



## FEATURES • ALUMINUM VICTORY AF SERIES CONTROL



## Ratings &amp; Certifications:

US Class I, Div 1 & 2, Groups B, C & D  
 Class II, Div.1, Groups F & G  
 at 250VAC, 60/400 Hz, Circuit-Breaking.  
 Select inserts 480VAC non-circuit  
 breaking.  
 AEx d IIC T6  
 II 2 GD Ex d IIC  
 IP 66/67 T 70°C.  
 KEMA 04ATEX2179X  
 250VAC, 125VDC

## PRODUCT FEATURES

## Control Inserts

Multi-pin inserts can be specified for either crimp or solder termination with contacts whose size and amp ratings are as follows:

PIN - SOCKET	AMPS	
	US	
#12 AWG / 4.0 mm <sup>2</sup>	10	20
#16 AWG / 1.5 mm <sup>2</sup>	6.5	15
#18 AWG / 1.5 mm <sup>2</sup>	3.5	10

## Circuit Breaking

AF StarLine CSA listed connectors are circuit breaking, designed and tested to make/break at full rated load – an added safety feature.

## Voltage

AF Explosionproof StarLine has been tested for service through 250 VAC / 125 VDC circuit breaking; select inserts are rated 480 VAC non-circuit breaking.

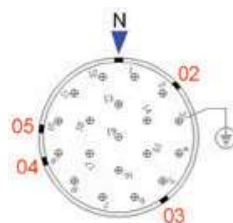
## Corrosion Resistance

Designed for corrosive environments, junction boxes are sand cast, copper-free aluminum, protected by our VanGuard baked polymer finish 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.

## Alternate Keying

For added safety, inserts can be keyed in alternate positions to prevent mating of different voltages, frequencies or services.

KEY	POSITION
N	0°
02	48°
03	144°
04	252°
05	276°



## Factory Sealing

Junction box, NPT and panel-mounted receptacles are pre-wired and factory sealed. No external seals are required.

## Insert Patterns

With 15 plus inserts having 10 thru 100 contacts the AF Explosionproof StarLine stands alone as a Class I, Division 1 control connector. Inserts with the highest contact density per shell size are:

Shell 16	61 - #18 AWG contacts
Shell 20	90 - #18 AWG contacts
Shell 24	100 - #16 AWG contacts

## Reverse Service

Available with all Victory and Millennium series connectors, reverse service provides electrical safety where lineside power is carried from the plug to a receptacle.

## 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.

## Purged / Pressurized Systems

Victory and Millennium series NPT / panel mount receptacles, with factory sealing and flat gaskets are ideal for this technology.



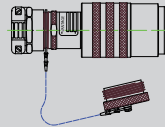
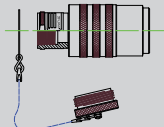
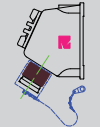


## RECEPTACLE STYLES

JUNCTION BOX	ATTACHMENT	PANEL MOUNT	NPT MOUNT	TAPPED FLEXIBLE CONDUIT



## AF PART NUMBERS

PIN QUANTITY	PIN SIZE AWG (MM <sup>2</sup> ) 'G' = WITH GROUND PIN	AMPS @ 250 VAC <sup>1</sup>		PLUG, ATTACHMENT	PLUG, TAPPED CONDUIT	RECEPTACLE, JUNCTION BOX
						
10	#12 (4.0)	10.0	20	AF-D1016-681PL-XX	AF-D1016-681PL-TC	AF-B1716-681SL-FH
10	#12 G (4.0)	10.0	20	AF-D1016-676PL-XX	AF-D1016-676PL-TC	AF-B1716-676SL-FH
19	#12 G (4.0)	10.0	20	AF-D1016-612PL-XX	AF-D1016-612PL-TC	AF-B1716-612SL-FH
19	#12 (4.0)	10.0	20	AF-D1016-677PL-XX	AF-D1016-677PL-TC	AF-B1716-677SL-FH
19	#12 (4.0)	10.0 <sup>1</sup>	20	AF-D1020-676PL-XX	AF-D1020-676PL-TC	AF-B1720-676SL-FH
19	#12 G (4.0)	10.0 <sup>1</sup>	20	AF-D1020-688PL-XX	AF-D1020-688PL-TC	AF-B1720-688SL-FH
19	#16 (1.5)	6.5	15	AF-D1016-655PL-XX	AF-D1016-655PL-TC	AF-B1716-655SL-FH
20	#12 (4.0)	10.0	20	AF-D1020-632PL-XX	AF-D1020-632PL-TC	AF-B1720-632SL-FH
20	#12 G (4.0)	10.0	20	AF-D1020-687PL-XX	AF-D1020-687PL-TC	AF-B1720-687SL-FH
37	#12 (4.0)	10.0	20	AF-D1020-686PL-XX	AF-D1020-686PL-TC	AF-B1720-686SL-FH
37	#12 G (4.0)	10.0	20	AF-D1020-650PL-XX	AF-D1020-650PL-TC	AF-B1720-650SL-FH
37	#16 (1.5)	6.5	15	AF-D1016-621PL-XX	AF-D1016-621PL-TC	AF-B1716-621SL-FH
55	#18 (.75)	3.5	10	AF-D1016-640PL-XX	AF-D1016-640PL-TC	AF-B1716-640SL-FH
61	#18 (.75)	3.5	10	AF-D1016-633PL-XX	AF-D1016-633PL-TC	AF-B1716-633SL-FH
68	#16 (1.5)	6.5	15	AF-D1020-613PL-XX	AF-D1020-613PL-TC	AF-B1720-613SL-FH
100	#16 (1.5)	5.0	15	AF-D1024-613PL-XX	AF-D1024-613PL-TC	AF-B1724-613SL-BK

Replace 'XX' with cable diameter code number from Page CN66

Pre-wired lead length can be specified to suit application. Consult factory

See pages CN73 and CN74 for Part Number Code Logic

<sup>1</sup> = Insert is also rated 480 VAC non-circuit breaking.



## AF PART NUMBERS

PIN QUANTITY	PIN SIZE AWG (MM <sup>2</sup> ) 'G' = WITH GROUND PIN	AMPS @ 250 VAC <sup>1</sup>		RECEPTACLE, NPT	RECEPTACLE, PANEL MOUNT	RECEPTACLE, ATTACHMENT
10	#12 (4.0)	10.0	20	AF-B1916-681SL-L48	AF-B1716-681SL-L36	AF-B1516-681SL-XX
10	#12 G (4.0)	10.0	20	AF-B1916-676SL-L48	AF-B1716-676SL-L36	AF-B1516-676SL-XX
19	#12 G (4.0)	10.0	20	AF-B1916-612SL-L48	AF-B1716-612SL-L36	AF-B1516-612SL-XX
19	#12 (4.0)	10.0	20	AF-B1916-677SL-L48	AF-B1716-677SL-L36	AF-B1516-677SL-XX
19	#12 (4.0)	10.0 <sup>1</sup>	20	AF-B1920-676SL-L48	AF-B1720-676SL-L36	AF-B1520-676SL-XX
19	#12 G (4.0)	10.0 <sup>1</sup>	20	AF-B1920-688SL-L48	AF-B1720-688SL-L36	AF-B1520-688SL-XX
19	#16 (1.5)	6.5	15	AF-B1916-655SL-L48	AF-B1716-655SL-L36	AF-B1516-655SL-XX
20	#12 (4.0)	10.0	20	AF-B1920-632SL-L48	AF-B1720-632SL-L36	AF-B1520-632SL-XX
20	#12 G (4.0)	10.0	20	AF-B1920-687SL-L48	AF-B1720-687SL-L36	AF-B1520-687SL-XX
37	#12 (4.0)	10.0	20	AF-B1920-686SL-L48	AF-B1720-686SL-L36	AF-B1520-686SL-XX
37	#12 G (4.0)	10.0	20	AF-B1920-650SL-L48	AF-B1720-650SL-L36	AF-B1520-650SL-XX
37	#16 (1.5)	6.5	15	AF-B1916-621SL-L48	AF-B1716-621SL-L36	AF-B1516-621SL-XX
55	#18 (.75)	3.5	10	AF-B1916-640SL-L48	AF-B1716-640SL-L36	AF-B1516-640SL-XX
61	#18 (.75)	3.5	10	AF-B1916-633SL-L48	AF-B1716-633SL-L36	AF-B1516-633SL-XX
68	#16 (1.5)	6.5	15	AF-B1920-613SL-L48	AF-B1720-613SL-L36	AF-B1520-613SL-XX
100	#16 (1.5)	5.0	15	AF-B1924-613SL-L48	AF-B1724-613SL-L36	AF-B1524-613SL-XX

Replace 'XX' with cable diameter code number from Page CN66

Pre-wired lead length can be specified to suit application. Consult factory

See pages CN73 and CN74 for Part Number Code Logic

<sup>1</sup> = Insert is also rated 480 VAC non-circuit breaking.



## XP STARLINE INSERT AND CONTACT FEATURES

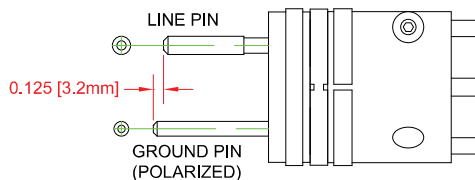
### Inserts

Vantage inserts come in power (30 thru 260 AMP) and control (10 thru 100 contacts) versions. Within these power and control versions many options are available. See depictions of inserts for electrical ratings, certifications and available key positions. Inserts are designed for simplified field termination. Power inserts feature captive contacts that utilize pressure termination. Control inserts utilize crimp contacts that are rear insertable, rear removable. Consult factory for replacements.

### Grounding

Power inserts feature ground contacts which provide shell grounding, polarization, and make-first, break last function. Many control inserts feature ground contacts which provide shell grounding and make-first, break last function.

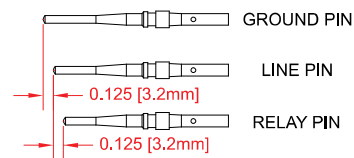
**POWER CONTACTS**  
PRESSURE TERMINATION, NON-REMOVABLE



### Relay Circuits

Some inserts are available with a pair of relay contacts that are shorter than all other contacts to provide a time delay during breaking and making.

**CONTROL CONTACTS**  
CRIMP TERMINATION, REAR INSERTABLE - REAR REMOVABLE



### Plating Options

Control contacts come standard with silver plating. Gold plating is available for added corrosion resistance. The following plating options are available.

SYMBOL	FINISH
L	Silver
K	Gold over Silver
D	Gold over Nickel

### Ferrules

Ferrules are designed to serve as a compression supporting member when an undersized wire is crimp terminated into a larger contact. Ferrules are gold plated.



PART NUMBER	CONTACT SIZE AWG (MM <sup>2</sup> ) PIN OR SOCKET		
	10 (6)	12 (4)	16 (1.5)
<b>FERRULE SIZE</b>			
VT-70065-1012K	12		
VT-70065-1014K	14		
VT-70065-1016K	16		
VT-70065-1216K		16	
VT-70065-1218K		18	
VT-70065-1220K		20	
VT-70065-1620K			20
VT-70065-1622K			22

Example: To transition From #12 contact to #20 wire, use V-70065-1220K.

### Thermocouple Contacts

AF / SF inserts with 16 AWG contacts can be ordered with thermocouple contacts.

PART NUMBER/GENDER	ISA SYMBOL	THERMOCOUPLE MATERIAL	ISA COLOR CODING			TEMPERATURE RANGE	
			(+)	(-)	JACKET	DEGREES CONTINUOUS	SHORT TIME
VT-4016-50MF / Pin	J	Iron	White	Red	Black	0-1100° C	to 1100° C
VT-4116-50MF / Socket	J						
VT-4016-50NF / Pin	J	Constantan	White	Red	Black	0-1100° C	to 1100° C
VT-4116-50NF / Socket	J						
VT-4016-50PO / Pin	K	Chromel	Yellow	Red	Yellow	0-1100° C	to 1350° C
VT-4116-50PO / Socket	K						
VT-4016-50RO / Pin	K	Alumel	Yellow	Red	Yellow	0-1100° C	to 1350° C
VT-4116-50RO / Socket	K						

Note: Iron and Alumel contacts are magnetic. Constantan and Chromel contacts are non-magnetic.

### Termination Information

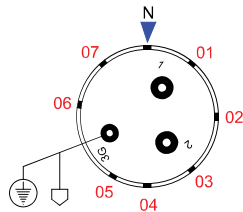
All inserts are designed for simplified field termination. Control inserts require the use of Vantage crimp tools for safe and reliable circuits. See page CN67 for more information.



## XP STARLINE INSERT CONFIGURATIONS

The **Vantage Inserts** presented in this section illustrate the contact configurations available in the Star-Line series. Most inserts are available in alternate key positions to prevent the inter-mating of like configurations in your system. Power inserts (GD/SD) are designed with oversized contacts to maximize cooling. Wire size indicates maximize wire gauge that can be terminated to contact.

### 3 Contacts



#### Insert Reference

Pins: GD-16-51PL

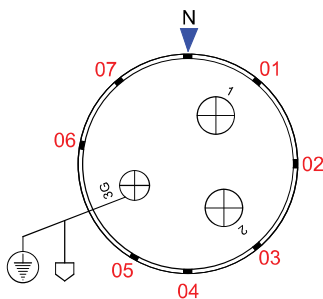
Sockets: GD-16-51SL

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	WIRE AWG (MM <sup>2</sup> )	SHELL SIZE
3	4 (25)	8 (10)	16

KEY	POSITION
N	0°
01	40°
02	90°
03	140°
04	180°
05	210°
06	280°
07	320°

	1000 VAC 50/60/400Hz Non-Circuit Breaking	32 AMP
	600 VAC 60/400Hz Circuit Breaking	30 AMP
	480 VAC 60/400Hz Circuit Breaking	30 AMP

### 3 Contacts



#### Insert Reference

Pins: GD-20-61PL

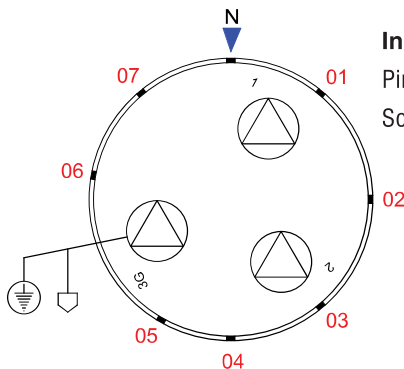
Sockets: GD-20-61SL

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	WIRE AWG (MM <sup>2</sup> )	SHELL SIZE
3	1/0 (55)	4 (25)	20

KEY	POSITION
N	0°
01	40°
02	90°
03	140°
04	180°
05	210°
06	280°
07	320°

	1000 VAC 50/60/400Hz Non-Circuit Breaking	63 AMP
	600 VAC 60/400Hz Circuit Breaking	60 AMP
	480 VAC 60/400Hz Circuit Breaking	60 AMP

### 3 Contacts



#### Insert Reference

Pins: GD-24-60PL

Sockets: GD-24-60SL

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	WIRE AWG (MM <sup>2</sup> )	SHELL SIZE
3	4/0 (120)	1/0 (55)	24

KEY	POSITION
N	0°
01	40°
02	90°
03	140°
04	180°
05	210°
06	280°
07	320°

	1000 VAC 50/60/400Hz Non-Circuit Breaking	125 AMP
	600 VAC 60/400Hz Circuit Breaking	100 AMP
	480 VAC 60/400Hz Circuit Breaking	100 AMP

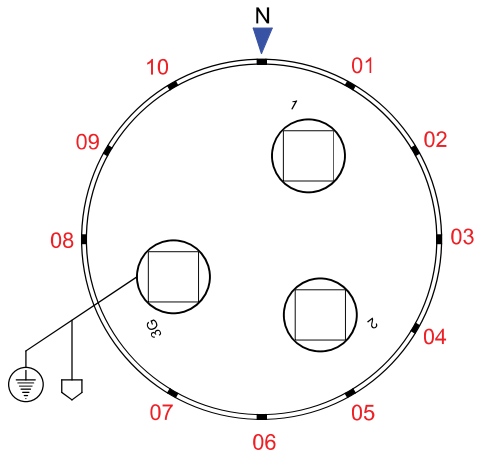
View Shown: Male insert (pins) from front of connector. The female insert (sockets) view is mirrored.

<b>Symbol:</b> Contact grounded to connector shell. Ground pins are longer to make first - break last.	 PRESSURE  CRIMP	CONTACT SYMBOLS		○	●	⊕	○	⦿	⦿	⊕	⦿	⦿
		CONTACT SIZE	AWG	18	16	12	10	8	4	1/0	4/0	350 MCM
			mm <sup>2</sup>	0.75	1.5	4	6	10	25	55	120	185
		WIRE SIZE	AWG	18	16	12	10	8	8	4	1/0	4/0
			mm <sup>2</sup>	0.75	1.5	4	6	10	10	25	55	120





## XP STARLINE INSERT CONFIGURATIONS

**Insert Reference**

Pins: GD-28-30PL

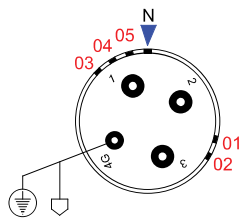
Sockets: GD-28-30SL

**3 Contacts**

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	WIRE AWG (MM <sup>2</sup> )	SHELL SIZE
3	350 MCM (185)	4/0 (120)	28

	1000 VAC 50/60/400Hz Non-Circuit Breaking	260 AMP
	600 VAC 60/400Hz Circuit Breaking	200 AMP
	480 VAC 60/400Hz Circuit Breaking	200 AMP

KEY	POSITION
N	0°
01	40°
02	90°
03	140°
04	180°
05	210°
06	280°
07	320°
08	270°
09	300°
10	330°

**Insert Reference**

Pins: GD-16-23PL

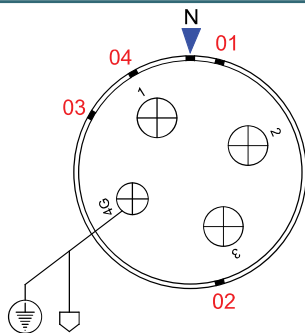
Sockets: GD-16-23SL

**4 Contacts**

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	WIRE AWG (MM <sup>2</sup> )	SHELL SIZE
4	4 (25)	8 (10)	16

	1000 VAC 50/60/400Hz Non-Circuit Breaking	32 AMP
	600 VAC 60/400Hz Circuit Breaking	30 AMP
	480 VAC 60/400Hz Circuit Breaking	30 AMP

KEY	POSITION
N	0°
01	105°
02	120°
03	315°
04	330°
05	345°

**Insert Reference**

Pins: GD-20-40PL

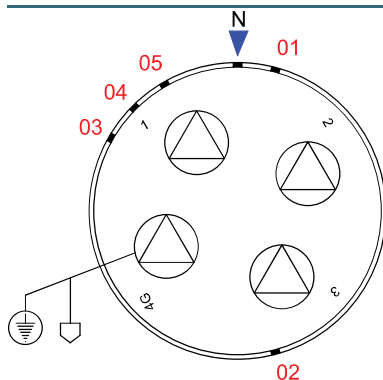
Sockets: GD-20-40SL

**4 Contacts**

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	WIRE AWG (MM <sup>2</sup> )	SHELL SIZE
4	1/0 (55)	4 (25)	20

	1000 VAC 50/60/400Hz Non-Circuit Breaking	63 AMP
	600 VAC 60/400Hz Circuit Breaking	60 AMP
	480 VAC 60/400Hz Circuit Breaking	60 AMP

KEY	POSITION
N	0°
01	15°
02	165°
03	300°
04	330°

**Insert Reference**

Pins: GD-24-39PL

Sockets: GD-24-39SL

**4 Contacts**

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	WIRE AWG (MM <sup>2</sup> )	SHELL SIZE
4	4/0 (120)	1/0 (55)	24

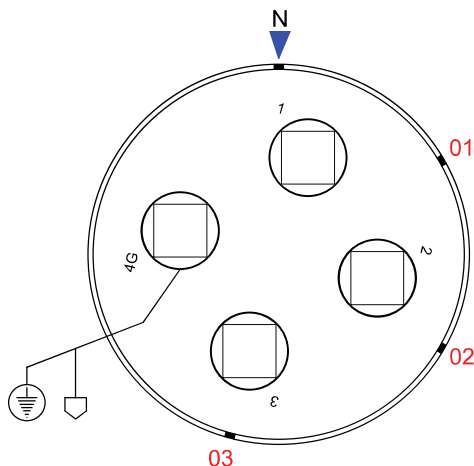
	1000 VAC 50/60/400Hz Non-Circuit Breaking	125 AMP
	600 VAC 60/400Hz Circuit Breaking	100 AMP
	480 VAC 60/400Hz Circuit Breaking	100 AMP

KEY	POSITION
N	0°
01	15°
02	165°
03	300°
04	315°
05	330°



## XP STARLINE INSERT CONFIGURATIONS

## 4 Contacts



## Insert Reference

Pins: GDU-28-31PL

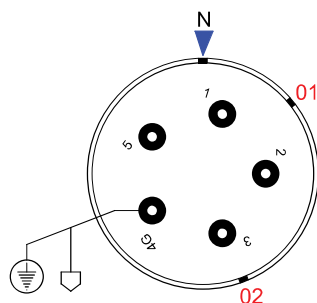
Sockets: GDU-28-31SL

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	WIRE AWG (MM <sup>2</sup> )	SHELL SIZE
4	350 MCM (185)	4/0 (120)	28

	1000 VAC 50/60/400Hz Non-Circuit Breaking	260 AMP
	600 VAC 60/400Hz Circuit Breaking	200 AMP
	480 VAC 60/400Hz Circuit Breaking	200 AMP

KEY	POSITION
N	0°
01	60°
02	120°
03	195°

## 5 Contacts



## Insert Reference

Pins: GD-20-36PL

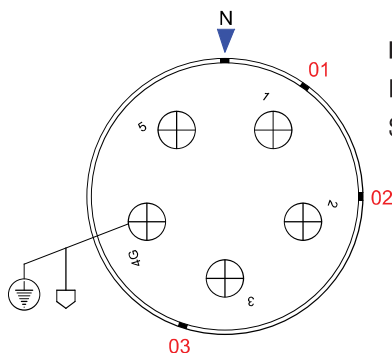
Sockets: GD-20-36SL

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	WIRE AWG (MM <sup>2</sup> )	SHELL SIZE
5	4 (25)	8 (10)	20

	1000 VAC 50/60/400Hz Non-Circuit Breaking	32 AMP
	600 VAC 60/400Hz Circuit Breaking	30 AMP
	480 VAC 60/400Hz Circuit Breaking	30 AMP

KEY	POSITION
N	0°
01	51°
02	159°

## 5 Contacts



## Insert Reference

Pins: GD-24-29PL












Sockets: GD-24-29SL

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	WIRE AWG (MM <sup>2</sup> )	SHELL SIZE
5	1/0 (55)	4 (25)	24

	1000 VAC 50/60/400Hz Non-Circuit Breaking	63 AMP
	600 VAC 60/400Hz Circuit Breaking	60 AMP
	480 VAC 60/400Hz Circuit Breaking	60 AMP

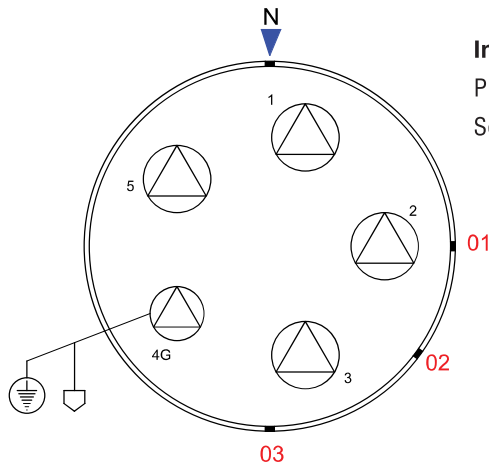
KEY	POSITION
N	0°
01	36°
02	90°
03	198°

View Shown: Male insert (pins) from front of connector. The female insert (sockets) view is mirrored.

<div>Symbol: Contact grounded to connetor shell. Ground pins are longer to make first - break last.</div>		CONTACT SYMBOLS											
	PRESSURE 		CONTACT SIZE	AWG	18	16	12	10	8	4	1/0	4/0	350 MCM
				mm²	0.75	1.5	4	6	10	25	55	120	185
	CRIMP		WIRE SIZE	AWG	18	16	12	10	8	8	4	1/0	4/0
				mm²	0.75	1.5	4	6	10	10	25	55	120



## XP STARLINE INSERT CONFIGURATIONS

**Insert Reference**

Pins: GD-28-23PL

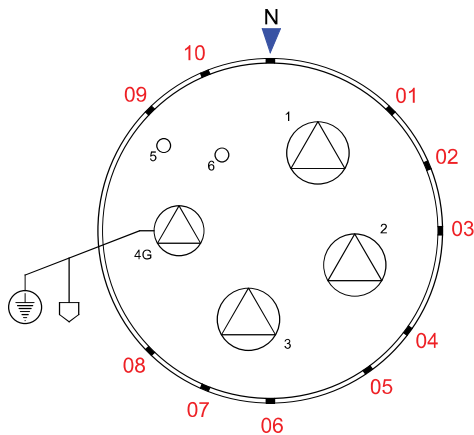
Sockets: GD-28-23SL

**5 Contacts**

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	WIRE AWG (MM <sup>2</sup> )	SHELL SIZE
5	4/0 (120)	1/0 (55)	28

	1000 VAC 50/60/400Hz Non-Circuit Breaking	125 AMP
	600 VAC 60/400Hz Circuit Breaking	100 AMP
	480 VAC 60/400Hz Circuit Breaking	100 AMP

KEY	POSITION
N	0°
01	90°
02	126°
03	180°

**Insert Reference**

Pins: GD-28-42PL

Sockets: GD-28-42SL

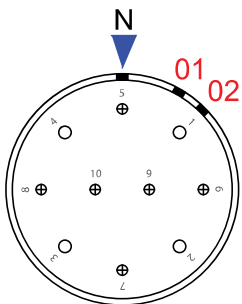
**6 Contacts**

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	WIRE AWG (MM <sup>2</sup> )	SHELL SIZE
4 2	4/0 (120) 10 (6)	4/0 (120) 10 (6)	28

	1000 VAC 50/60/400Hz Non-Circuit Breaking	260 AMP
	600 VAC 60/400Hz Circuit Breaking	200 AMP
	480 VAC 60/400Hz Circuit Breaking	200 AMP

KEY	POSITION
N	0°
01	45°
02	67.5°
03	90°
04	126°
05	145°
06	180°
07	202.5°
08	225°
09	315°
10	337.5°

NOTE: Relay pins 5 &amp; 6 are shorter to make last / break first

**Insert Reference**

Pins: VT-16-681PL

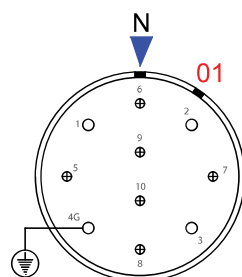
Sockets: VT-16-681SL

**10 Contacts**

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE
6 4	12 (4.0) 10 (6.0)	16

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	63 AMP
	250 VAC 60Hz Circuit Breaking	60 AMP

KEY	POSITION
N	0°
01	30°
02	45°

**Insert Reference**

Pins: VT-16-676PL

Sockets: VT-16-676SL

**10 Contacts**

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE
6 4	12 (4.0) 10 (6.0)	16

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	20/30 AMP
	250 VAC 60Hz Circuit Breaking	10 AMP

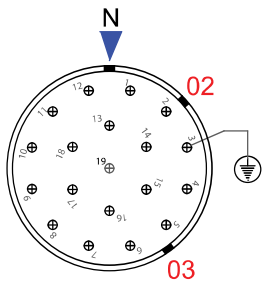
KEY	POSITION
N	0°
01	30°





## XP STARLINE INSERT CONFIGURATIONS

## 19 Contacts





## Insert Reference

Pins: VT-16-612PL

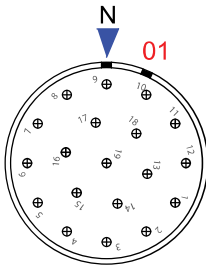
Sockets: VT-16-612SL

CONTACT QUANTITY		CONTACT AWG (MM²)	SHELL SIZE	
19		12 (4)	16	

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	20 AMP	KEY	POSITION
			N	0°
			02	48°
			03	144°

	250 VAC 60Hz Circuit Breaking	10 AMP
---	----------------------------------	--------

## 19 Contacts





## Insert Reference

Pins: VT-16-677PL

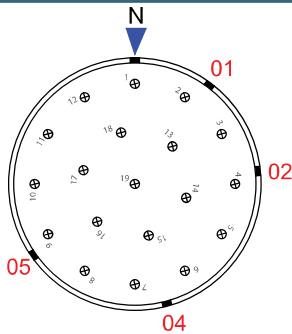
Sockets: VT-16-677SL

CONTACT QUANTITY		CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE	
19		12 (4)	16	

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	20 AMP	KEY	POSITION
			N	0°
			01	24°

	250 VAC 60Hz Circuit Breaking	10 AMP
---	----------------------------------	--------

## 19 Contacts





## Insert Reference

Pins: VT-20-676PL

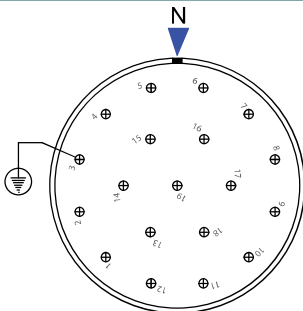
Sockets: VT-20-676SL

CONTACT QUANTITY		CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE
19		12 (4)	20

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	20 AMP
	 480 VAC Non-Circuit Breaking 250 VAC Circuit Breaking 60Hz	10 AMP

KEY	POSITION
N	0°
01	37°
02	84°
04	165°
05	235°
02	45°

## 19 Contacts





## Insert Reference

Pins: VT-20-688PL

Sockets: VT-20-688SL

CONTACT QUANTITY		CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE
19		12 (4)	20

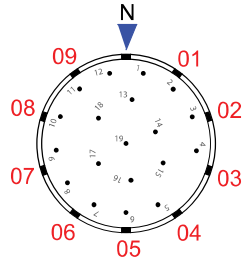
	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	20 AMP	<table><tr><th>KEY</th><th>POSITION</th></tr><tr><td>N</td><td>0°</td></tr></table>	KEY	POSITION	N	0°
	KEY	POSITION					
N	0°						
	480 VAC Non-Circuit Breaking 250 VAC Circuit Breaking 60Hz	10 AMP					

View Shown: Male insert (pins) from front of connector. The female insert (sockets) view is mirrored.

<b>Symbol:</b> Contact grounded to connector shell. Ground pins are longer to make first - break last.	 PRESSURE   CRIMP	CONTACT SYMBOLS		○	●	⊕	○	⦿	⦿	⊕	△	□
		CONTACT SIZE	AWG	18	16	12	10	8	4	1/0	4/0	350 MCM
			mm <sup>2</sup>	0.75	1.5	4	6	10	25	55	120	185
		WIRE SIZE	AWG	18	16	12	10	8	8	4	1/0	4/0
			mm <sup>2</sup>	0.75	1.5	4	6	10	10	25	55	120



## XP STARLINE INSERT CONFIGURATIONS

**Insert Reference**

Pins: VT-16-655PL

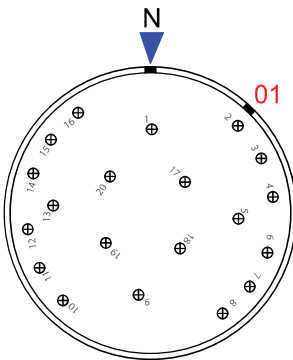
Sockets: VT-16-655SL

**19 Contacts**

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE
19	16 (1.5)	16

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	15 AMP
	250 VAC 60Hz Circuit Breaking	6.5 AMP

KEY	POSITION
N	0°
01	36°
02	72°
03	108°
04	144°
05	180°
06	216°
07	252°
08	288°
09	324°

**Insert Reference**

Pins: VT-20-632PL

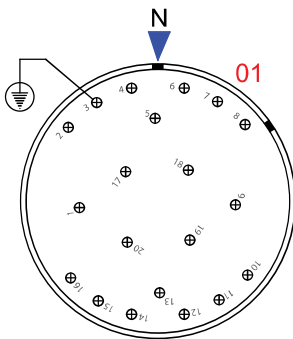
Sockets: VT-16-632SL

**20 Contacts**

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE
20	12 (4)	20

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	20 AMP
	250 VAC 60Hz Circuit Breaking	10 AMP

KEY	POSITION
N	0°
01	42.5°

**Insert Reference**

Pins: VT-20-687PL

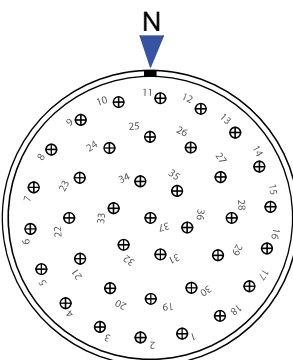
Sockets: VT-20-687SL

**20 Contacts**

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE
19	12 (4)	20

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	20 AMP
	250 VAC 60Hz Circuit Breaking	10 AMP

KEY	POSITION
N	0°
01	56°

**Insert Reference**

Pins: VT-20-686PL

Sockets: VT-20-686SL

**37 Contacts**

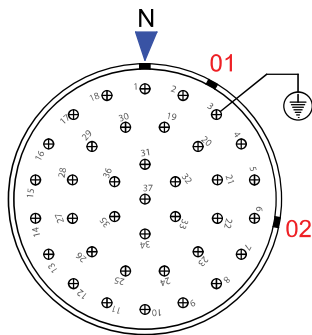
CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE
37	12 (4)	20

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	20 AMP
	250 VAC 60Hz Circuit Breaking	10 AMP

KEY	POSITION
N	0°



## XP STARLINE INSERT CONFIGURATIONS



## Insert Reference

Pins: VT-20-650PL

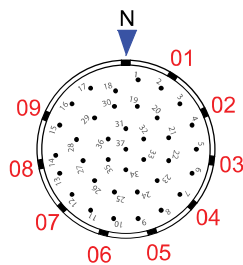
Sockets: VT-20-650SL

## 37 Contacts

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE
37	12 (4)	20

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	20 AMP
	250 VAC 60Hz Circuit Breaking	10 AMP

KEY	POSITION
N	0°
01	30°
02	100°



## Insert Reference

Pins: VT-16-621PL

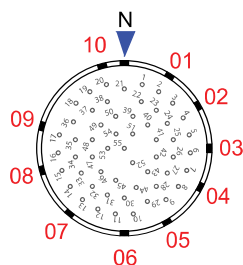
Sockets: VT-16-621SL

## 37 Contacts

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE
37	16 (1.5)	16

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	15 AMP
	250 VAC 60Hz Circuit Breaking	6.5 AMP

KEY	POSITION
N	0°
01	32.5°
02	65°
03	97.5°
04	130°
05	162.5°
06	195°
07	227.5°
08	260°
09	292.5°



## Insert Reference

Pins: VT-16-640PL

Sockets: VT-16-640SL










## 55 Contacts

CONTACT QUANTITY	CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE
55	18 (0.75)	16

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	15 AMP
	250 VAC 60Hz Circuit Breaking	6.5 AMP

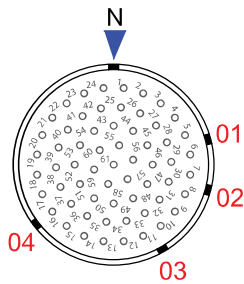
KEY	POSITION
N	0°
01	32°
02	60°
03	90°
04	117°
05	150°
06	180°
07	220°
08	255°
09	285°
10	345°

View Shown: Male insert (pins) from front of connector. The female insert (sockets) view is mirrored.

<div>Symbol: Contact grounded to connetor shell. Ground pins are longer to make first - break last.</div>	<div></div> <div>PRESSURE</div>	CONTACT SYMBOLS	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		
	CONTACT SIZE		AWG	18	16	12	10	8	4	1/0	4/0	350 MCM
			mm <sup>2</sup>	0.75	1.5	4	6	10	25	55	120	185
			WIRE SIZE	AWG	18	16	12	10	8	8	4	1/0
mm <sup>2</sup>	0.75	1.5		4	6	10	10	25	55	120		



## XP STARLINE INSERT CONFIGURATIONS

**Insert Reference**

Pins: VT-16-633PL

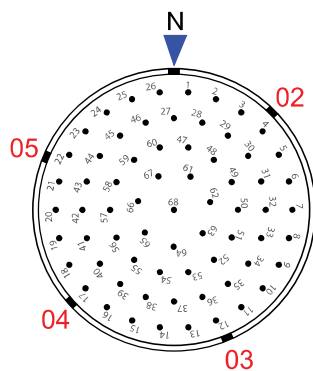
Sockets: VT-16-633SL

**61 Contacts**

CONTACT QUANTITY		CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE
61		18 (0.75)	16

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	10 AMP	<b>KEY</b>	<b>POSITION</b>
	250 VAC 60Hz Circuit Breaking	3.5 AMP	N	0°
			01	75°
			02	105°
			03	150°
			04	232.5°

**Insert Reference**

Pins: VT-20-613PL

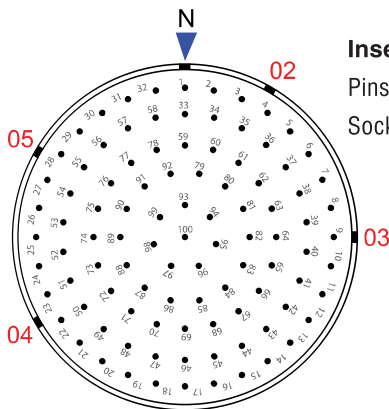
Sockets: VT-20-613SL

**68 Contacts**

CONTACT QUANTITY		CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE
68		16 (1.5)	20

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	15 AMP	<b>KEY</b>	<b>POSITION</b>
	250 VAC 60Hz Circuit Breaking	6.5 AMP	N	0°
			02	45°
			03	157.5°
			04	228°
			05	292.5°

**Insert Reference**

Pins: VT-24-613PL

Sockets: VT-24-613SL











**100 Contacts**

CONTACT QUANTITY		CONTACT AWG (MM <sup>2</sup> )	SHELL SIZE
100		16 (1.5)	24

	250 VAC 50/60/400Hz 125 VDC Non-Circuit Breaking	15 AMP	<b>KEY</b>	<b>POSITION</b>
	250 VAC 60Hz Circuit Breaking	5.0 AMP	N	0°
			02	30°
			03	90°
			04	240°
			05	300°

View Shown: Male insert (pins) from front of connector. The female insert (sockets) view is mirrored.

<div>Symbol: Contact grounded to connetor shell. Ground pins are longer to make first - break last.</div>	<div></div> <div>PRESSURE</div>	CONTACT SYMBOLS		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
	CONTACT SIZE			AWG	18	16	12	10	8	4	1/0	4/0
		mm²	0.75	1.5	4	6	10	25	55	120	185	
		WIRE SIZE	AWG	18	16	12	10	8	8	4	1/0	4/0
mm²	0.75		1.5	4	6	10	10	25	55	120		