

Ratings and Certifications

CE 0344 II 2 G D, EEx d IIC T6, KEMA 04ATEX2179 X; -20°C ≤ Ta ≤ +50°C; IP 66/67, T70°C.
For Standard and Reverse Service, 50/60/400 Hz, 250 Vac / 125 Vdc.

CSA International, U.S. and Canadian Standards: Class I, Division 1, 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 4, 5 and 6 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.
Junction box enclosures, 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

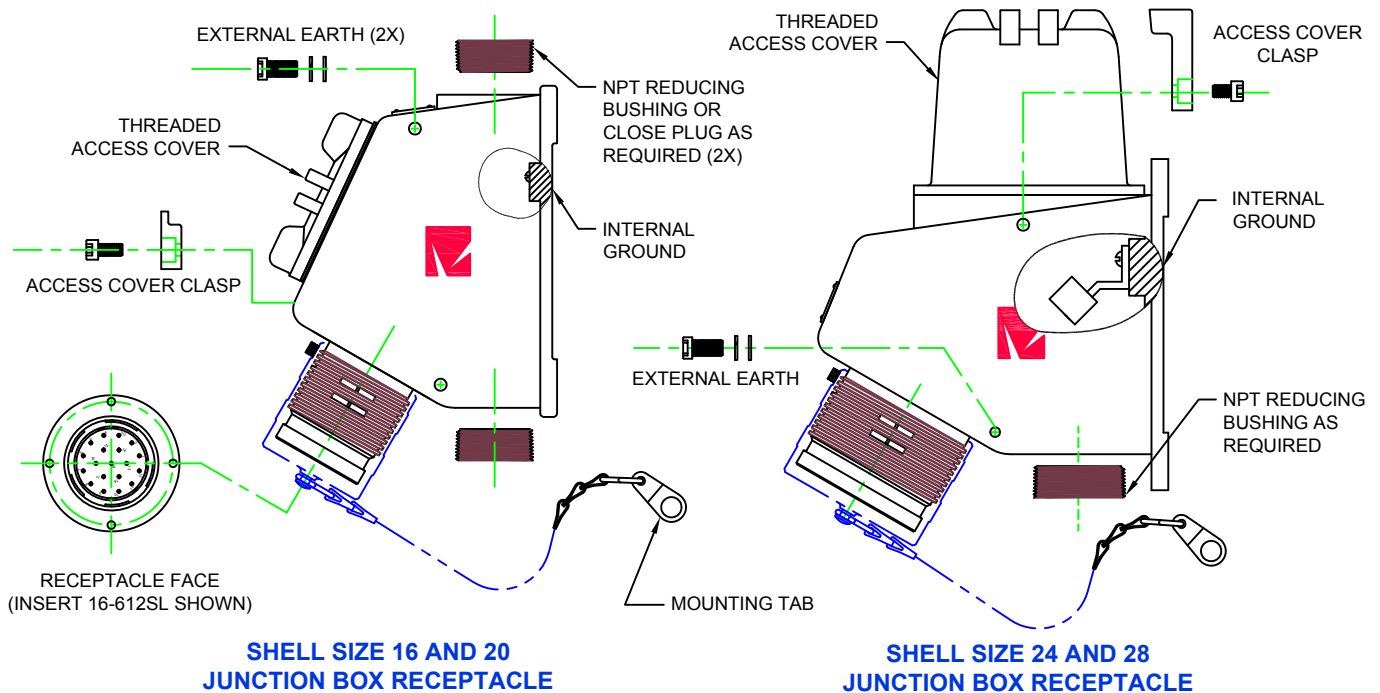
Periodic maintenance consists of inspection for termination integrity and contamination. When conditions require, lubricate coupling threads with silicone oil, Vantage Part Number VT-9400-21D.


Before Ordering

Insert: Table 3 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 2.

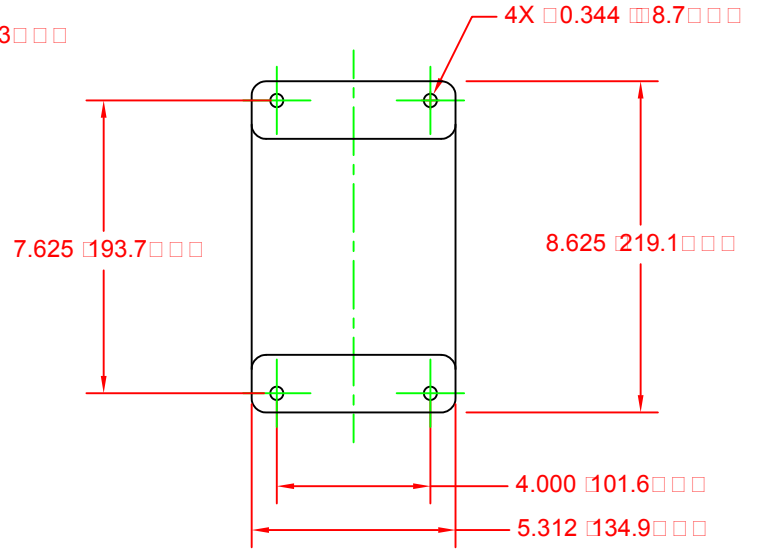
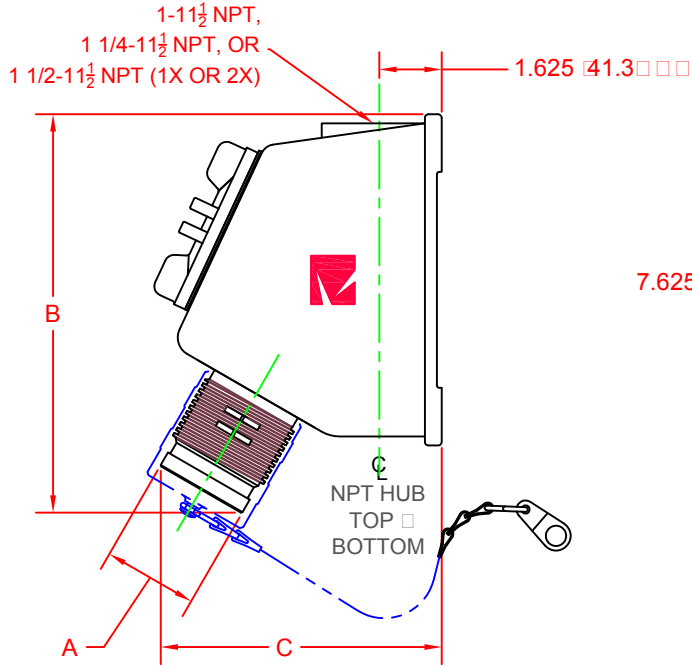
Conduit Hub: Conduit entrance and size options vary. Use Table 7 to specify size and location. Unused hub entrances must be fully stopped with a close up plug.

Option: Receptacles are available with a 15 Ampere, 125/250 VAC, NO/NC electrical interlock switch that is activated during the mating and unmating of the plug. The switch is activated before the connector's contacts can make or break.

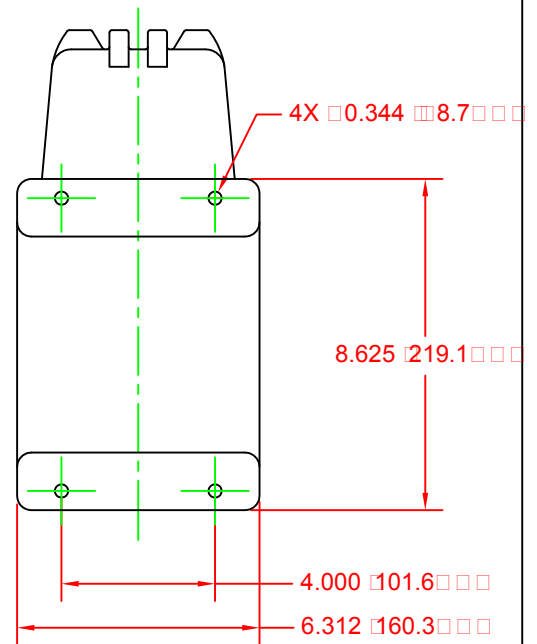
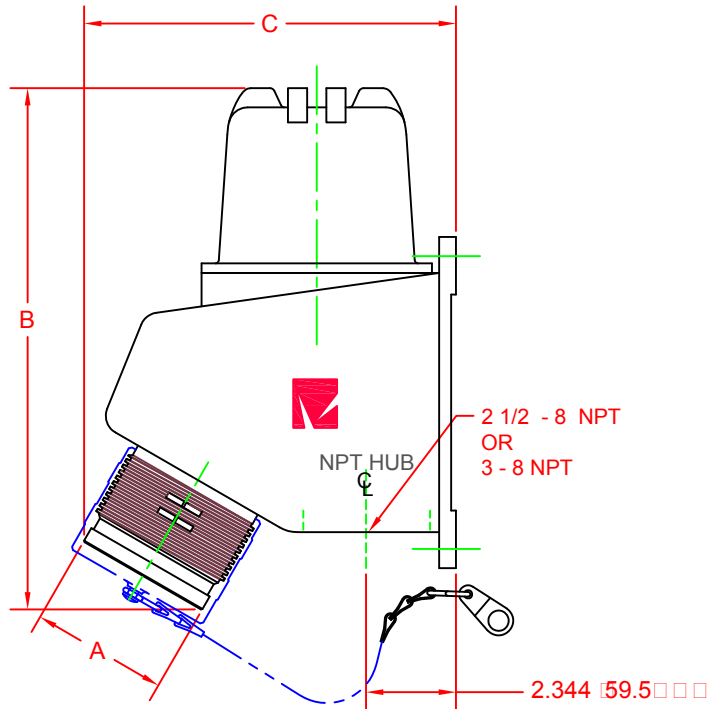


REVISION:	B WTN BY: JOHN NORDECK	TITLE: AF AND SF JUNCTION BOX RECEPTACLES	 Vantage Technology LLC 4875 South Windermere Street Englewood, Colorado USA 80110 Phone: 303-781-2121 FAX: 303-789-4215 Email: service@vantagexp.com
	CHK BY: DARRIN LOMBARD		
	ENG BY:		
	ATEX: JOHN NORDECK		
ISSUE DATE: JULY 29, 2004	PRODUCT DATA SHEET	DOCUMENT: PDS-AF-SF-JBR	SHEET: 1 OF 4

**JUNCTION BOX
RECEPTACLE DIMENSIONS**



SHELL SIZE	DIMENSION IN INCHES (mm)		
	A	B	C
16	1.969 (50.0)	10.25 (260.4)	7.375 (187.3)
20	2.469 (62.7)	10.25 (260.4)	7.375 (187.3)



SHELL SIZE	DIMENSION IN INCHES (mm)		
	A	B	C
24	2.969 (75.4)	14 (355.6)	9.688 (246.1)
28	3.469 (88.1)	14 (355.6)	9.688 (246.1)

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TABLE 2: JUNCTION BOX RECEPTACLE PART NUMBER CODE LOGIC													
AF	-	B	17	16	-	677	P	L	01	-	94	-	AH
1		2	3	4		5	6	7	8		9		10

1	CLASSIFICATION	AF = ALUMINUM SF = STAINLEES STEEL
2	COVER	B = RECEPTACLE COVER
3	SHELL STYLE	17 = RECEPTACLE, JUNCTION BOX 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 3
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	MICROSWITCH	94 = MICROSWITCH BLANK = NO MICROSWITCH OPTION
10	CONDUIT HUB	AH = SEE TABLE 7

TABLE 3: INSERT TABLE AND AMPERE RATINGS						
CONTACT QUANTITY	CONTACT SIZE (mm ²)	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 + 4
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

CONTACT SIZE (mm ²)	 AMPERE RATING 250 Vac, 60 Hz	 AMPERE RATING 250 Vac / 125 Vdc, 50/60/400 Hz
18 (0.75)	3.5	10
16 (1.5)	6.5	15
12 (4.0)	10.0	20
10 (6.0)	10.0	30

1. Insert Codes VT-20-676 and VT-20-688 are also rated at 480 Vac Non-circuit Breaking.

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ELEMENTAL COMPOSITIONS

TABLE 4: ELEMENTAL COMPOSITION OF ALUMINUM 6061-T6 PERCENTAGE BY WEIGHT											
	Al	Cr	Cu	Fe	Mg	Mn	Si	Ti	Zn	Other Each	Other Total
MIN	REM	0.04	0.15	-	0.80	-	0.40	-	-	-	-
MAX	REM	0.35	0.40	0.70	1.20	0.15	0.80	0.15	0.25	0.05	0.15

TABLE 5: ELEMENTAL COMPOSITION OF STAINLESS STEEL TYPE 316 PERCENTAGE BY WEIGHT											
	Fe	C	Mn	Si	P	S	Cr	Mo	Ni	N	Other
MIN	REM	-	-	-	0	-	16.0	2.0	10.0	-	-
MAX	REM	0.08	2.0	0.75	0.045	0.03	18.0	3.0	14.0	0.10	-

TABLE 6: ELEMENTAL COMPOSITION OF TENZALOY 713 PERCENTAGE BY WEIGHT											
	Al	Cr	Cu	Fe	Mg	Mn	Si	Ti	Zn	Sn	Other
MIN	REM	-	0.40	-	0.20	-	-	0.10	7.0	-	-
MAX	REM	0.35	1.00	1.10	0.50	0.60	0.25	0.20	8.0	0.25	0.25

TABLE 7: CONDUIT HUB SIZE AND LOCATION			
ENCLOSURE	CONDUIT HUB LOCATON	HUB SIZE CODE	CONDUIT HUB SIZE (INCHES)
SHELL SIZE 16 □ 20	A = TOP B = BOTTOM F = TOP AND BOTTOM	F	1 - 1 1/2 NPT
		G	1 1/4 - 1 1/2 NPT
		H	1 1/2 - 1 1/2 NPT
SHELL SIZE 24 □ 28	B = BOTTOM FEED, TOP FEED NOT AVAILABLE	K	2 1/2 - 8 NPT
		L	3 - 8 NPT
EXAMPLE: SUFFIX □AH□DENOTES TOP FEED WITH A 1 1/2 INCH HUB.			

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