

Ratings and Certifications



CSA International, U.S. and Canadian Standards: Class I, Division 2, Groups B, C & D and Class II, Division 1, Groups F & G for Standard and Reverse Service, 60 Hz, 250 Vac. Select inserts are rated at 480 Vac non-circuit breaking.

Operation

Receptacles are mated to plugs that feature a quick make and break design. To engage, align plug to receptacle and turn coupling sleeve clockwise. Plug will be injected automatically & close circuit. Continue turning coupling sleeve to solid to provide environmental seal. To disengage, rotate coupling sleeve c.c.w. (counterclockwise). Plug will eject automatically. Continue turning coupling sleeve to extract the plug. **Caution:** Do not interfere with cable housing. To prevent shock hazard the receptacle cover must be threaded onto receptacle when receptacle is not in use.

Materials (See Tables 7, 8 and 9 for Material Composition data)

AF Series, Wrought Aluminum 6061-T6, copper-free, with Hardcoating per Mil-A-8625 Type III, black finish.  
 SF Series, Stainless Steel Type 316.  
 Angle Adapters, Tenzaloy 713, with a black powder coat finish.

Assembly

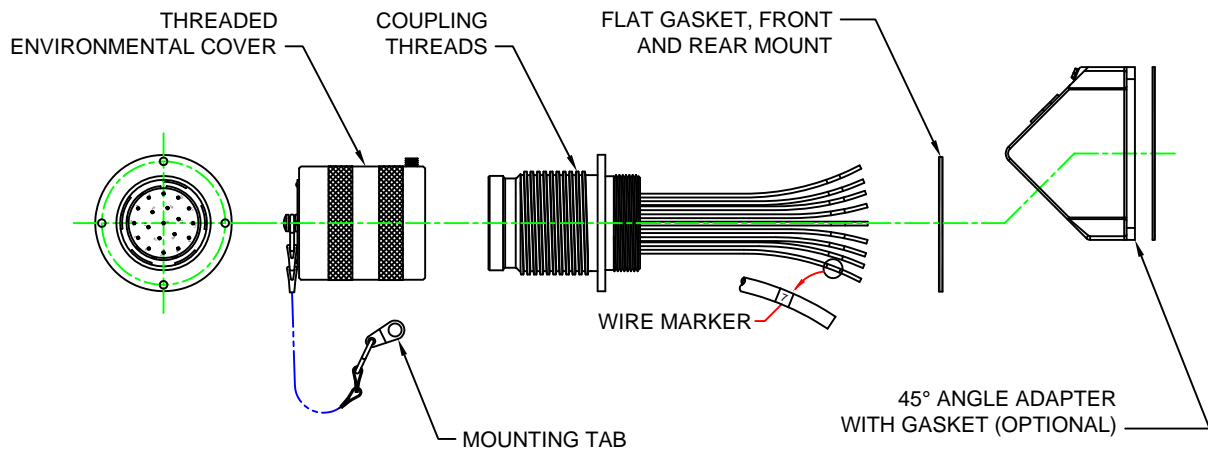
Receptacles are designed for field termination. Wire leads can be spliced or landed to terminals. No special tools are required.

Maintenance

Periodic maintenance consists of inspection for termination integrity and contamination. When conditions require, lubricate coupling threads with silicone oil, Vantage Part Number VT-9400-21D.

Before Ordering

Insert: Table 11 lists the available insert configurations. The insert selection dictates the shell size of the plug. Diagrams are available for each insert configuration. Pins and sockets are available in several finishes, see Table 10.



AF-B1716-677SL-L36 SHOWN

<b>REVISION:</b>	B	WTN BY: JOHN NORDECK	<b>TITLE:</b> AF AND SF PANEL MOUNT RECEPTACLES	<b>Vantage Technology LLC</b>	4875 South Windermere Street Englewood, Colorado USA 80110 Phone: 303-781-2121 FAX: 303-789-4215 Email: support@vantagexp.com
		CHK BY: DARRIN LOMBARD			DOCUMENT: PDS-AF-SF-PMR
		ENG BY:			SHEET: 1 OF 4
		ATEX: JOHN NORDECK			
		ISSUE DATE: APRIL 4, 2005			<b>PRODUCT DATA SHEET</b>

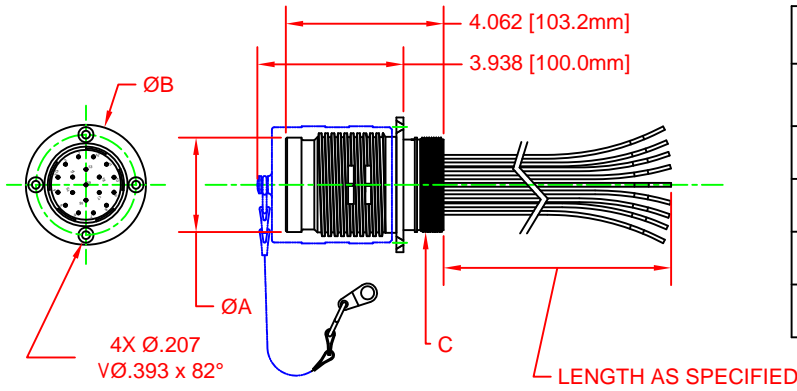


TABLE 1: BASIC DIMENSIONS			
SHELL SIZE	INCHES (mm)		
	A	B	C
16	1.969 (50.0)	3.063 (77.8)	2 - 16UN THREAD
20	2.468 (62.7)	3.563 (90.5)	2 1/2 - 16UN THREAD
24	2.969 (75.4)	4.188 (106.4)	3 1/8 - 16UN THREAD
28	3.468 (88.1)	4.688 (119.1)	3 5/8 - 16UN THREAD

TABLE 2: WEIGHTS IN LBS (kg) Multiply receptacle weight by a factor of 1.4 for weight in stainless steel.				
COMPONENT	SHELL SIZE 16	SHELL SIZE 20	SHELL SIZE 24	SHELL SIZE 28
RECEPTACLE (L36 LEADS)	3 (1.4)	4 (1.8)	8 (3.6)	13 (5.9)
ANGLE ADPTER	0.5 (0.23)	0.5 (0.23)	2.9 (1.3)	2.9 (1.3)

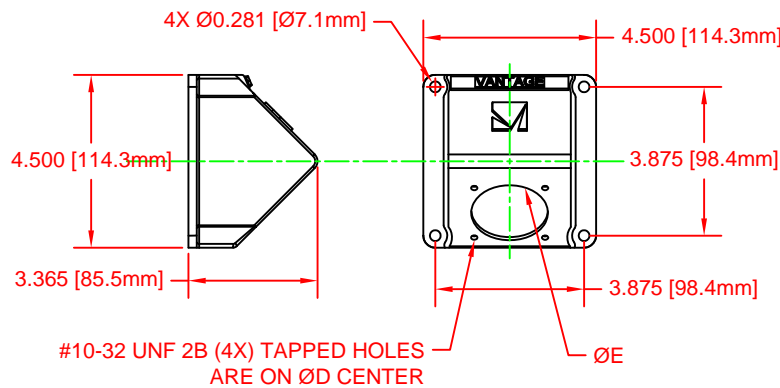


TABLE 3: SHELL SIZE 16 AND 20 ANGLE ADAPTER DIMENSIONS		
SHELL SIZE	INCHES (mm)	
	D	E
16	2.610 (66.3)	2.063 (52.4)
20	3.110 (79.0)	2.563 (65.1)

TABLE 4: SHELL SIZE 24 AND 28 ANGLE ADAPTER DIMENSIONS		
SHELL SIZE	INCHES (mm)	
	F	G
24	3.735 (94.9)	3.063 (77.8)
28	4.235 (107.6)	3.563 (90.5)

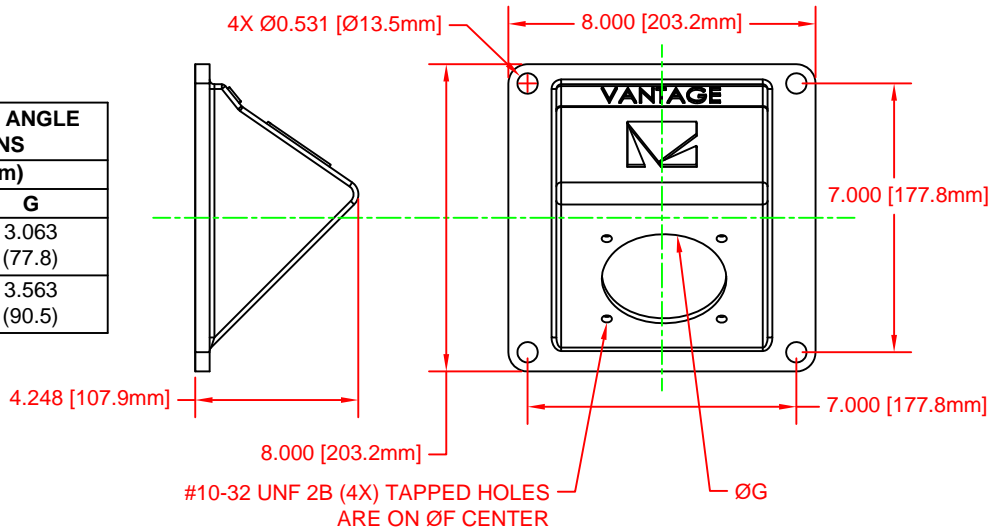
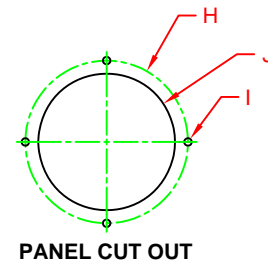
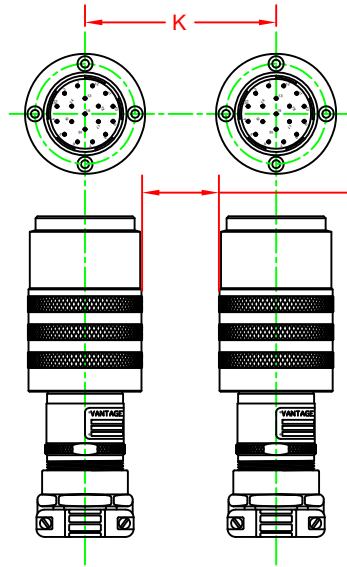


TABLE 5: PANEL CUT OUT DIMENSIONS			
SHELL SIZE	INCHES (mm)		
	H	I	J
16	2.610	0.195	2.0625
20	3.110	0.195	2.5625
24	3.735	0.195	3.0625
28	4.235	0.195	3.5625

NOTE: THE CUTOUT DIMENSION "J" INCLUDES 0.0625" RECEPTACLE SHELL CLEARANCE.





WHEN MOUNTING TWO OR MORE RECEPTACLES TO A PANEL, IT IS RECOMMENDED THAT 2 INCHES OF SPACING BE ALLOWED TO PROVIDE SUFFICIENT ACCESS FOR ROTATION OF PLUG COUPLING SLEEVE. SEE TABLE 6 FOR MOUNTING CENTERS.

2 [50.8mm] INCHES  
MINIMUM RECOMMENDED CLEARANCE  
BETWEEN PLUGS

SHELL SIZE	TABLE 6: RECEPTACLE MOUNTING SPACING	
	K IN INCHES (mm)	
16	5.0 (127)	
20	5.6 (142)	
24	6.2 (158)	
28	6.8 (173)	

FOR MIXED SHELL SIZES, ADD DIMENSION "K" FOR EACH AND DIVIDE BY TWO.

### ELEMENTAL COMPOSITIONS

**TABLE 7: ELEMENTAL COMPOSITION OF ALUMINUM 6061-T6  
PERCENTAGE BY WEIGHT**

	Al	Cr	Cu	Fe	Mg	Mn	Si	Ti	Zn	Other Each	Other Total
<b>MIN</b>	REM	0.04	0.15	-	0.80	-	0.40	-	-	-	-
<b>MAX</b>	REM	0.35	0.40	0.70	1.20	0.15	0.80	0.15	0.25	0.05	0.15

**TABLE 8: ELEMENTAL COMPOSITION OF STAINLESS STEEL TYPE 316  
PERCENTAGE BY WEIGHT**

	Fe	C	Mn	Si	P	S	Cr	Mo	Ni	N	Other
<b>MIN</b>	REM	-	-	-	0	-	16.0	2.0	10.0	-	-
<b>MAX</b>	REM	0.08	2.0	0.75	0.045	0.03	18.0	3.0	14.0	0.10	-

**TABLE 9: ELEMENTAL COMPOSITION OF TENZALOY 713  
PERCENTAGE BY WEIGHT**

	Al	Cr	Cu	Fe	Mg	Mn	Si	Ti	Zn	Sn	Other
<b>MIN</b>	REM	-	0.40	-	0.20	-	-	0.10	7.0	-	-
<b>MAX</b>	REM	0.35	1.00	1.10	0.50	0.60	0.25	0.20	8.0	0.25	0.25

TABLE 10: PANEL MOUNT RECEPTACLE PART NUMBER CODE LOGIC											
AF	-	B	17	16	-	677	S	L	01	-	L36
1		2	3	4		5	6	7	8		9

1	CLASSIFICATION	AF = ALUMINUM SF = STAINLEES STEEL
2	COVER	B = RECEPTACLE COVER
3	SHELL STYLE	17 = RECEPTACLE, JUNCTION BOX OR PANEL MOUNT
4	SHELL SIZE	16 = SHELL SIZE 16      24 = SHELL SIZE 24 20 = SHELL SIZE 20      28 = SHELL SIZE 28
5	INSERT	SEE INSERT TABLE, TABLE 11
6	GENDER	P = MALE (PIN) INSERT S = FEMALE (SOCKET) INSERT
7	CONTACT PLATING	L = SILVER PLATE (STANDARD) K = GOLD OVER SILVER D = GOLD OVER NICKLE
8	INSERT KEYING	SEE VANTAGE INSERT PRODUCT DATA SHEET
9	WIRE LENGTH	LENGTH OF WIRE LEADS IN INCHES

TABLE 11: INSERT TABLE AND AMPERE RATINGS						
CONTACT QUANTITY	CONTACT SIZE (mm <sup>2</sup> )	CONNECTOR PREFIX	SHELL SIZE	INSERT CODE NUMBER		KEY POSITIONS
				PIN	SOCKET	
10	12 (4.0)	AF or SF	16	681PL	681SL	N + 4
10	12 / G (4.0)	AF or SF	16	676PL	676SL	N + 1
19	12 / G (4.0)	AF or SF	16	612PL	612SL	N + 4
19	12 (4.0)	AF or SF	16	677PL	677SL	N + 1
19	12 (4.0)	AF or SF	20	676PL	676SL	N + 5
19	12 / G (4.0)	AF or SF	20	688PL	688SL	N
19	16 (1.5)	AF or SF	16	655PL	655SL	N + 9
20	12 (4.0)	AF or SF	20	632PL	632SL	N + 3
20	12 / G (4.0)	AF or SF	20	687PL	687SL	N + 1
37	12 (4.0)	AF or SF	20	686PL	686SL	N
37	12 / G (4.0)	AF or SF	20	650PL	650SL	N + 3
37	16 (1.5)	AF or SF	16	621PL	621SL	N + 9
55	18 (0.75)	AF or SF	16	640PL	640SL	N + 10
61	18 (0.75)	AF or SF	16	633PL	633SL	N + 4
68	16 (1.5)	AF or SF	20	613PL	613SL	N + 4
100	16 (1.5)	AF or SF	24	613PL	613SL	N + 4

TABLE 12: ELECTRICAL RATINGS	
CONTACT SIZE (mm <sup>2</sup> )	AMPERE RATING 250 Vac, 60 Hz <sup>1</sup>
18 (0.75)	3.5
16 (1.5)	6.5
12 (4.0)	10.0
10 (6.0)	10.0
1. Insert Codes VT-20-676 and VT-20-688 available at 480 Vac Non-circuit Breaking.	

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CHK BY: DARRIN LOMBARD	AF AND SF PANEL MOUNT RECEPTACLES	DOCUMENT: PDS-AF-SF-PMR
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