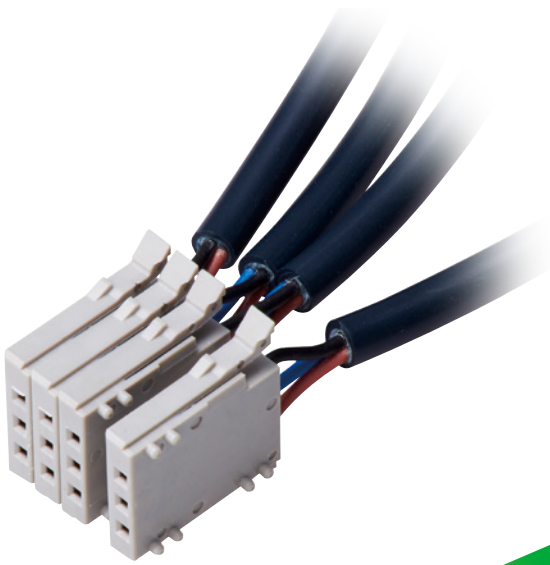


# 3M™ Mini Stack Connector

Miniature IDC Connector for Sensor Wire Connection

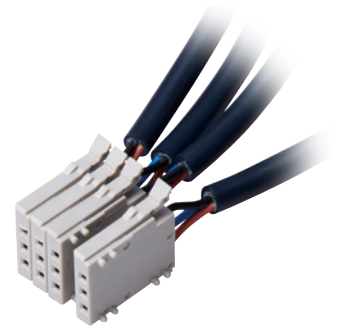


# 3M™ Mini Stack Connector

Easy termination, Easy handling

Enables board space savings & optimized networking

- As manufacturing equipment becomes increasingly automated, more electronic components, such as sensors, need to be integrated onto the control boards. This is driving a need for higher density connector options.
- The 3M™ Mini Stack Connector provides a reliable connection with a simple termination process while reducing the required board footprint.



## 1 Space-saving: Saves 30% more board space in comparison with 3M™ Mini-Clamp Connectors

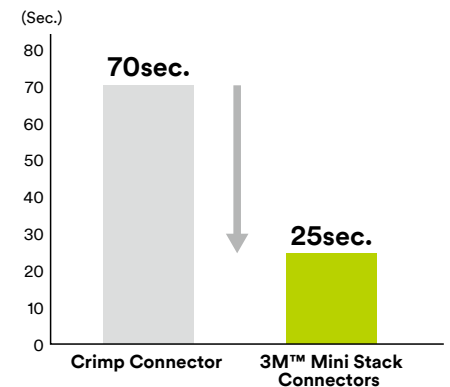
## 2 Time-saving: Reduces wiring time by approx. 60% compared to crimping connectors

\* Compared to similar sized crimped connector with 3 pins (based on 3M evaluation)

### Work Steps

Crimp Connector 3pins		3M™ Mini Stack Connector 3pins	
• Strip wire	x3	• Set connector into tool	x1
• Set terminal in tool	x3	• Set wires into tool and crimp terminals simultaneously	x1
• Set wire and crimp terminal	x3	• Insert terminated wires into housing simultaneously	x1
• Insert terminated wire into housing	x3		
<b>Total 12 steps</b>		<b>Total 3 steps</b>	

### Work Time

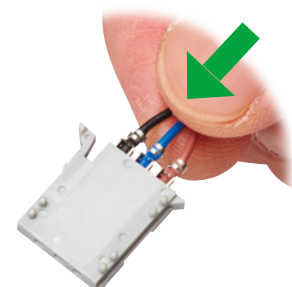
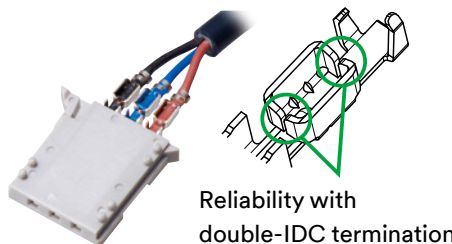
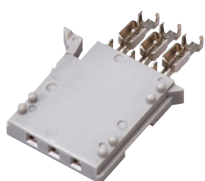


## 3 Compact with simple termination

Contact & housing are integrated, making handling easy

- No need to strip wires
- Connect wires simultaneously

Insert terminals into housing



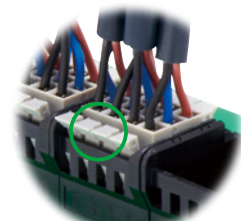
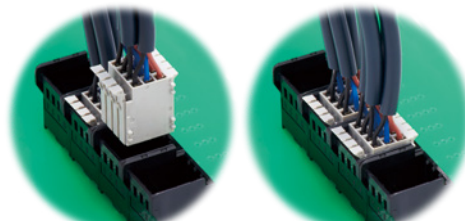
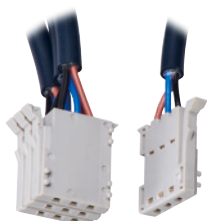
## 4 Compact with easy mating/unmating

Stack 4 connectors into a single block

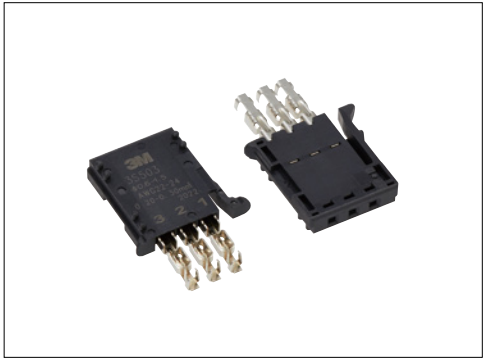
Easily mated even in hard-to-reach or see spaces

Block style simplifies mating

Ability to easily unplug



# 3M™ Mini Stack Connector Wiremount Socket 3S50x-Sx30-x00 PN



- Provides excellent wire connections in a compact form
- No pre-treatment of wire needed with IDC technology
- Terminates 3 or 4 wires in single action
- Integrated terminals and housing make handling easy
- Wide range of wire compatibility (AWG#22-30) with highly reliable double IDC termination
- Handling stacked connectors as a block offers easy mating and unmating

Material & Plating	Item	Material	Remarks
	Housing	PBT resin	UL94V-0
	Contact	Copper alloy	Wiping area: Gold plating over nickel plating IDC: Nickel plating

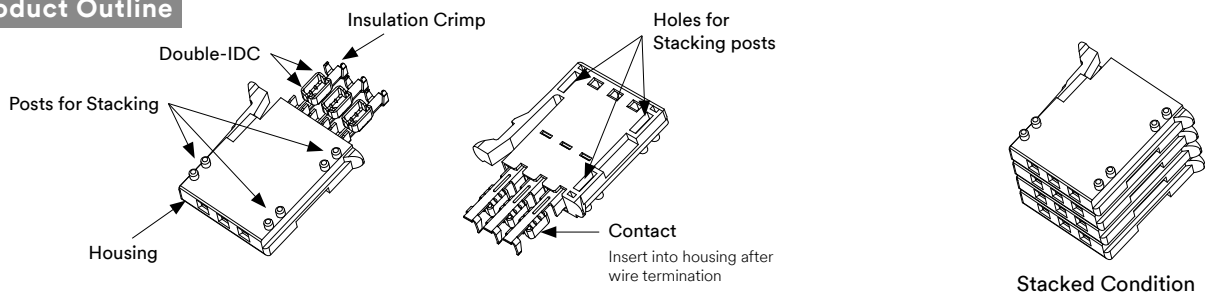
Wire Accommodation	See product table
--------------------	-------------------

Ratings	Item	Rating
	Voltage	AC/DC 32V Max.
	Current	2.0A MAX. (AWG22-26) 1.5A MAX. (AWG27-28) 1.0A MAX. (AWG29-30)
	Temperature	-20 to 85 degree C

## Product Table

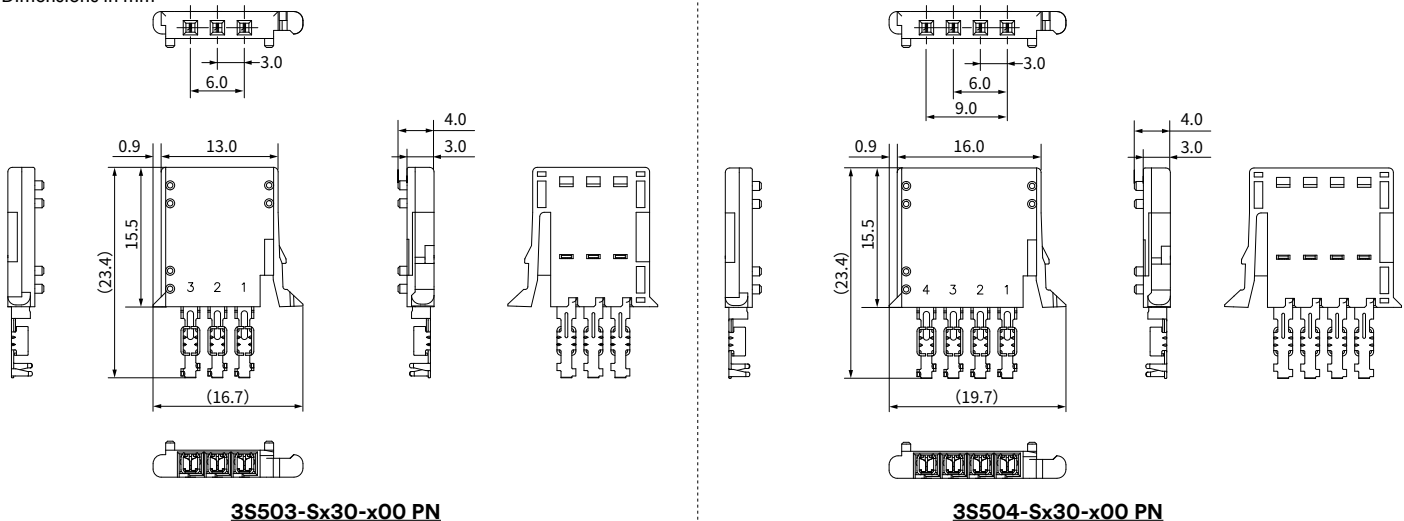
Positions	Wire Accommodation			Body Color	Product Number
	AWG No.	Nominal conductor cross-sectional area mm <sup>2</sup> (mil <sup>2</sup> )	Wire OD mm (mil)		
3	24-22	0.2 - 0.3 (310 - 465)	0.6 to 1.5 (23.6 to 59.1)	Black	3S503-S330-B00 PN
	30-25	0.05 - 0.19 (78 - 295)		Gray	3S503-S530-G00 PN
4	24-22	0.2 - 0.3 (310 - 465)	0.6 to 1.5 (23.6 to 59.1)	Black	3S504-S330-B00 PN
	30-25	0.05 - 0.19 (78 - 295)		Gray	3S504-S530-G00 PN

## Product Outline



## Dimensions

Dimensions in mm



# 3M™ Mini Stack Connector Boardmount Header 3S6xx-62Sx-B00 PP

- Saves 30% more board space in comparison with 3M™ Mini-Clamp connectors
- Mates with 4 stacked connectors in one action
- Wiremount connector can be unplugged by gripping the center latch
- Fixed tabs prevent lifting and secure fixation of the board during soldering



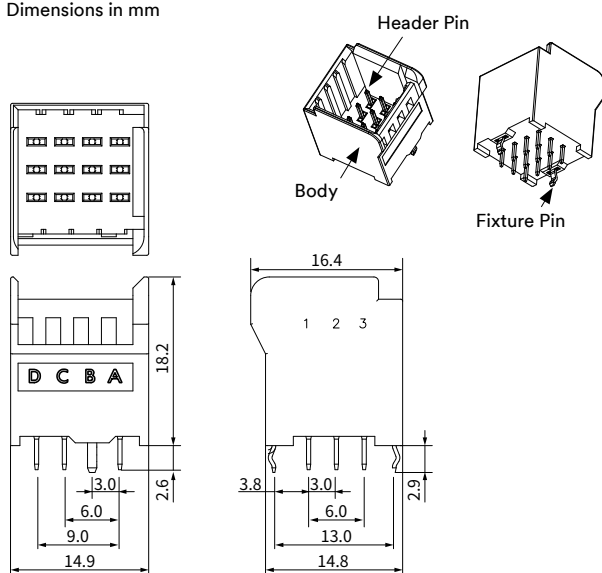
Material & Plating	Item	Material	Remarks
	Body	PBT resin	UL94V-0
	Header pin	Copper alloy	Wiping area: Gold plating over nickel plating Solder tails: Tin plating over nickel plating
	Fixture pin	Copper alloy	Tin plating over nickel plating

PCB Accommodation	Thickness: 1.0 to 1.6mm (39 to 63mil), see recommended hole pattern
-------------------	---

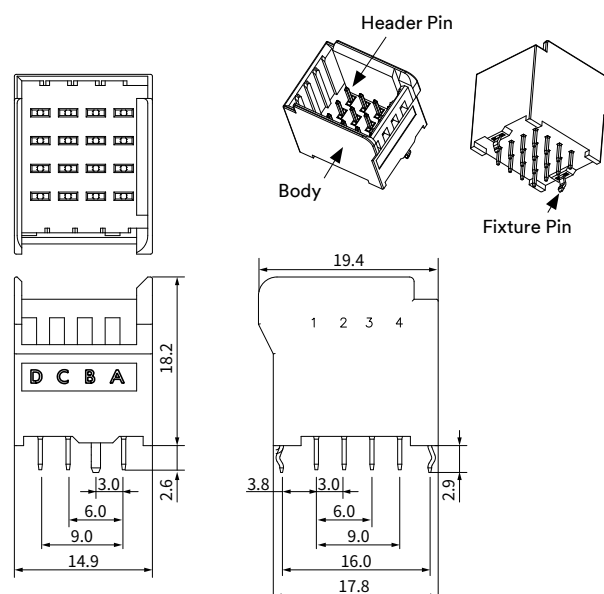
Ratings	Item	Rating
	Voltage	AC/DC 32V Max.
	Current	2.0A MAX.
	Temperature	-20 to 85 degree C

## Product Outline and Dimensions

Dimensions in mm



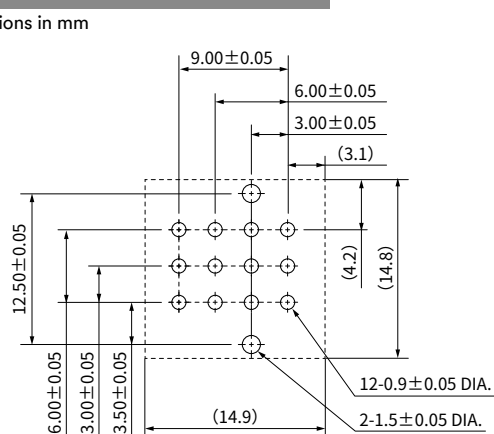
**3S612-62S3-B00 PP**



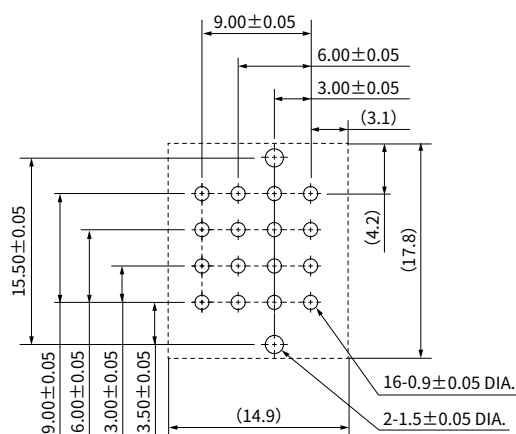
**3S616-62S4-B00 PP**

## Recommended Hole Pattern

Dimensions in mm



**3S612-62S3-B00 PP**



**3S616-62S4-B00 PP**

# 3M™ Mini Stack Connector Dust Cover 3SD0x-S01

- For use when there are less than four sockets. Creates a four-socket block to plug into the header.
- Prevents debris from getting inside boardmount headers

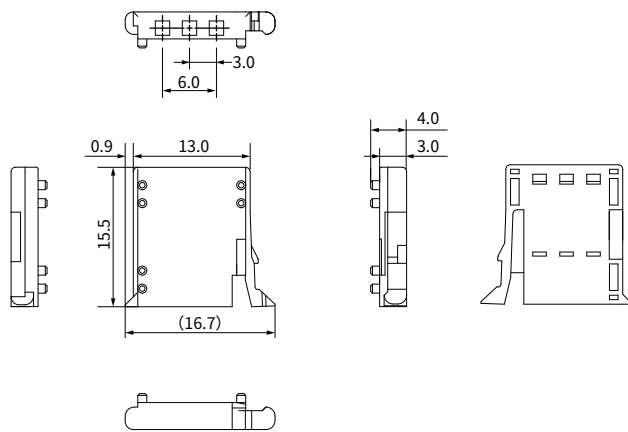


Material & Plating	Item	Material	Remarks
	Body	PBT resin	UL94V-0

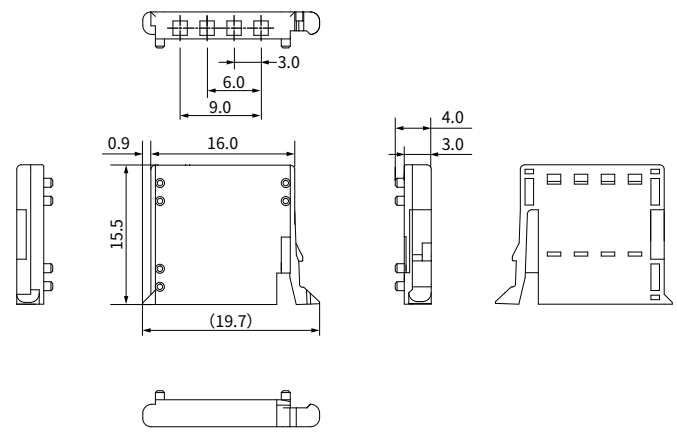
Ratings	Item	Rating
	Temperature	-20 to 85 degree C

## Dimensions

Dimensions in mm

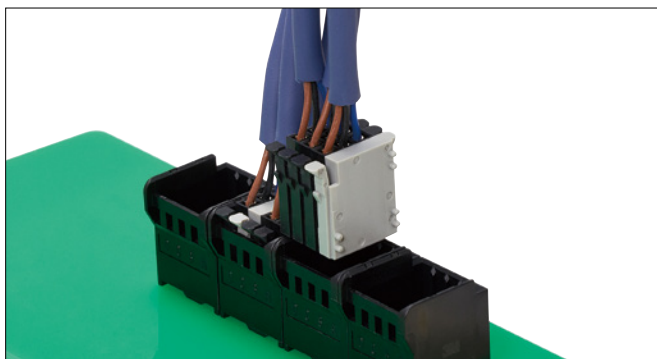


**3SD03-S01**



**3SD04-S01**

## Application Example

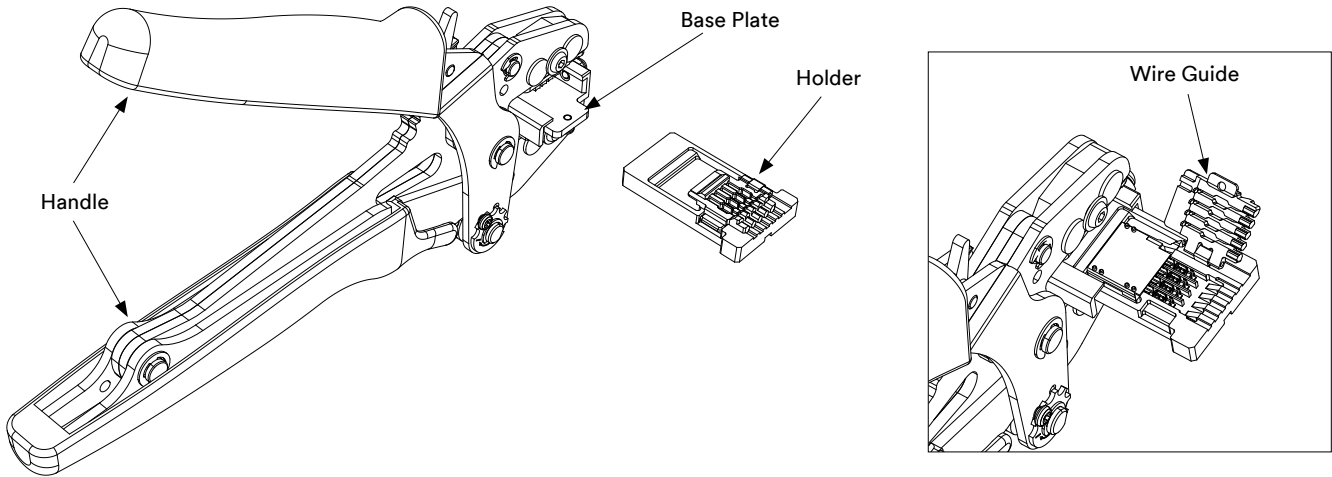


# 3M™ Mini Stack Connector Hand Tool 3S900-1x



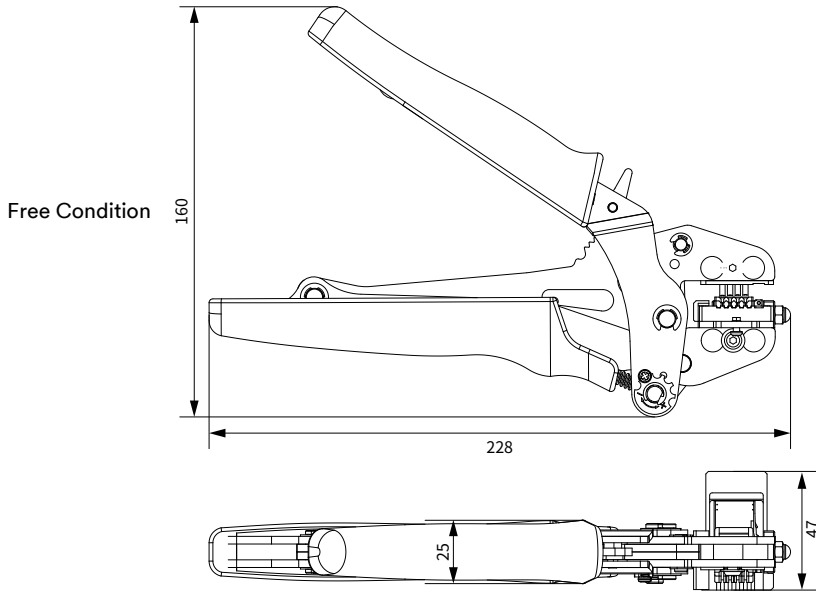
Product Number	Wire OD Accommodation mm (mil)
3S900-13	0.6 to 1.0 (24 to 39)
3S900-16	over 1.0 to 1.5 (39 to 59)

## Product Outline



## Dimensions

Dimensions in mm



**Regulatory:** For regulatory information about these products, visit [3M.com/regs](http://3M.com/regs) or contact your 3M representative.

**Technical Information:** The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

**Product Use:** Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

**Warranty, Limited Remedy, and Disclaimer:** Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. **3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE.** If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

**Limitation of Liability:** Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.



### Electronics Materials Solutions Division

3M Center, Building 224-3N-11  
St. Paul, MN 55144-1000

1-800-251-8634 phone  
651-778-4244 fax  
[www.3M.com/electronics](http://www.3M.com/electronics)

3M is a trademark of 3M Company.  
Please recycle.  
©3M 2021. All rights reserved.  
60-5005-0261-6