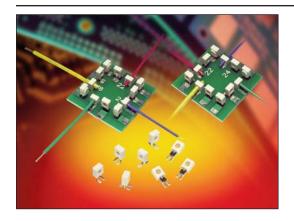
# Single Tine PTH 18-24 AWG: WTB

# A KYOCERA GROUP COMPANY

9176-600



The market and applications for simple and reliable discrete Wire-to-Board (WTB) connectors continue to evolve. Developed for harsh industrial and automotive applications, Insulation Displacement Connectors (IDC) have been used in hundreds of applications connecting wires to PCB's from transportation wiring to every day LED lighting and smart meter/sensor connections. Size, performance and simplicity have been the key factors for selecting this connector when long term reliability is critical.

This single contact version of the proven 9176 family of connectors is the first in Plated Through Hole (PTH) termination. While supporting all of the features and benefits from the SMT offering, this connector provides a new option for a small, cost effective and high performance WTB solution.

#### **APPLICATIONS**

- Machine Controls: motors, drives, solenoids, sensors, fans and pumps
- Commercial Buildings: controls, security, fire and sensors
- Smart Grid: meters, breakers and panels
- SSL/LED: bulbs, fixtures, signage and streetlights
- Application notes: reference 201-01-142

#### FEATURES AND BENEFITS

- IDC contact provides a gas-tight connection to the PCB for long term reliability
- Plastic cap retains the contact and then acts as the assembly tool to terminate the wires; no special tooling.
- Tested to automotive levels on shock, vibration and temperature cycling for reliability
- The IDC contact reduces the total applied cost versus solder or crimp processes
- Connectors are available in two configurations for maximum flexibility: End and Through Wire

### **ELECTRICAL**

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• Current Rating: See matrix below

001

• Voltage Rating: 600 VAC

### **ENVIRONMENTAL**

• Operating Temperature: -40°C to +125°C

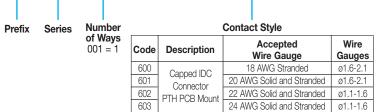
### **MECHANICAL**

- Contact Material: Phosphor Bronze
- · Contact Plating: Tin over Nickel
- Durability: 3 Cycles

X

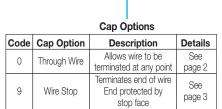
### **HOW TO ORDER**

9176



60X







6

### **CURRENT RATING**

18AWG	20AWG	22AWG	24AWG	
9A	8A	6A	5A	



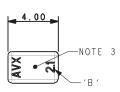


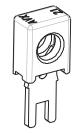
# **Single Tine PTH** 18-24 AWG: WTB

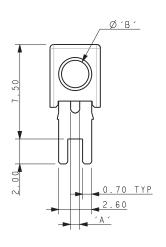
9176-600

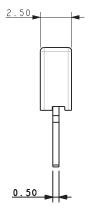


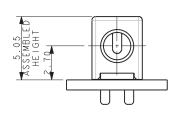
# 18-24 AWG 1 WAY PTH CONNECTOR **THROUGH WIRE CAPPED**







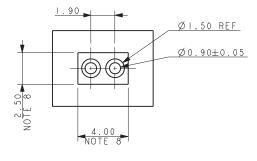




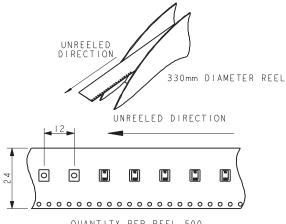
Code	Accepted Wire Gauge	Α	Wire Insulation	В
600	18 AWG Stranded	0.74	Ø 1.6-2.1	2.1
601	20 AWG Solid or Stranded	0.60	Ø 1.6-2.1	2.1
602	22 AWG Solid or Stranded	0.47	Ø 1.1-1.6	1.6
603	24 AWG Solid or Stranded	0.37	Ø 1.1-1.6	1.6



# SUGGESTED PCB LAYOUT



### **PACKING DETAILS**



### QUANTITY PER REEL 500

#### NOTES:

- 1. 1 WAY CONNECTOR FOR PTH WIRE TO BOARD CONNECTION, PRE-ASSEMBLED THROUGH WIRE CAP, CODE SEE PAGE 1.
- CONTACT/CAP TO MATCH 20AWG-24AWG SOLID AND STRANDED WIRES, 18AWG WILL ONLY ACCEPT STRANDED WIRES, SEE TABLE.
- 3. FLAT FACE ON TOP OF CAP TO AID PICK AND PLACE ASSEMBLY, MAXIMUM DIAMETER 1.8MM.
- 4. FOR FULL PRODUCT SPECIFICATION ON STANDARD CONNECTORS REFER TO ELCO SPEC 201-01-163.
- ASSEMBLY PROCEDURE, REFER TO APPLICATION NOTES 201-01-142.
- 6. GENERAL TOLERANCE ±0.20 UNLESS STATED.
- 7. PACKED IN TAPE AND REEL, QUANTITY PER REEL 500.
- CONNECTOR OUTLINE.
- CONTACT MATERIAL: TIN PLATED COPPER ALLOY.
- 10. INSULATION MATERIAL: HIGH TEMPERATURE NYLON, GLASS FILLED, UL94 V-O. COLOR REFER TO PAGE 1.

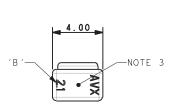


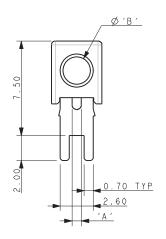
# Single Tine PTH 18-24 AWG: WTB

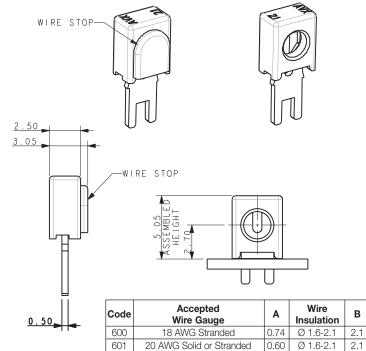
9176-600



# 18-24 AWG 1 WAY PTH CONNECTOR WIRE STOP CAPPED







### SUGGESTED PCB LAYOUT

0.47

0.37

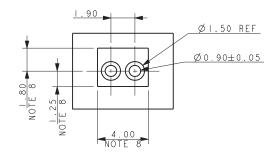
Ø 1.1-1.6

Ø 1.1-1.6 1.6

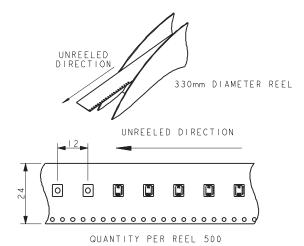
1.6

22 AWG Solid or Stranded

24 AWG Solid or Stranded







#### NOTES:

- 1 WAY CONNECTOR FOR PTH WIRE TO BOARD CONNECTION, PRE-ASSEMBLED WIRE STOP CAP, CODE SEE PAGE 1.
- CONTACT/CAP TO MATCH 20AWG-24AWG SOLID AND STRANDED WIRES, 18AWG WILL ONLY ACCEPT STRANDED WIRES, SEE TABLE.
- 3. FLAT FACE ON TOP OF CAP TO AID PICK AND PLACE ASSEMBLY, MAXIMUM DIAMETER 1.8MM.
- 4. FOR FULL PRODUCT SPECIFICATION ON STANDARD CONNECTORS REFER TO ELCO SPEC 201-01-163.
- 5. ASSEMBLY PROCEDURE, REFER TO APPLICATION NOTES 201-01-142.
- 6. GENERAL TOLERANCE ±0.20 UNLESS STATED.

602

- 7. PACKED IN TAPE AND REEL, QUANTITY PER REEL 500.
- 8. CONNECTOR OUTLINE.
- 9. CONTACT MATERIAL: TIN PLATED COPPER ALLOY.
- 10. INSULATION MATERIAL: HIGH TEMPERATURE NYLON, GLASS FILLED, UL94 V-O. COLOR REFER TO PAGE 1.
- 11. WIRE STOP CAP PROTECTS END OF WIRE.

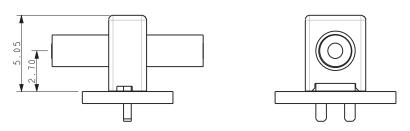


18-24 AWG: WTB

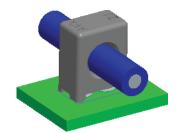


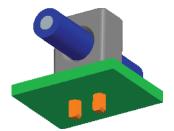
9176-600

# **18-24 AWG ASSEMBLED CAPPE PTH CONNECTORS**

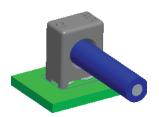


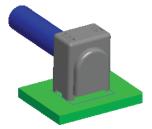
**NOMINAL ASSEMBLED HEIGHTS** 





**TYPICAL THROUGH WIRE ASSEMBLIES** 





**TYPICAL WIRE STOP ASSEMBLIES** 

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