

4

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RELEASED FOR PUBLICATION

20

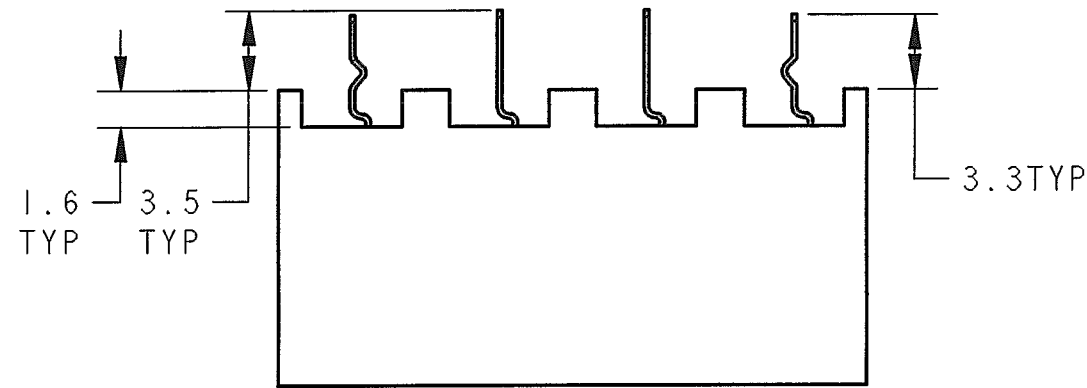
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LOC
JDIST
-REVISIONS
変更

P	LTR	DESCRIPTION	ECN	DATE	DWN	APVD
	O	RELEASED FJ00-1227-02		10MAY2002	D.M	S.M
	A	ADD P/N(-3) FJ00-1716-02		22AUG2002	D.M	S.M
	B	REVISED FJD0-0125-03		30JAN04	K.R	K.S

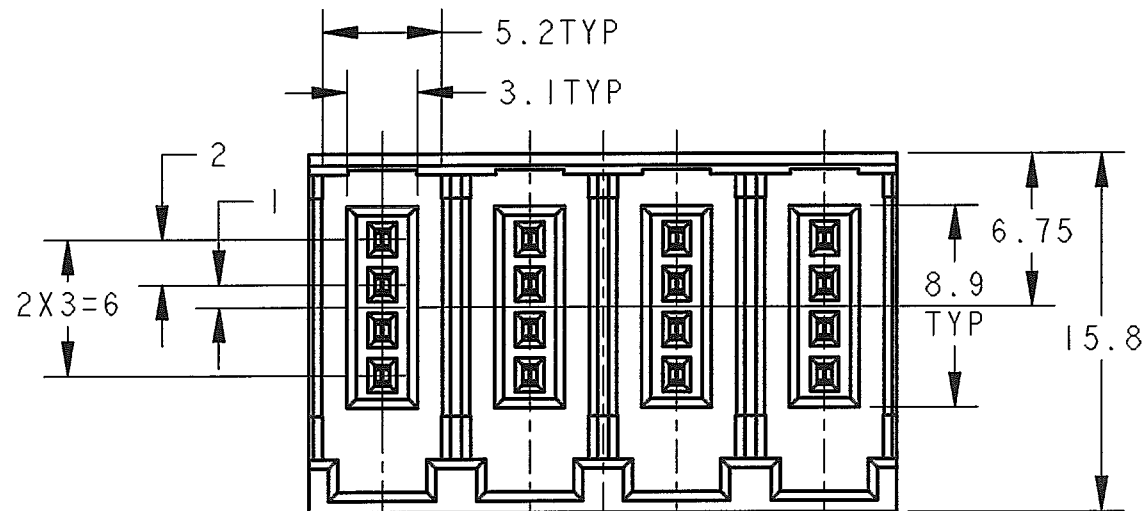
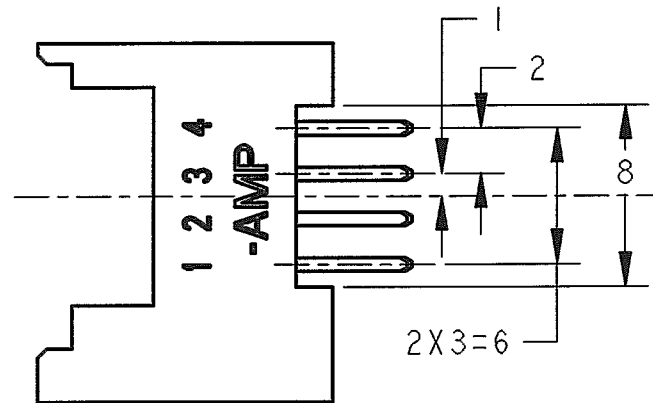
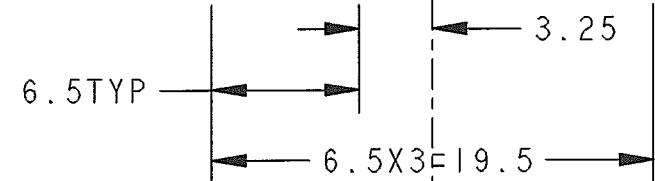
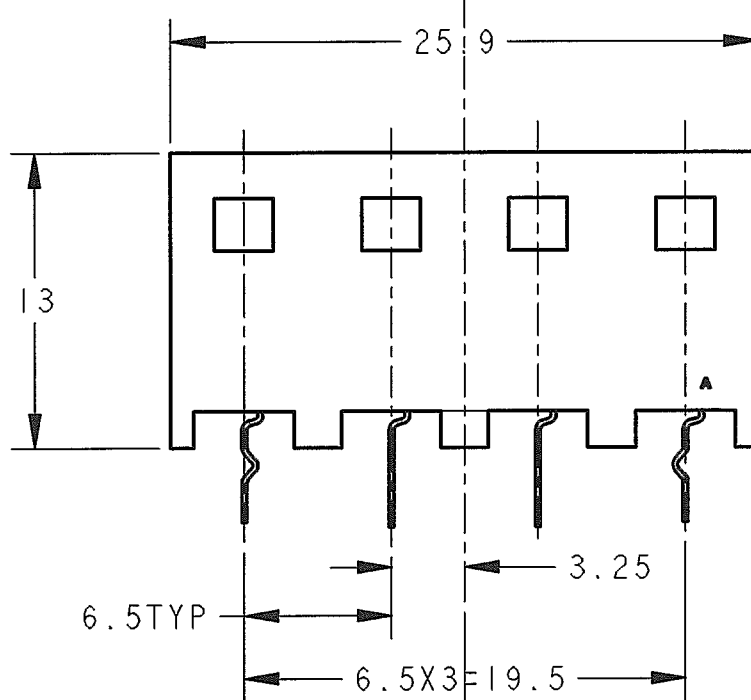
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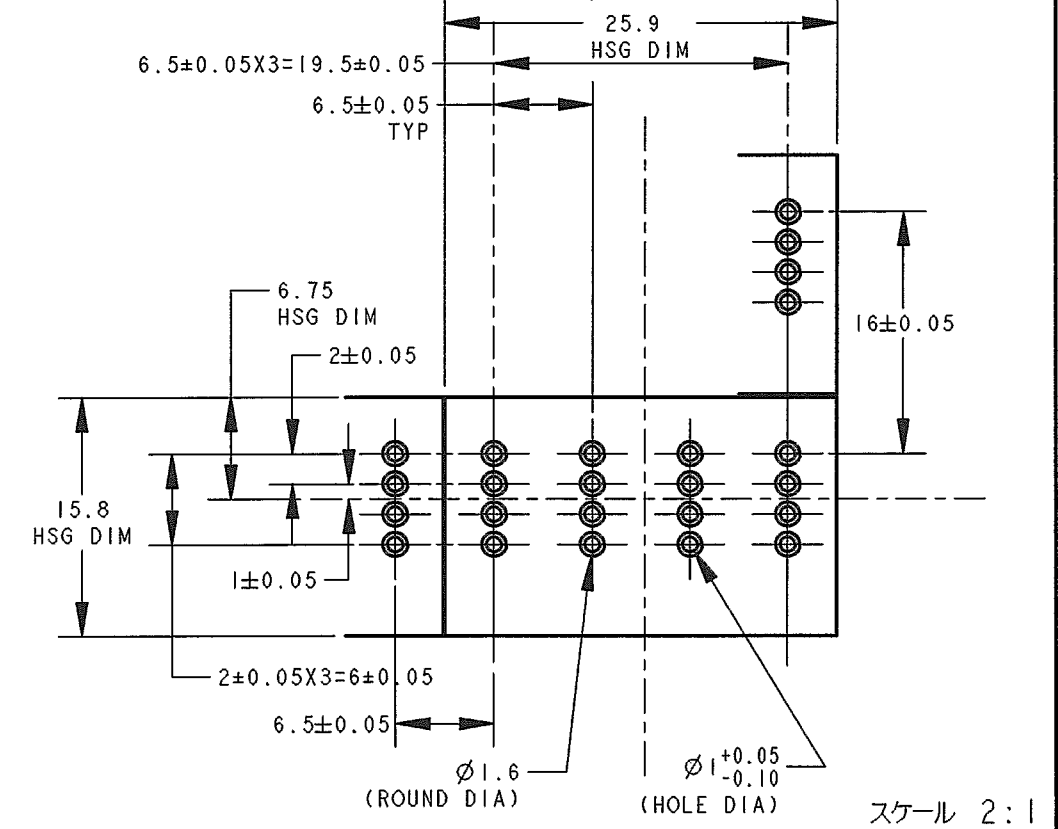
勝特力電材超市-龍山店 886-3-5773766
勝特力電材超市-光復店 886-3-5729570
勝特力電子(上海) 86-21-34970699
勝特力電子(深圳) 86-755-83298787
<http://www.100y.com.tw>

1. MATERIAL: HOUSING GLASS FIBER THERMOPLASTIC, 94V-0, BLACK
CONTACT COPPER ALLOY.
2. FINISH: UNDER PLATE Ni 1.27μm min.
CONTACT AREA Au 0.2μm min.
P.C. BOARD ATTACHMENT AREA Tin 2μm min.

1. 材料: ハウジング ガラス入り熱可塑性ポリエステル樹脂、94V-0、黒
コンタクト 銅合金
2. メッキ: コンタクト 全面Ni下地 1.27μm MIN
接点部 0.2μm MIN金メッキ
基板取付部 2μm MIN 錫メッキ



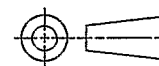
推奨基板寸法 (t=1.6±0.2)
RECOMMENDED PC BOARD PATTERN



THIS DRAWING IS A CONTROLLED DOCUMENT FOR TYCO ELECTRONICS CORPORATION
IT IS SUBJECT TO CHANGE AND THE CONTROLLING ENGINEERING ORGANIZATION
SHOULD BE CONTACTED FOR THE LATEST REVISION.

DIMENSIONS:
単位: 概
mm

TOLERANCES UNLESS
OTHERWISE SPECIFIED:



0 PLC	±	
1 PLC	±	±0.2
2 PLC	±	
3 PLC	±	±3°
4 PLC	±	
ANGLES	±	

MATERIAL
材料

FINISH
仕上

DWN 10MAY2002

CHK S. MANABE 10MAY2002

APVD S. MANABE 10MAY2002

PRODUCT SPEC 108-5765

APPLICATION SPEC

取付適用規格

WEIGHT

CUSTOMER DRAWING

tyco
Electronics
Tyco Electronics AMP K.K.
Kawasaki, Japan

NAME
HDR-ASSY-4ROW
FOR E-CON.
- RITS CONN. -

SIZE A3 CAGE CODE 00779 DRAWING NO. C-1473567 RESTRICTED TO

SCALE 3:1 SHEET 1 OF 2 REV B

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LOC
JDIST
-

REVISIONS

P

LTR

DESCRIPTION

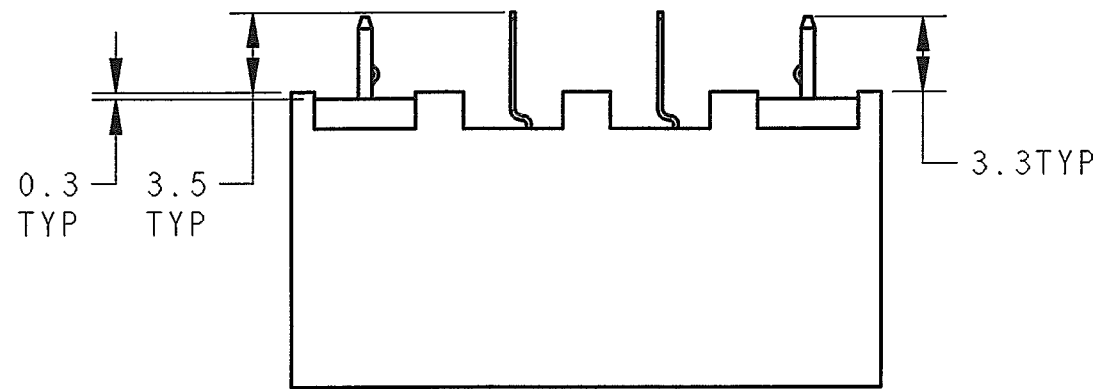
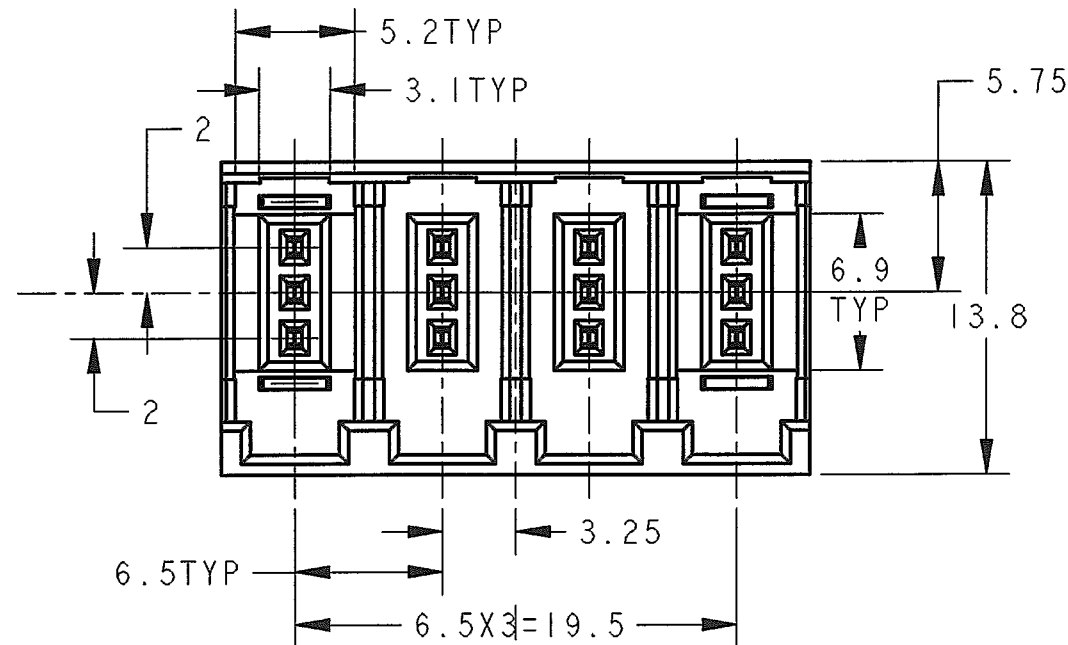
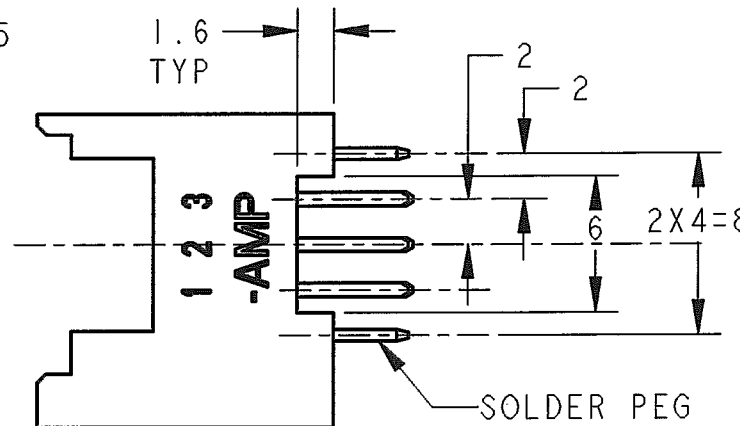
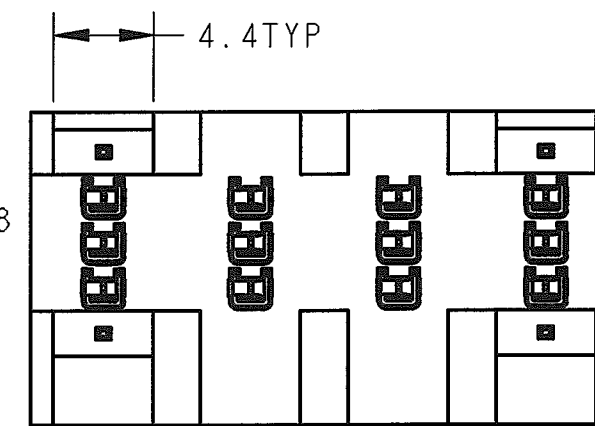
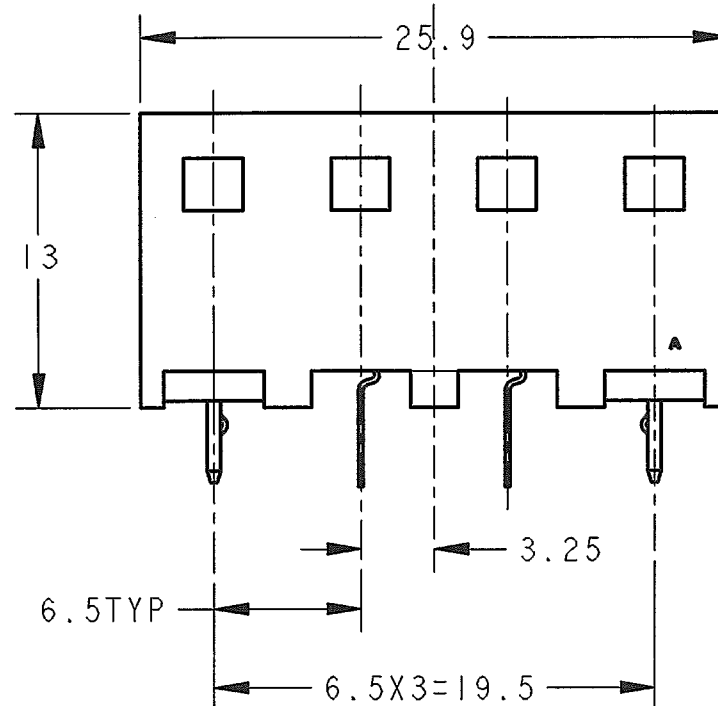
DATE

DWN

APVD

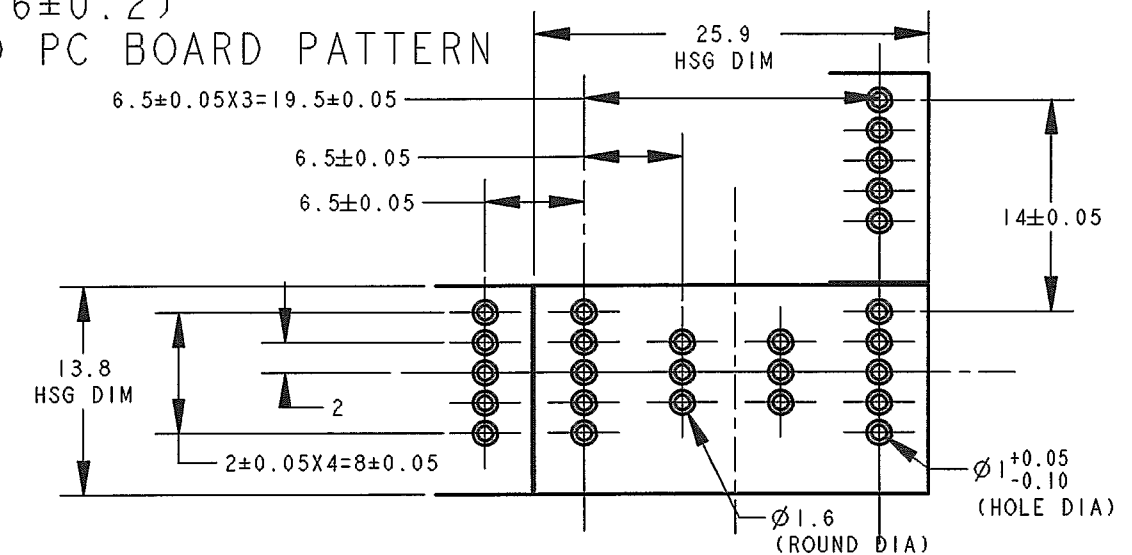
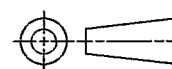
SEE SHEET 1 OF 2

-3 : AS SHOWN



推奨基板寸法 (t = 1.6 ± 0.2)

RECOMMENDED PC BOARD PATTERN

THIS DRAWING IS A CONTROLLED DOCUMENT FOR TYCO ELECTRONICS CORPORATION
IT IS SUBJECT TO CHANGE AND THE CONTROLLING ENGINEERING ORGANIZATION
SHOULD BE CONTACTED FOR THE LATEST REVISION.DIMENSIONS:
mmTOLERANCES UNLESS
OTHERWISE SPECIFIED:0 PLC ± ±0.2
1 PLC ± ±3°
2 PLC ± ±3°
3 PLC ± ±
4 PLC ± ±
ANGLES ± ±

MATERIAL

FINISH

DWN 20AUG2002

CHK 22AUG2002

APVD 22AUG2002

PRODUCT SPEC

108-5765

APPLICATION SPEC

-

WEIGHT

-

CUSTOMER DRAWING

tyco
ElectronicsTyco Electronics AMP K.K.
Kawasaki, Japan

NAME

HDR-ASSY-4ROW
FOR E-CON.
- RITS CONN. -

SIZE

CAGE CODE

DRAWING NO

RESTRICTED TO

A3

00779

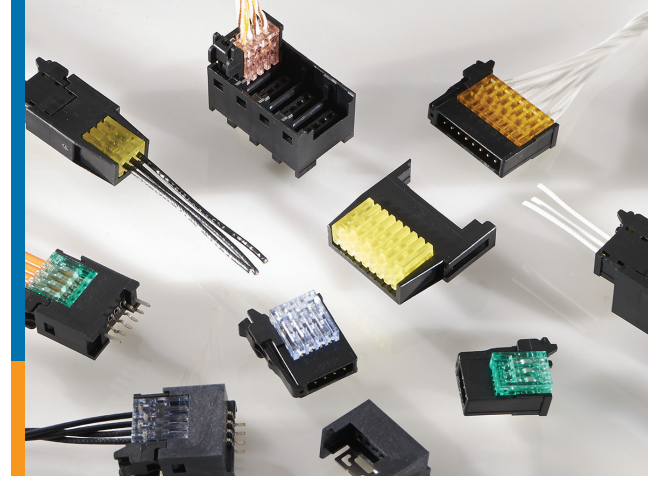
C=1473567

SCALE 3:1

SHEET 2 OF 2

REV B

REMOTE INPUT/ OUTPUT TERMINAL SYSTEM (RITS) CONNECTORS



The e-CON standard was developed in Japan in 2001 by a group of Japanese manufacturers in order to standardize connections from sensors to terminals. This standard is not under control of any standard organizations. Without the standard, each manufacturer had specified different connectors for terminations of sensors to Programmable Logic Controllers (PLCs), and end users had to prepare many different connectors and different tools. In order to improve this situation and create a user-friendly environment, TE Connectivity has offered AMP RITS connectors as the standard interface connector for sensors. The 4-position RITS connector is approved as the industry standard connector.

Key Benefits

- Termination by generic tools
- Small 2.0 mm [.079] centerline connectors
- Two contact points structure provides for high contact reliability
- Housing colors indicate applicable wire range
- Component Recognized by UL to US and Canadian Standards, File No. E28476

Electrical

- **Current rating:** Max. 3 A
- **Voltage rating:** 32 V DC

Mechanical

- **Applicable wire range:** 0.1 to 0.5 mm² [27 to 20 AWG]
- **Outside Diameter:** 0.6 to 1.6 mm [.02 – .06]

Product Specifications

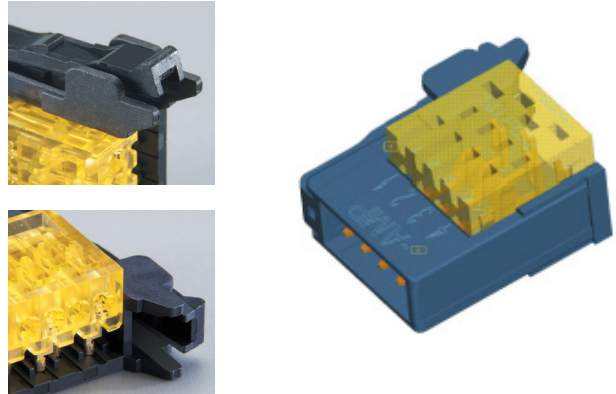
- **Product specification:** 108-5765
- **Instruction sheets:** 411-78014
411-78162

Materials

- **Housing:** PBT (UL 94V-0)/Polycarbonate (UL 94V-0)/
- **Contact:** Phosphor Bronze Platings - 0.2 µm [.000007] gold plated underplated 1.27 µm [.000050] Ni
- **LCP (SMT Products)**

Locking Configuration

The new locking lever design secures a wire-to-wire connection and can be pulled through a partially jammed wiring duct. When mated, a very clear click-sound will be heard. It will help prevent accidental half-mating.



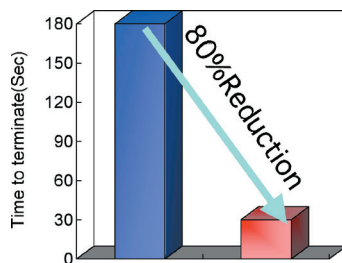
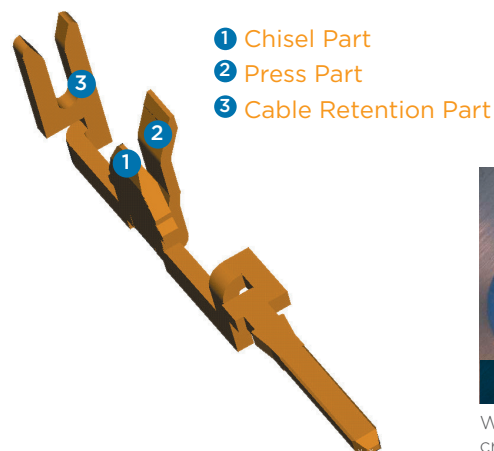
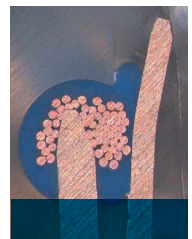
Chisel Press Contact

This new technology has three major features: Chisel, Press and Retention.

The chisel shaped contact pierces into wire to secure a much larger contact area. The press function will keep the contact pressure applied. The retention mechanism retains the wire at a higher retention force than Insulation Displacement Contact (IDC) connectors. Chisel Press Contact is the new wire termination technology to be applied to many kinds of wire from solid to multi-stranded commonly used in Factory Automation (FA) industries.

Cost Reduction

RITS Connectors offer 80% cost reduction of operation compared to conventional crimping connectors.

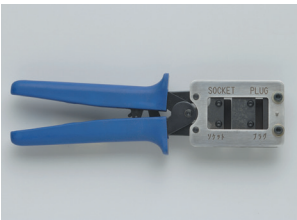


Wire termination cross section

Easy Termination

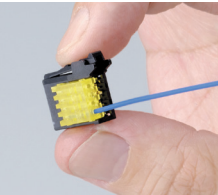
Easier terminations made with lower applied cost and improved quality.

In the manufacturing process of FA equipment, electrical connections by crimping are commonly seen in the assembly lines. RITS (Remote I/O Terminal System) connectors offer an easy and efficient connection method as well as total cost reduction with higher electrical reliability without special skill to perform the work.



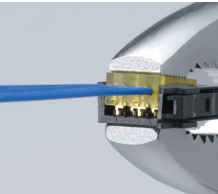
Part Number: 1729940-1
Instruction Sheet: 411-78162
Please refer to Instruction Sheet 411-78014 for further detail.

STEP 1



Insert each wire into Housing.
Pliers can only be used for 3- and 4-position RITS connectors.

STEP 2



Squeeze housing together with pliers or press the housing together with a special tool.
Please use the special tool for larger than 5-position RITS connectors.

The way to connect wire is quite easy: Insert wire into a housing and pinch the housing with a generic tool such as pliers. TE Connectivity also provides a special tool for RITS termination at a more economical price than a crimp-type tool due to its simple function.

Product Features

	PRODUCTS	PLUG Connectors	HDR Connectors	JCT Box		Socket Connectors
				(2D)	(4D)	
FEATURES		<ul style="list-style-type: none">• PLUG Connectors for wire termination• Consists of HOLD HSG and BODY HSG• HSG colors indicate applicable wire range	<ul style="list-style-type: none">• Connectors for PCB• Stackable mounting is possible• Single row and 4row types available• Right Angle type available with SMT Type• Prevent from miss-direction-inserting	<ul style="list-style-type: none">• For Junction Box.• Plugs can be mated on both sides• Panel type version also available	<ul style="list-style-type: none">• Basic same feature as 2D type• Four circuits are made common respectively.	<ul style="list-style-type: none">• Socket connectors for wire termination• Plug can be mated.• Hold housing color same as Plug connectors

Various Product Line-up

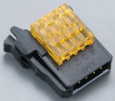
RITS connectors are available for wire-to-wire type and PCB mount type from 3- through 8-positions.

PLUG Connectors						Header PCB Mount			Junction Box		Socket Connector			
Wire Range & O/S Diameter mm	0.6-0.9	0.9-1.0	1.0-1.15	1.15-1.35	1.35-1.6	Vertical		Horizontal	2D	4D	0.9-1.0	1.0-1.15	1.15-1.35	1.35-1.6
HSG Color	Orange	Red	Yellow	Blue	Green	single row	4 row	single row			Red	Yellow	Blue	Green
(POS)	3P	★	★	★	★	★	★	★	★	★	★	★	★	★
	4P*	★	★	★	★	★	★	★	★	★	★	★	★	★
	5P	★	★	★	★	★	—	—	—	—	—	—	—	—
	6P	★	★	★	★	★	—	—	★	—	★	★	★	★
	7P	★	★	★	★	★	—	—	—	—	—	—	—	—
	8P	★	★	★	★	★	—	—	★	—	★	★	★	★

★ Available
— No Plan
* e-CON Conform

Applied cable

Applicable cable is designated by its outside diameter. Please choose the appropriate connector from the outside diameter of cable to be used with.

Wire Range (mm ² *)	0.1-0.5 mm ² [27-20 AWG]				
Outside Diameter	0.6 - 0.9 [.024 - .035]	0.9 - 1.0 [.035 - .039]	1.0 - 1.15 [.039 - .045]	1.15 - 1.35 [.045 - .053]	1.35 - 1.60 [.053 - .063]
Plug HSG Color					
Part Number	3-1473562-X	1-1473562-X	1473562-X	2-1473562-X	4-1473562-X
Socket HSG Color					
Part Number		1-1746741-X	1746741-X	2-1746741-X	4-1746741-X
Insulator Material	PVC/PE				

How to choose the appropriate connector

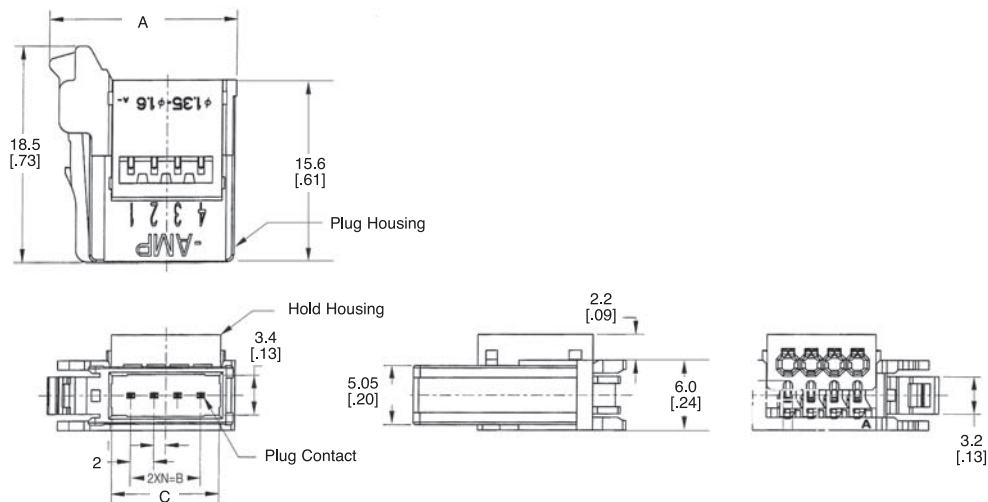
Please find the wire diameter in the above table and locate the appropriate connector part number. All wire needs to be tested for termination with the connector. Further detailed information is available from Technical Support.

*When 0.08 mm² [29 AWG] wire is to be used, please contact Technical Support.

Note: All part numbers are RoHS Compliant.

Plug Connectors

x-1473562-x
-3 to -8 shows No. of Positions
Shows wire range: Blank- Yellow,
1- Red, 2- Blue, 3- Orange, 4- Green

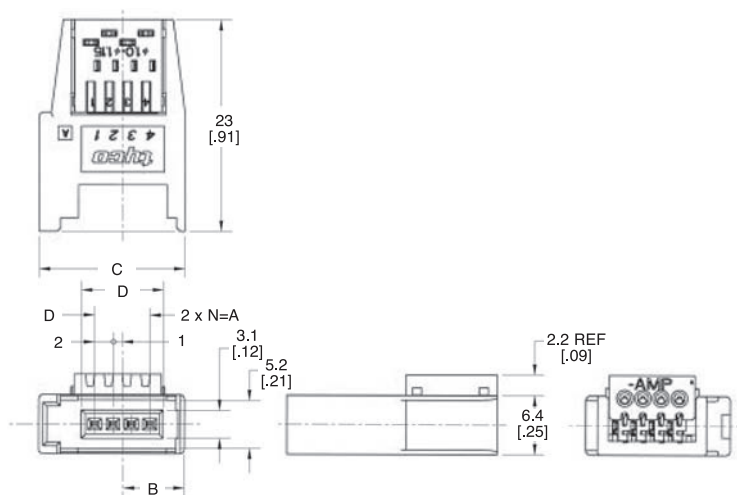


No. of Positions	Dimensions				Part Number				
	N	A	B	C	Hold Housing Color				
					Yellow	Red	Blue	Orange	Green
3	2 [.08]	14.1 [.56]	4 [.16]	7.2 [.28]	1473562-3	1-1473562-3	2-1473562-3	3-1473562-3	4-1473562-3
4	3 [.12]	16.1 [.63]	6 [.24]	9.2 [.36]	1473562-4	1-1473562-4	2-1473562-4	3-1473562-4	4-1473562-4
5*	5 [.20]	20.1 [.79]	10 [.39]	13.2 [.52]	1473562-5	1-1473562-5	2-1473562-5	3-1473562-5	4-1473562-5
6	5 [.20]	20.1 [.79]	10 [.39]	13.2 [.52]	1473562-6	1-1473562-6	2-1473562-6	3-1473562-6	4-1473562-6
7*	7 [.28]	24.1 [.95]	14 [.55]	17.2 [.68]	1473562-7	1-1473562-7	2-1473562-7	3-1473562-7	4-1473562-7
8	7 [.28]	24.1 [.95]	14 [.55]	17.2 [.68]	1473562-8	1-1473562-8	2-1473562-8	3-1473562-8	4-1473562-8

*The 5-position and the 7-position assemblies do not have contacts at the circuit number 6 and 8, respectively.
Note: All part numbers are RoHS Compliant.

Socket Connectors

x-1746741-x
-3 to -8 shows No. of Positions
Shows wire range: Blank- Yellow,
1- Red, 2- Blue, 4- Green

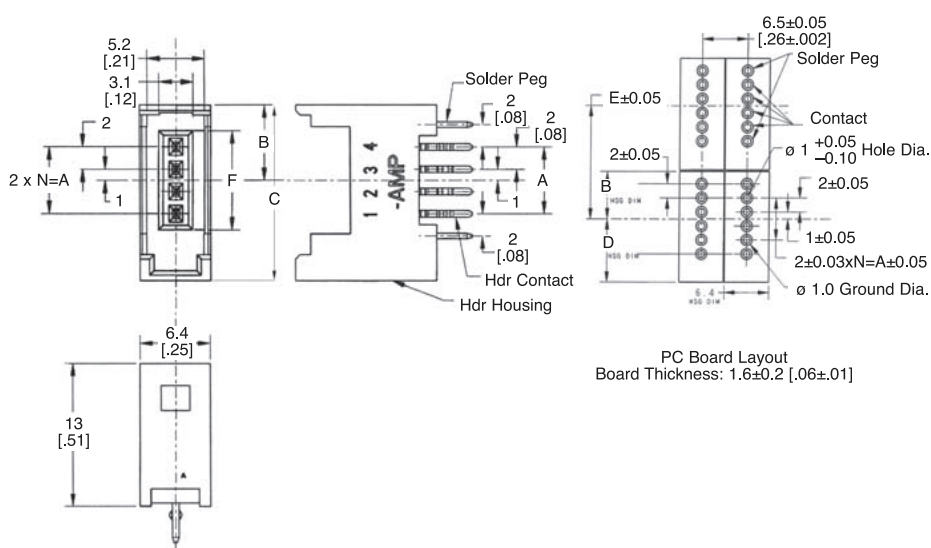


No. of Positions	Dimensions					Part Number			
	N	A	B	C	D	Hold Housing Color			
						Yellow	Red	Blue	Green
3	2 [.08]	4 [.16]	5.75 [.23]	13.8 [.54]	6.9 [.27]	1746741-3	1-1746741-3	2-1746741-3	4-1746741-3
4	3 [.12]	6 [.24]	6.75 [.27]	15.8 [.62]	8.9 [.35]	1746741-4	1-1746741-4	2-1746741-4	4-1746741-4
6	5 [.20]	10 [.39]	8.75 [.35]	19.8 [.78]	12.9 [.51]	1746741-6	1-1746741-6	2-1746741-6	4-1746741-6
8	7 [.28]	14 [.55]	10.75 [.42]	23.8 [.94]	16.9 [.67]	1746741-8	1-1746741-8	2-1746741-8	4-1746741-8

Note: All part numbers are RoHS Compliant.

Board Mount Headers 1-Row Vertical Type

1473565-x
T
-3 to -8 shows No. of Positions

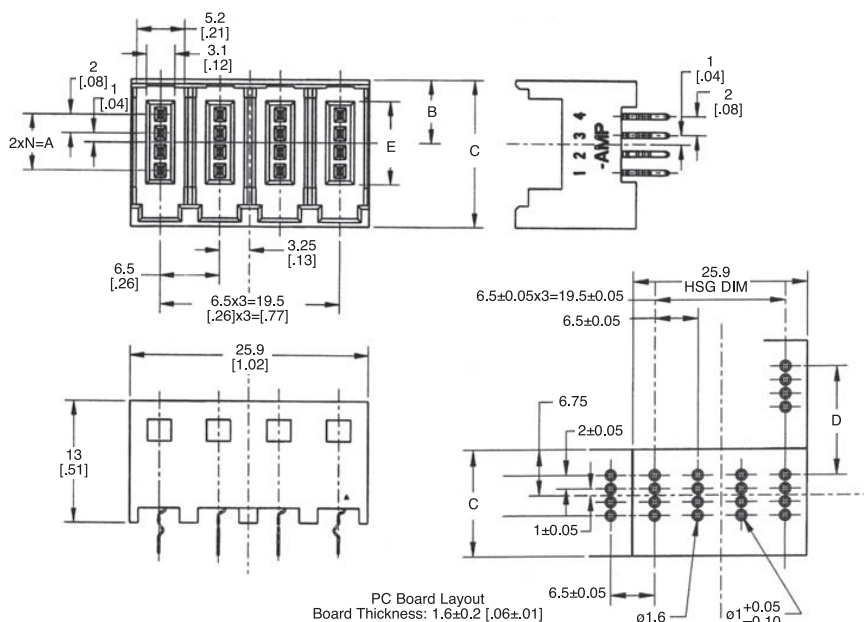


No. of Positions	Dimensions							Part Number
	N	A	B	C	D	E	F	
3	2 [.08]	4 [.16]	5.75 [.23]	13.8 [.54]	8.05 [.32]	14 [.55]	6.9 [.27]	1473565-3
4	3 [.12]	6 [.24]	6.75 [.27]	15.8 [.62]	9.05 [.36]	16 [.63]	8.9 [.35]	1473565-4
5*	5 [.20]	8 [.31]	8.75 [.35]	19.8 [.78]	11.05 [.44]	20 [.79]	12.9 [.51]	1473565-5
6	5 [.20]	10 [.39]	8.75 [.35]	19.8 [.78]	11.05 [.44]	20 [.79]	12.9 [.51]	1473565-6
7*	7 [.28]	12 [.47]	10.75 [.42]	23.8 [.94]	13.05 [.51]	24 [.94]	16.9 [.67]	1473565-7
8	7 [.28]	14 [.55]	10.75 [.42]	23.8 [.94]	13.05 [.51]	24 [.94]	16.9 [.67]	1473565-8

*The 5-position and the 7-position assemblies do not have contacts at the circuit number 6 and 8, respectively.
Note: All part numbers are RoHS Compliant.

Board Mount Headers 4-Row Vertical Type

1473567-x
-3 to -4 shows No. of Positions



Drawing shows 4-position.
As to the 3-position, please confirm
with the 3-position drawing.

No. of Positions	Dimensions						Part Number
	N	A	B	C	D	E	
3	2 [08]	4 [16]	5.75 [23]	13.8 [54]	14 [55]	6.9 [27]	1473567-3
4	3 [12]	6 [24]	6.75 [27]	15.8 [62]	16 [63]	8.9 [35]	1473567-4

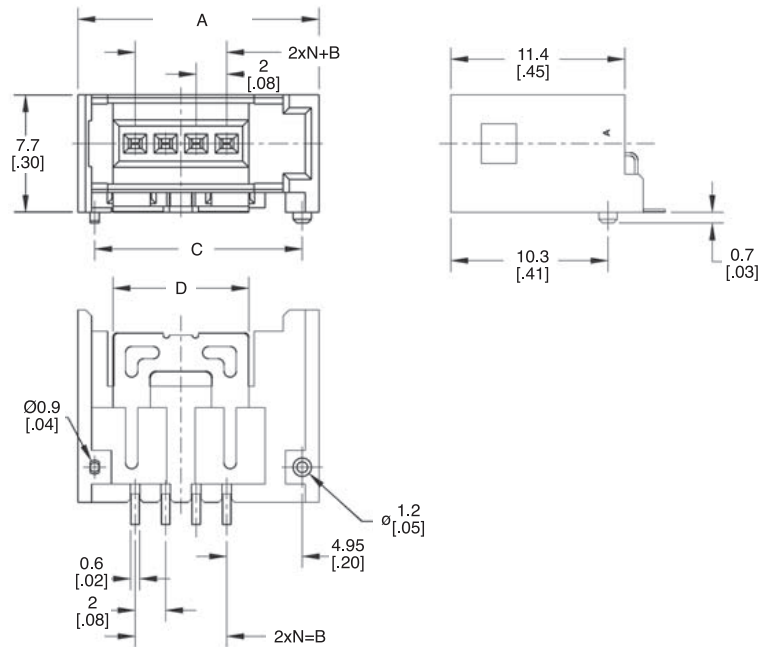
Note: All part numbers are RoHS Compliant.

Board Mount Headers SMT Horizontal Type

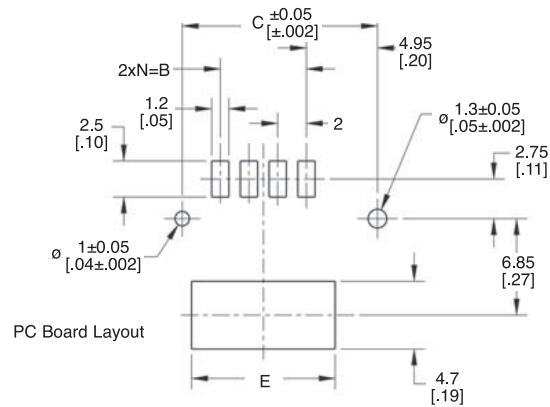
x-1565994-x

-3 to -4 shows No. of Positions

Shows Boss availability: Blank- with Boss,
1- without Boss



Drawing and PC board layout
shows Positioning Boss Holes.
Dimensions are for reference only.



No. of Positions	Dimensions						Part Number	
	N	A	B	C	D	E	with Boss	without Boss
3	2 [.08]	13.8 [.54]	4 [.16]	11.6 [.46]	6.9 [.27]	8 [.31]	1565994-3	1-1565994-3
4	3 [.12]	15.8 [.62]	6 [.24]	13.6 [.54]	8.9 [.35]	10 [.39]	1565994-4	1-1565994-4

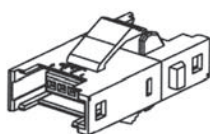
Packaged on embossed tapes suitable for automated application.
Note: All part numbers are RoHS Compliant.

Junction Box (2D Type)

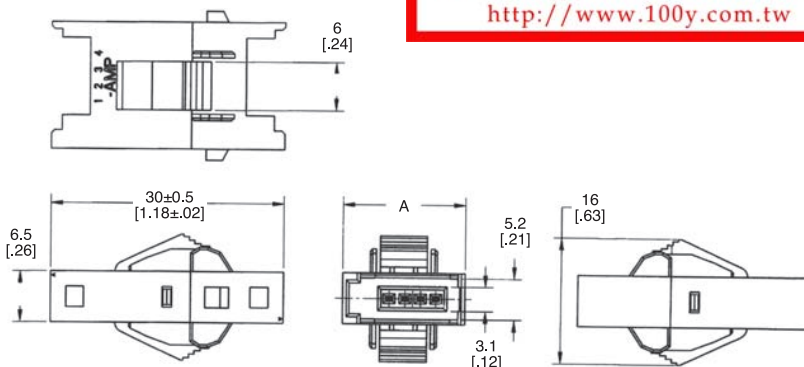
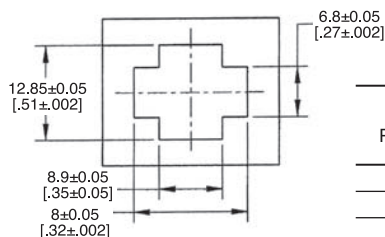
x-1473571-x
 -3 to -8 shows No. of Positions
 Shows connector style:
 Blank- Panel Mount Style,
 5- Free Hanging Style



Free Hanging Style



Panel Mount Style



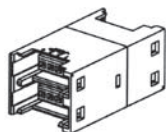
Panel Layout
 Panel Thickness 1.0 to 2.0 [.04 to .08]

No. of Positions	Dimensions		Part Number	
	A	B	Panel Mount Style	Free Hanging Style
3	13.8 [.54]	14.1 [.56]	1473571-3	5-1473571-3
4	15.8 [.62]	16.1 [.63]	1473571-4	5-1473571-4
6	19.8 [.78]	20.1 [.79]	1473571-6	5-1473571-6
8	23.8 [.94]	24.1 [.95]	1473571-8	5-1473571-8

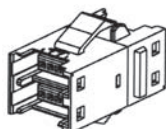
Note: All part numbers are RoHS Compliant.

Junction Box (4D Type)

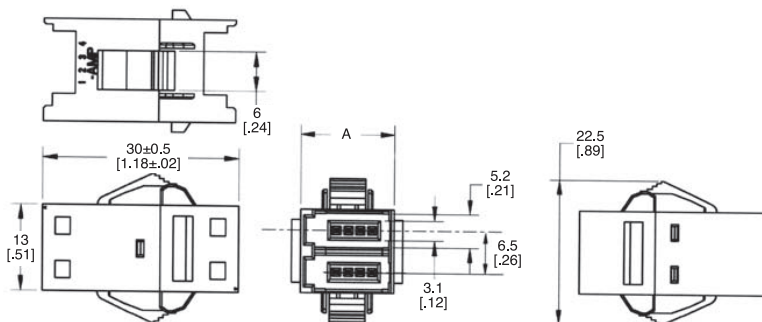
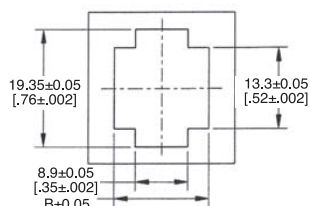
x-1473574-x
 -3 to -4 shows No. of Position
 Shows connector style:
 Blank- Panel Mount Style,
 5- Free Hanging Style



Free Hanging Style



Panel Mount Style



Panel Layout
 Panel Thickness 1.0 to 2.0 [.04 to .08]

No. of Positions	Dimensions		Part Number	
	A	B	Panel Mount Style	Free Hanging Style
3	13.8 [.54]	14.1 [.56]	1473574-3	5-1473574-3
4	15.8 [.62]	16.1 [.63]	1473574-4	5-1473574-4

Note: All part numbers are RoHS Compliant.

Note: The Junction Box with 4 connector interfaces enables 3 outputs by 1 input. 4 interfaces are commoned as per the drawing.

