



THORNE &
DERRICK
INTERNATIONAL

Thorne & Derrick
+44 (0) 191 410 4292
www.heatingandprocess.com



HDESERIES
C O N N E C T O R S Y S T E M



PRODUCT GUIDE

HDE SERIES CONNECTOR

TABLE OF CONTENTS



3	Product Applications
4	Code Logic
5	Code Logic Continued / Examples
6	HDE Features
7	Product Options
8	Component Dimensions
9	Receptacle Dimensions
10	Grommets
11-22	Insert Arrangements

HDE SERIES CONNECTOR APPLICATIONS FOR HAZARDOUS LOCATIONS

HDE Connectors are intermateable with the Pyle National AF/GD connectors and are designed for the following applications:

- Chemical Manufacturing Facilities
- Ship to Shore Communications (L.N.G. and Oil Tankers)
- Petroleum Refineries
- Oil Rigs
- Monitoring Gasoline Storage Facilities
- Gas Processing
- Synthetic Fuels Handling
- Plastics and Synthetic Rubber Processing
- Logging Equipment
- Motor Operated Valves
- Pipeline Pumping



HDE CODE LOGIC

HDES-10-2-18-20-621PN-01-R-LXX

1

2

3

4

5

6

7

8

9

10

11

12

1 HDE SERIES IDENTIFICATION

2 MATERIAL

S Stainless Steel 316
Omit for Aluminum

3 SHELL STYLE

10 Plug, In-Line
15 Receptacle, In-Line
17 Receptacle, for Box or Panel-Mount
19 Receptacle, NPT Mount (Table 3)

4 CABLE RETENTION STYLE

* 1 Enclosure, (Junction Box)
** 2 Mechanical Clamp (With Grommet)
** 3 Metric Thread for EEx d Gland
** 4 Basket Weave Grip (With Grommet)
** 5 Compression Nut (With Grommet)
*** 7 NPT Internal Mount

* For 17 only
** For 10 and 15 only
*** For 19 only

5 GLAND SIZE / GROMMET / JUNCTION BOX

Style 1, Conduit Hub Threads, See Table 1 & 1a
Style 2, 4, & 5, Grommet Code, See Table 2
Style 3, See Gland Section for EEx d Gland
For Style 3 and 7 Threads, See Table 3

6 SHELL SIZE

16, C16, 20, C20, 24, C24, 28, and C28

7 INSERT CONFIGURATION

See Insert Section

8 CONTACT GENDER

P Pin (Male)
S Socket (Female)

9 CONTACT TERMINATION STYLE

N Crimp Contact
R Pressure
Omit for solder

10 OPTIONAL ALTERNATE INSERT KEY POSITION

Omit for normal

11 COLOR CODING

See Table 4

12 PIGTAIL LENGTH

LXX XX Pigtail length in inches for Style 17 and 19
L36 36" Standard for Style 17
L48 48" Standard for Style 19

TABLE 1 STANDARD HUB SIZE AND LOCATION FOR JUNCTION BOX, STYLE 1

Shell Size	Code	Hub Location	NPT
16	FH*	Top & Bottom	1-1/2" NPT
20	FH*	Top & Bottom	1-1/2" NPT
24	BK*	Bottom Only	2-1/2" NPT
28	BL*	Bottom Only	3" NPT

* Standard box for size
Omit for Panel-mount (no junction box)

TABLE 1A POSSIBLE HUB SIZE AND LOCATION OPTIONS FOR JUNCTION BOXES

Shell Size			
16	20	24	28
-	FF	-	-
FH	FG	-	-
FH*	FH*	-	-
-	FJ	-	-
-	BK	BK*	BK
-	-	-	BL*

F Top and bottom hubs with flat cover
B Bottom hub only with domed cover
C Bottom hub only with flat cover, optional
F 1 – 11-1/2 NPT
G 1-1/4 – 11-1/2 NPT
H 1-1/2 – 11-1/2 NPT
J 2 – 11-1/2 NPT
K 2-1/2 – 8 NPT
L 3 – 8 NPT
S Include electrical interlock switch

TABLE 2 GROMMET CODE FOR CABLE SIZE

Shell	Cable Ø	Code
16	.250 > .375	06
16	.375 > .500	08
16-20	.500 > .625	10
16-20	.625 > .750	12
16-20	.750 > .875	14
16-24	.875 > 1.000	16
16-24	1.000 > 1.125	18
16-24	1.125 > 1.250	20

Shell	Cable Ø	Code
16-24	1.250 > 1.375	22
16	1.375 > 1.437	23
20-28	1.375 > 1.500	24
20-28	1.500 > 1.625	26
20-28	1.625 > 1.750	28
20-28	1.750 > 1.875	30
20	1.875 > 1.937	31
24-28	1.875 > 2.000	32

Shell	Cable Ø	Code
24-28	2.00 > 2.125	34
24-28	2.125 > 2.250	36
24-28	2.250 > 2.375	38
24	2.375 > 2.437	39
28	2.375 > 2.500	40
28	2.500 > 2.625	42
28	2.625 > 2.750	44
28	2.750 > 2.875	46

Shell Size also includes 'C' length, ie shell size 24 includes C24

TABLE 3 STANDARD CABLE ADAPTER & THREAD SIZE

Shell	Style 3 Metric	Style 7 NPT	Style 19 NPT
16	M40x1.5	1-1/4	1-1/2
20	M50x1.5	1-1/2	2
24	M63x1.5	2	2-1/2
28	M75x1.5	2-1/2	3

TABLE 4 COLOR CODING

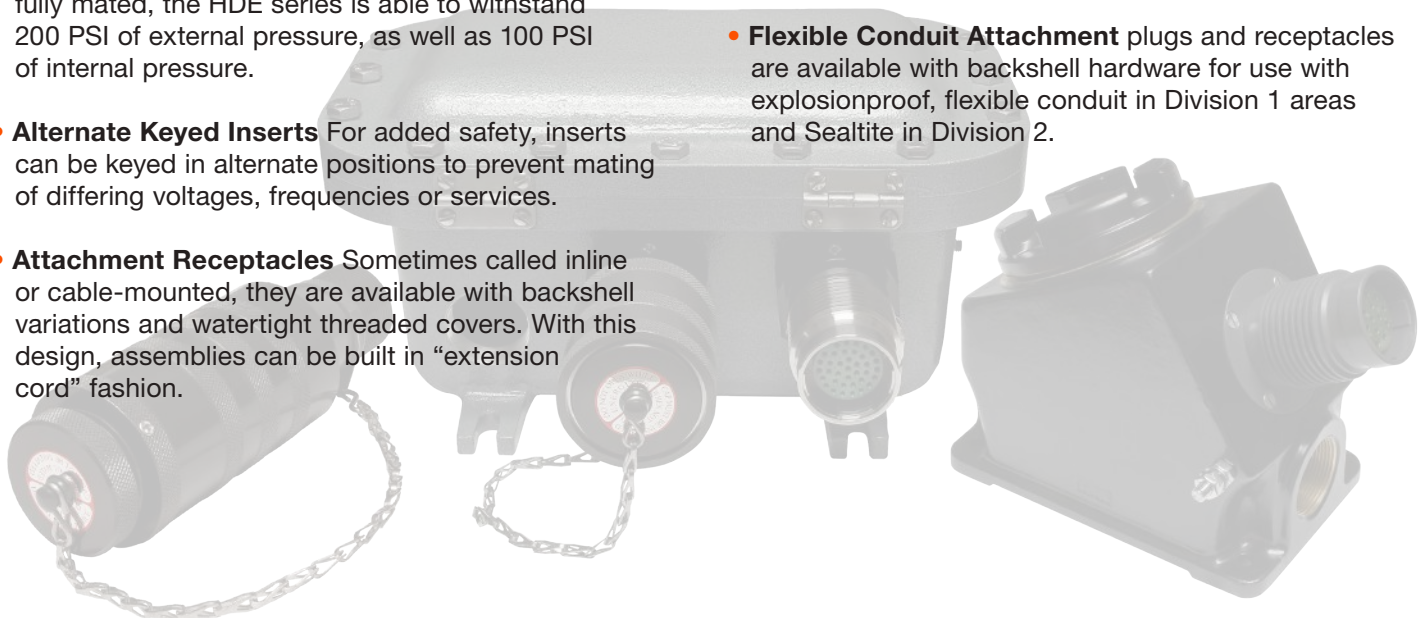
BK Black	BL Blue	Y Yellow
R Red	G Green	BR Brown
W White	OR Orange	P Purple
		GY Gray

EXAMPLES PART NUMBER WITH LOGIC DECODED

HDE-10-4-16-621PN-02-BK Plug, Basketweave, Shell 16, Insert 621 Pin, Rotated to Key 02, Black
HDE-15-7-C20-40P In-line Receptacle, NPT Adapter, Shell C20, 40P Insert
HDE-17-1-FH-16-321S Receptacle Junction Box

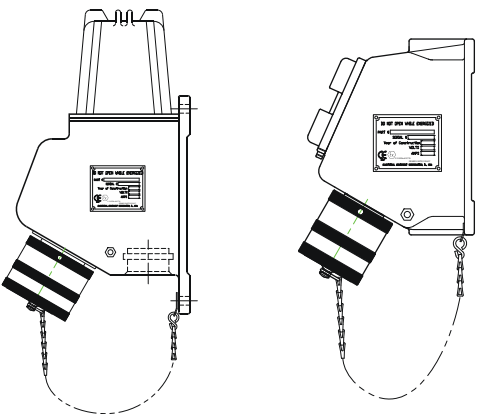
HDE SERIES FEATURES

- **Reverse Service** provides flexibility not offered with other connectors. Male or female configurations are possible with the same hardware. A full range of inserts are available for both power and control service.
- **Box or in-line** mounting options are available
- **Zero dwell snap action** virtually eliminates the possibility of dwell (spark) by quickly engaging, or disengaging contacts via a spring loaded design.
- **Internal labyrinth flame path** distributes and dissipates any dangerous ignition within the connector, further protecting the operator in hazardous locations.
- **Manufactured in aircraft quality aluminum** or 316 grade stainless steel.
- **The HDE series is designed and tested** to meet the most demanding circumstances, including Class 1 Div 1 / Zone 1 hazardous locations.
- **Explosion-proof and submersible:** upon being fully mated, the HDE series is able to withstand 200 PSI of external pressure, as well as 100 PSI of internal pressure.
- **Alternate Keyed Inserts** For added safety, inserts can be keyed in alternate positions to prevent mating of differing voltages, frequencies or services.
- **Attachment Receptacles** Sometimes called inline or cable-mounted, they are available with backshell variations and watertight threaded covers. With this design, assemblies can be built in “extension cord” fashion.
- **Corrosion Resistance Designed** for corrosive environments, junction boxes are sand cast, copper-free aluminum, protected by our robust powder coated finishing system. Plug and receptacle shells are machined from 6061T6 aluminum and finished by hard anodizing to exceed corrosion resistance requirements per MIL-STD 202, Method 101, Condition D.
- **Electrical Interlock Switch Receptacles** with junction boxes are available with this variation, often used as a motor disconnect. The normally open switch is operated automatically by insertion/withdrawal of the mating plug.
- **Factory Sealing Junction box**, NPT and panel-mounted receptacles are pre-wired and factory sealed. No external seals are required.
- **Color Coding Plugs** and receptacles are available with color coding variations for specific application identification. This coding could include the plug coupling nut and cover with matching colors on various receptacle components.
- **Flexible Conduit Attachment** plugs and receptacles are available with backshell hardware for use with explosionproof, flexible conduit in Division 1 areas and Sealite in Division 2.

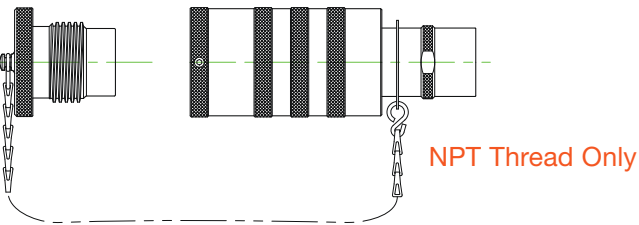


Sealing all Junction Box, NPT and Panel-Mounted Receptacles	Pre-wired and factory sealed eliminating need for external seals
Covers, Environmental & Threaded	Available with all connectors
Pigtails	Normally 36", can be any length to suit applications
Gender Connectors	Supplied with "reverse service" inserts when lineside power is carried in the plug to a receptacle
Keying Inserts	Keyed for phase & voltage separation
Color Coding Connectors	Coded for use identification
Purged Systems Factory Sealing	Our receptacles are ideal for use with this technology
Custom Assemblies	Available to user's specifications

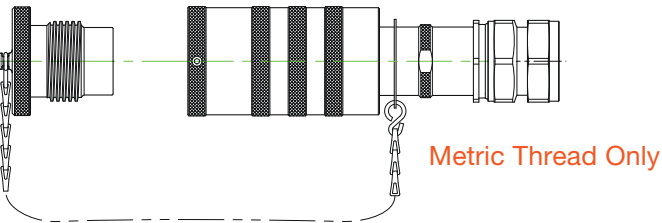
Receptacle, Junction Box
For Division 1 installations



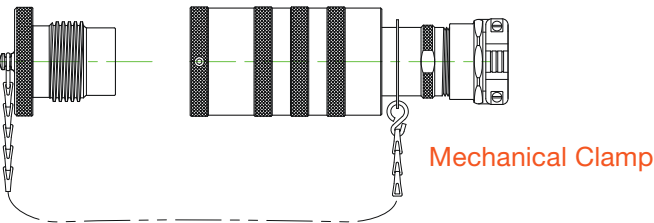
Plug Attachments



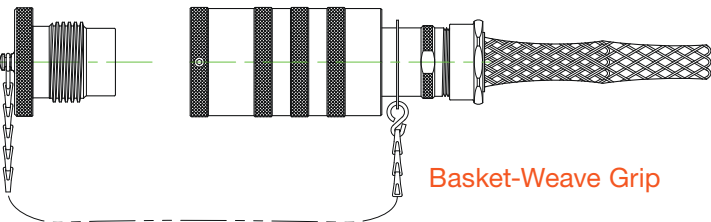
NPT Thread Only



Metric Thread Only

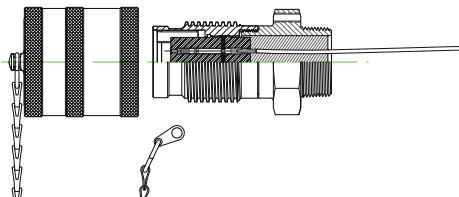


Mechanical Clamp

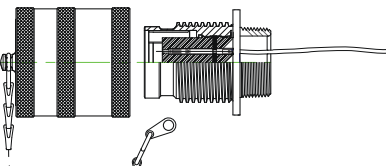


Basket-Weave Grip

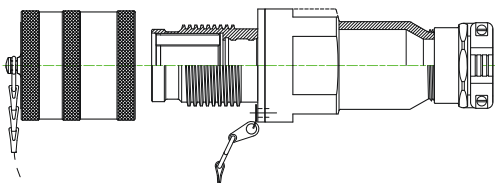
Receptacle, NPT
Designed to thread into explosion-proof enclosures



Receptacle, Panel Mount



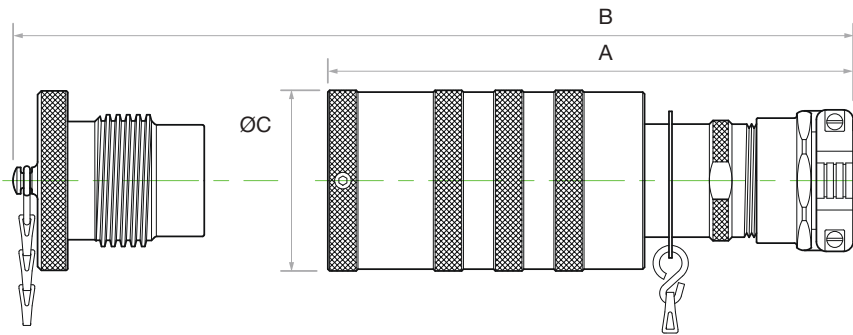
Receptacle, Attachment



COMPONENT DIMENSIONS

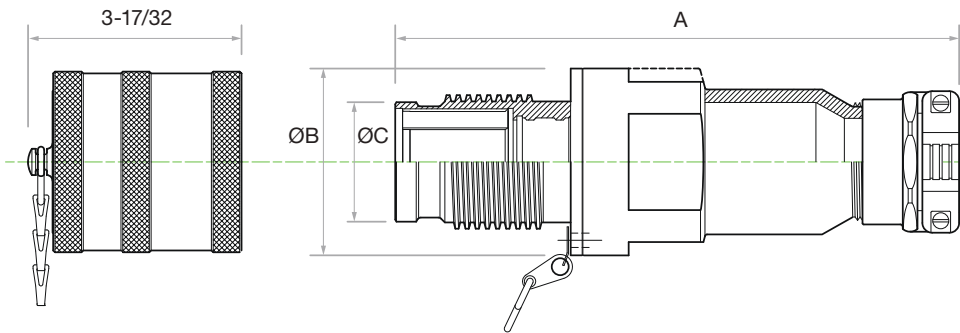
CABLE MOUNTED PLUG ASSEMBLY

Shell Size	Dim A	Dim B	Dim C
16	9.3"	10.3"	2.98
20	10.0"	11.0"	3.58
24	10.4"	11.4"	4.18
28	10.9"	11.9"	4.81



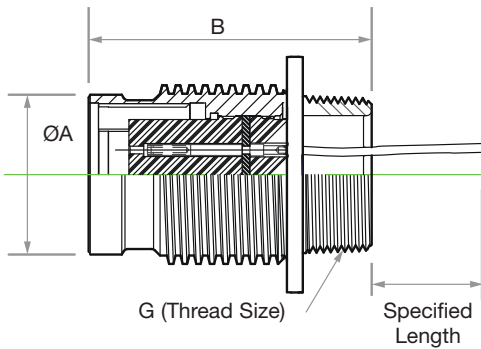
CABLE MOUNTED RECEPTACLE ASSEMBLY

Shell Size	Dim A	Dim B	Dim C
16	10.0"	3.06"	1.97
20	10.7"	3.56"	2.47
24	11.1"	4.19"	2.97
28	11.4"	4.69"	3.47



PANEL MOUNT RECEPTACLE ASSEMBLY

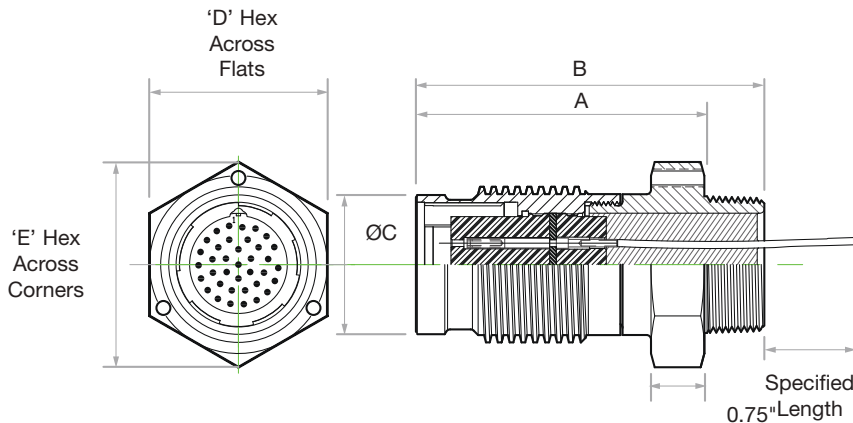
Shell Size	Dim A	Dim B	Thread G (16UN)
16	1.97"	4.06"	2
20	2.49"	4.06"	2-1/2
24	2.97"	4.06"	3-1/8
28	3.47"	4.06"	3-5/8



NPT MOUNTED RECEPTACLE ASSEMBLY

Shell Size	Dim A	Dim B	Dim C
16	4.16"	5"	1.97"
20	4.16"	5.03"	2.47"
24	4.16"	5.40"	2.97"
28	4.16"	5.47"	3.47"

Shell Size	Hex D	Hex E
16	2.5"	2.875"
20	3"	3.47"
24	3.5"	4.03"
28	4"	4.625"



RECEPTACLE DIMENSIONS

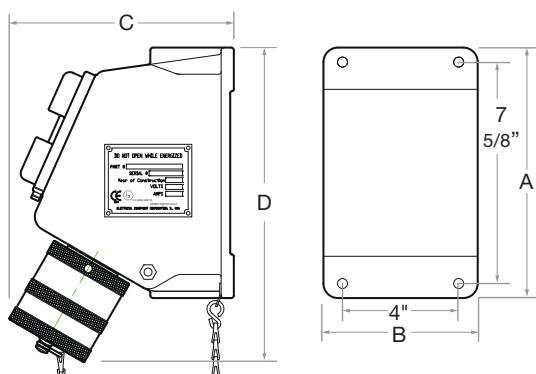
CRIMP CONTACTS

Conduit Hub Size	Receptacle Number	Dimension A	Dimension B	Dimension C	Dimension D
1-1/2	HDE-B1720-676SL-AH	8-5/8"	5-5/16"	8-1/16"	11-1/8"
1-1/4	HDE-B1716-677SL-AG	8-5/8"	5-5/16"	7-7/8"	11"
1-1/2	HDE-B1720-688SL-AH	8-5/8"	5-5/16"	8-1/16"	11-1/8"
1-1/4	HDE-B1716-655SL-AG	8-5/8"	5-5/16"	8-3/8"	11"
1-1/2	HDE-B1720-632SL-AH	8-5/8"	5-5/16"	8-1/16"	11-1/8"
1-1/2	HDE-B1720-686SL-AH	8-5/8"	5-5/16"	8-1/16"	11-1/8"
1-1/2	HDE-B1720-650SL-AH	8-5/8"	5-5/16"	8-1/16"	11-1/8"
1-1/4	HDE-B1716-621SL-AG	8-5/8"	5-5/16"	7-7/8"	11"
1-1/4	HDE-B1716-640SL-AG	8-5/8"	5-5/16"	7-7/8"	11"
1-1/4	HDE-B1716-633SL-AG	8-5/8"	5-5/16"	7-7/8"	11"
1-1/2	HDE-B1720-613SL-AH	8-5/8"	5-5/16"	8-1/16"	11-1/8"
2-1/2	HDE-B1724-613SL-BK	8-5/8"	5-5/16"	10-5/16"	14-5/16"

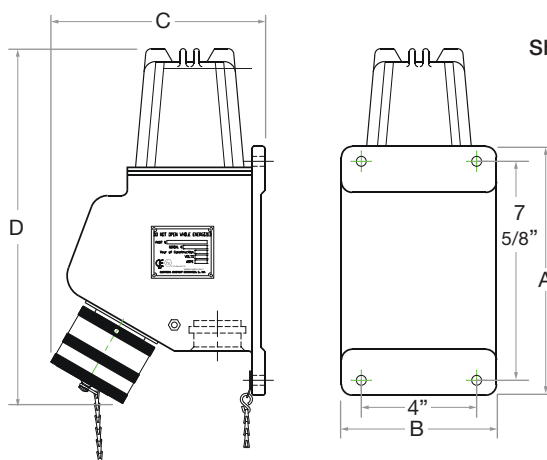
SOLDER CONTACTS

Conduit Hub Size	Receptacle Number	Dimension A	Dimension B	Dimension C	Dimension D
1-1/4	HDE-B1716-25SL-AG	8-5/8"	5-5/16"	7/8"	11"
1-1/4	HDE-B1716-12SL-AG	8-5/8"	5-5/16"	7/8"	11"
1-1/4	HDE-B1716-37SL-AG	8-5/8"	5-5/16"	7/8"	11"
2-1/2	HDE-B1724-84SL-BK	8-5/8"	6-5/16"	10-5/16"	14-5/16"
1-1/2	HDE-B1720-35SL-AH	8-5/8"	5-5/16"	8-1/16"	11-1/8"
2-1/2	HDE-B1724-31SL-BK	8-5/8"	6-5/16"	10-5/16"	14-5/16"
1-1/2	HDE-B1720-44SL-AH	8-5/8"	5-5/16"	8-1/16"	11-1/8"
1-1/2	HDE-B1720-45SL-AH	8-5/8"	5-5/16"	8-1/16"	11-1/8"
3	HDE-B1728-14SL-BL	8-5/8"	6-5/16"	10-5/8"	14-7/16"
3	HDE-B1728-22SL-BL	8-5/8"	6-5/16"	10-5/8"	14-7/16"

Shell Sizes 16 & 20



Shell Sizes 24 & 28



GROMMETS

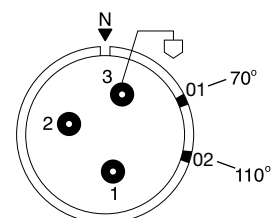
Shell Size	Cable Diameter Dimension A				Cable Diameter Code No.	Grommets	Gland Washers	Basket Weave Grips		
	Inches		mm			Rub Grom	St. Steel	St. Steel		
	Min	Max	Min	Max		Cat No.	Cat No.	Cat No.	Inches	mm
12	.062	.125	2	3	02	HDS-6312-02				
	.125	.250	3	6	04	HDS-6312-04	HDS-8012-04	HDS-5012-04	3	76
	.250	.375	6	10	06	HDS-6312-06	HDS-8012-08	HDS-5012-06	4	102
	.375	.500	10	13	08	HDS-6312-08		HDS-5012-08	5	127
	.500	.625	13	16	10	HDS-6312-10	HDS-8012-12	HDS-5012-10	6	152
	.625	.750	16	19	12	HDS-6312-12		HDS-5012-12	7	178
	.750	.875	19	22	14	HDS-6312-14	HDS-8012-15	HDS-5012-14	7-1/2	191
.875	.937	22	25	15	HDS-6312-15	HDS-5012-15		8	203	
16	.250	.375	6	10	06	HDS-6316-06	HDS-8016-08	HDS-5012-06	4	102
	.375	.500	10	13	08	HDS-6316-08		HDS-5016-08	5	127
	.500	.625	13	16	10	HDS-6316-10	HDS-8016-12	HDS-5016-10	6	152
	.625	.750	16	19	12	HDS-6316-12		HDS-5016-12	7	178
	.750	.875	19	22	14	HDS-6316-14	HDS-8016-16	HDS-5016-14	7-1/2	191
	.875	1.000	22	25	16	HDS-6316-16		HDS-5016-16	8-1/2	216
	1.000	1.125	25	29	18	HDS-6316-18	HDS-8016-20	HDS-5016-18	9	229
	1.125	1.250	29	32	20	HDS-6316-20		HDS-5016-20	10	254
	1.250	1.375	32	35	22	HDS-6316-22	HDS-8016-23	HDS-5016-22	10-1/2	267
1.375	1.437	35	37	23	HDS-6316-23	HDS-5016-23		14-1/2		
20 or CB20	.500	.625	13	16	10	HDS-6320-10	HDS-8020-12	HDS-5020-10	6	152
	.625	.750	16	19	12	HDS-6320-12		HDS-5020-14	7-1/2	191
	.750	.875	19	22	14	HDS-6320-14	HDS-8020-16	HDS-5020-14	7-1/2	191
	.875	1.000	22	25	16	HDS-6320-16		HDS-5020-18	9	229
	1.000	1.125	25	29	18	HDS-6320-18	HDS-8020-20	HDS-5020-18	9	229
	1.125	1.250	29	32	20	HDS-6320-20		HDS-5020-20	10	254
	1.250	1.375	32	35	22	HDS-6320-22	HDS-8020-24			
	1.375	1.500	35	38	24	HDS-6320-24		HDS-5020-24	11	279
	1.500	1.625	38	41	26	HDS-6320-26	HDS-8020-28			
	1.625	1.750	41	44	28	HDS-6320-28		HDS-5020-28	13	330
	1.750	1.875	44	48	30	HDS-6320-30	HDS-8020-31			
	1.875	1.937	48	49	31	HDS-6320-31		HDS-5020-31	14-1/2	368
24 or CB24	.875	1.000	22	25	16	HDS-6324-16	HDS-8024-16	HDS-5024-16	8-1/2	216
	1.000	1.125	25	29	18	HDS-6324-18	HDS-8024-20	HDS-5024-18		
	1.125	1.250	29	32	20	HDS-6324-20		HDS-5024-20	10	254
	1.250	1.375	32	35	22	HDS-6324-22	HDS-8024-24	HDS-5024-22		
	1.375	1.500	35	38	24	HDS-6324-24		HDS-5024-24	11	279
	1.500	1.625	38	41	26	HDS-6324-26	HDS-8024-28	HDS-5024-26		
	1.625	1.750	41	44	28	HDS-6324-28		HDS-5024-28	13	330
	1.750	1.875	44	48	30	HDS-6324-30	HDS-8024-32	HDS-5024-30		
	1.875	2.000	48	51	32	HDS-6324-32		HDS-5024-32	15	381
	2.000	2.125	51	54	34	HDS-6324-34	HDS-8024-36	HDS-5024-34		
	2.125	2.250	54	57	36	HDS-6324-36		HDS-5024-36	16	406
	2.250	2.375	57	60	38	HDS-6324-38	HDS-8024-39	HDS-5024-38		
2.375	2.437	60	62	39	HDS-6324-39	HDS-5024-39		17	445	
28 or CB28	1.375	1.500	35	38	24	HDS-6328-24	HDS-8028-28	HDS-5028-24		
	1.500	1.625	38	41	26	HDS-6328-26		HDS-5028-26		
	1.625	1.750	41	44	28	HDS-6328-28		HDS-5028-28	13	330
	1.750	1.875	44	48	30	HDS-6328-30	HDS-8028-32	HDS-5028-30		
	1.875	2.00	48	51	32	HDS-6328-32		HDS-5028-32	15	381
	2.000	2.125	51	54	34	HDS-6328-34	HDS-8028-36	HDS-5028-34		
	2.125	2.250	54	57	36	HDS-6328-36		HDS-5028-36	16	406
	2.250	2.375	57	60	38	HDS-6328-38	HDS-8028-40	HDS-5028-38		
	2.375	2.500	60	64	40	HDS-6328-40		HDS-5028-40	17-1/2	445
	2.500	2.625	64	67	42	HDS-6328-42	HDS-8028-44			
	2.625	2.750	67	70	44	HDS-6328-44		HDS-5028-44		
	2.750	2.875	70	73	46	HDS-6328-46	HDS-8028-46	HDS-5028-46	19	483

INSERT ARRANGEMENTS

3 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	16	Pin Socket	74P 74S	ZP-16-74P ZP-16-74S
Mod I	Pressure	16	Pin Socket	74PR 74SR	ZP-16-74PR ZP-16-74SR

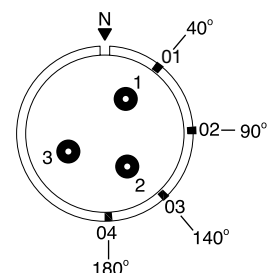
Qty.	Size AWG	Service Voltage Rating
3	4	D



3 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	16	Pin Socket	70P 70S	ZP-16-70P ZP-16-70S
Mod I	Pressure	16	Pin Socket	70PR 70SR	ZP-16-70PR ZP-16-70SR

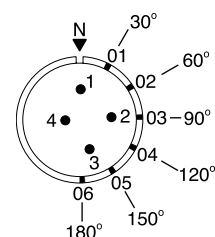
Qty.	Size AWG	Service Voltage Rating
3	4	D



4 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	12	Pin Socket	33P 33S	ZP-12-33P ZP-12-33S

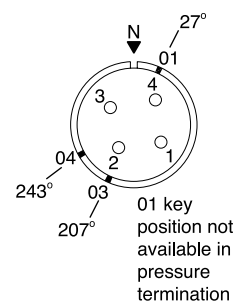
Qty.	Size AWG	Service Voltage Rating
4	16	D



4 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	12	Pin Socket	14P 14S	ZP-12-14P ZP-12-14S
Mod I	Pressure	12	Pin Socket	14PR 14SR	ZP-12-14PR ZP-12-14SR

Qty.	Size AWG	Service Voltage Rating
4	10	D

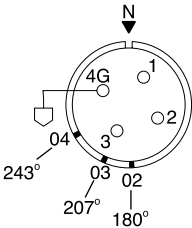


INSERT ARRANGEMENTS

4 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	12	Pin Socket	22P 22S	ZP-12-22P ZP-12-22S
Mod I	Pressure	12	Pin Socket	22PR 22SR	ZP-12-22PR ZP-12-22SR

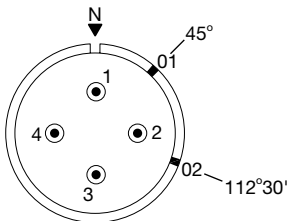
Qty.	Size AWG	Service Voltage Rating
4	10	D



4 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	16	Pin Socket	28P 28S	ZP-16-28P ZP-16-28S

Qty.	Size AWG	Service Voltage Rating
4	8	D

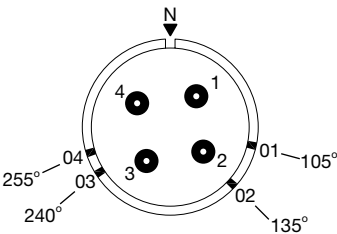


NOTE: Cannot be used with short cable adapter

4 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	16	Pin Socket	22P 22S	ZP-16-22P ZP-16-22S
Mod I	Pressure	16	Pin Socket	22PR 22SR	ZP-16-22PR ZP-16-22SR

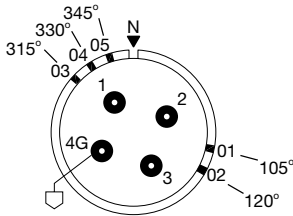
Qty.	Size AWG	Service Voltage Rating
4	4	D



4 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	16	Pin Socket	38P 38S	ZP-16-38P ZP-16-38S
Mod I	Pressure	16	Pin Socket	38PR 38SR	ZP-16-38PR ZP-16-38SR
Mod III	Crimp	16	Pin Socket	638PN 638SN	

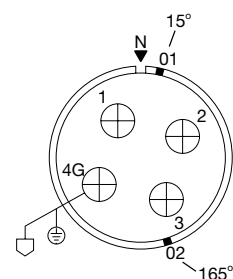
Qty.	Size AWG	Service Voltage Rating
4	4	D



INSERT ARRANGEMENTS

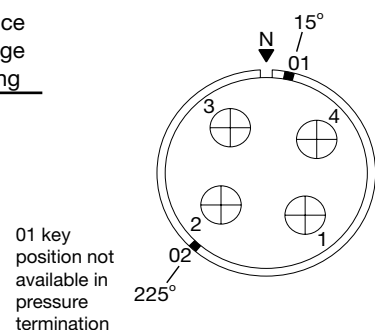
4 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Current Rating
Mod I	Solder	C20	Pin Socket	40P 40S	ZP-C20-40P ZP-C20-40S	4	1/0	D
Mod I	Pressure	C20	Pin Socket	40PR 40SR	ZP-C20-40PR ZP-C20-40SR			
Mod III	Crimp	C20	Pin Socket	640PN 640SN				



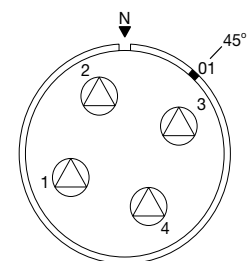
4 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	C20	Pin Socket	42P 42S	ZP-C20-42P ZP-C20-42S	4	1/0	D
Mod I	Pressure	C20	Pin Socket	42PR 42SR	ZP-C20-42PR ZP-C20-42SR			



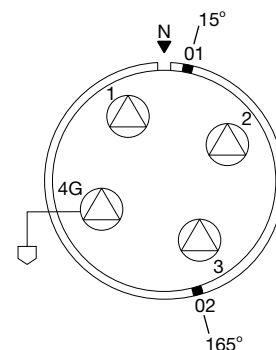
4 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	24	Pin Socket	83P 83S	ZP-24-83P ZP-24-83S	4	4/0	D



4 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	C24	Pin Socket	26P 26S	ZP-C24-26P ZP-C24-26S	4	4/0	D
Mod I	Pressure	C24	Pin Socket	26PR 26SR	ZP-C24-26PR ZP-C24-26SR			

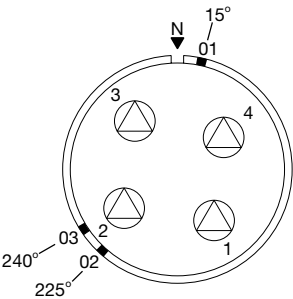


INSERT ARRANGEMENTS

4 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	C24	Pin Socket	38P 38S	ZP-C24-38P ZP-C24-38S

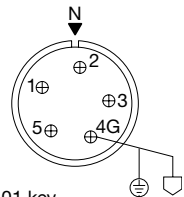
Qty.	Size AWG	Service Voltage Rating
4	4/0	D



5 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	12	Pin Socket	53P 53S	ZP-12-53P ZP-12-53S
Mod III	Crimp	12	Pin Socket	653PN 653SN	

Qty.	Size AWG	Service Voltage Rating
5	12	D

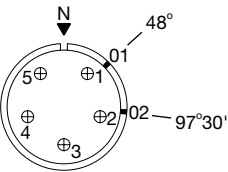


01 key position not available in pressure termination

5 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	12	Pin Socket	24P 24S	ZP-12-24P ZP-12-24S

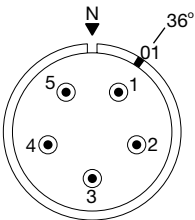
Qty.	Size AWG	Service Voltage Rating
5	12	D



5 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	16	Pin Socket	16P 16S	ZP-16-16P ZP-16-16S

Qty.	Size AWG	Service Voltage Rating
5	8	D

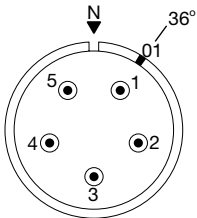


INSERT ARRANGEMENTS

5 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	16	Pin Socket	16P 16S	ZP-16-16P ZP-16-16S

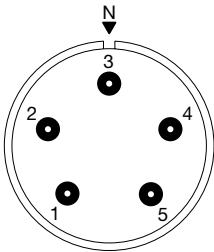
Qty.	Size AWG	Service Voltage Rating
5	8	D



5 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	20	Pin Socket	84P 84S	ZP-20-84P ZP-20-84S
Mod I	Pressure	20	Pin Socket	84PR 84SR	ZP-20-84PR ZP-20-84SR

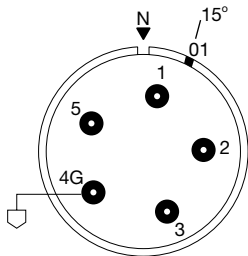
Qty.	Size AWG	Service Voltage Rating
5	4	D



5 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	20	Pin Socket	38P 38S	ZP-20-38P ZP-20-38S
Mod I	Pressure	20	Pin Socket	38PR 38SR	ZP-20-38PR ZP-20-38SR

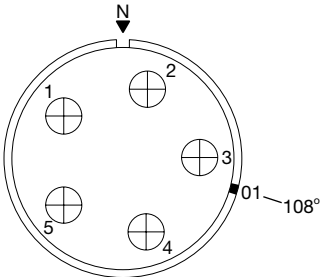
Qty.	Size AWG	Service Voltage Rating
5	4	D



5 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	C24	Pin Socket	79P 79S	ZP-C24-79P ZP-C24-79S
Mod I	Pressure	C24	Pin Socket	79PR 79SR	ZP-C24-79PR ZP-C24-79SR

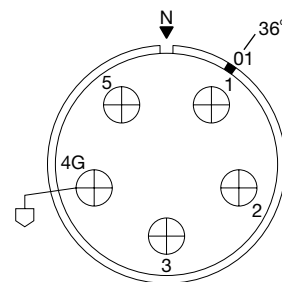
Qty.	Size AWG	Service Voltage Rating
5	1/0	E



INSERT ARRANGEMENTS

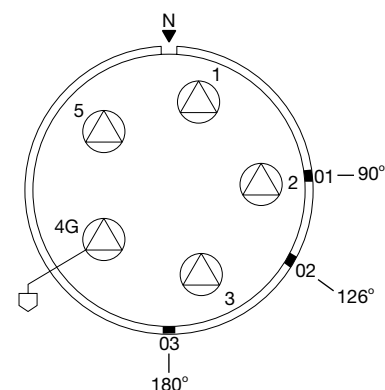
5 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	C24	Pin Socket	49P 49S	ZP-C24-49P ZP-C24-49S	5	1/0	E
Mod I	Pressure	C24	Pin Socket	49PR 49SR	ZP-C24-49PR ZP-C24-49SR			



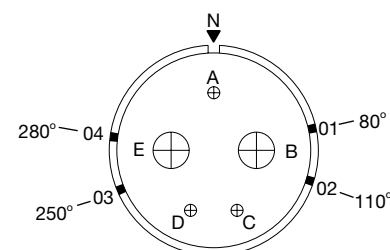
5 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	C28	Pin Socket	23P 23S	ZP-C28-23P ZP-C28-23S	5	4/0	D
Mod I	Pressure	C28	Pin Socket	23PR 23SR	ZP-C28-23PR ZP-C28-23SR			



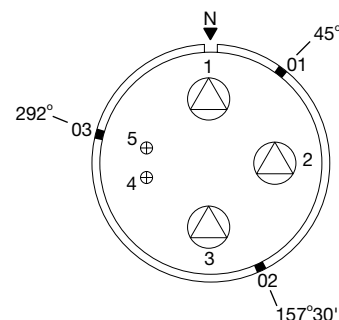
5 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	20	Pin Socket	49P 49S	ZP-20-49P ZP-20-49S	2 3	1/0 12	E E
Mod III	Crimp	20	Pin Socket	649PN 649SN				



5 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	C24	Pin Socket	48P 48S	ZP-C24-48P ZP-C24-48S	3 2	4/0 12	D A

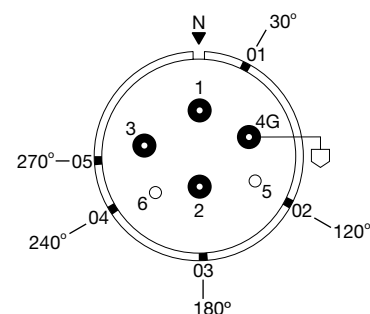


INSERT ARRANGEMENTS

6 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Pressure	20	Pin Socket	43PR 43SR	ZP-20-43PR ZP-20-43SR
Mod III	Crimp	20	Pin Socket	643PN 643SN	

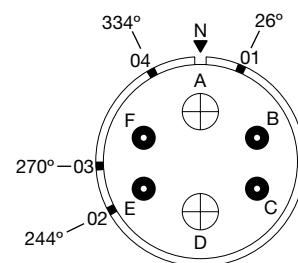
Qty.	Size AWG	Service Voltage Rating
4	4	D
2	10	D



6 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	20	Pin Socket	46PR 46SR	ZP-20-46P ZP-20-46S
Mod III	Crimp	20	Pin Socket	646PN 646SN	

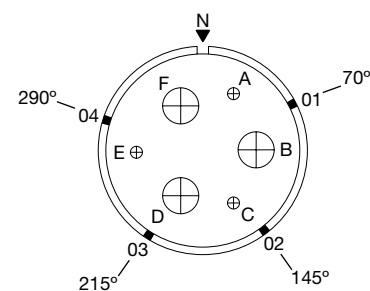
Qty.	Size AWG	Service Voltage Rating
2	1/0	A
4	4	A



6 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	20	Pin Socket	48P 48S	ZP-20-48P ZP-20-48S
Mod III	Crimp	20	Pin Socket	648PN 648SN	

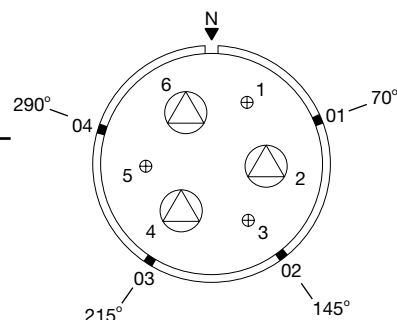
Qty.	Size AWG	Service Voltage Rating
3	1/0	D
3	12	D



6 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	C24	Pin Socket	72P 72S	ZP-C24-72P ZP-C24-72S

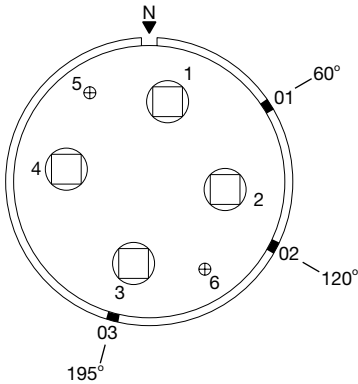
Qty.	Size AWG	Service Voltage Rating
3	4/0	D
3	12	D



INSERT ARRANGEMENTS

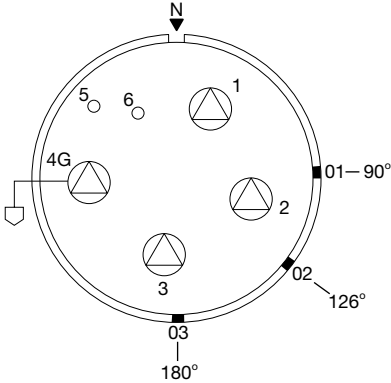
6 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	C28	Pin Socket	18P	ZP-C28-18P	4	350 MCM	D
				18S	ZP-C28-18S	2	12	E



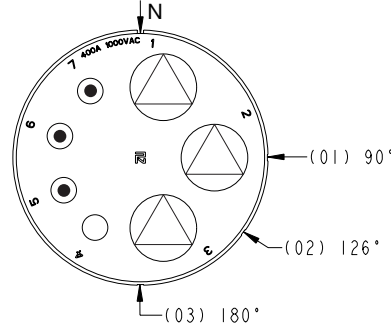
6 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	C28	Pin Socket	42P	ZP-C28-42P	4	4/0	D
				42S	ZP-C28-42S	2	10	D
Mod I	Pressure	C28	Pin Socket	42PR	ZP-C28-42PR			
				42SR	ZP-C28-42SR			
Mod I	Radsok Pressure	C28	Pin Socket	R42PR	ZP-C28-R42PR			
				R42SR	ZP-C28-R42SR			



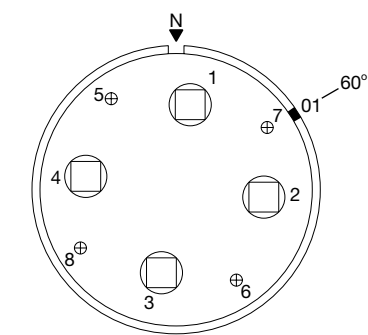
7 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Radsok Pressure	C28	Pin Socket	R44PR	ZP-C28-R44PR	3	4/0	D
				R44SR	ZP-C28-R44SR	3	8	D
						1	10	D



8 Contacts

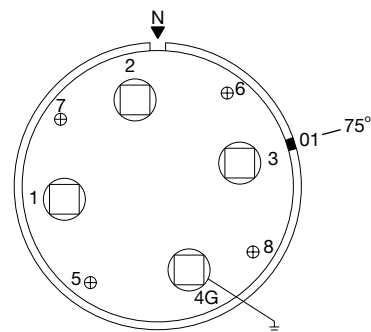
Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	C28	Pin Socket	21P	ZP-C28-21P	4	350 MCM	D
				21S	ZP-C28-21S	4	12 Relay	E



INSERT ARRANGEMENTS

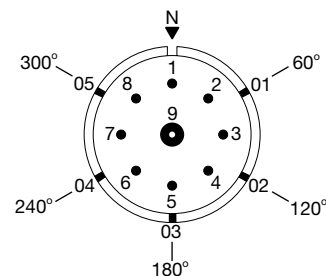
8 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	C28	Pin Socket	43P 43S	ZP-C28-43P ZP-C28-43S	4 4	350 MCM 12 Relay	D E



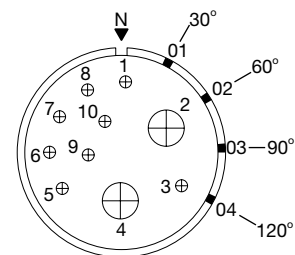
9 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	16	Pin Socket	29P 29S	ZP-16-29P ZP-16-29S	1 8	4 16	D D



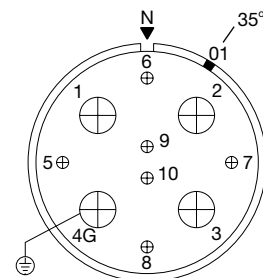
10 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	20	Pin Socket	55P 55S	ZP-20-55P ZP-20-55S	2 8	1/0 12	D D



10 Contacts

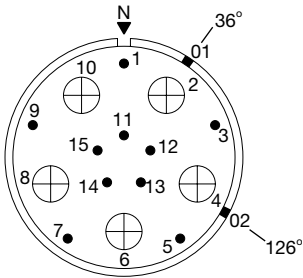
Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod III	Crimp	C24	Pin Socket	680PN 680SN		4 6	1/0 12	D D



INSERT ARRANGEMENTS

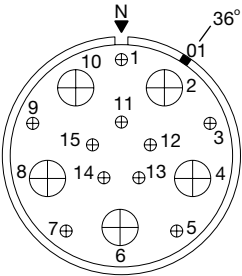
15 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	24	Pin Socket	40P	ZP-24-40P	5	1/0	D
				40S	ZP-24-40S	10	16	D



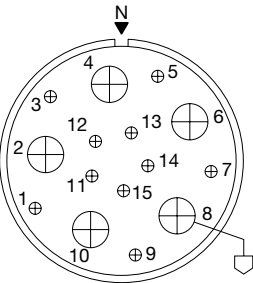
15 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	C24	Pin Socket	47P	ZP-C24-47P	5	1/0	D
				47S	ZP-C24-47S	10	12	A



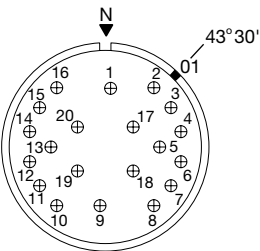
15 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	C24	Pin Socket	81P	ZP-C24-81P	5	1/0	D
				81S	ZP-C24-81S	10	12	A



20 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number	Qty.	Size AWG	Service Voltage Rating
Mod I	Solder	20	Pin Socket	32P	ZP-20-32P	20	12	B Center
				32S	ZP-20-32S			A Outer

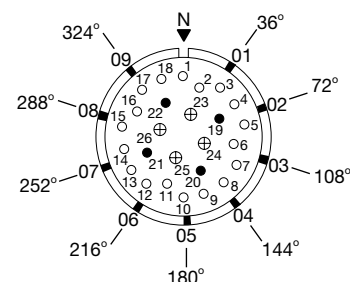


INSERT ARRANGEMENTS

26 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	16	Pin	37P	ZP-16-37P
			Socket	37S	ZP-16-37S

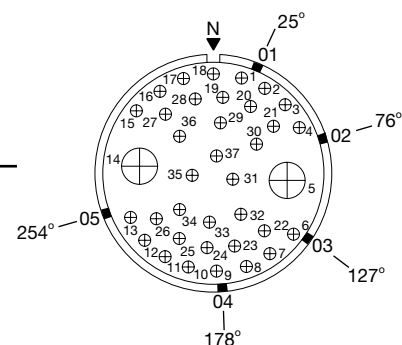
Qty.	Size AWG	Service Voltage Rating
4	12	A
4	16	A
18	18	A



37 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	C24	Pin	36P	ZP-C24-36P
			Socket	36S	ZP-C24-36S

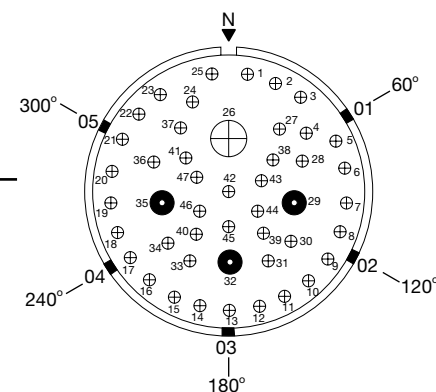
Qty.	Size AWG	Service Voltage Rating
2	1/0	D
35	12	A



47 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	C28	Pin	15P	ZP-C28-15P
			Socket	15S	ZP-C28-15S

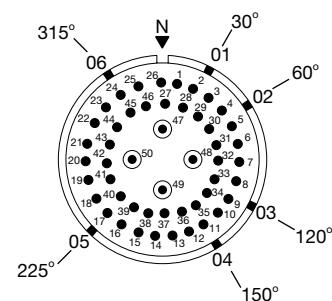
Qty.	Size AWG	Service Voltage Rating
1	1/0	D
3	4	D
43	12	A



50 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod III	Crimp	20	Pin	673PN	
			Socket	673SN	

Qty.	Size AWG	Service Voltage Rating
4	8	D
46	16	A

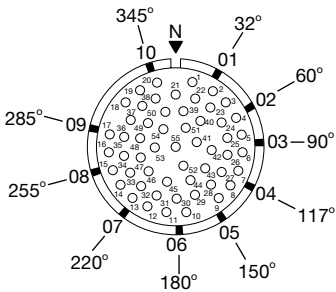


INSERT ARRANGEMENTS

55 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod III	Crimp	16	Pin Socket	640PN 640SN	

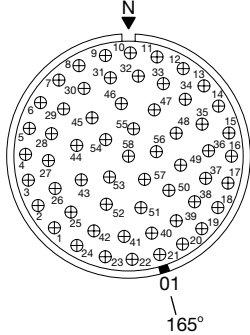
Qty.	Size AWG	Service Voltage Rating
55	18	Inst.



58 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	24	Pin Socket	84P 84S	ZP-24-84P ZP-24-84S

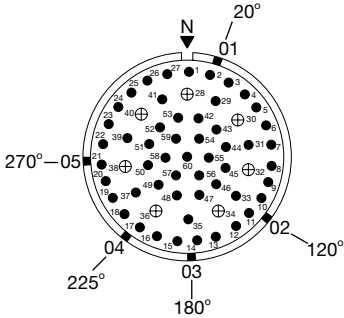
Qty.	Size AWG	Service Voltage Rating
58	12	A



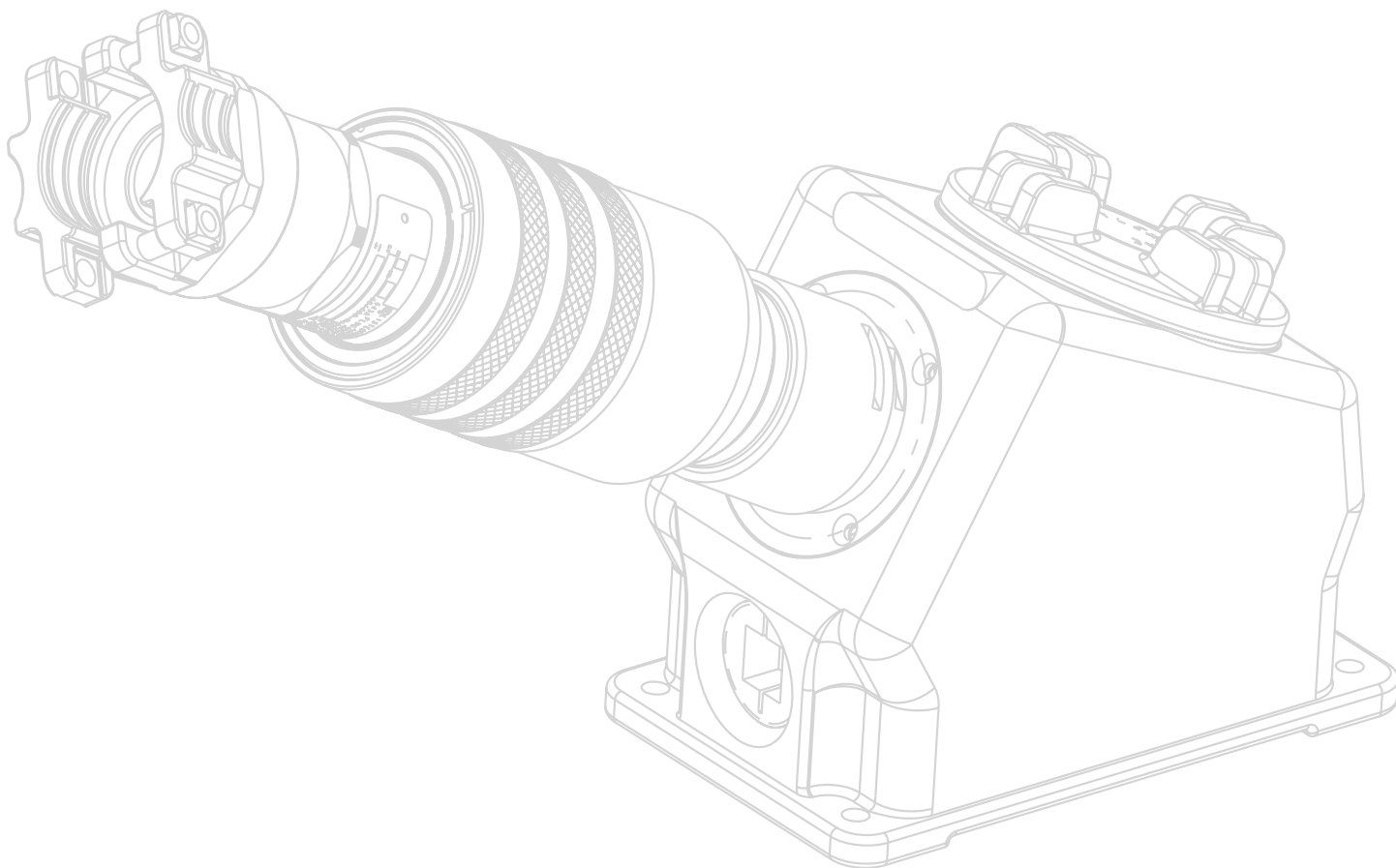
60 Contacts

Style	Wire Terminal Type	Shell Size	Insert Type	Dash Number	Catalog Number
Mod I	Solder	20	Pin Socket	35P 35S	ZP-20-35P ZP-20-35S

Qty.	Size AWG	Service Voltage Rating
60	16	A



FOR MORE INFORMATION



AMPHENOL EEC, INC.

4050 N Rockwell St

Chicago IL 60618

United States

Phone 773.463.8343

Fax 773.463.8344

©2016 AMPHENOL EEC, INC.



THORNE &
DERRICK
INTERNATIONAL

Thorne & Derrick
+44 (0) 191 410 4292
www.heatingandprocess.com