

Extensive range of OPL standard and custom audio connectors trusted by our fighting forces for 35 years

# MIL-DTL-55116 audio connectors



**EATON**

*Powering Business Worldwide*

# MIL-DTL-55116 solutions

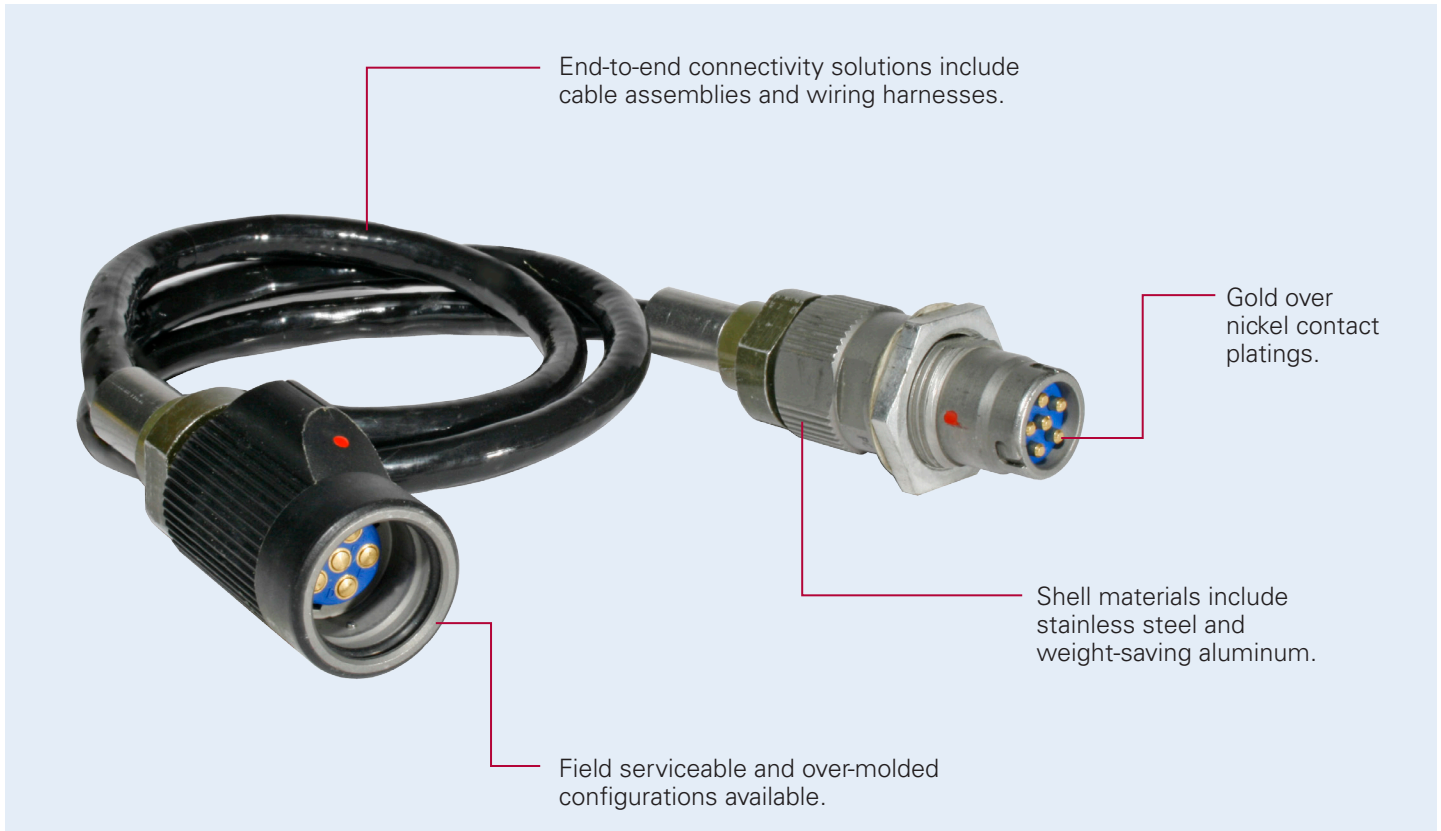
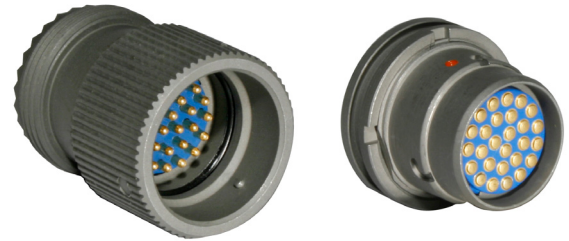
Eaton's MIL-DTL-55116 connectors and cable assemblies incorporate rugged designs that have been field proven in an extensive range of applications that include the SINCGARS and JTRS radio systems.

A comprehensive array of QPL and specialized designs includes in-line and panel-mount connectors, EMI/RFI filtered receptacles (left image), feedthroughs, and extended length, bulkhead connectors (right image).

Quick turn, custom solutions include cable assemblies, wiring harnesses, and high-pin-count connectors that utilize MIL-DTL-55116-style shells.



*MIL-DTL-55116-style solutions are available with up to 27 contacts*



# Solutions overview and general specifications

## 21 QPL, NSA and specialized plugs

- M55116/1 to /8
- NSA ON241774-1 and -2
- Lightweight and right angle
- Thread and flange panel mount



## 23 QPL, NSA, and filtered receptacles

- M55116/11 to /14
- M55116/9 and /10
- NSA ON241775-1 to -5
- Application-optimized filtered solutions



## 24 Specialized receptacles

- Extended bodies for bulkhead mounting
- Double-ended feedthroughs



## 25 High-density solutions

- 19 and 27 contact connectors
- In-line, panel mount, and filtered configurations



### Materials and Finishes

Shells And Panel Nuts	Passivated Stainless Steel, Aluminum Shells Available as Noted on Detail Pages
Backshell (Extended Receptacle)	Nickel-Plated Brass
Contact Material	Copper Alloy
Contact Plating	Gold Over Nickel
Insert	Diallyl Phthalate per MIL-M-14F, Type MDG

### Electrical

Dielectric Strength	500 VRMS
Insulation Resistance	1000 Megaohms Minimum
Contact Resistance (mated)	0.05 Ohms Maximum

### Mechanical

Air Pressure	2.5 PSI
Water Immersion	48 Hours at Six Feet
Mate/Unmate Durability	3000 Cycles

# MIL-DTL-55116 QPL, NSA, and specialized plugs

Eaton's MIL-DTL-55116 solutions include an extensive array of heritage proven, standard plugs and custom capabilities:

- Cable-mount solutions in QPL, NSA, lightweight, and right-angle configurations.
- Panel-mount plugs with rear threads or mounting flanges.
- Application-specific backshells that support environmental sealing and EMI/RFI shielding.
- Custom cable assemblies and wiring harnesses.



In-Line Type	Model Numbers	# Contacts	Terminations	Specifications And National Stock Numbers (NSNs)
U-229 Wire Strain Reliefs	M55116/1-X	5	Crimped	NSN 5935-01-373-6341 = M55116/1-3
	M55116/2-X	6	Crimped	NSN 5935-01-465-3101 = M55116/2-3
	M55116/3-X	5	Solder Cups	NSN 5935-01-439-9280 = M55116/3-2 NSN 5935-01-482-9006 = M55116/3-4
	M55116/4-X	6	Solder Cups	NSN 5935-01-499-4241 = M55116/4-2 NSN 5935-01-412-4102 = M55116/4-3 NSN 5935-01-383-4173 = M55116/4-4 NSN 5935-01-383-4851 = M55116/4-5
U-182 Molded Strain Reliefs	M55116/5-X	5	Crimped	NSN 5935-00-462-3075 = M55116/5-1
	M55116/6-X	6	Crimped	n/a
	M55116/7-X	5	Solder Cups	n/a
	M55116/8-X	6	Solder Cups	n/a
NSA	ON241774-1	6	Solder Cups	DoD Specification ON241774-1
	ON241774-2	6	Crimped	DoD Specification ON241774-2



"X" Cable Designation	Maximum Cable Outside Diameter
0	No Strain Relief
1	0.165"
2	0.228"
3	0.250"
4	0.290"
5	0.320"

CI529RA-1 and CI629RA-1 in-line plugs support right-angle cable mounting.

# MIL-DTL-55116 QPL, NSA, and specialized plugs

*Lightweight Plugs are Approximately 50% Lighter than QPL Solutions\**

In-Line Plug Configurations	Lightweight Plug Part Number	Cable Sizes	Shell Material	*Weight (Ounces)
Five Contacts Overmolded Strain Reliefs	GC217-1-4	1/4"	Stainless Steel	1.20
	GC217-3-16	3/16"	Stainless Steel	1.20
	GC217A-1-4	1/4"	Aluminum	0.81
	GC217A-3-16	3/16"	Aluminum	0.81
Six Contacts Overmolded Strain Reliefs	GC617-1-4	1/4"	Stainless Steel	1.19
	GC617-3-16	3/16"	Stainless Steel	1.19
	GC617A-1-4	1/4"	Aluminum	0.80
	GC617A-3-16	3/16"	Aluminum	0.80

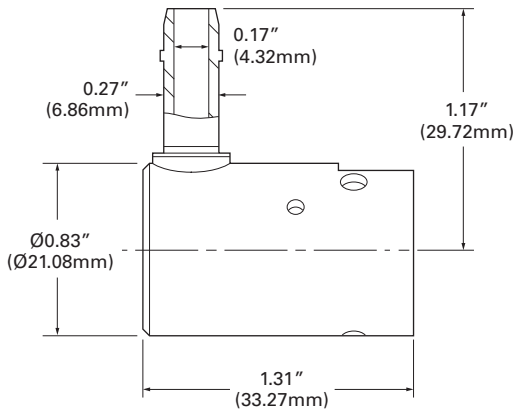
\* Approximate weight of QPL solutions is two ounces.

Type	Part Number	Contacts
In-line, 90° Cable Entry	CI529RA-1	5
	CI629RA-1	6

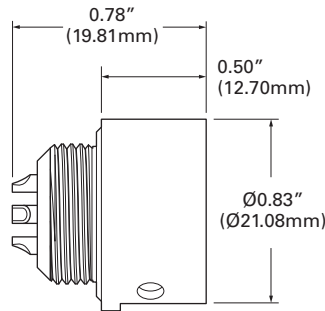
The products listed above utilize stainless-steel shells, rigid contacts, and solder cup terminations.

Type	Part Number	Contacts	Mounting
Panel Mount	GC429	5	Rear Thread
	GC529	6	Rear Thread
	GC629	5	Square Flange
	GC729	6	Square Flange

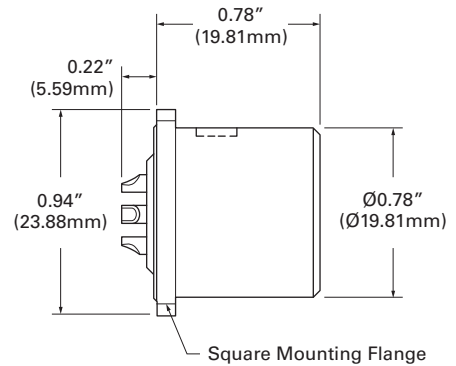
The products listed above utilize stainless-steel shells, rigid contacts, and solder cup terminations.



CI529RA-1 and CI629RA-1



GC429 and GC529



GC629 and GC729

# MIL-DTL-55116 QPL, NSA, and filtered receptacles

Eaton's MIL-DTL-55116 solutions include an extensive array of heritage proven standard receptacles and custom capabilities:

- Cable-mount M55116/11 to /14
- Panel-mount M55116/9 and /10
- NSA connectors, ON241775-1 to -5
- Application optimized filtered solutions
- Custom backshells, cable assemblies, and wiring harnesses.



## QPL In-Line Receptacles\*

Type	Model Numbers	# Contacts	Terminations	NSNs Cross Referenced By Model Numbers
	M55116/11-X	5	Crimped	n/a
U-228	M55116/13-X	5	Solder Cups	5935-00-929-7082 = M55116/13-3
Wire Strain Reliefs	M55116/12-X	6	Crimped	5935-01-552-4361 = M55116/12-3
	M55116/14-X	6	Solder Cups	5935-01-512-5620 = M55116/14-3 5935-01-383-6960 = M55116/14-4


\*"X" values designate strain-relief options to accommodate the cable sizes listed in the table below. The part numbers listed above are configured with spring-loaded contacts and stainless-steel shells.

## Panel Mount Receptacles

Type	Model Numbers	# Contacts	Terminations	Specifications and National Stock Numbers (NSNs)
U-183	M55116/9-0	5	Solder Cups	NSN 5935-01-304-6787
	M55116/10-0	6	Solder Cups	NSN 5935-01-356-8083
NSA	ON241775-1	6	Solder Cups	DoD Specification ON241775-1
	ON241775-2	6	Solder Pins	DoD Specification ON241775-2
	ON241775-3	6	Solder Cups	DoD Specification ON241775-3
	ON241775-4	6	Solder Pins	DoD Specification ON241775-4
	ON241775-5	6	Solder Cups	DoD Specification ON241775-5

"X" Cable Designation	Maximum Cable Outside Diameter
0	No Strain Relief
1	0.165"
2	0.228"
3	0.250"
4	0.290"
5	0.320"

The part numbers listed above are configured with spring-loaded contacts and stainless-steel shells. U-183 receptacles utilize the T-1104-03 spanner wrench.



### Filtered Solutions

MIL-DTL-55116-style filtered receptacles can be optimized for any frequency, voltage, TVS, and impedance requirements.

# MIL-DTL-55116 specialized receptacles

Extended Body Receptacles Provide up to 2¼" Additional Bulkhead Penetration



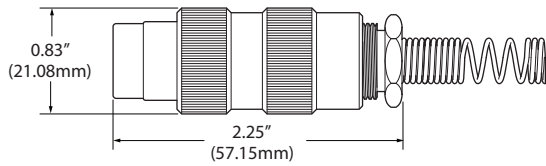
Double-Ended Receptacles are Ideal Feedthrough Solutions



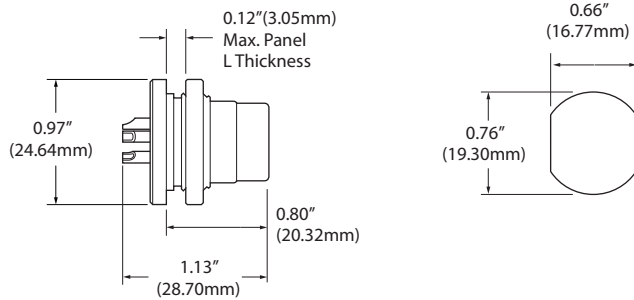
Mounting	Type*	Model Numbers	# Contacts	Contact Type	Terminations
Panel	Lightweight Rear Mount	GC183S	5	Spring Loaded	Solder Cups
Panel	Double-Ended Feedthrough	GC683S	6	Spring Loaded	Solder Cups
Panel	Double-Ended Feedthrough	GC283FT	6	Spring Loaded	Solder Cups
Bulkhead	Extended Body**	CI10654871	6	Spring Loaded	Solder Cups

\* The products listed above feature stainless-steel shells.

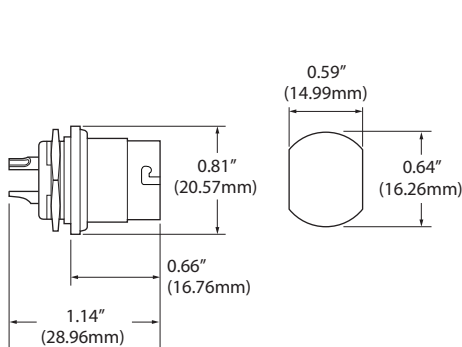
\*\* Extended-body-receptacle backshells are constructed from nickel-plated brass.



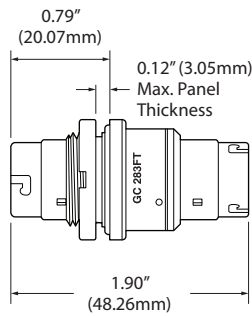
**U-228 Style, In-Line Receptacle**



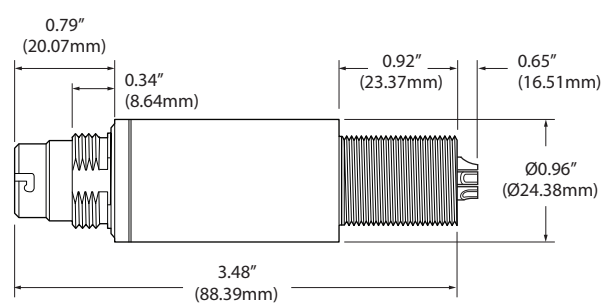
**U-183 Style, Panel Mount**



**GC183S and GC683S**  
Weight = 0.72 ounces



**GC283FT Double Ended Feedthrough**



**CI10654871 Extended Body Receptacle**



# MIL-DTL-55116 high-density solutions

These high-contact-density solutions support mixed audio, signal, and data applications that require more contacts than provided by MIL-DTL-55116 QPL connectors.

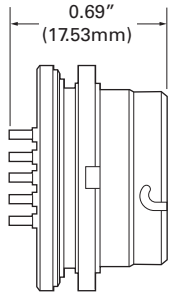
- Gold-over-nickel contacts are rated for 0.23 amps and 3000 mate and demate cycles.
- 500Vrms dielectric withstand voltage.
- Passivated, stainless-steel shells.
- Solutions include EMI/RFI filtered receptacles.
- Custom capabilities include cable assemblies and wiring harnesses.



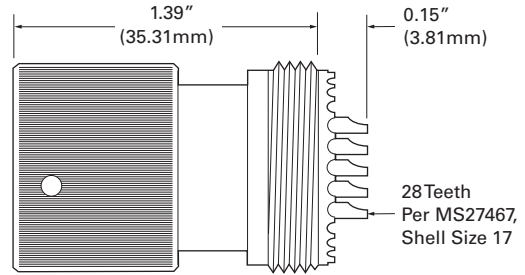
# Contacts	Model Numbers	Type	Mounting	Termination	Configuration
19	CIA3245089-3	Plug	Cable	Solder Cups	Compatible with Size 17 Backshells
19	GCA3245088-3	Receptacle	Panel	Solder Pins	Front Mount
27	GCJ69-0016-001	Plug	Cable	Solder Cups	Compatible with Size 17 Backshells
27	GCJ69-0014-001	Receptacle	Panel	Solder Pins	EMI/RFI "T" Filter



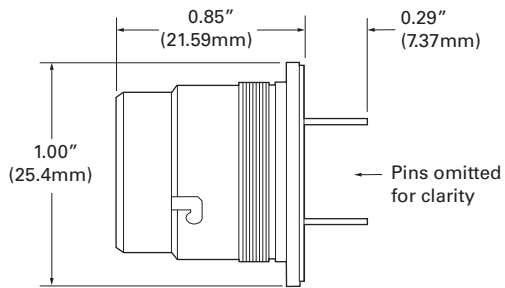
# MIL-DTL-55116 high-density solutions



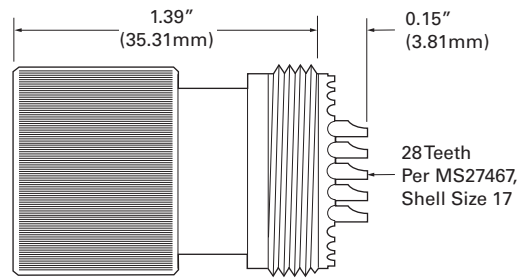
**19-Contact GCA3245088-3**



**19-Contact CIA3245089-3**



**27-Contact GCI69-0014-001**



**27-Contact GCJ69-0016-001**