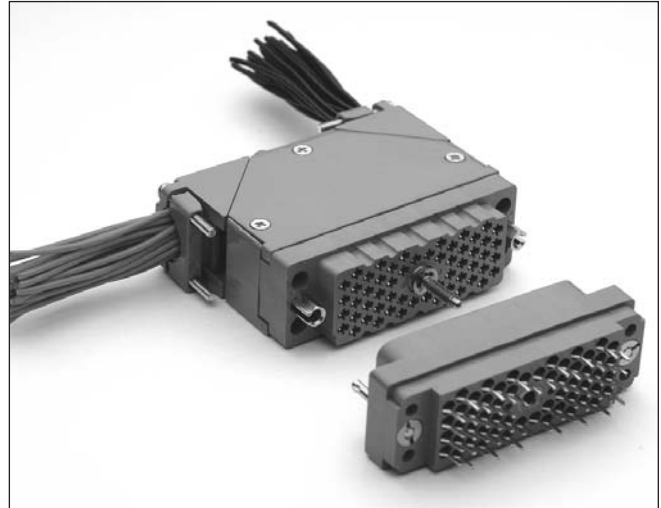


Series 8016 – .075" x .130" x .150" Grid Pattern

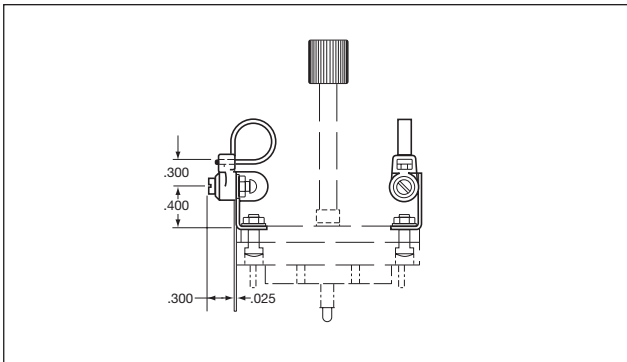
FEATURES

- Available in five sizes: 20, 38, 56, 90 and 120 contacts
- Insertable / removable Varilok contacts
- Crimp, solder, solderless wrap, and taper tab terminations
- Exceptional versatility: all hardware can be mounted on plug or receptacle (see ordering code)
- Actuating screw facilitates mating and unmating, locks mated connectors together
- Polarizing hardware can be set to any of six positions at factory; can also be reset by user (see polarizing code)
- Optional cover with top or side cable entry and clamp
- Optional cable strain relief clamp with adjustable strap for large or small cable bundles (fits on sizes 38 and 56)
- Plug and receptacle contacts are protected from mishandling
- Guide pins and sockets ensure correct alignment when mating
- U.L. recognized polyester material
- Aluminum covers
- CSA acceptable polyester material
- QPL approved polyester material



CABLE STRAIN RELIEF CLAMP

- Adjustable for large or small cable bundles
- Versatile clamp assembly permits mounting in various directions. Can be mounted on plug and/or receptacle.
- Order Number 30-8026-9601 for plug and cable-to-cable applications
- Order Number 30-8026-9602 for receptacle applications
- Available for sizes 38 and 56



TECHNICAL SPECIFICATIONS

Current Rating:

8 amperes, maximum

Contact Resistance:

6 milliohms, maximum

Contact Material:

Phosphor bronze

Contact Plating:

Gold, 10 microinches min.,
over Nickel,
50-100 microinches

Insulator Material:

Thermoplastic 94V-O glass
filled polyester

Insulation Resistance:

5,000 megohms, min.
(polyester)

Sea Level: 1250 volts RMS

3.4" Hg: 625 volts RMS

Cover and Clamp Material and Finish:

Aluminum with clear chromate
under grey enamel finish

Commercial Specification:

Covered under the components
recognition program of
Underwriters' Laboratory, Inc.
File No. E-27610

PLUG
Actuating Screw

PLUG
Fixed Nut

SOCKET
Actuating Screw

SOCKET
Fixed Nut

PIN LAYOUT
20 Way

The figure contains five technical drawings of a 20-way connector. The first four drawings are side views of the Plug, Fixed Nut, Socket, and Fixed Nut components, respectively. Each side view includes dimensions for overall height, actuating screw length, and guide pin locations. The fifth drawing is a top view of the Pin Layout, showing the 20 pins arranged in a 4x5 grid. The top view includes dimensions for the overall width and height of the pin array, as well as individual pin dimensions and spacing.

00	8016	020	217	001
└	└	└	└	└
Prefix	Series Number	Number of Contacts		See Variation Code

*000 = Contacts not fitted and ordered separately,
see page 23 for full list of options

218 = Wire Wrap –  0.025 x 0.050 x 0.567" / 0.64 x 1.27 x 14.4mm

296 = Wire Wrap –  0.025 x 0.026 x 0.579" / 0.64 x 1.27 x 19.3mm

504 = Solder Tail –

750 = Wire Wrap –  0.025 x 0.050 x 0.760" / 0.64 x 1.27 x 19.3mm

*Crimp contacts always ordered separately.
See page 23 for details.

[illegible]

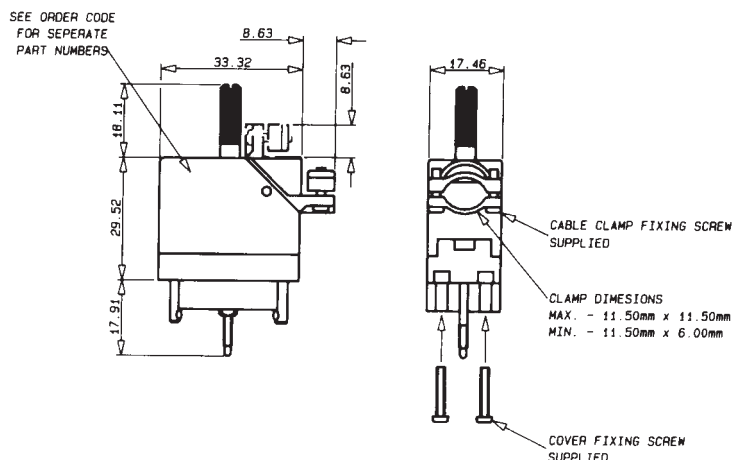
Select variation code combinations marked with square in the table.

Insulator Body Type	European Version		USA Versions				Cover and Cable Entrance	Actu- ating Screw	Fixed Nut
	Grey Polyester		Grey Polyester		Green Polyester				
	Aluminum Cover	No Cover	Cover	No Cover	Cover	No Cover			
Male (Exposed Contacts)	—	001	—	501		601	None	Yes	No
	—	002	—	502		602	None	No	Yes
	903	—	503		603		Top*	Yes	No
	904	—	504		604		Side*	Yes	No
	905	—	505		605		Top*	No	Yes
	906	—	506		606		Side*	No	Yes
Female (Recessed Contacts)	—	007		507		607	None	No	Yes
	—	008		508		608	None	Yes	No
	909	—	509		609		Top*	Yes	No
	910	—	510		610		Side*	Yes	No
	911	—	511		611		Top*	No	Yes
	912	—	512		612		Side*	No	Yes

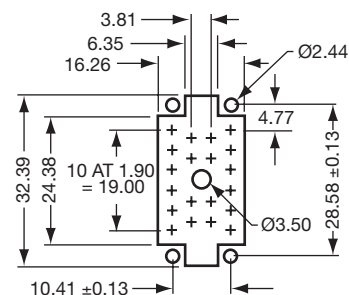
*These covers should only be used with crimp contacts.

Series 8016 – Rectangular Connector – 20 Way

CLAMPING AND COVER DIMENSIONS

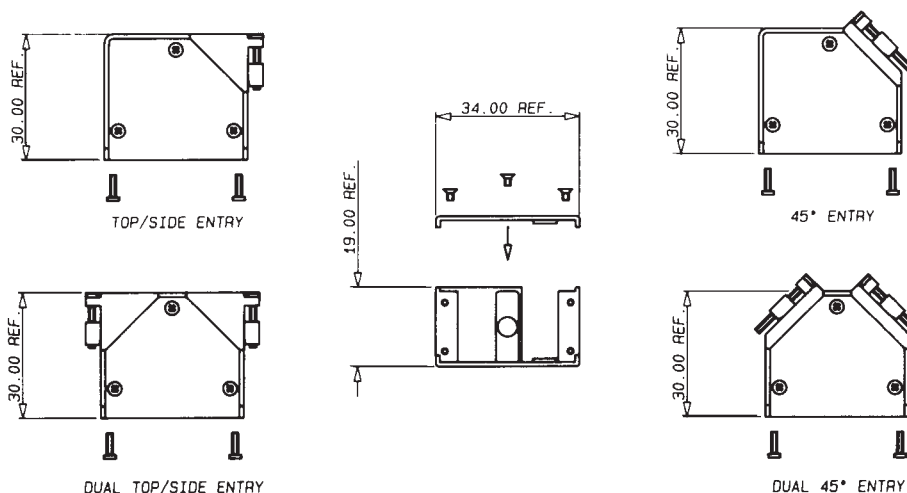


RECOMMENDED LAYOUT FOR FRONT CHASSIS MOUNTING & PCB LAYOUT



STANDARD COVERS

Metric Screws European Version	Cover Part Number	Imperial Screws USA Version	Number of Contacts	Cable Entrance	Clamp	
					Description	Size mm (inches)
30-8016-9829-20-000	30-8016-9829-00-000	30-8016-9829-00-000	20	Side	Standard	11.53 (0.454) Dia.
30-8016-9831-20-000	30-8016-9831-00-000	30-8016-9831-00-000	20	Top	Standard	11.53 (0.454) Dia.

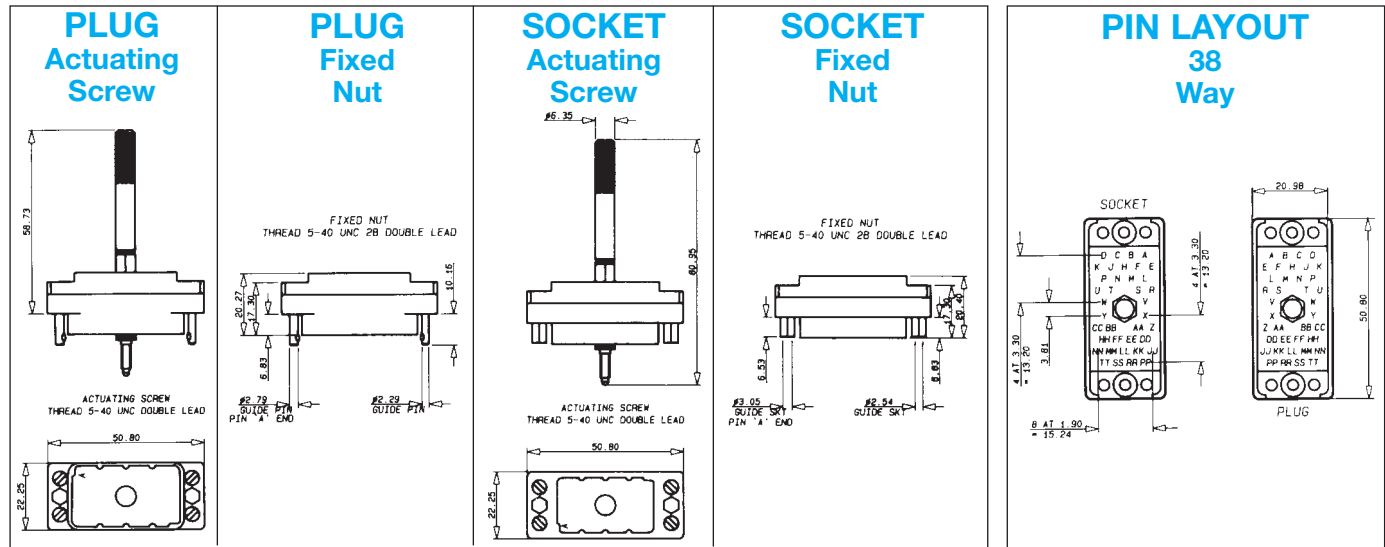


REMOVABLE SIDE PLATE COVERS

millimeters (inches)

Cover Part Number	Number of Contacts	Cable Entrance	Clamp		
			Description	Minimum Size	Maximum Size
30-8016-020-000-413	20	Side/Top	Standard	5 x 10 (0.197 x 0.394)	10 x 10 (0.394 x 0.394)
30-8016-020-000-415	20	45°	Standard	5 x 10 (0.197 x 0.394)	10 x 10 (0.394 x 0.394)
30-8016-020-000-423	20	Dual 90° Side/Top	Special	2 - 5 x 10 (0.197 x 0.394)	2 - 10 x 10 (0.394 x 0.394)
30-8016-020-000-425	20	Dual 45° Entry	Special	2 - 5 x 10 (0.197 x 0.394)	2 - 10 x 10 (0.394 x 0.394)

Series 8016 – Rectangular Connector – 38 Way



ORDERING CODE

00	8016	038	217	001
Prefix	Series Number	Number of Contacts		See Variation Code

Contact Termination

*000 = Contacts not fitted and ordered separately, see page 23 for full list of options

217 = Solder 0.098" x 2.49mm

218 = Wire Wrap –
0.025 x 0.050 x 0.567" / 0.64 x 1.27 x 14.4mm

296 = Wire Wrap –
0.025 x 0.026 x 0.579" / 0.64 x 1.27 x 19.3mm

504 = Solder Tail –

750 = Wire Wrap –
0.025 x 0.050 x 0.760" / 0.64 x 1.27 x 19.3mm

*Crimp contacts always ordered separately. See page 23 for details.

CONNECTOR PLUG AND RECEPTACLE COMBINATIONS

Plug \ Receptacle	007/507/607	008/508/608	909/509/609	910/510/610	911/511/611	912/512/612	923/523/623	924/524/624	925/525/625	926/526/626	935/535/635	936/536/636	937/537/637	938/538/638
001/501/601														
002/502/602														
903/503/603														
904/504/604														
905/505/605														
906/506/606														
919/519/619														
920/520/620														
921/521/621														
922/522/622														
931/531/631														
932/532/632														
933/533/633														
934/534/634														

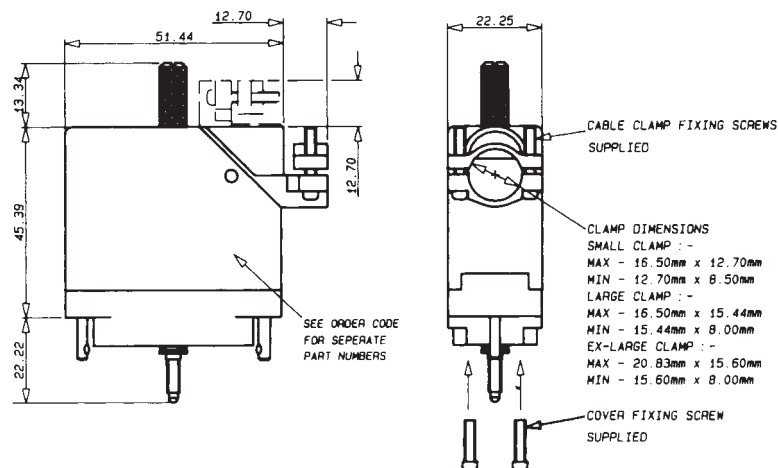
Select variation code combinations marked with square in the table.

VARIATION CODE

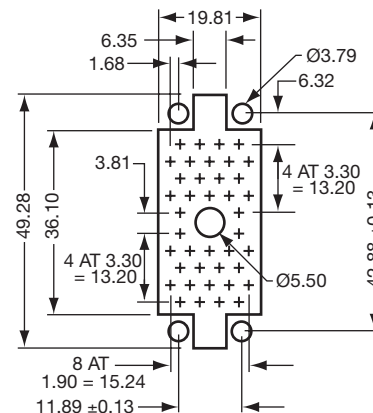
Insulator Body Type	European Version 				USA Version 								Cover & Cable Entrance	Actu- ating Screw	Fixed Nut
	Grey Polyester				Grey Polyester				Green Polyester						
	Aluminum Cover			No Cover	Aluminum Cover			No Cover	Aluminum Cover			No Cover			
	Std. Clamp	Large Clamp	Ex-Large Clamp		Std. Clamp	Large Clamp	Ex-Large Clamp		Std. Clamp	Large Clamp	Ex-Large Clamp				
Male (Exposed Contacts)	—	—	—	001	—	—	—	501	—	—	—	601	None	Yes	No
	—	—	—	002	—	—	—	502	—	—	—	602	None	No	Yes
	903	919	931	—	503	519	531	—	603	619	631	—	Top	Yes	No
	904	920	932	—	504	520	532	—	604	620	632	—	Side	Yes	No
	905	921	933	—	505	521	533	—	605	621	633	—	Top	No	Yes
	906	922	934	—	506	522	534	—	606	622	634	—	Side	No	Yes
Female (Recessed Contacts)	—	—	—	007	—	—	—	507	—	—	—	607	None	No	Yes
	—	—	—	008	—	—	—	508	—	—	—	608	None	Yes	No
	909	923	935	—	509	523	535	—	609	623	635	—	Top	Yes	No
	910	924	936	—	510	524	536	—	610	624	636	—	Side	Yes	No
	911	925	937	—	511	525	537	—	611	625	637	—	Top	No	Yes
	912	926	938	—	512	526	538	—	612	626	638	—	Side	No	Yes

Series 8016 – Rectangular Connector – 38 Way

CLAMPING AND COVER DIMENSIONS



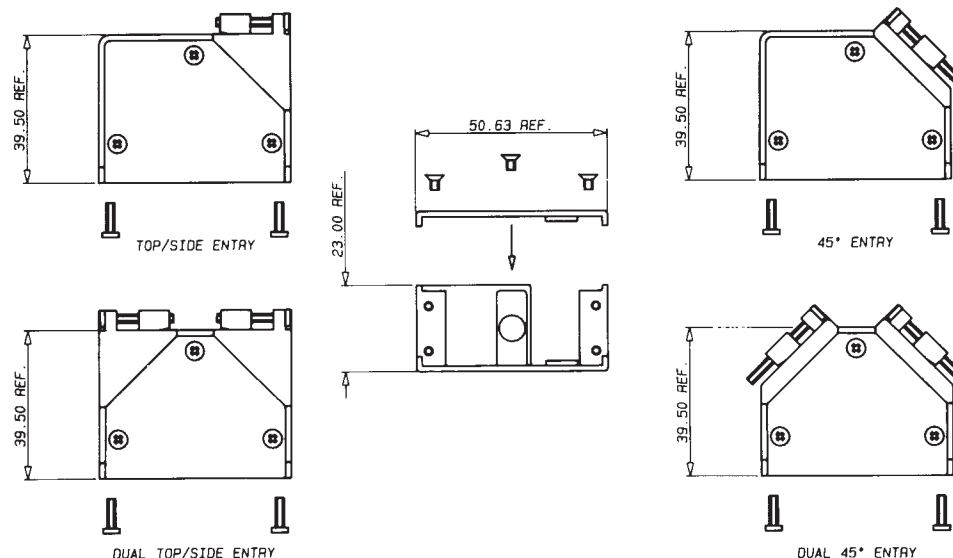
RECOMMENDED LAYOUT FOR FRONT CHASSIS MOUNTING & PCB LAYOUT



STANDARD COVERS

Metric Screws European Version	Cover Part Number Imperial Screws USA Version	Number of Contacts	Cable Entrance	Clamp	
				Description	Size mm (inches)
30-8016-9821-20-000	30-8016-9821-00-000	38	Side	Standard	16.51 X 12.70 (0.650 x 0.500)
30-8016-9822-20-000	30-8016-9822-00-000	38	Top	Standard	16.51 X 12.70 (0.650 x 0.500)
30-8016-9825-20-000	30-8016-9825-00-000	38	Side	Large	16.51 X 15.44 (0.650 x 0.608)
30-8016-9826-20-000	30-8016-9826-00-000	38	Top	Large	16.51 X 15.44 (0.650 x 0.608)
30-8016-9838-20-000	30-8016-9838-00-000	38	Side	Extra-Large	20.83 X 15.60 (0.820 x 0.614)
30-8016-9839-20-000	30-8016-9839-00-000	38	Top	Extra-Large	20.83 X 15.60 (0.820 x 0.614)

OPTIONAL REMOVABLE SIDE PLATE COVER

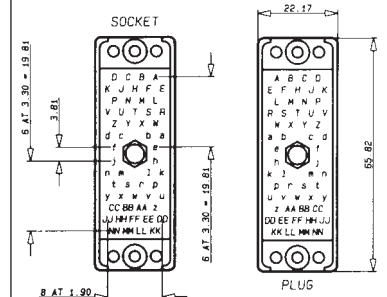
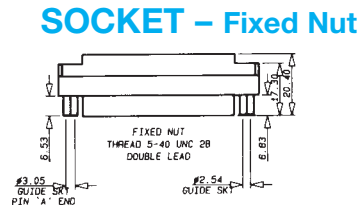
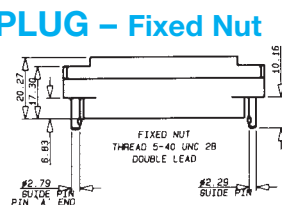
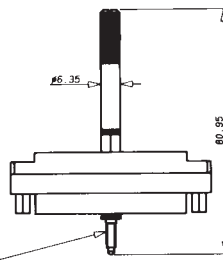
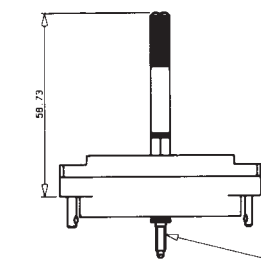


REMOVABLE SIDE PLATE COVERS

millimeters (inches)

Cover Part Number	Number of Contacts	Cable Entrance	Clamp		
			Description	Minimum Size	Maximum Size
30-8016-038-000-413	38	Side/Top	Standard	6 x 14 (0.236 x 0.551)	17 x 14 (0.669 x 0.551)
30-8016-038-000-415	38	45°	Standard	6 x 14 (0.236 x 0.551)	17 x 14 (0.669 x 0.551)
30-8016-038-000-423	38	Dual 90° Side/Top	Special	2 - 6 x 14 (0.236 x 0.551)	2 - 17 x 14 (0.669 x 0.551)
30-8016-038-000-425	38	Dual 45° Entry	Special	2 - 6 x 14 (0.236 x 0.551)	2 - 17 x 14 (0.669 x 0.551)

PIN LAYOUT



ORDERING CODE

00	8016	056	217	001
Prefix	Series Number	Number of Contacts		See Variation Code

Contact Termination

*000 = Contacts not fitted and ordered separately,
see page 23 for full list of options

217 = Solder 0.098" x 2.49mm

218 = Wire Wrap – 0.025 x 0.050 x 0.567" / 0.64 x 1.27 x 14.4mm

296 = Wire Wrap –  0.025 x 0.026 x 0.579" / 0.64 x 1.27 x 19.3mm

504 = Solder Tail – 

750 = Wire Wrap – 0.025 x 0.050 x 0.760" / 0.64 x 1.27 x 19.3mm

*Crimp contacts always ordered separately.
See page 23 for details.

CONNECTOR PLUG AND RECEPTACLE COMBINATIONS

[illegible]

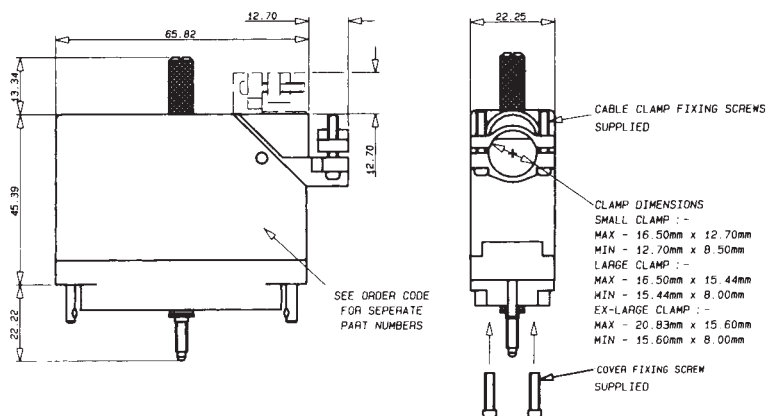
Select variation code combinations marked with square in the table.

VARIATION CODE

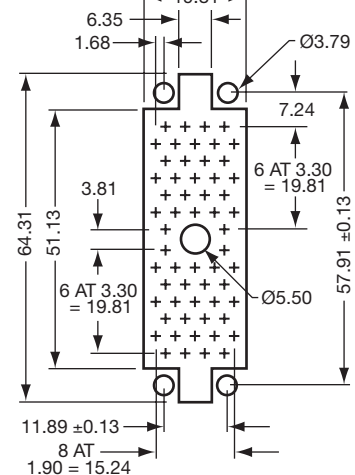
Insulator Body Type	European Version 				USA Version 								Cover & Cable Entrance	Actu- ating Screw	Fixed Nut
	Grey Polyester				Grey Polyester				Green Polyester						
	Aluminum Cover			No Cover	Aluminum Cover			No Cover	Aluminum Cover			No Cover			
	Std. Clamp	Large Clamp	Ex-Large Clamp		Std. Clamp	Large Clamp	Ex-Large Clamp		Std. Clamp	Large Clamp	Ex-Large Clamp				
Male (Exposed Contacts)	—	—	—	001	—	—	—	501	—	—	—	601	None	Yes	No
	—	—	—	002	—	—	—	502	—	—	—	602	None	No	Yes
	903	919	931	—	503	519	531	—	603	619	631	—	Top	Yes	No
	904	920	932	—	504	520	532	—	604	620	632	—	Side	Yes	No
	905	921	933	—	505	521	533	—	605	621	633	—	Top	No	Yes
	906	922	934	—	506	522	534	—	606	622	634	—	Side	No	Yes
Female (Recessed Contacts)	—	—	—	007	—	—	—	507	—	—	—	607	None	No	Yes
	—	—	—	008	—	—	—	508	—	—	—	608	None	Yes	No
	909	923	935	—	509	523	535	—	609	623	635	—	Top	Yes	No
	910	924	936	—	510	524	536	—	610	624	636	—	Side	Yes	No
	911	925	937	—	511	525	537	—	611	625	637	—	Top	No	Yes
	912	926	938	—	512	526	538	—	612	626	638	—	Side	No	Yes

Series 8016 – Rectangular Connector – 56 Way

CLAMPING AND COVER DIMENSIONS



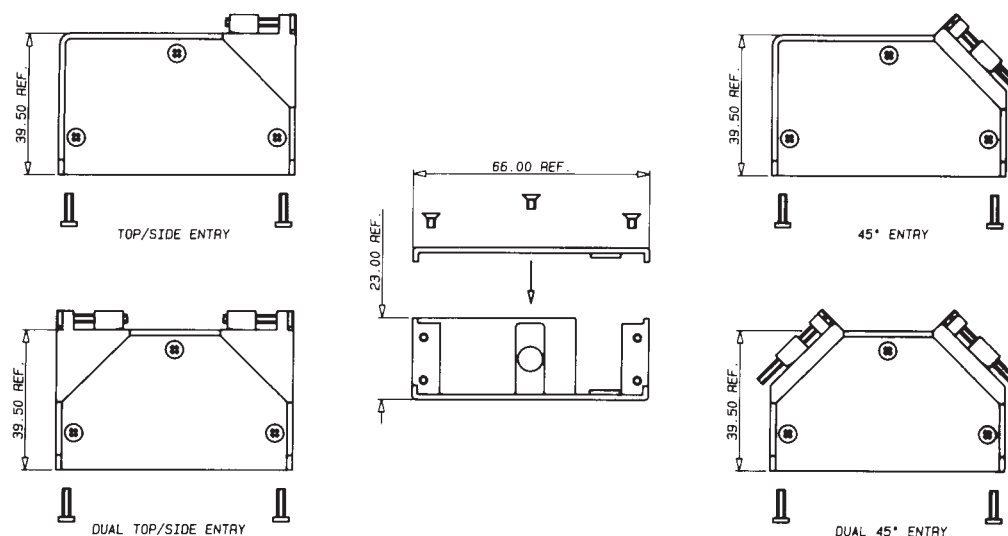
RECOMMENDED LAYOUT FOR FRONT CHASSIS MOUNTING & PCB LAYOUT



STANDARD COVERS

Cover Part Number		Number of Contacts	Cable Entrance	Clamp	
Metric Screws European Version	Imperial Screws USA Version			Description	Size mm (inches)
30-8016-9823-20-000	30-8016-9823-00-000	56	Side	Standard	16.51 X 12.70 (0.650 x 0.500)
30-8016-9824-20-000	30-8016-9824-00-000	56	Top	Standard	16.51 X 12.70 (0.650 x 0.500)
30-8016-9827-20-000	30-8016-9827-00-000	56	Side	Large	16.51 X 15.44 (0.650 x 0.608)
30-8016-9828-20-000	30-8016-9828-00-000	56	Top	Large	16.51 X 15.44 (0.650 x 0.608)
30-8016-9840-20-000	30-8016-9840-00-000	56	Side	Extra-Large	20.83 X 15.60 (0.820 x 0.614)
30-8016-9842-20-000	30-8016-9842-00-000	56	Top	Extra-Large	20.83 X 15.60 (0.820 x 0.614)

OPTIONAL REMOVABLE SIDE PLATE COVER

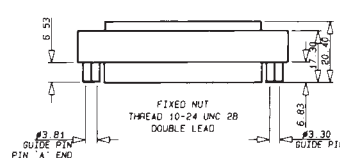
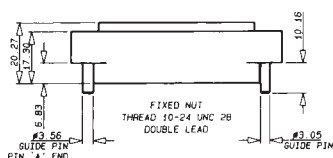


REMOVABLE SIDE PLATE COVERS

millimeters (inches)

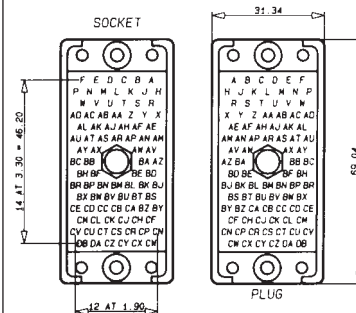
Cover Part Number	Number of Contacts	Cable Entrance	Clamp		
			Description	Minimum Size	Maximum Size
30-8016-056-000-413	56	Side/Top	Standard	6 x 14 (0.236 x 0.551)	17 x 14 (0.669 x 0.551)
30-8016-056-000-415	56	45°	Standard	6 x 14 (0.236 x 0.551)	17 x 14 (0.669 x 0.551)
30-8016-056-000-423	56	Dual 90° Side/Top	Special	2 - 6 x 14 (0.236 x 0.551)	2 - 17 x 14 (0.669 x 0.551)
30-8016-056-000-425	56	Dual 45° Entry	Special	2 - 6 x 14 (0.236 x 0.551)	2 - 17 x 14 (0.669 x 0.551)

SOCKET - Actuating Screw



PIN LAYOUT

90 Way



00

Prefix

8016

Series Number

090

Number of
Contacts

217

001

**See
Variation
Code**

Contact Termination

*000 = Contacts not fitted and ordered separately,
see page 23 for full list of options

217 = Solder 0.098" x 2.49mm 

218 = Wire Wrap –  0.025 x 0.050 x 0.567" / 0.64 x 1.27 x 14.4mm

296 = Wire Wrap – 
0.025 x 0.026 x 0.579" / 0.64 x 1.27 x 19.3mm

504 = Solder Tail –

750 = Wire Wrap –  0.025 x 0.050 x 0.760" / 0.64 x 1.27 x 19.3mm

*Crimp contacts always ordered separately.
See page 23 for details.

CONNECTOR PLUG AND RECEPTACLE COMBINATIONS

[illegible]

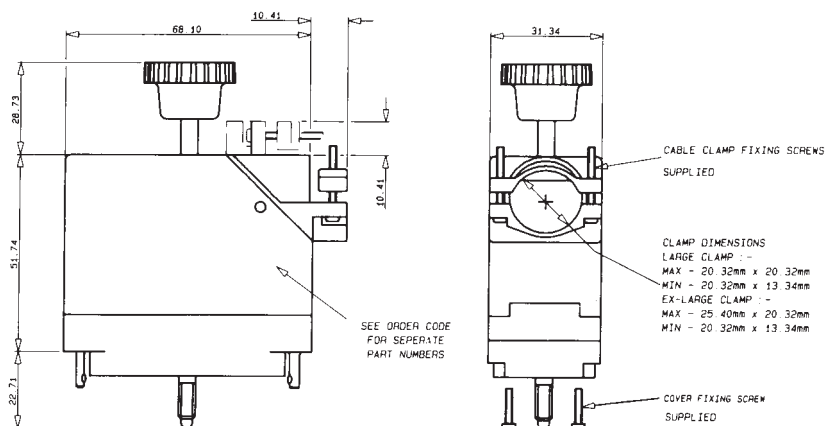
Select variation code combinations marked with square in the table.

VARIATION CODE

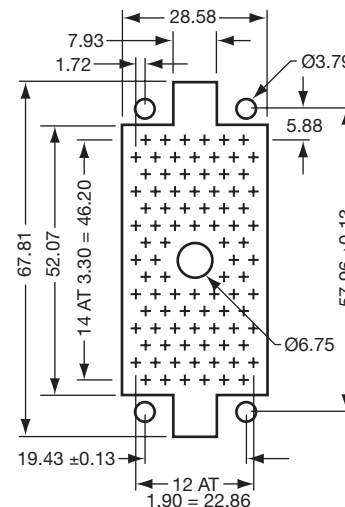
[illegible]

Series 8016 – Rectangular Connector – 90 Way

CLAMPING AND COVER DIMENSIONS



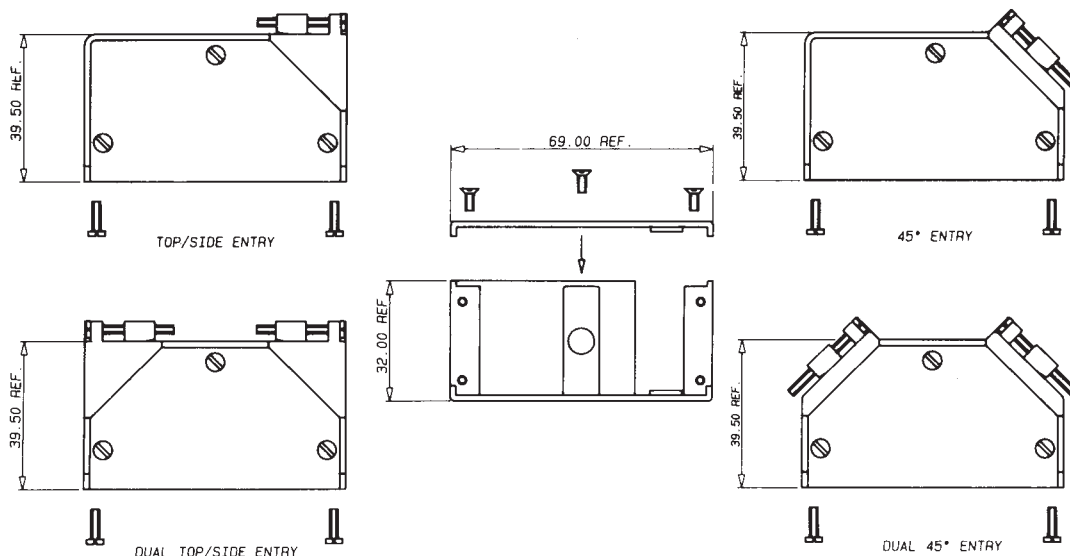
RECOMMENDED LAYOUT FOR FRONT CHASSIS MOUNTING & PCB LAYOUT



STANDARD COVERS

Metric Screws European Version	Cover Part Number Imperial Screws USA Version	Number of Contacts	Cable Entrance	Clamp	
				Description	Size mm (inches)
30-8016-9832-20-000	30-8016-9832-00-000	90	Side	Large	20.32 (0.800) Dia.
30-8016-9833-20-000	30-8016-9833-00-000	90	Top	Large	20.32 (0.800) Dia.
30-8016-9843-20-000	30-8016-9843-00-000	90	Side	Extra-Large	25.40 x 20.32 (1.00 x 0.008)
30-8016-9844-20-000	30-8016-9844-00-000	90	Top	Extra-Large	25.40 x 20.32 (1.00 x 0.008)

OPTIONAL REMOVABLE SIDE PLATE COVER

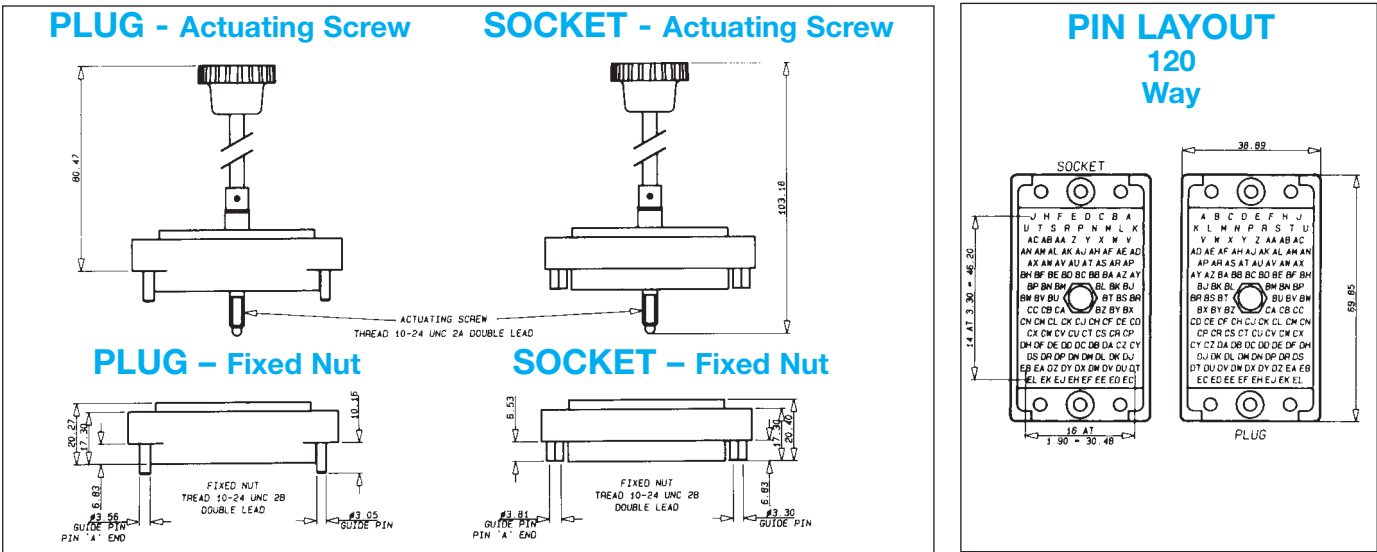


REMOVABLE SIDE PLATE COVERS

millimeters (inches)

Cover Part Number	Number of Contacts	Cable Entrance	Clamp		
			Description	Minimum Size	Maximum Size
30-8016-090-000-413	90	Side/Top	Standard	7 x 21 (0.276)	21 x 21 (0.827 x 0.827)
30-8016-090-000-415	90	45°	Standard	7 x 21 (0.276)	21 x 21 (0.827 x 0.827)
30-8016-090-000-423	90	Dual 90° Side/Top	Special	2 - 7 x 21 (0.276)	2 - 21 x 21 (0.827 x 0.827)
30-8016-090-000-425	90	Dual 45° Entry	Special	2 - 7 x 21 (0.276)	2 - 21 x 21 (0.827 x 0.827)

Series 8016 – Rectangular Connector – 120 Way



ORDERING CODE

00 **8016** **120** **217** **001**
 Prefix Series Number Number of Contacts See Variation Code

Contact Termination

*000 = Contacts not fitted and ordered separately, see page 23 for full list of options

217 = Solder 0.098" x 2.49mm

218 = Wire Wrap –
0.025 x 0.050 x 0.567" / 0.64 x 1.27 x 14.4mm

296 = Wire Wrap –
0.025 x 0.026 x 0.579" / 0.64 x 1.27 x 19.3mm

504 = Solder Tail –

750 = Wire Wrap –
0.025 x 0.050 x 0.760" / 0.64 x 1.27 x 19.3mm

*Crimp contacts always ordered separately.
See page 23 for details.

CONNECTOR PLUG AND RECEPTACLE COMBINATIONS

Plug \ Receptacle	007/507/607	008/508/608	509/609	510/610	511/611	512/612	535/635	536/636	537/637	538/638										
001/501/601																				
002/502/602																				
503/603																				
504/604																				
505/605																				
506/606																				
531/631																				
532/632																				
533/633																				
534/634																				

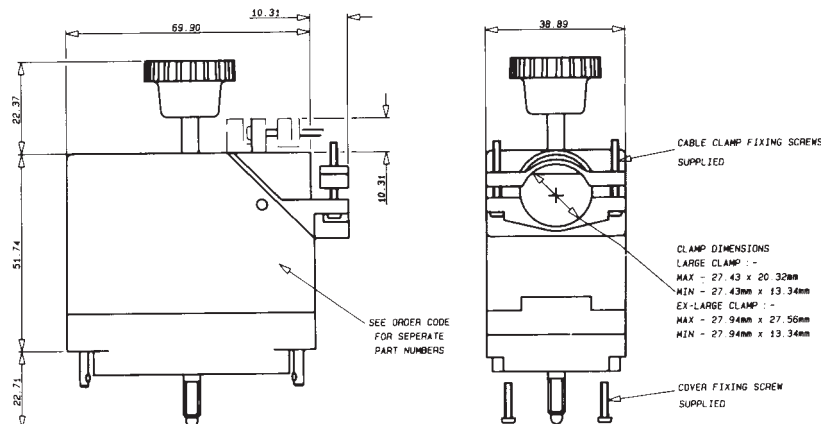
Select variation code combinations marked with square in the table.

VARIATION CODE

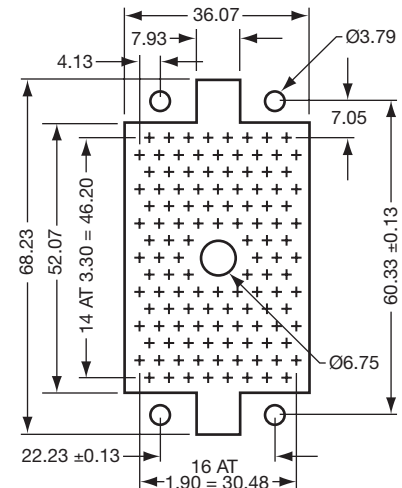
Insulator Body Type	European Version 			USA Version 						Cover & Cable Entrance	Actu- ating Screw	Fixed Nut
	Grey Polyester			Grey Polyester			Green Polyester					
	Cover		No Cover	Cover		No Cover	Cover		No Cover			
Male (Exposed Contacts)	Large Clamp	Ex-Large Clamp	001	Large Clamp	Ex-Large Clamp	501	Large Clamp	Ex-Large Clamp	601	None None Top Side Top Side	Yes No Yes Yes No No	No Yes No Yes Yes
	—	—		—	—		—	—				
	503	531	002	503	531	502	603	631	602			
	504	532	—	504	532	—	604	632	—			
	505	533	—	505	533	—	605	633	—			
	506	534	—	506	534	—	606	634	—			
	Female (Recessed Contacts)	—	—	007	—	—	507	—	—			
—		—	008	—	—	508	—	—	608	None	Yes	No
509		535	—	509	535	—	609	635	—	Top	Yes	No
510		536	—	510	536	—	610	636	—	Side	Yes	No
511		537	—	511	537	—	611	637	—	Top	No	Yes
512		538	—	512	538	—	612	638	—	Side	No	Yes

Series 8016 – Rectangular Connector – 120 Way

CLAMPING AND COVER DIMENSIONS



RECOMMENDED LAYOUT FOR FRONT CHASSIS MOUNTING & PCB LAYOUT



STANDARD COVERS

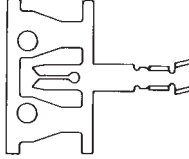
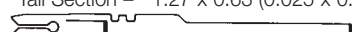
Cover Part Number Imperial Screws	Number of Contacts	Cable Entrance	Clamp	
			Description	Size mm (inches)
30-8016-9834-00-000	120	Side	Large	20.32 x 27.43 (0.800 x 1.080)
30-8016-9835-00-000	120	Top	Large	20.32 x 27.43 (0.800 x 1.080)
30-8016-9845-00-000	120	Side	Extra-Large	27.94 x 27.56 (1.100 x 1.085)
30-8016-9846-00-000	120	Top	Extra-Large	27.94 x 27.56 (1.100 x 1.085)

NB: There are no removable side plate covers for the 120 Way version.

Loose Contacts

Varilok® connectors can be specified as either fully loaded, to include the connector body and a variety of pre-loaded contact termination types or the empty body and a selection

of separately specified and ordered contacts. The table below details the various loose contacts available.

Contact Style	Description	Plating Specification	Order Code
 * Ordered separately	Crimp Contact Loose	0.25µM Gold All Over (Standard) 0.25µM Gold Nose & Tail (Optional)	60 8017 0313 00 339 60 8017 0313 00 042
 * Ordered separately	Crimp Contact End Carrier (1800 Contacts per reel)	0.25µM Gold All Over (Standard) 0.25µM Gold Nose & Tail (Optional) 0.25µM Gold All Over (Standard) 0.25µM Gold Nose & Tail (Optional)	60 8017 0323 99 339 60 8017 0323 99 042 60 8017 0323 00 339** 60 8017 0323 00 042**
Tail Section – 2.49 x 0.61 (0.098 x 0.024)  * If fitted type 217	Solder Tag Contact	0.25µM Gold All Over (Standard)	60 8017 0513 00 339
Tail Section – 1.27 x 0.63 (0.025 x 0.005)  * If fitted type 218	14.4mm Maxiwrap Contact	0.25µM Gold All Over (Standard)	60 8017 0613 00 339
Tail Section – 1.27 x 0.63 (0.025 x 0.005)  * If fitted type 750	19.3mm Maxiwrap Contact	0.25µM Gold All Over (Standard)	60 8017 0623 00 339
Tail Section – 0.635 x 0.63 (0.025 x 0.005)  * If fitted type 296	14.0 Miniwrap Contact	0.25µM Gold All Over (Standard)	60 8017 0633 00 339
Tail Section – 0.635 x 0.63 (0.025 x 0.005)  * If fitted type 504	4.3mm PC Solder Contact for ø 1.00 mm P.T.H.	0.25µM Gold All Over (Standard)	60 8017 0663 00 339

* Indicates standard contact

Plating code 343 conforms to MIL SPEC requirement

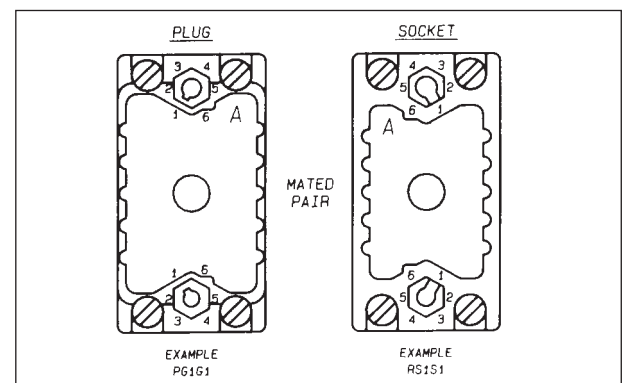
** Order code to be used when purchasing through a USA source.

CONNECTOR POLARIZATION

Varicon® 8016 Series connectors are designed with an integral polarizing system to ensure in high density environments that the correct halves are mated together.

As a factory standard, male plugs are set to the code P-G-1-G-1, with the female receptacles being set to the opposite matching code R-S-1-S-1.

Customers who need to use this facility can either configure the polarization codes themselves, or for an additional charge provide AVX with the required polarization codes for presetting by the factory, which will be supplied as a special part 58-8016-XXX-000-XXX.



ORDERING CODE

P
Type of Connector Half
Plug = P
Socket = R

G
Location Side
(Large Dia.)
Guide Pin = G
Guide Socket = S

1
Positions
1 through 6

G
Location Side
(Small Dia.)
Guide Pin = G
Guide Socket = S

1
Positions
1 through 6