

## Introduction

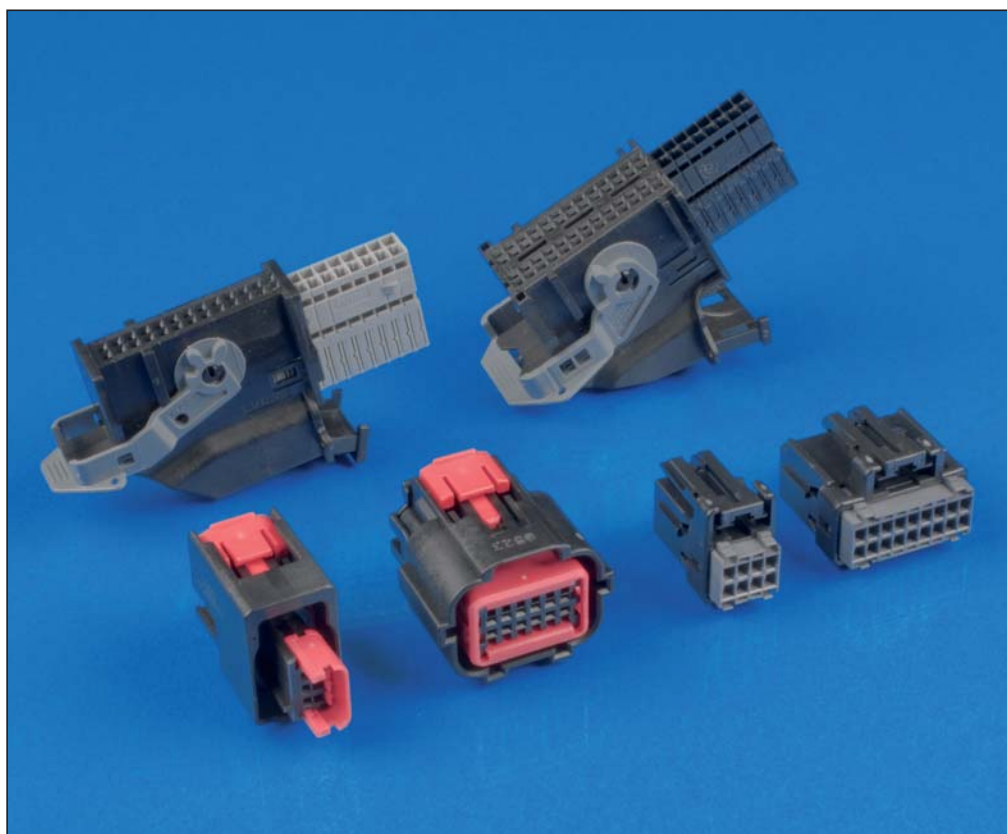


### Product Highlights

- AMP 0.64 mm system offers miniature high-density connectors for use as an I/O for automotive applications
- Sealed and unsealed; wire-to-wire, wire-to-board; wire-to-device; hand mate and lever assist
- Compact design and packaging

### Automotive Applications

- Sealed and unsealed connectors for use in airbag module
- Unsealed wire-to-device for Body Control Module
- Sealed connectors for Occupant Classification Module
- Sealed connector for use in Variable Line Pressure Module (VLP)
- Lever assist connectors for use in Climate Control, Instrument Cluster and Smart Junction Box Modules



### Features

- Small yet durable wire-to-wire and wire-to-board connectors
- Lanceless contact to eliminate tangling of harness leads
- Unsealed connectors have rear secondary lock which assures full terminal seating
- Sealed connectors use front-loaded terminal position assurance
- Off-the-shelf or application specific header designs available
- Header materials available for IR resistance and lead-free solder processing
- Receptacle connectors are provided with or without Connector Position Assurance component (CPA)
- Header designs available with thru-hole solder tails, surface mount tabs, or press fit compliant pin terminals
- Header designs available in vertical or right angle; with or without boardlocks
- Sealed and unsealed connectors exceed performance requirements of USCAR-2, -20, -21 and -25 connector design and ergonomic standards

USCAR is a trademark of United States Council for Automotive Research.

### Receptacle Contacts – Sealed and Unsealed Applications

#### Technical Features

**Terminal Bend Strength:**  
12 N

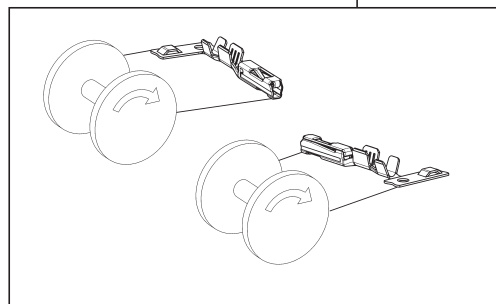
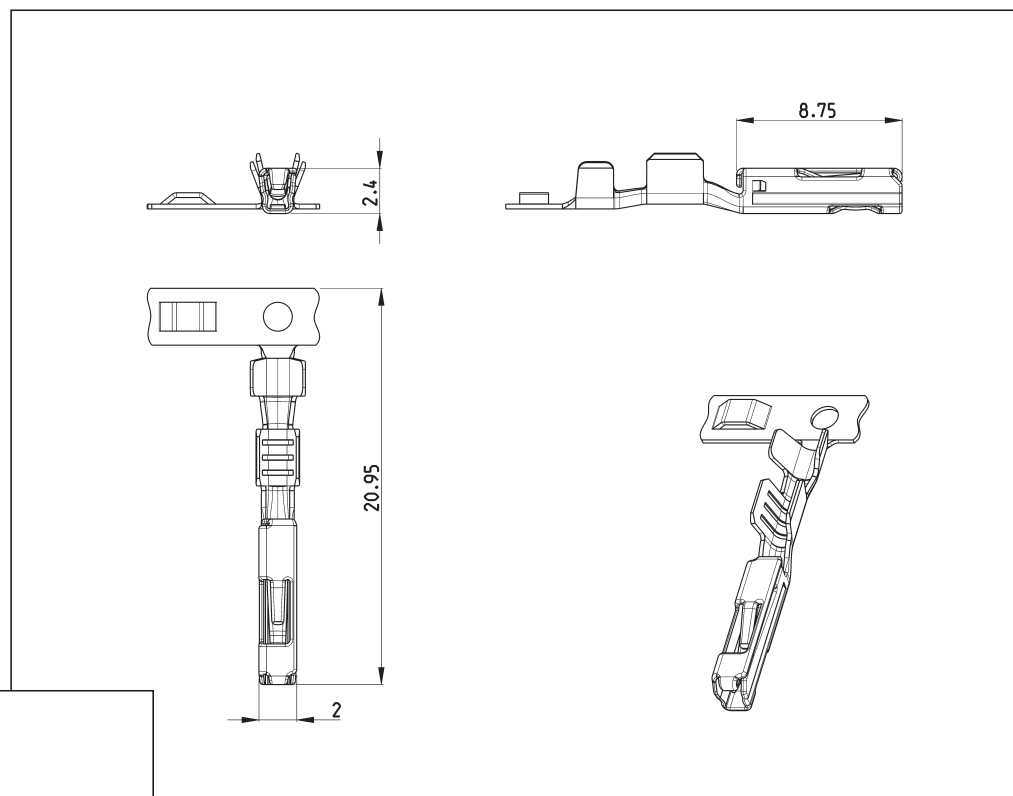
**Maximum Current Rating:**  
7.7 amps – 18 AWG,  
20 °C T-rise free-air

**Temperature Classification  
(per USCAR):**  
–40° to +125 °C (tin)  
(USCAR temperature class 3)

**Voltage Drop (Initial Interface):**  
20 milliohms max

**Product Specification:**  
108-2220

**Application Specification:**  
114-13006



Wire Size Range		Wire Insulation Diameter (mm)	Finish	Part Number Receptacle Contact		Reeling Direction
(mm <sup>2</sup> )	(AWG)			Strip Form	Loose-Piece	
0.5–0.75	18–20	1.40–2.13	Sel Gold	1326028-1	–	Figure 1 **
			Pre-Tin	638551-1		
			Sel Gold *	1326028-3		
0.35	22	1.20–1.65	Sel Gold	1326028-2		
			Pre-Tin	638551-2		
			Silver	2035275-2		
			Sel Gold *	1326028-4		
0.5–0.75	18–20	1.40–2.13	Sel Gold	1326028-5	–	Figure 2
			Pre-Tin	638551-3		
			Silver	2035275-3		
			Sel Gold *	1326028-7		
0.35	22	1.20–1.65	Sel Gold	1326028-6		
			Pre-Tin	638551-4		
			Silver	2035275-4		
			Sel Gold *	1326028-8		

\*) Same as Sel Gold part except provided with gold plate on outside of box for shunted applications.  
\*\*) Reeled for Tyco Electronics brand applicators.

**Note:** All Part Numbers are RoHS and ELV compliant.

### Male Blade Contacts – Sealed and Unsealed Applications

#### Technical Features

**Terminal Bend Strength:**  
12 N

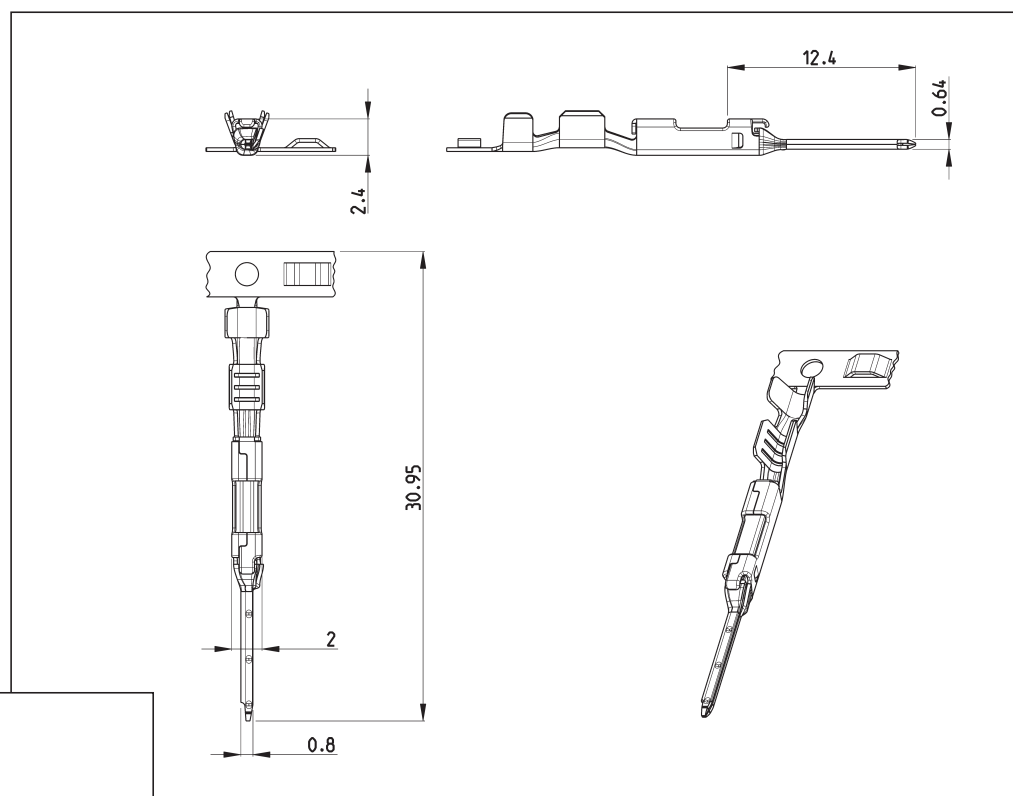
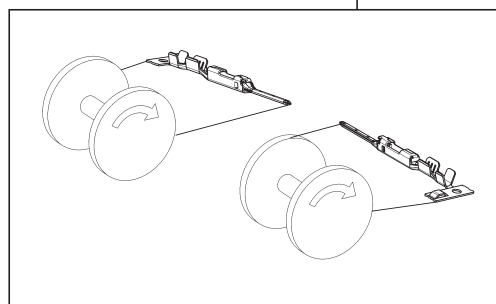
**Maximum Current Rating:**  
7.7 amps – 18 AWG,  
20 °C T-rise free-air

**Temperature Classification  
(per USCAR):**  
–40° to +125 °C (tin)  
(USCAR temperature class 3)

**Voltage Drop (Initial Interface):**  
20 milliohms max

**Product Specification:**  
108-2220

**Application Specification:**  
114-13006



Wire Size Range		Wire Insulation Diameter (mm)	Finish	Part Number Receptacle Contact		Reeling Direction
(mm <sup>2</sup> )	(AWG)			Strip Form	Loose-Piece	
0.5–0.75	18–20	1.40–2.13	Sel Gold	1488208-1	–	Figure 1**
			Pre-Tin	1488220-1		
			Sel Gold*	1488208-3		
0.35	22	1.20–1.65	Sel Gold	1488208-2		
			Pre-Tin	1488220-2		
			Sel Gold*	1488208-4		
0.5–0.75	18–20	1.40–2.13	Sel Gold	1488208-5	–	Figure 2
			Pre-Tin	1488220-3		
			Sel Gold*	1488208-7		
0.35	22	1.20–1.65	Sel Gold	1488208-6		
			Pre-Tin	1488220-4		
			Sel Gold*	1488208-8		

\*) Same as Sel Gold part except provided with gold plate on outside of box for shunted applications.

\*\*) Reeled for Tyco Electronics brand applicators.

**Note:** All Part Numbers are RoHS and ELV compliant.

### Unsealed Connector System – Shunted Receptacle Wire-to-Wire Connector System

#### Technical Features

##### No. of Positions:

4 Positions

##### Housing Materials:

Glass Filled PBT

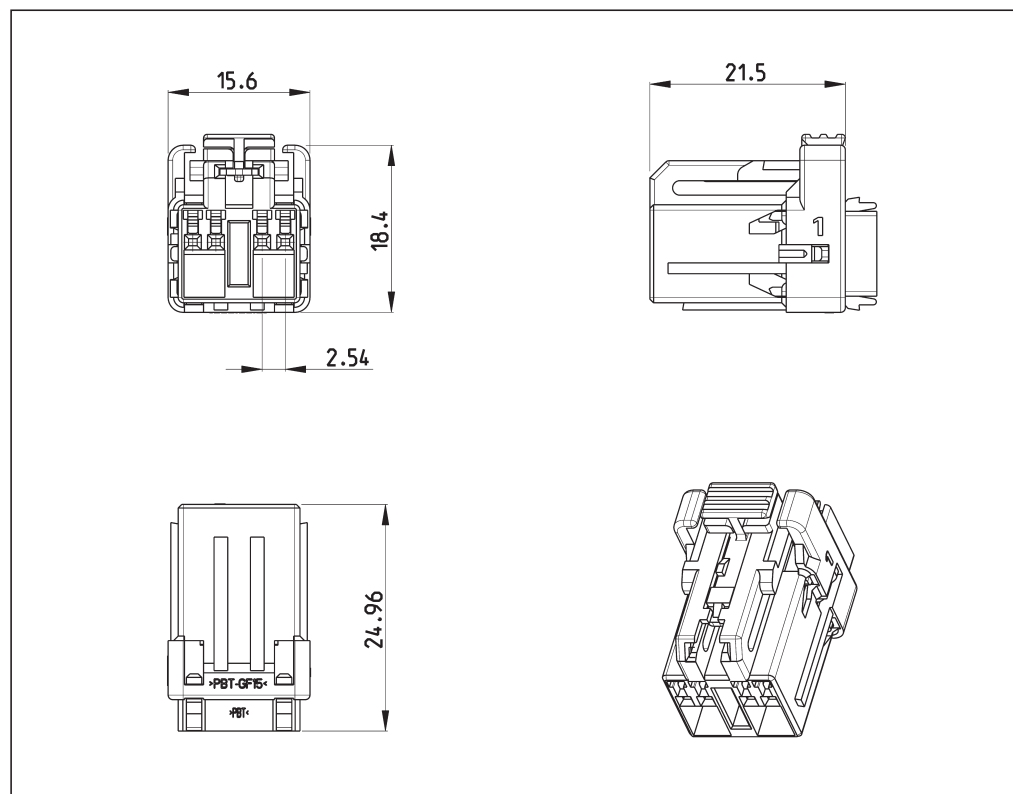
##### Wire Size Range:

18–22 AWG

##### Instruction Sheet:

408-8690

*Shunted Receptacle Housing for use in safety device applications*



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
4	A	Black	1326034-1	–	345484-1	–	1326033-1	–	–

**Note:** All Part Numbers are RoHS and ELV compliant.

### Unsealed Connector System

#### Technical Features

##### No. of Positions:

8 (2 x 4) Positions

##### Housing Materials:

Glass Filled PBT

##### Wire Size Range:

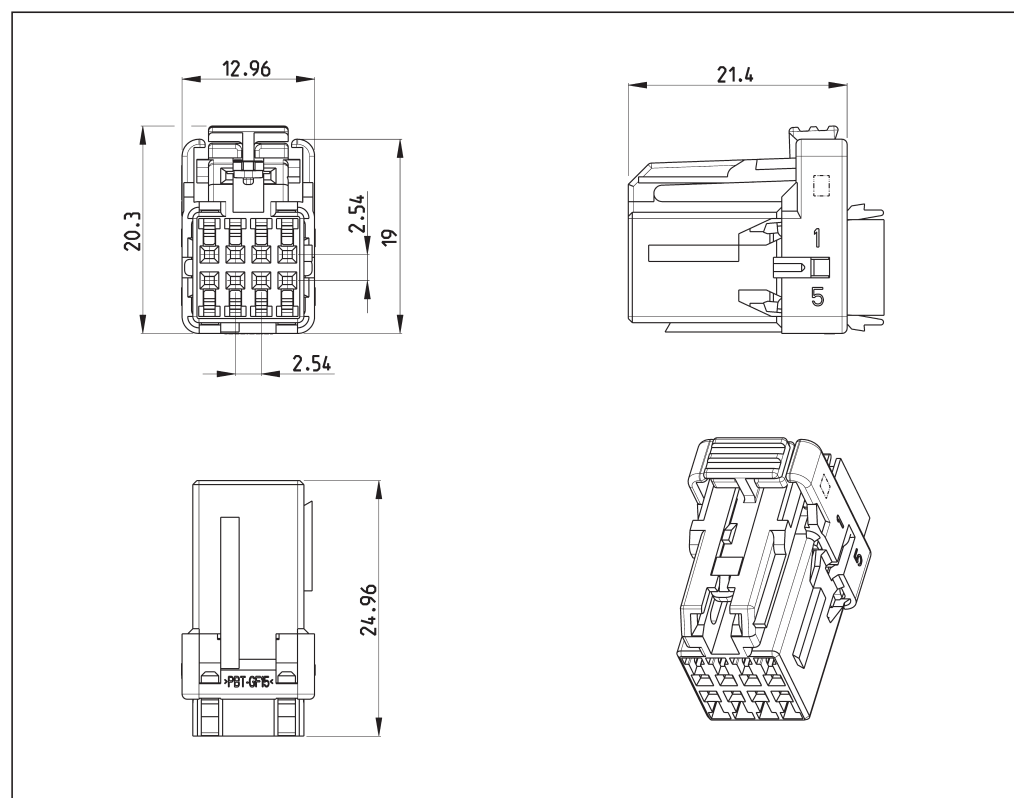
18–22 AWG

##### Instruction Sheet:

408-8690

*Optional CPA Available*

*Mating Interface Drawing  
 Available, 638654*



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
8	A	Black	638392-1	–	345484-1	–	638379-1		
	B	Yellow	638392-2	–	345484-1	–	638379-2	–	–
	C	Blue	638392-3	–	345484-1	–	638379-3		

**Note:** All Part Numbers are RoHS and ELV compliant.

### Unsealed Connector System

#### Technical Features

##### No. of Positions:

10 (2 x 5) Positions

##### Housing Materials:

Glass Filled PBT

##### Wire Size Range:

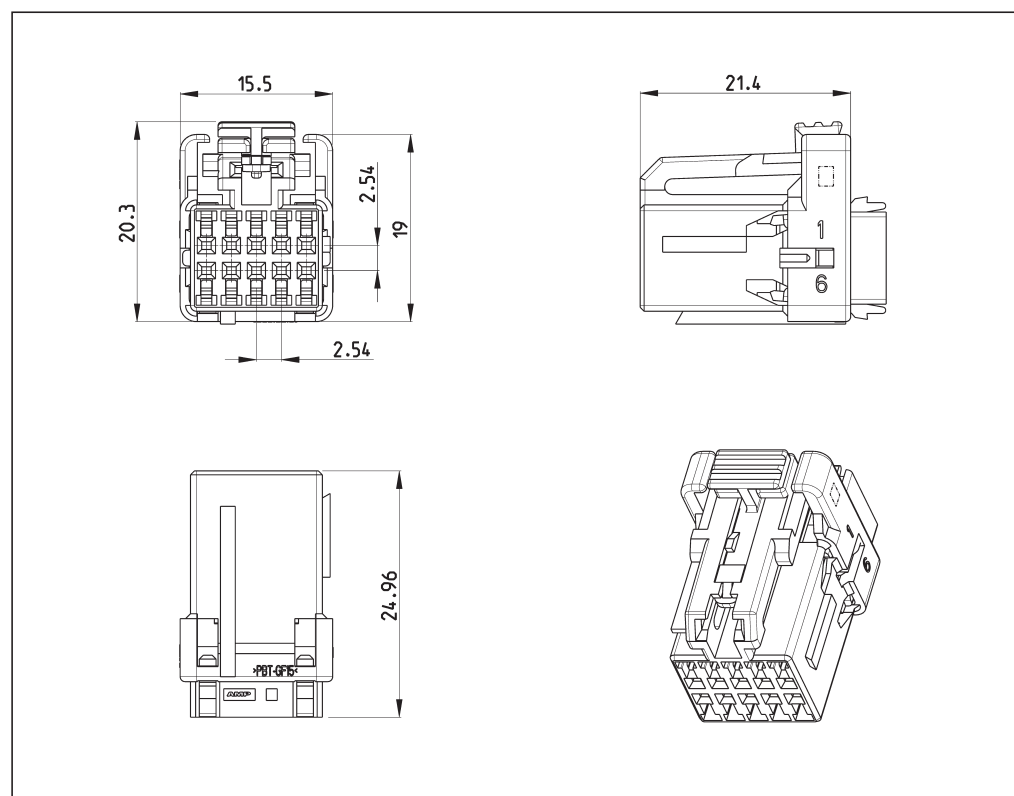
18–22 AWG

##### Instruction Sheet:

408-8690

*Optional CPA Available*

*Mating Interface Drawing  
 Available, 638857*



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
10	A	Black	638393-1	–	–	–	638380-1	638444-9	638323-1
	B	Yellow	638393-2	–	–	–	–	638444-6	638323-2
	C	Blue	638393-3	–	–	–	–	638444-7	638323-3
	D	Green	638393-4	–	–	–	–	638444-8	638323-4

**Note:** All Part Numbers are RoHS and ELV compliant.

### Unsealed Connector System

#### Technical Features

##### No. of Positions:

12 (2 x 6) Positions

##### Housing Materials:

Glass Filled PBT

##### Wire Size Range:

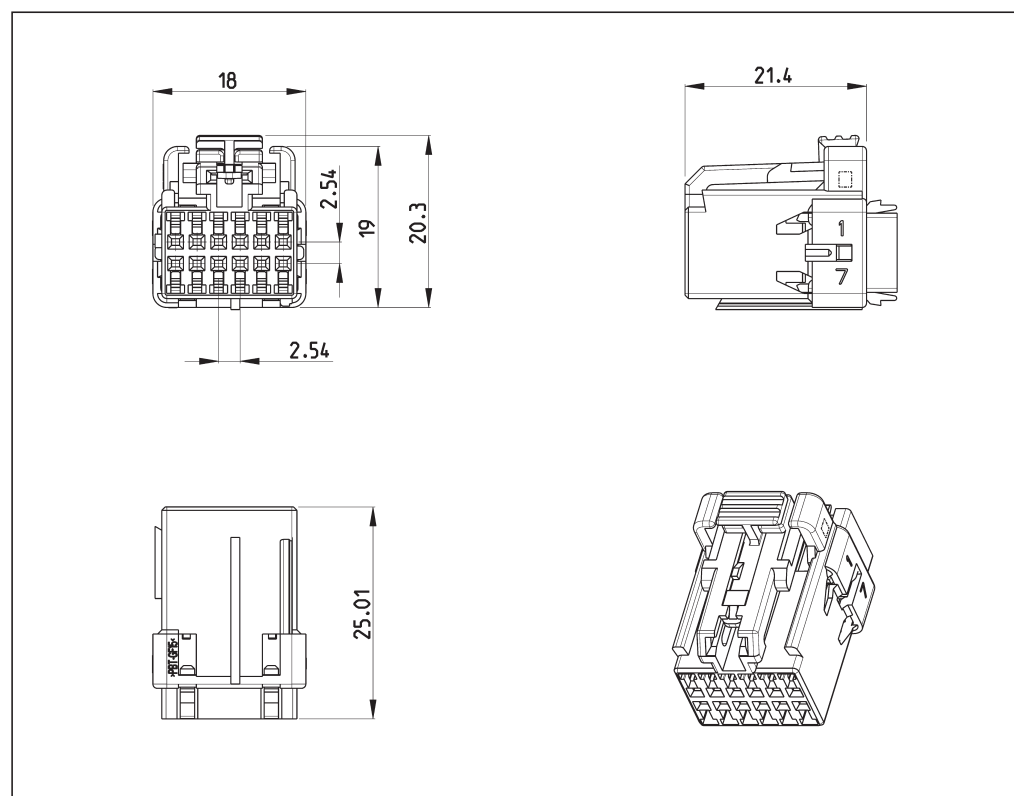
18–22 AWG

##### Instruction Sheet:

408-8690

*Optional CPA Available*

*Mating Interface Drawing  
 Available, 638858*



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
12	A	Black	638394-1						
	B	Yellow	638394-2	–	–	–	–	–	–
	C	Blue	638394-3						
	D	Green	638394-4						

**Note:** All Part Numbers are RoHS and ELV compliant.

### Unsealed Connector System

#### Technical Features

**No. of Positions:**  
 18 (2 x 9) Positions

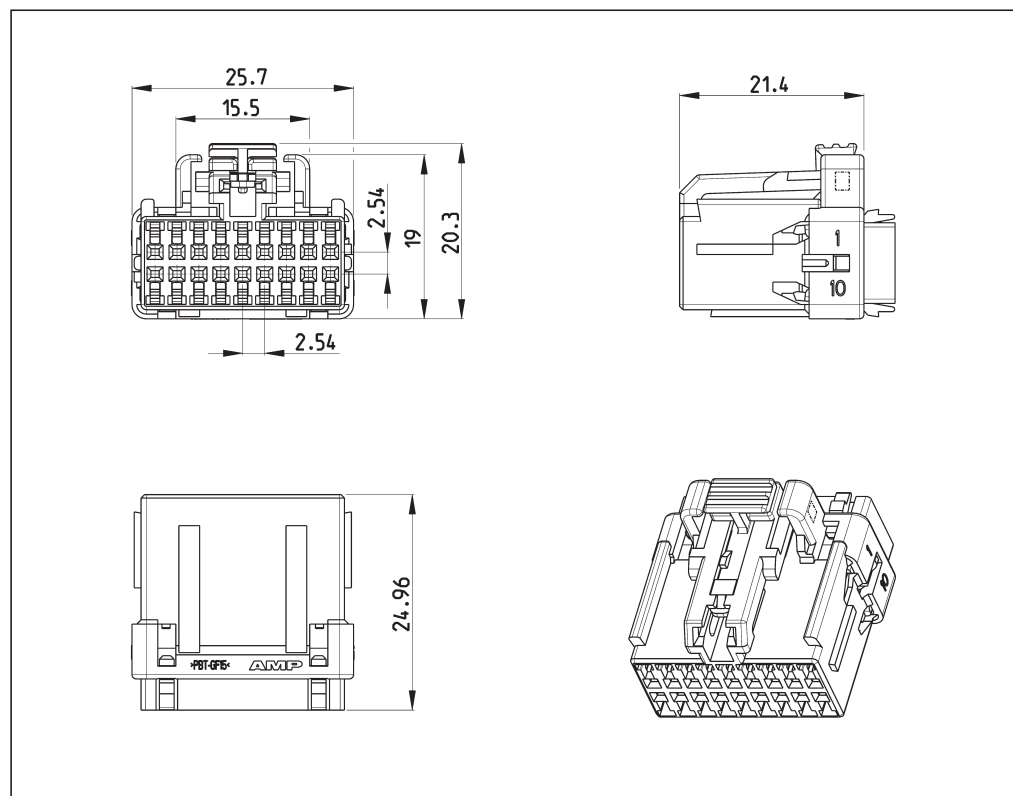
**Housing Materials:**  
 Glass Filled PBT

**Wire Size Range:**  
 18–22 AWG

**Instruction Sheet:**  
 408-8690

*Optional CPA Available*

*Mating Interface Drawing  
 Available, 1488029*



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
18	A	Black	638397-1						
	B	Yellow	638397-2						
	C	Blue	638397-3	–	–	–	–	–	–
	D	Green	638397-4						
	E	Natural	638397-5						

**Note:** All Part Numbers are RoHS and ELV compliant.



### Sealed Connector System

#### Technical Features

##### No. of Positions:

2 Positions

##### Housing Materials:

Glass Filled Nylon

##### Wire Size Range:

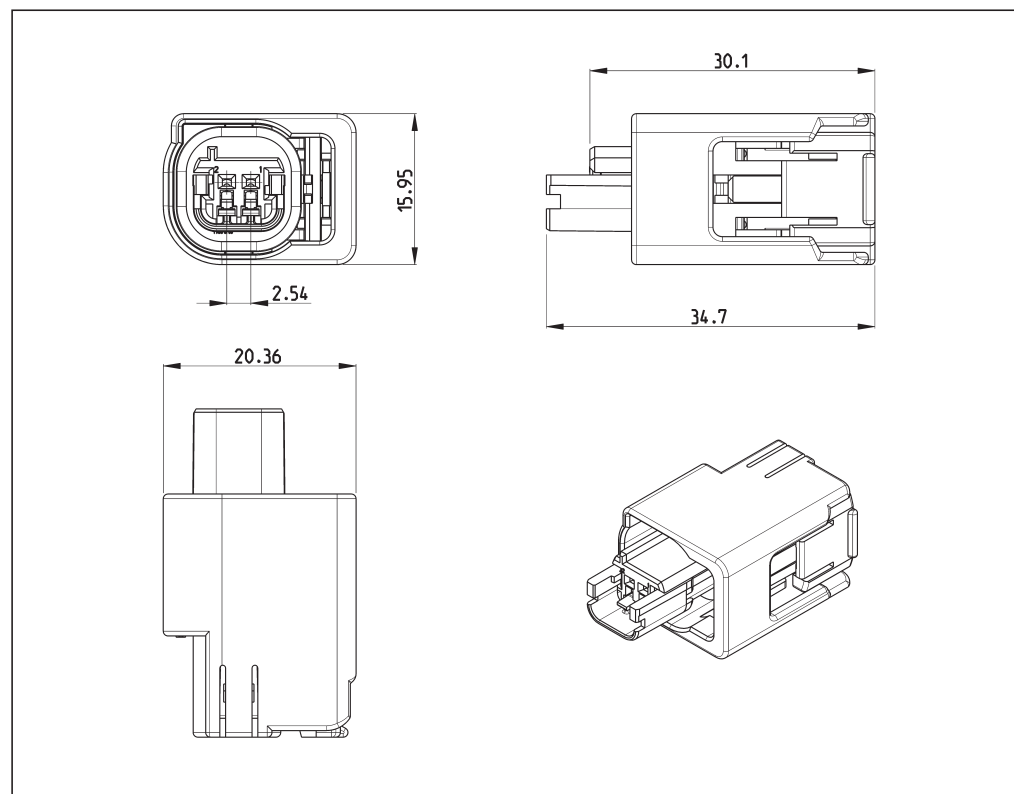
18–22 AWG

##### Instruction Sheet:

408-8630

CPA Included

Mating Interface Drawing  
 Available, 1438426-GEN



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
2	A	Black	1438426-1						
	B	Gray	1438426-3						
	C	Yellow	1438426-4	–	–	–	–	–	–
	D	Black	1438426-5						
	E	Black	1438426-6						

**Note:** All Part Numbers are RoHS and ELV compliant.

### Sealed Connector System

#### Technical Features

##### No. of Positions:

3 Positions

##### Housing Materials:

Glass Filled Nylon

##### Wire Size Range:

18–22 AWG

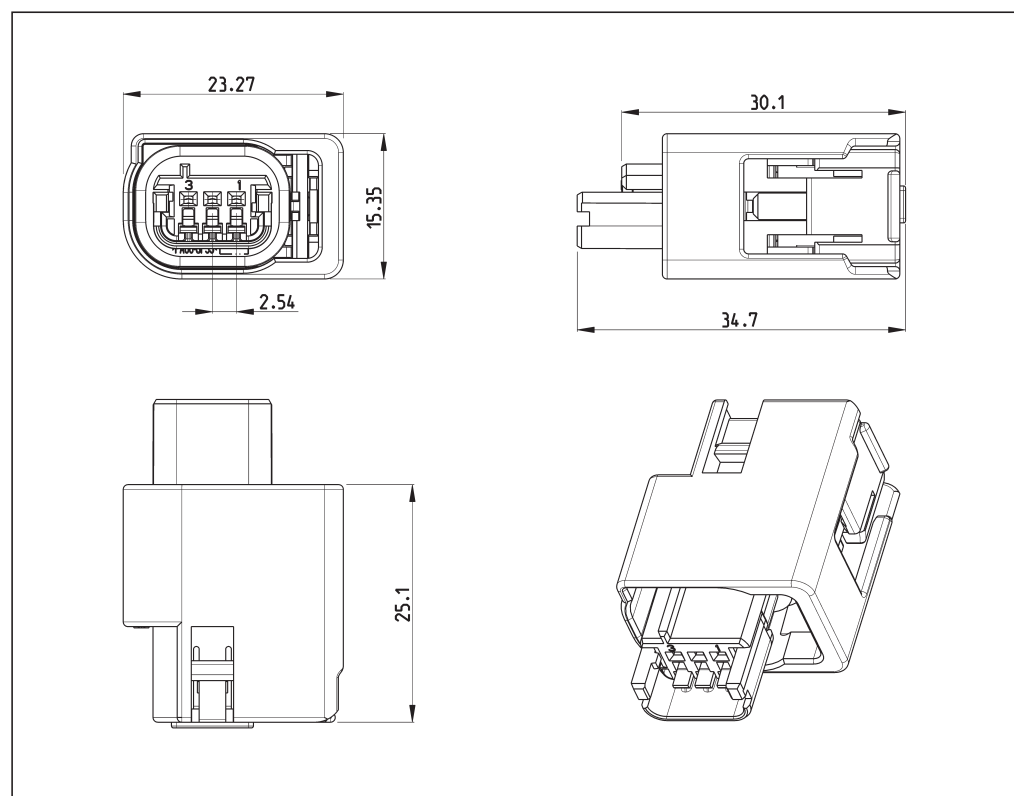
##### Instruction Sheet:

408-8630

408-8901 (PN: 1488750-1,  
-2, -3, -4, -5) Only)

CPA Included

Mating Interface Drawing  
Available, 1438454-GEN



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
3	A	Black	1438454-1	–	–	–	1488750-1		
	B	Black	1438454-3	–	–	–	1488750-1		
	C	Black	1438454-4	–	–	–	1488750-1		
	D	Black	1438454-5	–	–	–	1488750-1		
	E	Black	1438454-6	–	–	–	1488750-1		
	A	Black	1-1438454-1	No CPA	1437389-1*	–	1488750-1		

\*) Applies to Mating Cap Assembly only.

**Note:** All Part Numbers are RoHS and ELV compliant.

### Sealed Connector System

#### Technical Features

**No. of Positions:**

4 Positions

**Housing Materials:**

Glass Filled Nylon

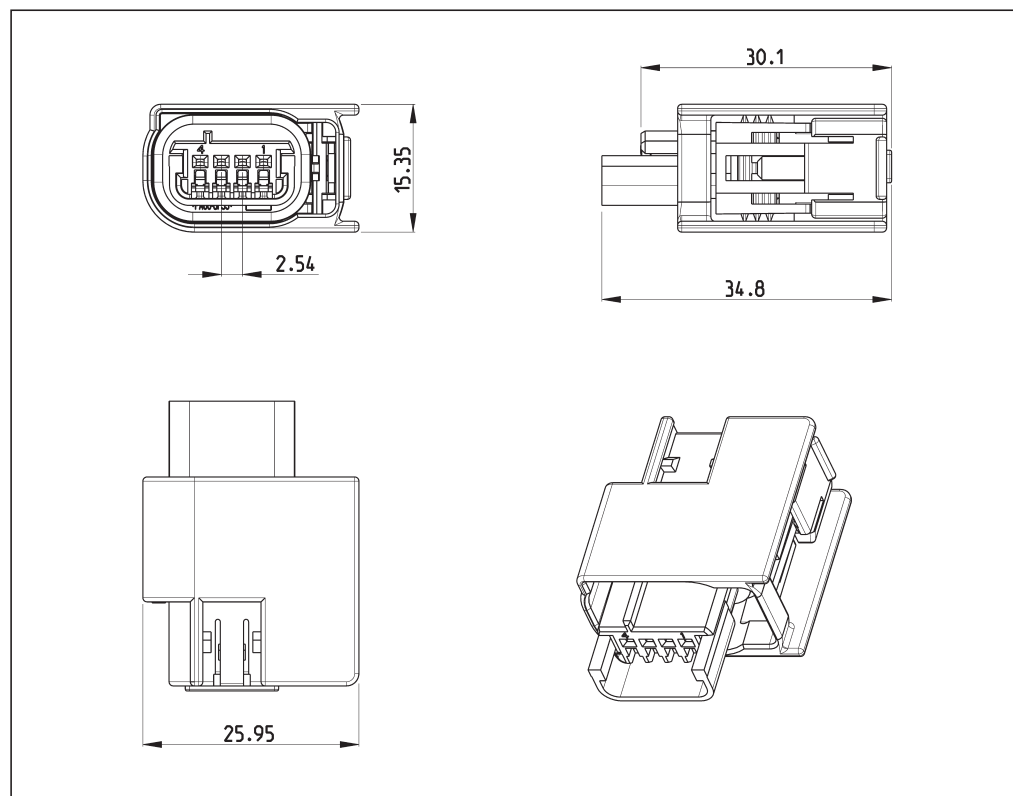
**Wire Size Range:**

18–22 AWG

**Instruction Sheet:**

408-8630

*Mating Interface Drawing  
 Available, 1488107-GEN*



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
4	A	Black	1488107-1						
	B	Black	1488107-3						
	C	Black	1488107-4	–	–	–	–	–	–
	D	Black	1488107-5						
	E	Black	1488107-6						

**Note:** All Part Numbers are RoHS and ELV compliant.

### Sealed Connector System

#### Technical Features

##### No. of Positions:

6 Positions

##### Housing Materials:

Glass Filled Nylon

##### Wire Size Range:

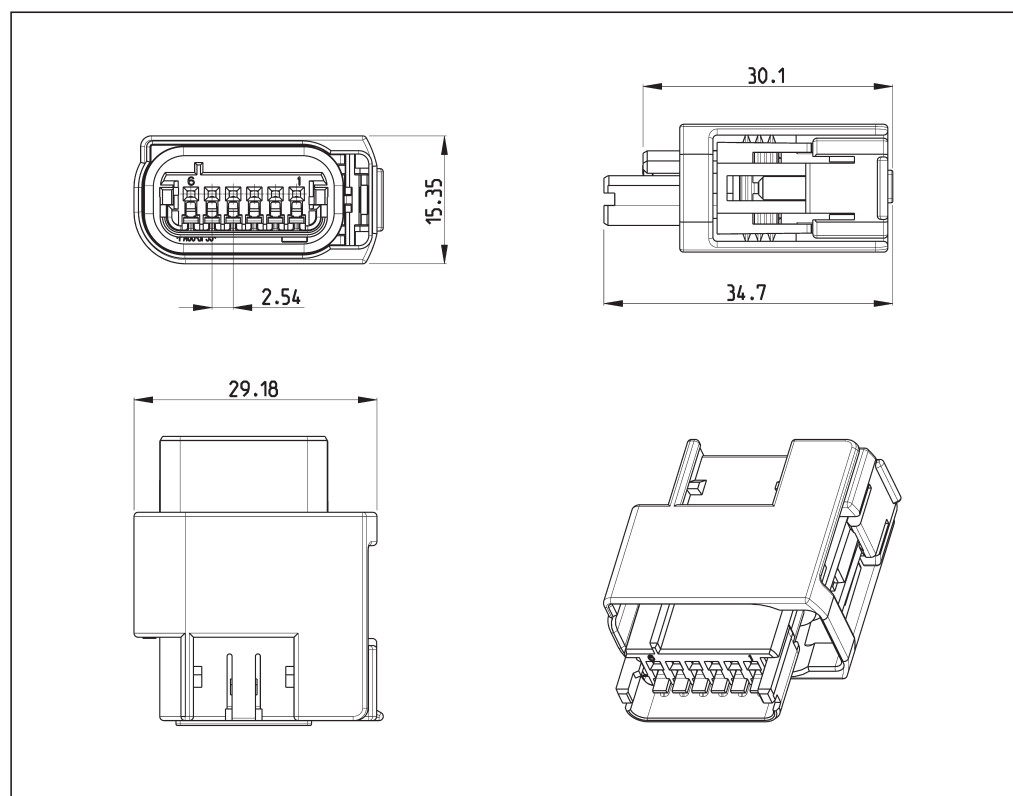
18–22 AWG

##### Instruction Sheet:

408-8630

*CPA Included*

*Mating Interface Drawing  
Available, 638514-GEN*



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
6	A	Black	638514-1	1438975					
	B	Yellow	638514-2	1438975					
	C	Black	638514-3	1438975					
	D	Black	638514-4	1438975	–	–	–	–	–
	E	Black	638514-5	1438975					
	F	Black	638514-6	1438975					
	G	Black	638514-7	1438975					

**Note:** All Part Numbers are RoHS and ELV compliant.

### Sealed Connector System

#### Technical Features

**No. of Positions:**  
10 Positions

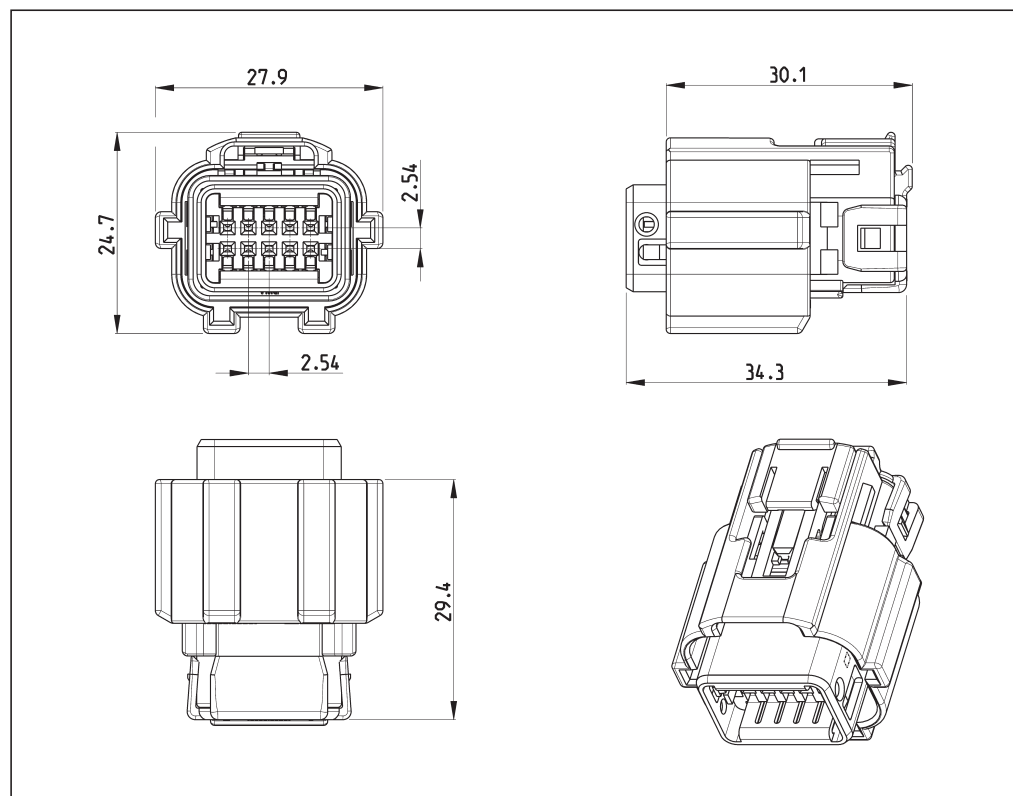
**Housing Materials:**  
Glass Filled Nylon

**Wire Size Range:**  
18–22 AWG

**Instruction Sheet:**  
408-8630

*CPA Included*

*Mating Interface Drawing  
Available, 638517-GEN*



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
10	A	Black	638517-5	–	–	–	–	2035069-1	–

**Note:** All Part Numbers are RoHS and ELV compliant.

### Sealed Connector System

#### Technical Features

**No. of Positions:**  
 12 Positions

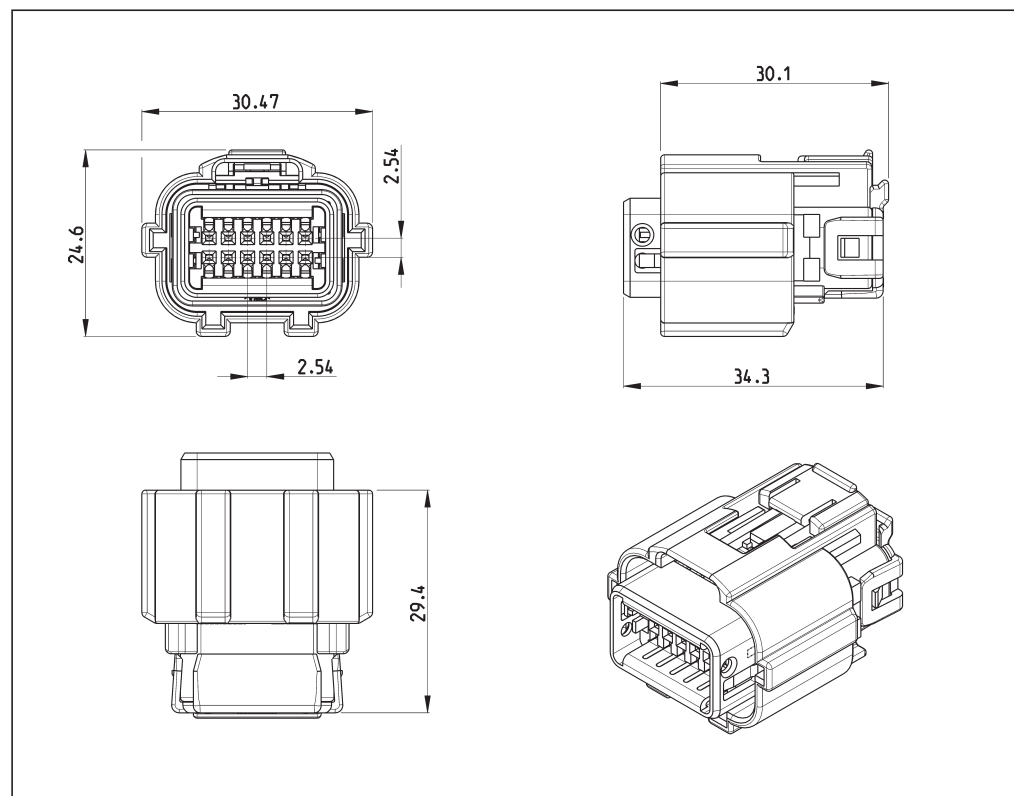
**Housing Materials:**  
 Glass Filled Nylon

**Wire Size Range:**  
 18–22 AWG

**Instruction Sheet:**  
 408-8630

*CPA Included*

*Mating Interface Drawing  
 Available, 638518-GEN*



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
12	A	Black	638518-5	–	–	–	–	–	–
	D	Black	638518-8	–	–	–	–	2035069-1	–

**Note:** All Part Numbers are RoHS and ELV compliant.

### Sealed Connector System

#### Technical Features

##### No. of Positions:

22 Positions

##### Housing Materials:

Glass Filled PBT

##### Wire Size Range:

Gold Plated Compliant Pin Leads

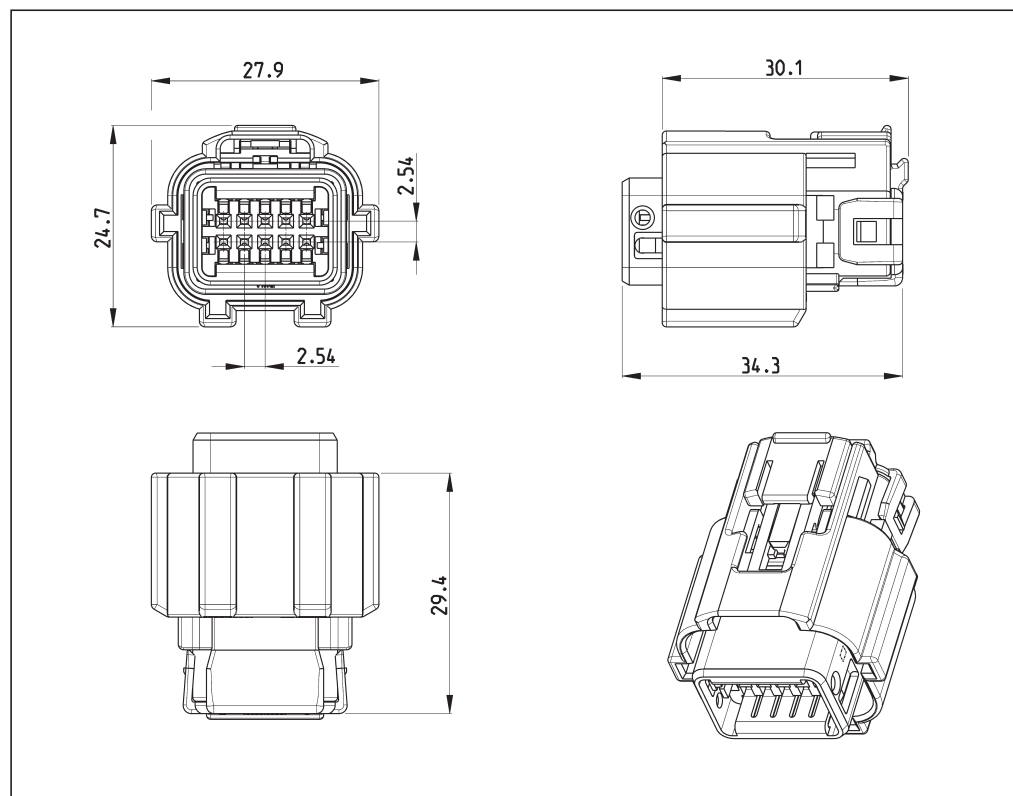
##### Application Specification:

114-13224

##### Instruction Sheet:

n/a

*Sealed dual pocket header  
with provisions for snap-fit to  
PCB cover*



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			PCB Header	PCB Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
22	–	–	2635069-1 (Right-Angle)	2035070-1	–	–	–	638517-5	638518-8

**Note:** All Part Numbers are RoHS and ELV compliant.

### Sealed Connector System

#### Technical Features

##### No. of Positions:

12 (4 + 8) Positions

##### Housing Materials:

Glass Filled Nylon

##### Wire Size Range:

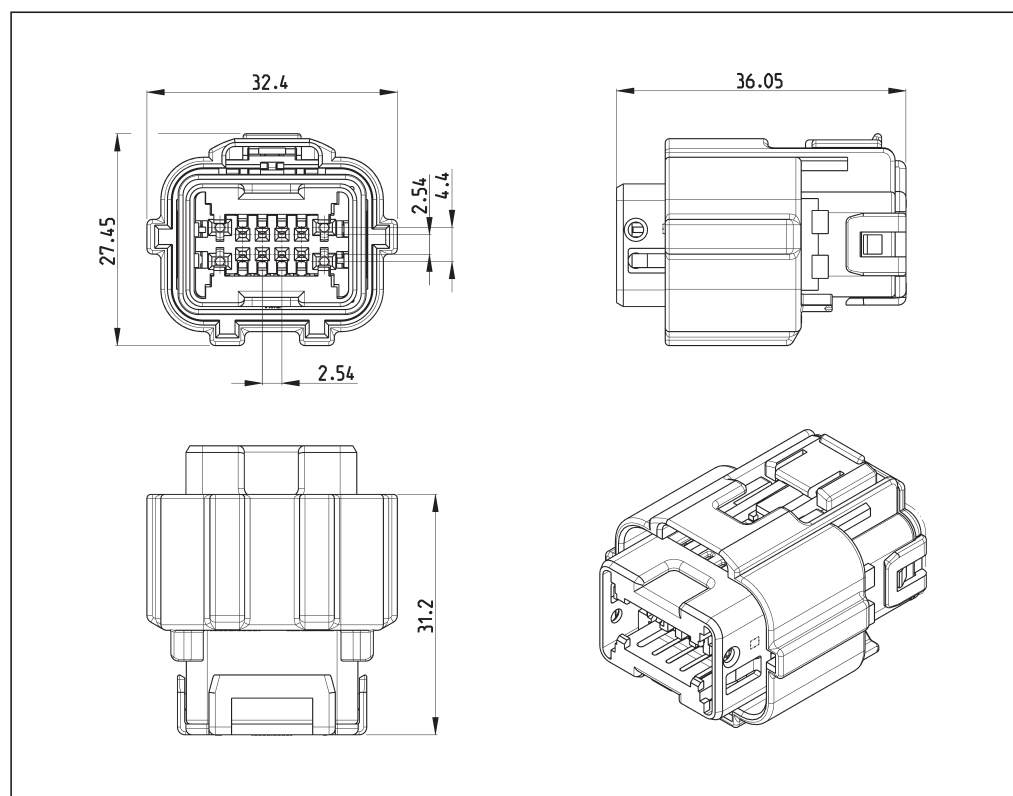
18–22 AWG

##### Instruction Sheet:

408-8630

*Hybrid Receptacle assembly accepts eight AMP 0.64 receptacle terminals and four 1.5 mm terminals*

*CPA Included*



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
12	A	Black	638939-5	–	–	–	–	638946-1	–

**Note:** All Part Numbers are RoHS and ELV compliant.



### Sealed Connector System

#### Technical Features

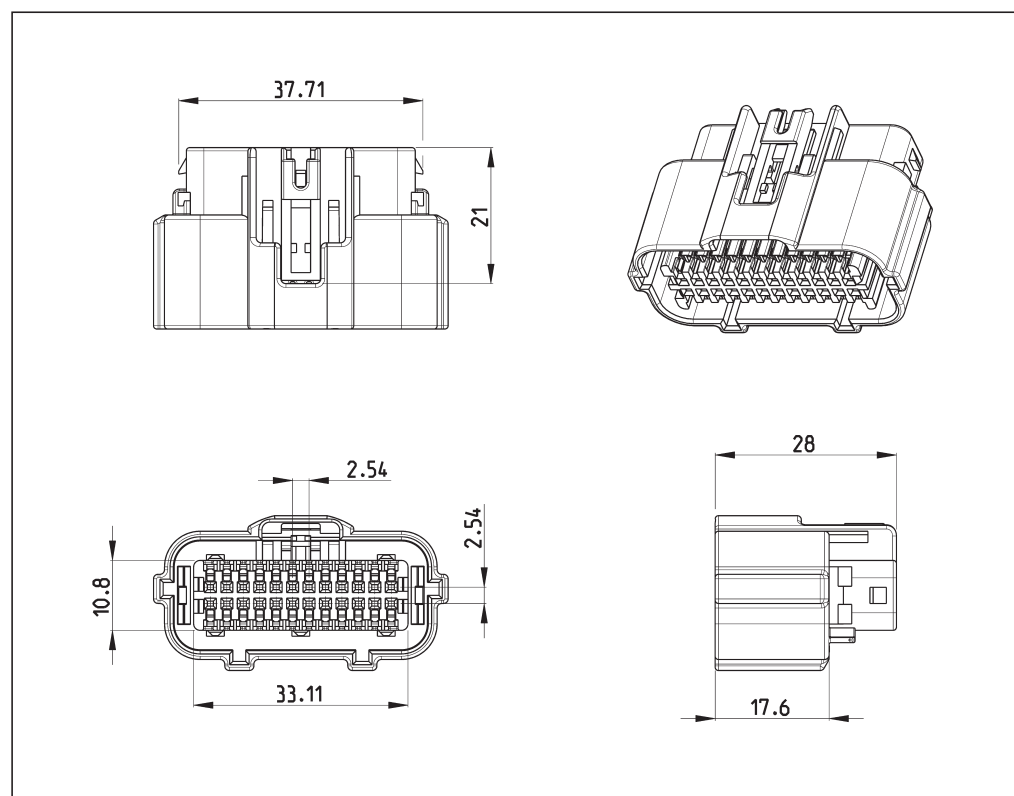
**No. of Positions:**  
 24 Positions

**Housing Materials:**  
 Glass Filled Nylon

**Wire Size Range:**  
 18–22 AWG

**Instruction Sheet:**  
 408-8630

*CPA Included*



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
24	A	Black	638848-1	–	–	–	–	638946-1	–

**Note:** All Part Numbers are RoHS and ELV compliant.

### Sealed Connector System

#### Technical Features

##### No. of Positions:

32 Positions

##### Housing Materials:

Glass filled PBT

##### Wire Size Range:

18–22 AWG

##### Product Specification:

108-2220

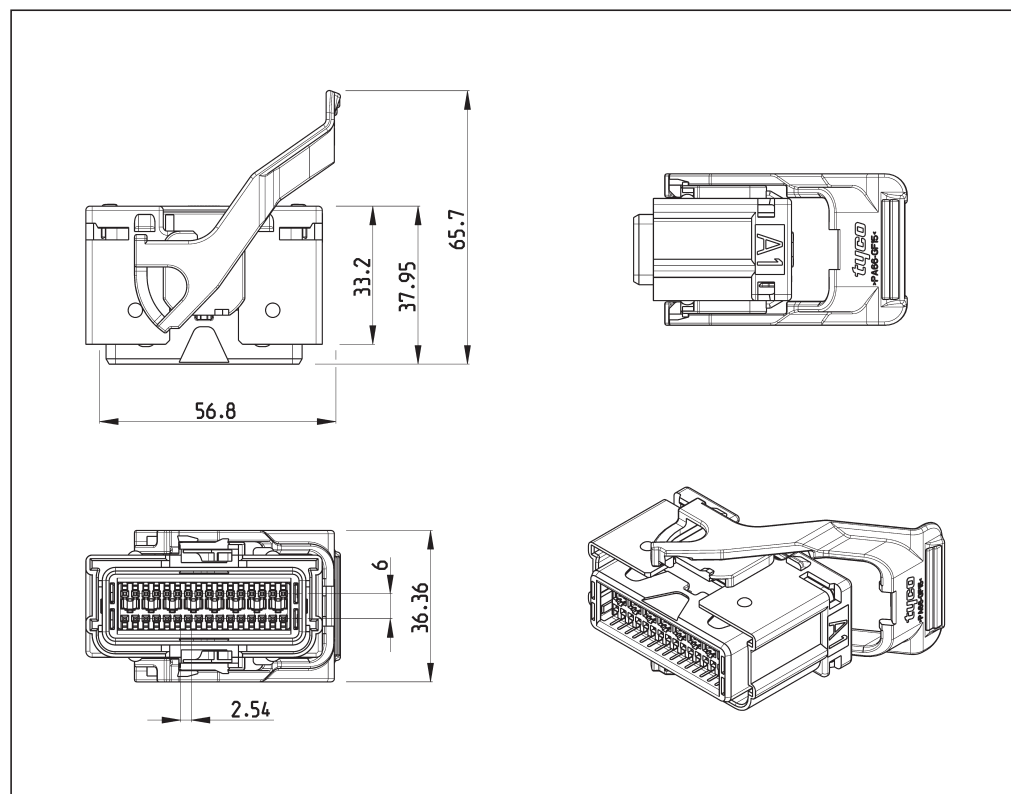
##### Application Specification:

114-13006

##### Instruction Sheet:

408-10078

*Shunted Plug Assembly – use in safety device applications*



No. of Pos.	Keying Options	Housing Color	Part Numbers					
			Receptacle Housing	Cover	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle Vertical
32	A1	Red	1438640-1	–	1438766-1			
	B1	Blue	1438640-2	–	1438766-1			
	B2	Green	1438640-3	–	1438766-1			
	A2	Purple	1438640-4	–	1438766-1			
	A1	Red	1438640-5	–	1438766-1	–	–	–
	B1	Blue	1438640-6	–	1438766-1			
	B2	Green	1438640-7	–	1438766-1			
	A2	Purple	1438640-8	–	1438766-1			
	B3	Tan	1438640-9	–	1438766-1			

**Note:** All Part Numbers are RoHS and ELV compliant.

### Lever Assist Connector (LAC) Terminal Carrier

#### Technical Features

##### No. of Positions:

18, 26, 32 Positions

##### Housing Materials:

Gas Filled Nylon

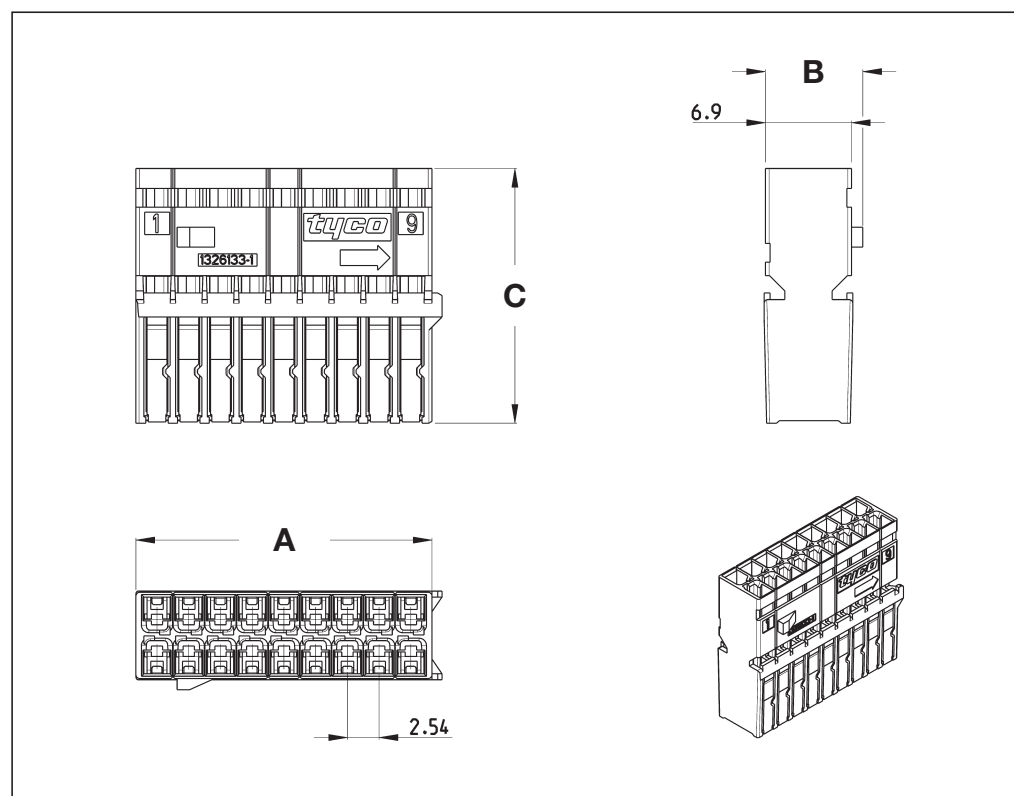
##### Wire Size Range:

18–22 AWG

##### Instruction Sheet:

408-8662

*Used with lever assist connector shields on corresponding pages*



No. of Positions	Color	Key	Part Number	Dimensions (mm)		
				A	B	C
18	Black	A	1326133-1	23.7	7.9	20.4
26	Black	A	1326042-1	33.7	7.9	20.4
26	Gray	B	1326042-2	33.7	7.9	20.4
32	Black	A	1326141-1	41.5	7.9	20.4

**Note:** All Part Numbers are RoHS and ELV compliant.

### Lever Assist Connector (LAC) Shield with Integrated Wire Routing

#### Technical Features

##### No. of Positions:

18 Positions

##### Housing Materials:

Glass Filled Nylon

##### Wire Size Range:

18–22 AWG

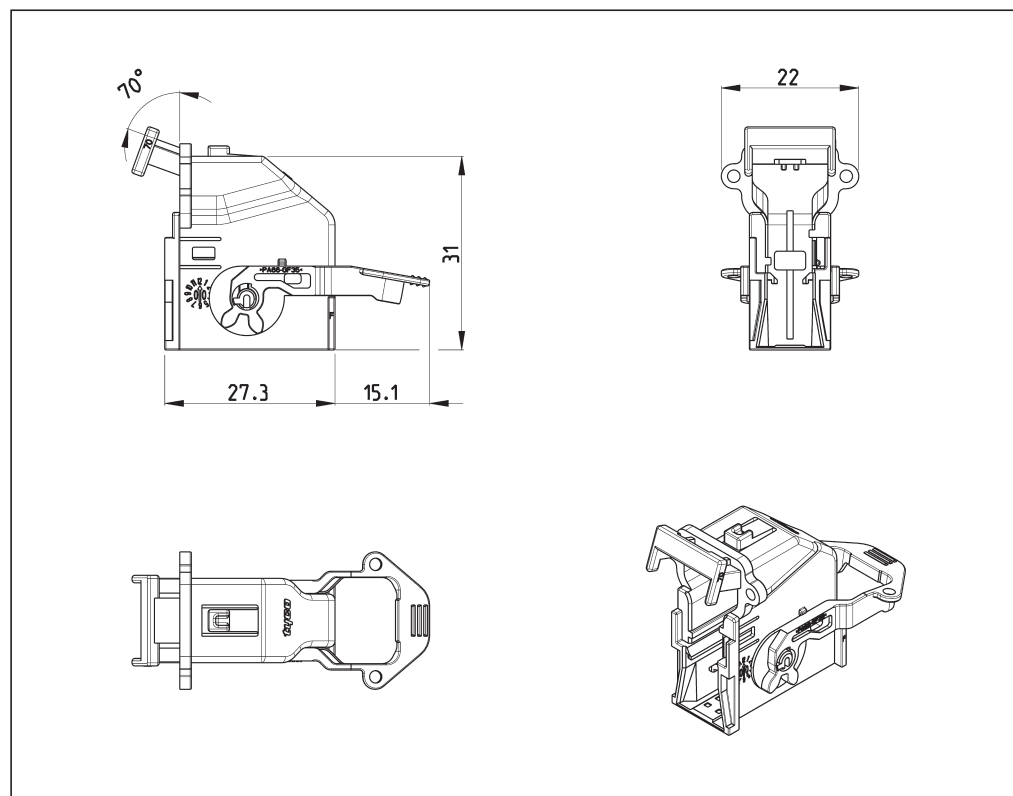
##### Application Specification:

114-13230 (Vertical Headers)

##### Instruction Sheet:

408-8662

Used with 18p terminal carrier



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Wire Exit Angle	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
18	C-F	Black	1326132-1	70°				–	1438543-1
	B-E	Natural	1326132-2	70°				–	1438543-2
	C-E	Green	1326132-4	70°				–	1438543-4
	C-F	Black	1326132-5	45°				–	1438543-1
	B-E	Natural	1326132-6	45°	–	–	–	–	1438543-2
	C-E	Green	1326132-8	45°				–	1438543-4
	C-F	Black	1326132-9	20°				–	1438543-1
	B-E	Natural	1-1326132-0	20°				–	1438543-2
	C-E	Green	1-1326132-2	20°				–	1438543-4

**Note:** All Part Numbers are RoHS and ELV compliant.

### Lever Assist Connector (LAC) Shield with Integrated Wire Routing

#### Technical Features

##### No. of Positions:

26 Positions

##### Housing Materials:

Glass Filled Nylon

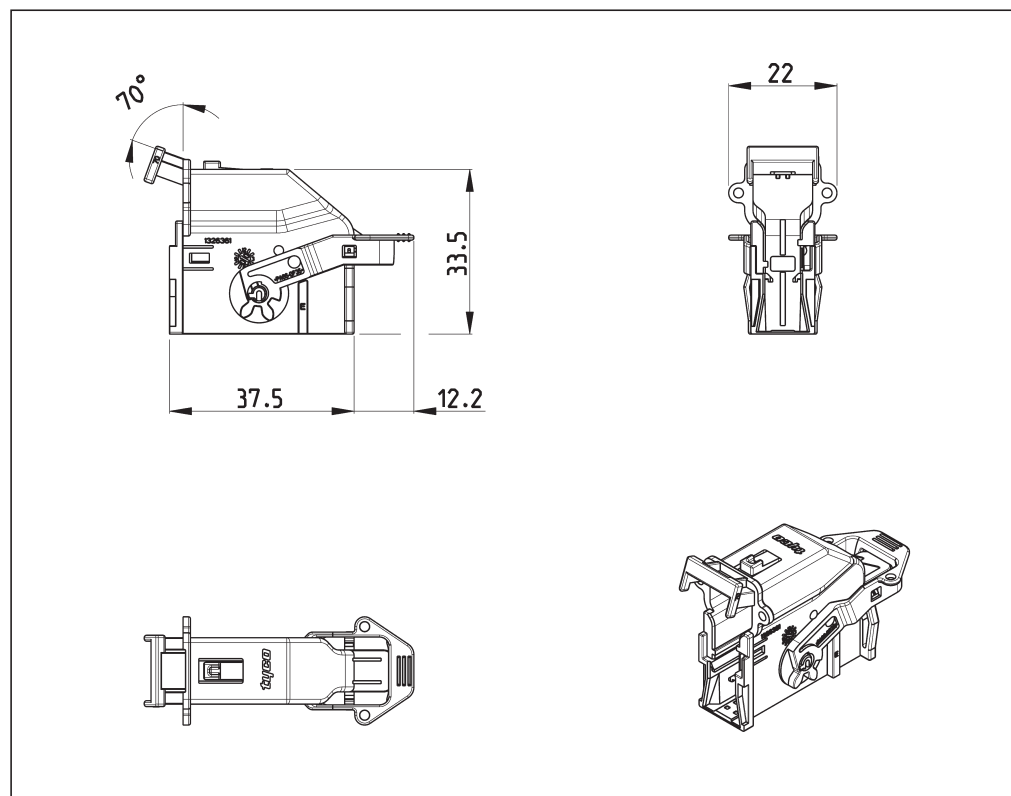
##### Wire Size Range:

18–22 AWG

##### Instruction Sheet:

408-8662

Used with 26p terminal carrier



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Wire Exit Angle	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
26	A-E	Black	1326362-1	70°	–	–	–	1456549-1	1924678-1 * 1438680-1 **
	B-E	Gray	1326362-2	70°				1456549-2	1924678-2 * 1438680-2 **
	B-F	Blue	1326362-3	70°				1456549-3	1924678-3 * 1438680-3 **
	A-E	Black	1326362-4	45°				1456549-1	1924678-1 * 1438680-1 **
	B-E	Gray	1326362-5	45°				1456549-2	1924678-2 * 1438680-2 **
	B-F	Blue	1326362-6	45°				1456549-3	1924678-3 * 1438680-3 **
	A-E	Black	1326362-7	20°				1456549-1	1924678-1 * 1438680-1 **
	B-E	Gray	1326362-8	20°				1456549-2	1924678-2 * 1438680-2 **
	B-F	Blue	1326362-9	20°				1456549-3	1924678-3 * 1438680-3 **

\*) Surface Mount Technology

\*\*) Self-tapping Type

**Note:** All Part Numbers are RoHS and ELV compliant.

### Lever Assist Connector (LAC) Shield with Integrated Wire Routing

#### Technical Features

##### No. of Positions:

32 Positions

##### Housing Materials:

Glass Filled Nylon

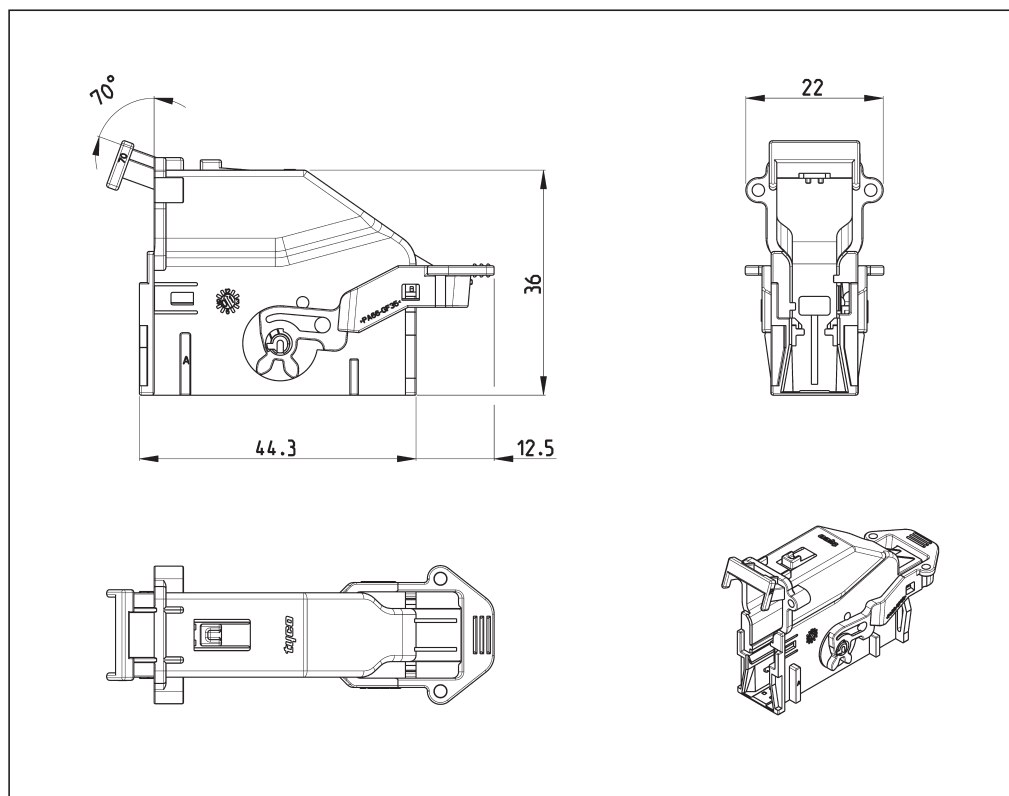
##### Wire Size Range:

18–22 AWG

##### Instruction Sheet:

408-8662

Used with 32p terminal carrier



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Wire Exit Angle	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
32	A	Gray	1326140-1	70°					
	B	Blue	1326140-2	70°					
	C	Black	1326140-3	70°					
	A	Gray	1326140-4	45°					
	B	Blue	1326140-5	45°					
	C	Black	1326140-6	45°	–	–	–	–	–
	B	Gray	1326140-7	20°					
	B	Blue	1326140-8	20°					
	C	Black	1326140-9	20°					
	A	Black	1-1326140-0	70°					

**Note:** All Part Numbers are RoHS and ELV compliant.

### Lever Assist Connector (LAC) Shield with Integrated Wire Routing

#### Technical Features

**No. of Positions:**  
 52 Positions

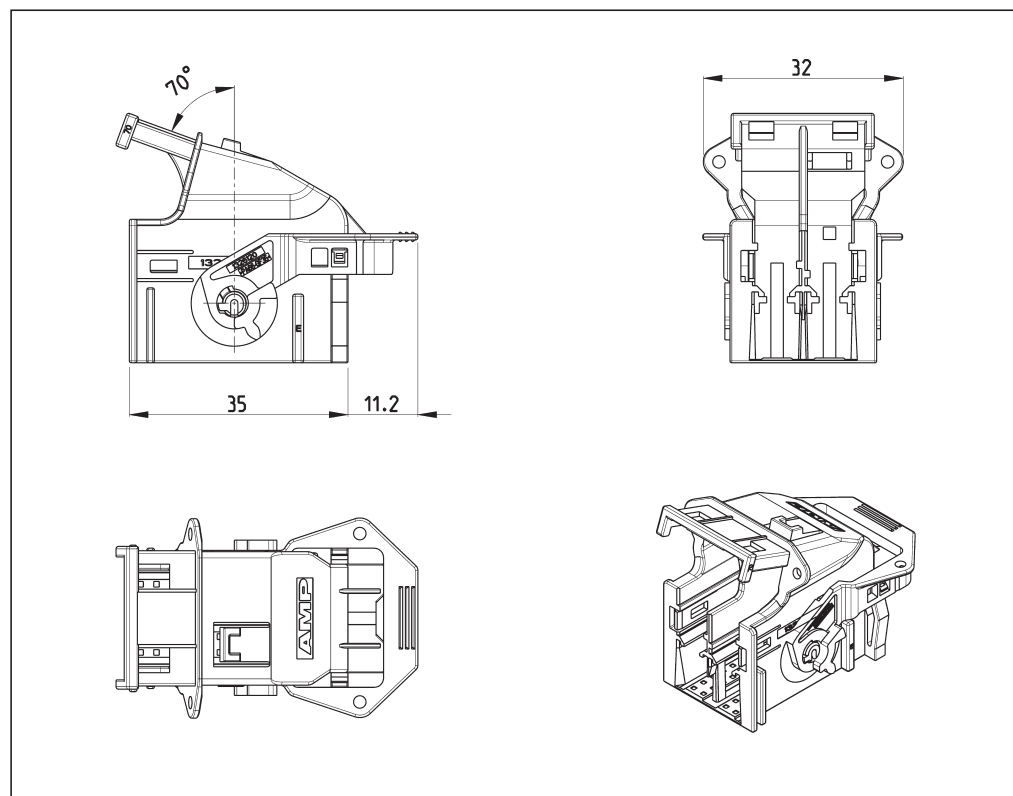
**Housing Materials:**  
 Glass Filled Nylon

**Wire Size Range:**  
 18–22 AWG

**Instruction Sheet:**  
 408-8662

*Used with two 26p terminal carriers, key A & B*

*Mating Interface Drawing Available, 1438985-GEN*



No. of Pos.	Keying Options	Housing Color	Part Numbers						
			Receptacle Housing	Wire Exit Angle	Retainer Clip	Cover and Lever	Mating Pin Housing	Mating PCB Header Right-Angle	Mating PCB Header Vertical
52	A-E	Black	1326122-1	70°	-	-	-	-	-
	B-E	Gray	1326122-2	70°					
	B-F	Blue	1326122-3	70°					
	A-E	Black	1326122-4	45°					
	B-E	Gray	1326122-5	45°					
	B-F	Blue	1326122-6	45°					

**Note:** All Part Numbers are RoHS and ELV compliant.

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**Engineering Notes**

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