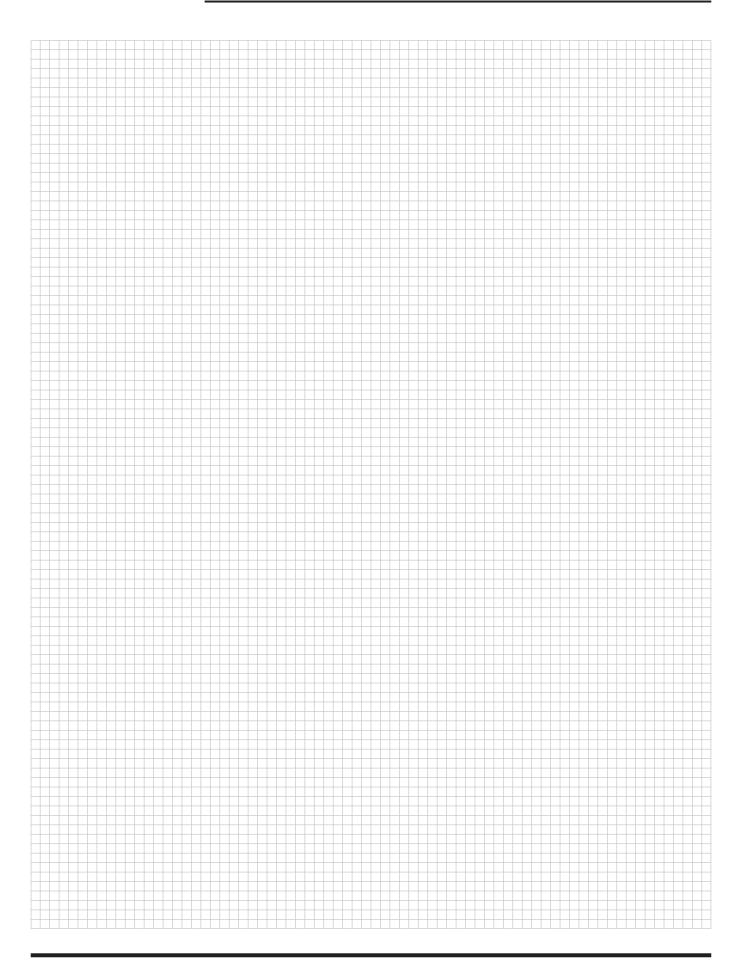


Engineering Notes



AMPSEAL Sealed Connector SeriesContact System

Section Catalog 1654285-2 Revised 4-2010 Main Catalog 1654400-1 Chapter 29 – Issued 4-2010

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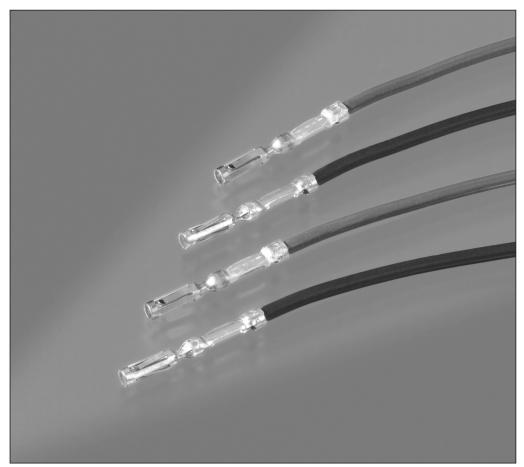












Product Features

- 1.3 mm Pin and Socket System (Lanceless)
- Socket terminals have 3 contact beams
- Wire Size Range 0.5 – 1.25 mm² (20 – 16 AWG)
- Wire Insulation 1.7-2.7 mm
- Terminal Plating Tin or Gold
- Current Rating up to 17 A (16 AWG with Gold)
- Temperature Range Gold: -40 °C to +125 °C Tin: -40 °C to +105 °C

AMPSEAL Sealed Connector Series Contact System

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Receptacle Contacts

Product Features

Contact Material:

Cu-Alloy

Contact Finish:

Tin plated, gold plated

Current Rating:

Up to 17 amps

Temperature Range:

 $-40~^{\circ}\text{C}$ to +105 $^{\circ}\text{C}$ (tin plated) $-40~^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$ (gold plated)

Wire Size Range:

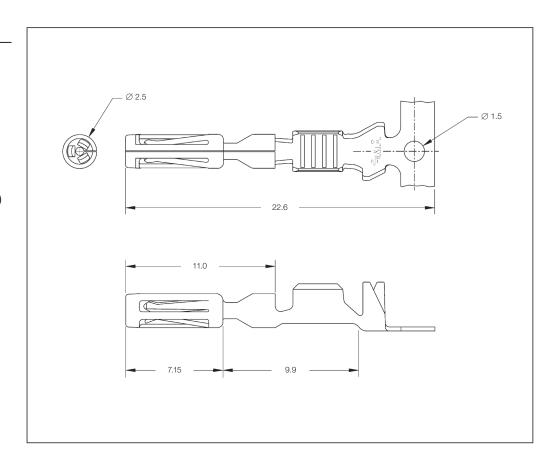
Accept 0.5-1.25 mm² (20-16 AWG) wire with insulation diameter of 1.7-2.7 mm

Product Specification:

108-1329

Application Specification:

114-16016



Receptacle Contacts

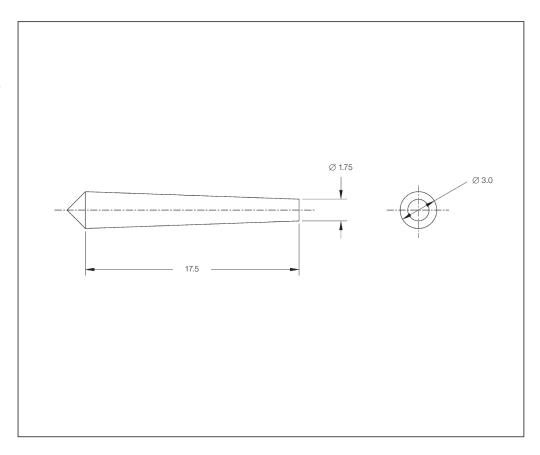
Wire		Insulation	Material	Part Numbers						
Range (mm²) (AWG)		Diameter (mm)	and Finish	Strip Form	Package Quantity	Loose- Piece	Package Quantity	Applicator	Hand Tool	
0.5-1.25	0.5-1.25 20-16	1.7–2.7	Cu-Alloy, pre-tin plated	770520-1	5,000	770854-1	1,000	567333-2	58440-1	
0.5-1.25	20-10		Cu-Alloy, selective gold plated	770520-3	5,000	770854-3	1,000	307333-2	J044U-1	

AMPSEAL Sealed Connector SeriesContact System

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AMPSEAL Seal Plug

All circuits are sealed by a diaphragm in the rubber wire seal. During plug connector assembly, the diaphragm is pierced as the contact passes through it. Unused circuit cavities, unless accidentally perforated will remain sealed.

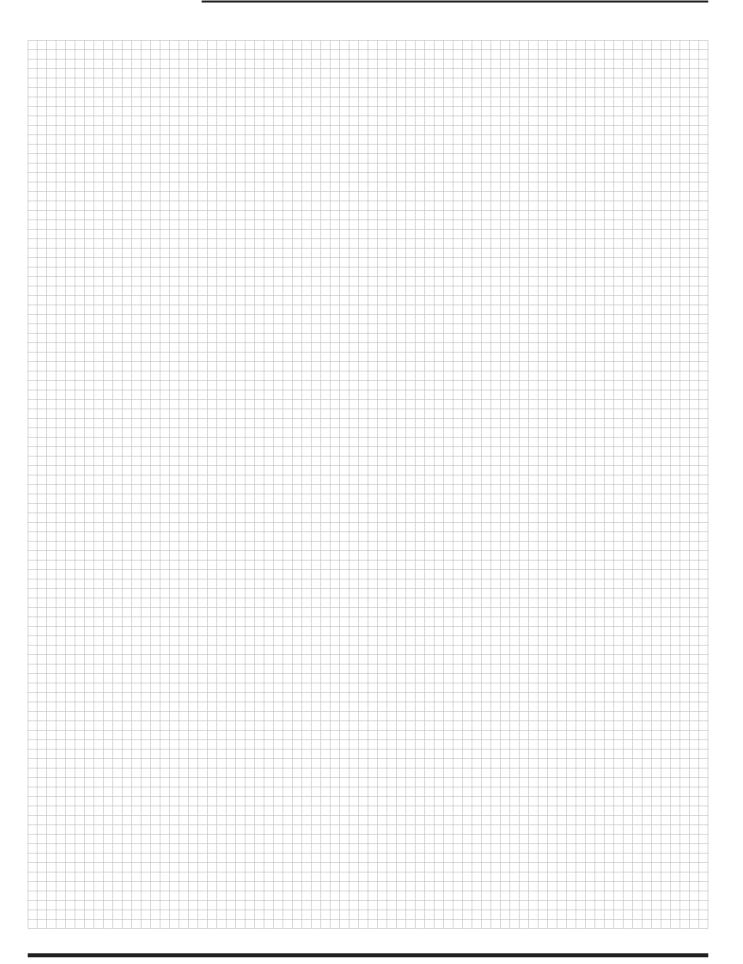


AMPSEAL Seal Plug

Material	Color	Part Number	Package Quantity
Nylon 6/6	Natural	770678-1	1,000



Engineering Notes



Housings and Connectors

Section Catalog 1654285-2 Revised 4-2010 Main Catalog 1654400-1 Chapter 29 - Issued 4-2010

Introduction

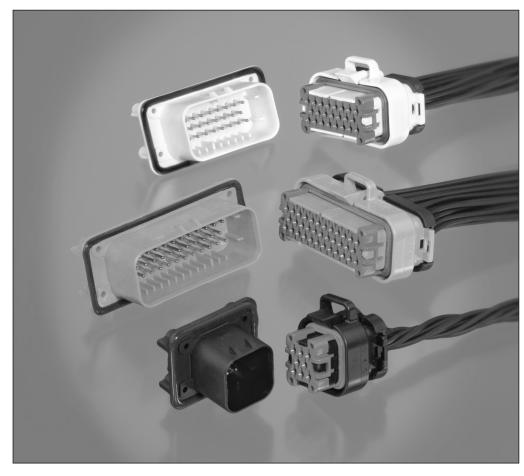












The housings use a two-piece contact-holding design that provides secondary locking which protects against contact backout.

After contacts are inserted into the housing, the locking wedge is seated to firmly position all contacts.

The connectors use three-row contact grid on 4.0 centerlines. Mat seals contain a sealing diaphram within each circuit cavity which is broken when terminals are inserted. If terminal is removed a sealing plug should be installed to reseal the circuit.

The pc board-mounting connector is designed to be flange mounted.

Available with or without a formed in place flange seal.

Product Features

- Mechanical and colored keying
- UL 94 V-0 rated materials
- Integrated terminal position assurance
- Fully sealed and submersible IP67 rating
- Available in vertical or right-angle
- Contains integrated PCB retention feature
- IEC IP67 rated

Housings and Connectors

Section Catalog 1654285-2 Revised 4-2010 Main Catalog 1654400-1 Chapter 29 – Issued 4-2010

Sealed Receptacle Housings

Product Features

 $\hbox{No. of Positions:} \\$

8 Positions

Housing Material:

Glass reinforced PBT

Wire Size Range:

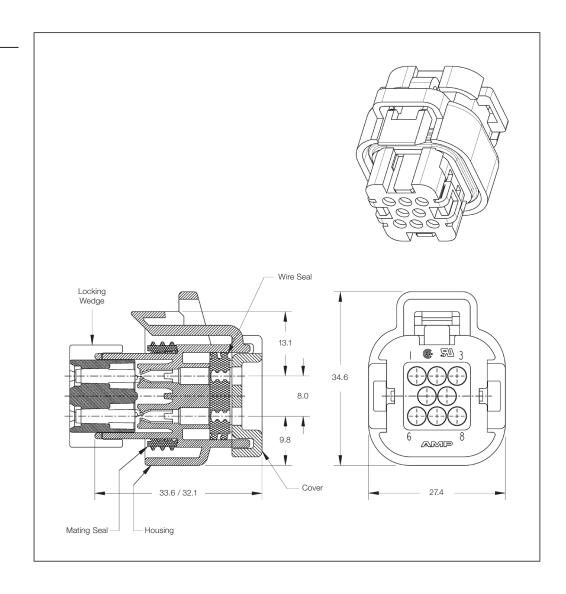
0.5-1.25 mm² (20-16 AWG)

Product Specification:

108-1329

 ${\bf Application\ Specification:}$

114-16016



8 Position Receptacle Housings

				Part Numbers					
No. of Keying Positions Options	Keying	Housing	Contact			Mating P	CB Header		
	Color	Finish	Receptacle Housing	Right-Angle		Vertical			
					Without Seal	With Seal	Without Seal	With Seal	
		Black	Tin plated	776286-1	776279-1	776280-1	776275-1	776276-1	
8	0		Gold plated	770200-1	1-776279-1	1-776280-1	1-776275-1	1-776276-1	
0	_	Natural	Tin plated	776286-2	776279-2	776280-2	776275-2	776276-2	
		Naturai	Gold plated	110200-2	1-776279-2	1-776280-2	1-776275-2	1-776276-2	

Housings and Connectors

Section Catalog 1654285-2 Revised 4-2010 Main Catalog 1654400-1 Chapter 29 - Issued 4-2010

Sealed Receptacle Housings

Product Features

No. of Positions:

14 Positions

Housing Material:Glass reinforced PBT

Wire Size Range:

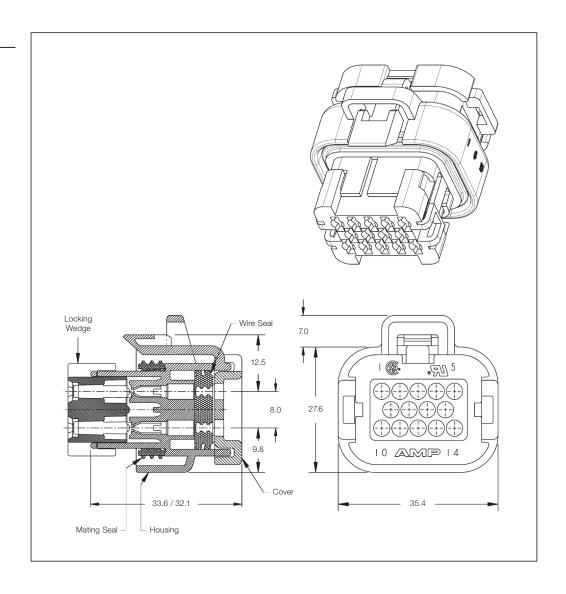
0.5-1.25 mm² (20-16 AWG)

Product Specification:

108-1329

Application Specification:

114-16016



14 Position Receptacle Housings

					Part Numbers						
No. of	Keying Options	Housing	Contact		Mating PCB Header						
Positions		Color	Finish	Receptacle Housing	Right-	Angle	Vert	ical			
					Without Seal	With Seal	Without Seal	With Seal			
		Black	Tin plated	776273-1	776266-1	776267-1	776261-1	776262-1			
		Diack	Gold plated		1-776266-1	1-776267-1	1-776261-1	1-776262-1			
	_	Natural	Tin plated	776273-2	776266-2	776267-2	776261-2	776262-2			
14		Ivaturai	Gold plated		1-776266-2	1-776267-2	1-776261-2	1-776262-2			
14	_	Gray	Tin plated	776273-4	776266-4	776267-4	776261-4	776262-4			
		Gray	Gold plated	110213-4	1-776266-4	1-776267-4	1-776261-4	1-776262-4			
		Blue	Tin plated	776273-5	776266-5	776267-5	776261-5	776262-5			
		Dide	Gold plated		1-776266-5	1-776267-5	1-776261-5	1-776262-5			

Housings and Connectors

Section Catalog 1654285-2 Revised 4-2010 Main Catalog 1654400-1 Chapter 29 – Issued 4-2010

Sealed Receptacle Housings

Product Features

No. of Positions: 23 Positions

Housing Material:Glass reinforced PBT

Wire Size Range:

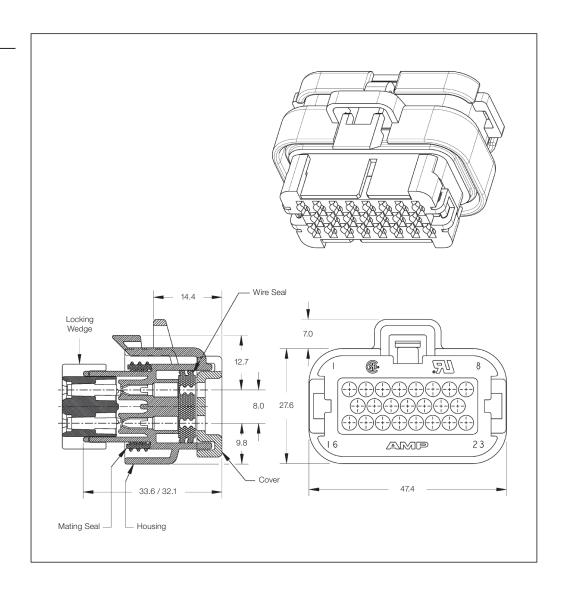
0.5-1.25 mm² (20-16 AWG)

Product Specification:

108-1329

 ${\bf Application\ Specification:}$

114-16016



23 Position Receptacle Housings

			Contact			Part Numbers		
No. of	Keying Options	Housing			Mating PCB Header			
Positions		Color	Finish	Receptacle Housing	Right-	Angle	Vert	ical
					Without Seal	With Seal	Without Seal	With Seal
		Black	Tin plated	770680-1	770669-1	776087-1	776200-1	776228-1
		DIACK	Gold plated		1-770699-1	1-776087-1	1-776200-1	1-776228-1
		Natural	Tin plated	770680-2	770669-2	776087-2	776200-2	776228-2
23		Inaturai	Gold plated		1-770669-2	1-776087-2	1-776200-2	1-776228-2
20	_	Gray	Tin plated	770680-4	770669-4	776087-4	776200-4	776228-4
		Gray	Gold plated	77000-4	1-770669-4	1-776087-4	1-776200-4	1-776228-4
		Blue	Tin plated	770680-5	770669-5	776087-5	776200-5	776228-5
		Dide	Gold plated	110000-3	1-770669-5	1-776087-5	1-776200-5	1-776228-5

Housings and Connectors

Section Catalog 1654285-2 Revised 4-2010 Main Catalog 1654400-1 Chapter 29 – Issued 4-2010

Sealed Receptacle Housings

Product Features

No. of Positions: 35 Positions

Housing Material:Glass reinforced PBT

Wire Size Range:

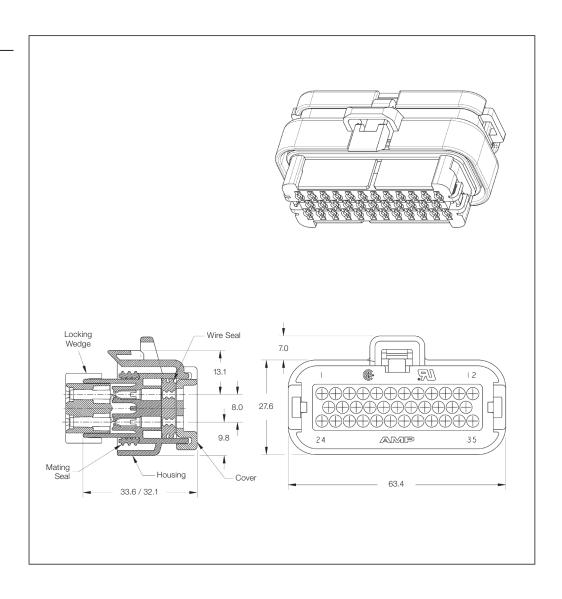
0.5-1.25 mm² (20-16 AWG)

Product Specification:

108-1329

 ${\bf Application\ Specification:}$

114-16016



35 Position Receptacle Housings

		Housing				Part Numbers		
No. of	Keying Options		Contact		Mating PCB Header			
Positions		Color	Finish	Receptacle Housing	Right-Angle		Vert	ical
				•	Without Seal	With Seal	Without Seal	With Seal
		Black	Tin plated	776164-1	_	_	776230-1	776231-1
			Gold plated	770104-1	1-776180-1	1-776163-1	1-776230-1	1-776231-1
		Natural	Tin plated	776164-2	_	_	776230-2	776231-2
			Gold plated		1-776180-2	1-776163-2	1-776230-2	1-776231-2
35		Gray	Tin plated	776164-4	-	_	776230-4	776231-4
33	_	Gray	Gold plated	770104-4	1-776180-4	1-776163-4	1-776230-4	1-776231-4
		Blue	Tin plated	776164-5	-	_	776230-5	776231-5
		Dide	Gold plated	770104-3	1-776180-5	1-776163-5	1-776230-5	1-776231-5
		Orange	Gold plated	776164-6	1-776180-6	1-776163-6	-	-

Housings and Connectors

Printed Circuit Board Headers for Sealed Receptacle Housings

Product Features

No. of Positions:

8 Position Header Assembly

Housing Material:

Glass reinforced PBT

Material and Finish:

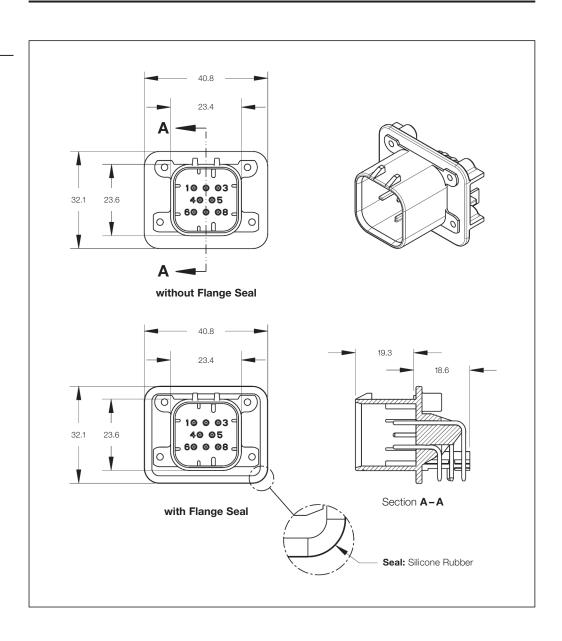
Contacts are made from either Tin or Gold Plated Brass

Product Specification:

108-1329

 ${\bf Application\ Specification:}$

114-16016



8 Position Right-Angle PCB Headers

				Part Numbers				
•	Keying	Housing	Contact	PCB H	Mating			
	Options	Color Finish		Right-Angle without Flange Seal	Right-Angle with Flange Seal	Receptacle Housing		
		Black	Tin plated	776279-1	776280-1	776286-1		
8	0	DIACK	Gold plated	1-776279-1	1-776280-1	110200-1		
O		Natural	Tin plated	776279-2	776280-2	776286-2		
		Ivaturai	Gold plated	1-776279-2	1-776280-2	110200-2		

Housings and Connectors

Section Catalog 1654285-2 Revised 4-2010 Main Catalog 1654400-1 Chapter 29 – Issued 4-2010

Printed Circuit Board Headers for Sealed Receptacle Housings

Product Features

No. of Positions:

8 Position Header Assembly

Housing Material:

Glass reinforced PBT

Material and Finish:

Contacts are made from either

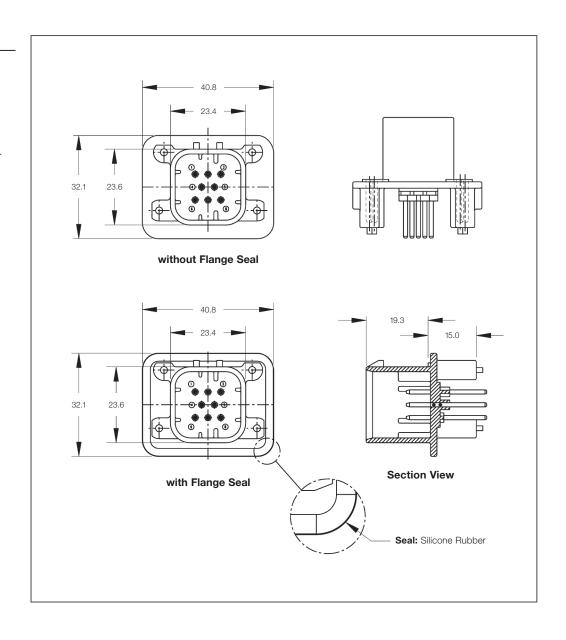
Tin or Gold Plated Brass

Product Specification:

108-1329

 ${\bf Application\ Specification:}$

114-16016



8 Position Vertical PCB Headers

				Part Numbers				
	Keying	Housing	Contact	PCB H	eader	Mating		
	Options	Color	Finish	Vertical without Flange Seal	Vertical with Flange Seal	Receptacle Housing		
		Dlask	Tin plated	776275-1	776276-1	776286-1		
		Black -	Gold plated	1-776275-1	1-776276-1	770200-1		
8		Natural	Tin plated	776275-2	776276-2	776286-2		
		inatural	Gold plated	1-776275-2	1-776276-2	110200-2		

Housings and Connectors

Section Catalog 1654285-2 Revised 4-2010 Main Catalog 1654400-1 Chapter 29 – Issued 4-2010

Printed Circuit Board Headers for Sealed Receptacle Housings

Product Features

No. of Positions:

14 Position Header Assembly

Housing Material:

Glass reinforced PBT

Material and Finish:

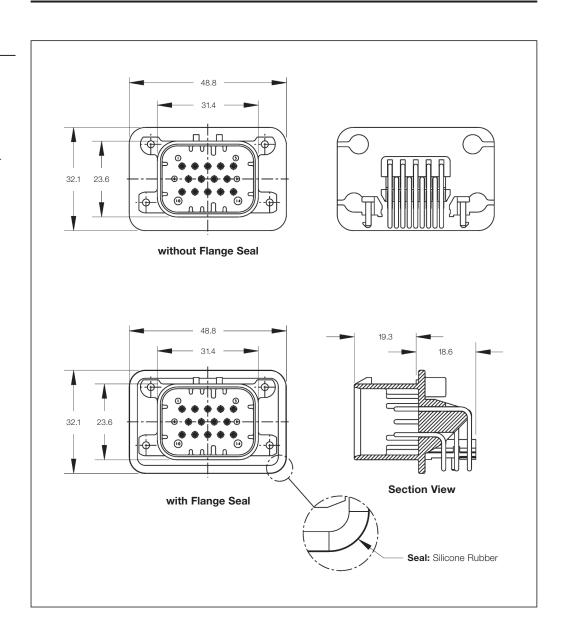
Contacts are made from either Tin or Gold Plated Brass

Product Specification:

108-1329

 ${\bf Application\ Specification:}$

114-16016



14 Position Right-Angle PCB Headers

				Part Numbers				
No. of Positions	Keying	Housing	Contact	PCB H	Mating			
	Options	Color	Finish	Right-Angle without Flange Seal	Right-Angle with Flange Seal	Receptacle Housing		
		Dlook	Tin plated	776266-1	776267-1	776273-1		
		Black	Gold plated	1-776266-1	1-776267-1	110213-1		
		Natural	Tin plated	776266-2	776267-2	776273-2		
1.4		Natural	Gold plated	1-776266-2	1-776267-2	110213-2		
14	_	Crov	Tin plated	776266-4	776267-4	776273-4		
		Gray	Gold plated	1-776266-4	1-776267-4	110213-4		
			Tin plated	776266-5	776267-5	770070 5		
		Blue	Gold plated	1-776266-5	1-776267-5	776273-5		

Housings and Connectors

Section Catalog 1654285-2 Revised 4-2010 Main Catalog 1654400-1 Chapter 29 – Issued 4-2010

Printed Circuit Board Headers for Sealed Receptacle Housings

Product Features

No. of Positions:

14 Position Header Assembly

Housing Material:

Glass reinforced PBT

Material and Finish:

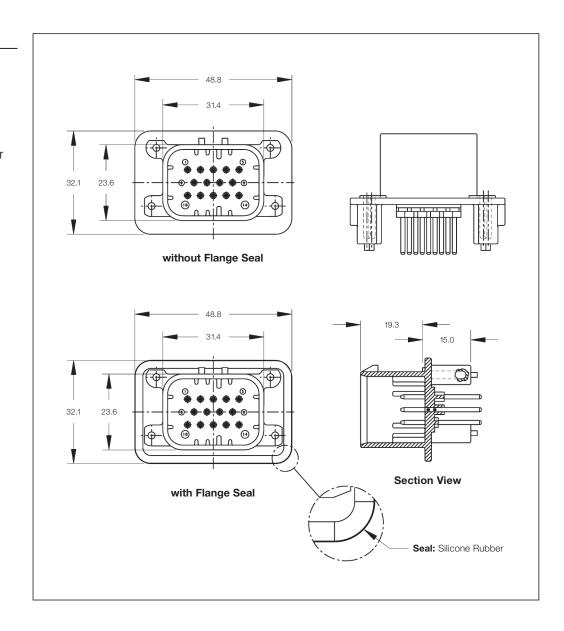
Contacts are made from either Tin or Gold Plated Brass

Product Specification:

108-1329

 ${\bf Application\ Specification:}$

114-16016



14 Position Vertical PCB Headers

		Housing Color		Part Numbers				
No. of Positions	Keying		Contact	PCB H	eader	Mating		
	Options		Finish	Vertical without Flange Seal	Vertical with Flange Seal	Receptacle Housing		
		Black	Tin plated	776261-1	776262-1	776273-1		
		DIACK	Gold plated	1-776261-1	1-776262-1	110213-1		
		Natural	Tin plated	776261-2	776262-2	776273-2		
14		Naturai	Gold plated	1-776261-2	1-776262-2	110213-2		
14	-	Gray	Tin plated	776261-4	776262-4	776273-4		
		Gray	Gold plated	1-776261-4	1-776262-4	110213-4		
		Blue	Tin plated	776261-5	776262-5	776273-5		
		Diue	Gold plated	1-776261-5	1-776262-5	110213-5		

Housings and Connectors

Section Catalog 1654285-2 Revised 4-2010 Main Catalog 1654400-1 Chapter 29 – Issued 4-2010

Printed Circuit Board Headers for Sealed Receptacle Housings

Product Features

No. of Positions:

23 Position Header Assembly

Housing Material:

Glass reinforced PBT

Material and Finish:

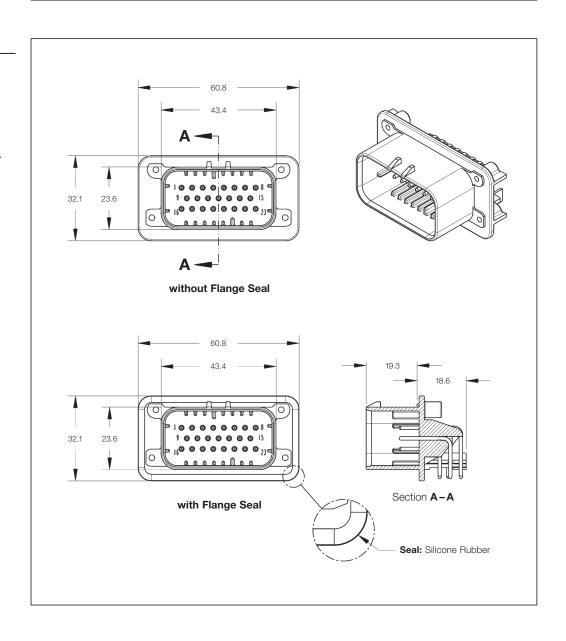
Contacts are made from either Tin or Gold Plated Brass

Product Specification:

108-1329

Application Specification:

114-16016



23 Position Right-Angle PCB Headers

				Part Numbers				
No. of Positions	Keying	Housing	Contact	PCB H	Mating			
	Options	Color	Finish	Right-Angle without Flange Seal	Right-Angle with Flange Seal	Receptacle Housing		
		Black	Tin plated	770669-1	776087-1	770680-1		
		Black	Gold plated	1-770669-1	1-776087-1	770680-1		
		Natural	Tin plated	770669-2	776087-2	770000.0		
23		Naturai	Gold plated	1-770669-2	1-776087-2	770680-2		
23	_	Cross	Tin plated	770669-4	776087-4	770680-4		
		Gray	Gold plated	1-770669-4	1-776087-4	770000-4		
		Blue	Tin plated	770669-5	776087-5	770000 5		
		Diue	Gold plated	1-770669-5	1-776087-5	770680-5		

Housings and Connectors

Section Catalog 1654285-2 Revised 4-2010 Main Catalog 1654400-1 Chapter 29 – Issued 4-2010

Printed Circuit Board Headers for Sealed Receptacle Housings

Product Features

No. of Positions:

23 Position Header Assembly

Housing Material:

Glass reinforced PBT

Material and Finish:

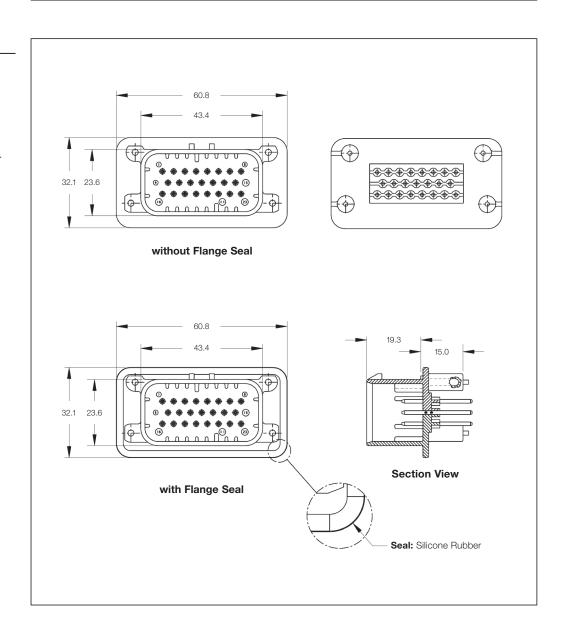
Contacts are made from either Tin or Gold Plated Brass

Product Specification:

108-1329

Application Specification:

114-16016



23 Position Vertical PCB Headers

				Part Numbers				
No. of	Keying	Housing	Contact	PCB H	Mating			
Positions	Options	Color	Finish	Vertical without Flange Seal	Vertical with Flange Seal	Receptacle Housing		
		Black	Tin plated	776200-1	776228-1	770680-1		
		DIACK	Gold plated	1-776200-1	1-776228-1	770000-1		
		Natural	Tin plated	776200-2	776228-2	770680-2		
23		Inaturai	Gold plated	1-776200-2	1-776228-2	770000-2		
23	_	Gray	Tin plated	776200-4	776228-4	770680-4		
		Gray	Gold plated	1-776200-4	1-776228-4	110000-4		
		Blue	Tin plated	776200-5	776228-5	770690 5		
		DIUE	Gold plated	1-776200-5	1-776228-5	770680-5		

AMPSEAL Sealed Connector SeriesHousings and Connectors

Section Catalog 1654285-2 Revised 4-2010 Main Catalog 1654400-1 Chapter 29 – Issued 4-2010

Printed Circuit Board Headers for Sealed Receptacle Housings

Product Features

No. of Positions:

35 Position Header Assembly

Housing Material:Glass reinforced PBT

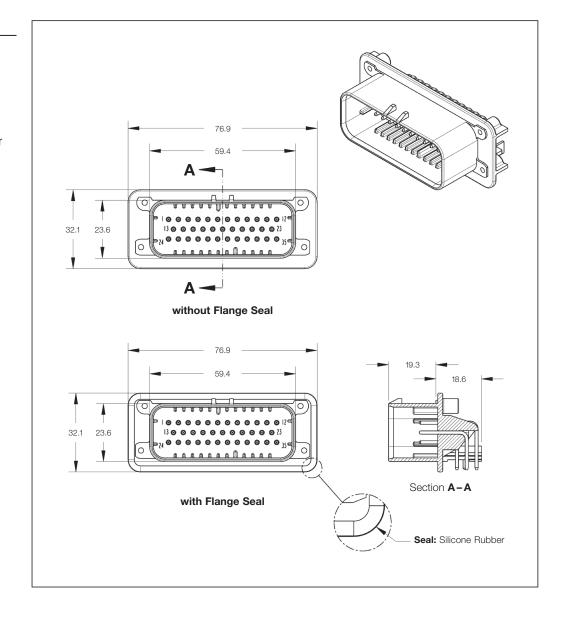
Material and Finish:

Contacts are made from either Tin or Gold Plated Brass

Product Specification:

108-1329

Application Specification: 114-16016



35 Position Right-Angle PCB Headers

No. of Positions	Keying Options	Housing Color	Contact Finish	Part Numbers		
				PCB Header		Mating
				Right-Angle without Flange Seal	Right-Angle with Flange Seal	Receptacle Housing
		Black	Gold plated	1-776180-1	1-776163-1	776164-1
		Natural	Gold plated	1-776180-2	1-776163-2	776164-2
35		Gray	Gold plated	1-776180-4	1-776163-4	776164-4
		Blue	Gold plated	1-776180-5	1-776163-5	776164-5
		Orange	Gold plated	1-776180-6	1-776163-6	776164-6

Housings and Connectors

Section Catalog 1654285-2 Revised 4-2010 Main Catalog 1654400-1 Chapter 29 – Issued 4-2010

Printed Circuit Board Headers for Sealed Receptacle Housings

Product Features

No. of Positions:

35 Position Header Assembly

Housing Material:Glass reinforced PBT

Material and Finish:

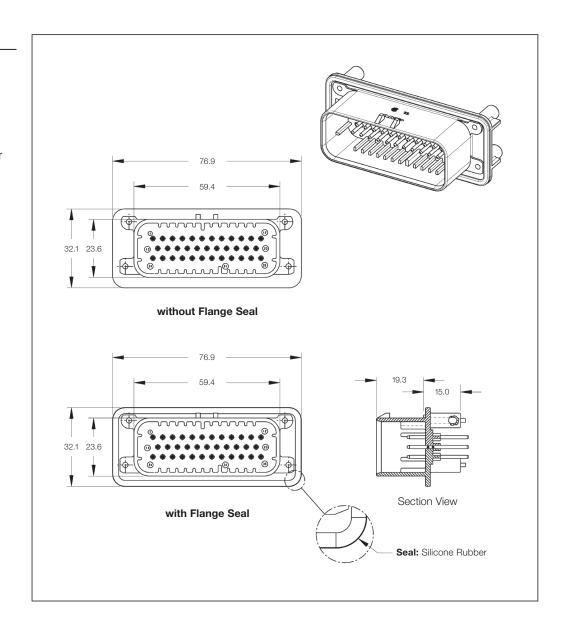
Contacts are made from either Tin or Gold Plated Brass

Product Specification:

108-1329

 ${\bf Application\ Specification:}$

114-16016



35 Position Vertical PCB Headers

No. of Positions	Keying Options	Housing Color	Contact Finish	Part Numbers			
				PCB Header		Mating	
				Vertical without Flange Seal	Vertical with Flange Seal	Receptacle Housing	
35		Black	Tin plated	776230-1	776231-1	776164-1	
			Gold plated	1-776230-1	1-776231-1		
		Natural	Tin plated	776230-2	776231-2	776164-2	
			Gold plated	1-776230-2	1-776231-2		
		Gray	Tin plated	776230-4	776231-4	776164-4	
			Gold plated	1-776230-4	1-776231-4		
		Blue	Tin plated	776230-5	776231-5	776164-5	
			Gold plated	1-776230-5	1-776231-5		

Housings and Connectors

Section Catalog 1654285-2 Revised 4-2010 Main Catalog 1654400-1 Chapter 29 – Issued 4-2010

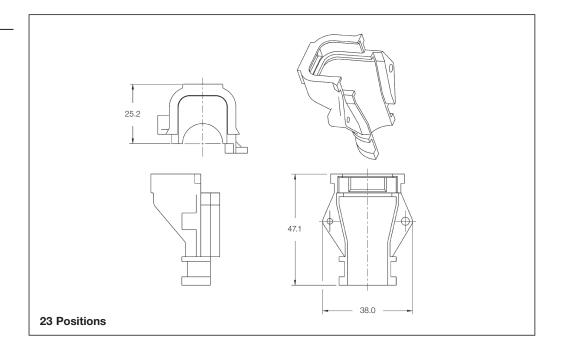
Sealed Receptacle Housing Wire Reliefs

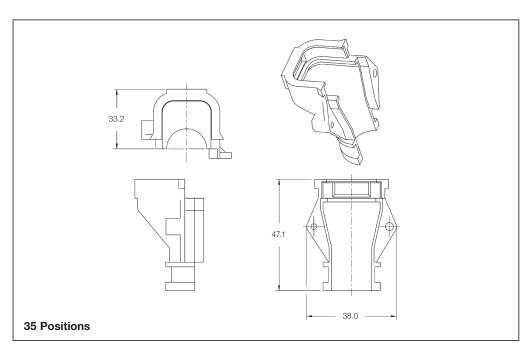
Product Features

Wire Relief Material: Glass reinforced PBT

Product Specification: 108-1329

Application Specification: 114-16016





Remarks:

- Wire relief part numbers represents one-half of a wire relief. Two wire reliefs required per receptacle housing.
- 2. Accepts #4 self trapping screw (Elco Hi-Lo Thread Cutting Style or Equivalent).

No. of Positions	Part Number	Package Quantity
23	776464-1	500
35	776463-1	500