



Series ITS-NG

Series ITS-NG Reverse-Bayonet Coupling

Nuclear industry standard power and signal connectors for existing Gen II plant refurbishment

Glenair ITS-NG series connectors can be configured to meet Gen II LOCA requirements and are suitable for equipment retrofit and refurbishment applications to legacy plant containment area requirements. These industry-standard legacy reverse bayonet-lock connectors offer fast and reliable mating and unmating.

Shells are available in stainless steel or aluminum in various finishes and platings, offering insert and O-ring material choices such as EPDM, silicone, PEEK, Epiall and others.

The Nuclear-Grade ITS series connector is a Glenair MIL-DTL-5015 reverse-bayonet connector, dimensionally and electrically compliant to MIL-DTL-5015 specifications, and offering the full array of contact plating and size options, and power and signal insert arrangements.

These connectors are available as commercial grade, or can be manufactured under our 10CFR50 Appendix B nuclear quality program.



Discrete connectors or
turnkey cable assemblies

- Fast connect / disconnect reverse-bayonet coupling
- Stainless steel or aluminum shells with various plating and finish options
- Chemical / radiation tolerant and moisture resistant inserts and O-rings
- Performance tested for advanced temperature, radiation, and seismic
- Ideally suited for I&C applications, valve control devices, sensors, and other electronic equipment in nuclear rest-of-plant and safety-related applications

NUCLEAR-GRADE QUICK-CONNECT CONNECTORS

Reverse-Bayonet (5015 type) Interconnect for Rest-of-Plant and Legacy Containment Area Applications



GLENAIR SERIES ITS-NG APPLICATION NOTES

- Series ITS-NG connectors are based on the legacy MIL-DTL-5015 standard, with the same insert arrangements, shell dimensions, supported contacts, and electrical performance ratings—but with an improved reverse-bayonet coupling technology in place of the threaded interface used on standard MIL-DTL-5015.
- The ITS-NG family of connectors features improved O-ring sealing and other design enhancements for use in Gen II plant safety-related applications, as well as for use in rest-of-plant applications. For new interconnect applications in modern-day Gen III power plants, Glenair recommends the SuperNG or Mighty Mouse NG series.
- ITS-NG is an industry-standard legacy connector design, intermateable and intermountable with all other 5015-based reverse-bayonet connector series. ITS-NG is appropriate for retrofit and refurbishment applications, as the 3-point bayonet coupling mechanism reduces mating/unmating time, an important consideration in time-sensitive outage servicing. Positive locking of the three stainless steel pins provides audible, visual and tactile confirmation of full mating engagement for double-gloved technicians, as well as resistance to vibration and shock, preventing connector de-coupling in harsh device-mount applications such as steam-pipe mounting.
- Both plug and receptacle connector configurations are available with client-specified insert and O-ring materials, such as EPDM, silicone, Epiall, or PEEK.
- ITS-NG connectors may be supplied with backshells and accessories for IP-rated environmental sealing for high humidity and submersion applications.
- Glenair ITS-NG connectors are particularly well-suited for use in applications where electromagnetic compatibility is a requirement, as a complete range of EMI shield termination accessories is available for overall and individual wire shields.

CONTACT SPECIFICATIONS

Copper alloy with gold plating (standard)

Contact Size	Rated Current at 20 C	Rated Current at 80 C	Max. Contact resist.	Wire size
20	7.5 A	7.5 A	12.0 mΩ	20-26 AWG
18	10A	7.5 A	12.0 mΩ	18-26 AWG
16	22 A	13 A	6.0 mΩ	16-22 AWG
12	41 A	23 A	3.0 mΩ	12-14 AWG
8	73 A	46 A	1.0 mΩ	8-10 AWG
4	135 A	80 A	0.5 mΩ	4-6 AWG
0	245 A	150 A	0.3 mΩ	0-2 AWG
4/0	350 A	225 A	0.2 mΩ	4/0 AWG

SERVICE RATING

(Minimum Insulating resistance: $\geq 5 \times 10^3$ MΩ)

Class	Operating voltage VDC	Operating voltage Vac RMS	Test voltage Vac RMS
INST.	250 V	200 V	1000 V
A	700 V	500 V	2000 V
D	1250 V	900 V	2800 V
E	1750 V	1250 V	3500 V
B	2450 V	1750 V	4500 V
C	4200 V	3000 V	7000 V

Materials and Finishes	
Shells, Coupling Nuts	316 Stainless Steel, Passivated Aluminum—various platings and finishes available
Contacts	Copper alloy, Gold Plated or Silver Plated for larger contacts in higher-amperage applications
Hoods (Socket contacts)	Copper Alloy, Nickel-Plated
Pencil Clip (Socket contacts)	Stainless Steel
Wave Spring	Stainless Steel
Grounding Finger	Beryllium Copper



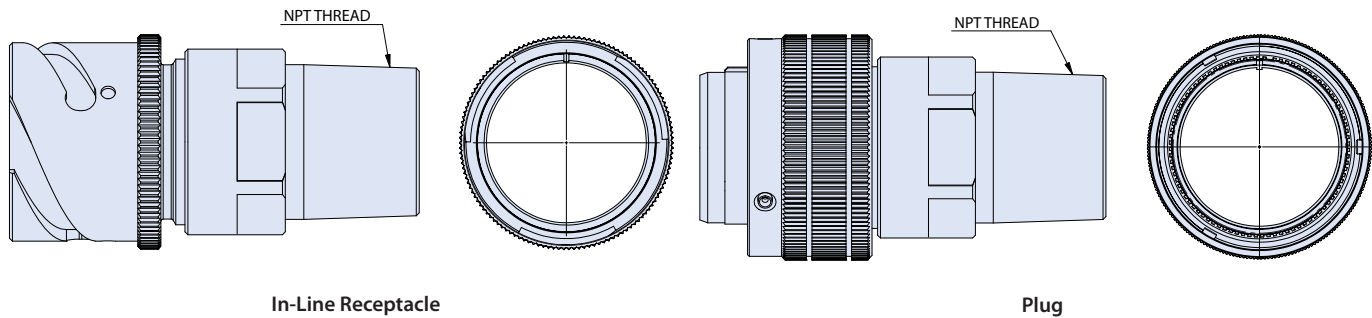


NUCLEAR-GRADE QUICK-DISCONNECT CONNECTORS

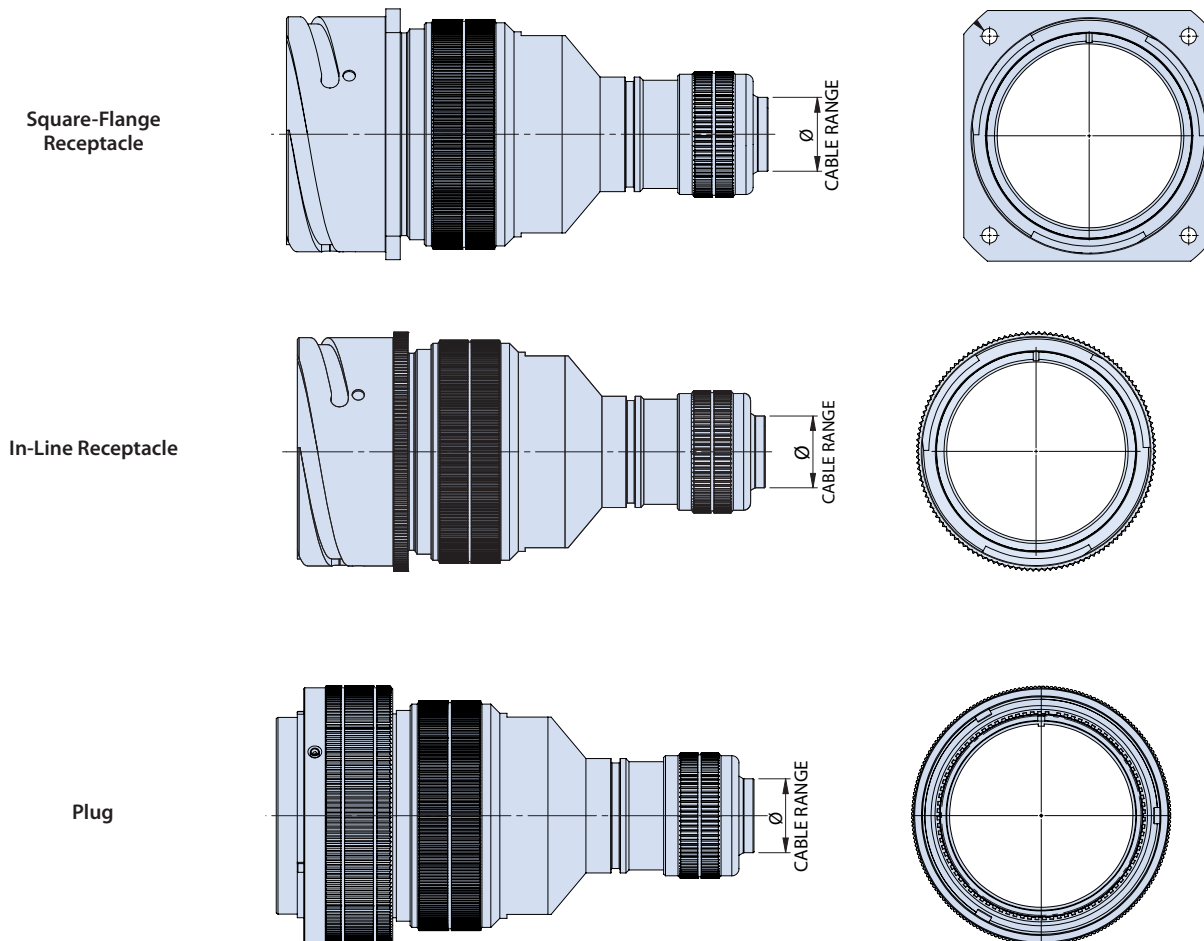
Reverse-Bayonet (5015 type) Interconnect for Legacy Containment Area (Class 1E) Applications

Series ITS-NG connectors with NPT adapters or cable gland

ITS-NG RECEPTACLE AND PLUG WITH NPT ADAPTER



ITS-NG RECEPTACLES AND PLUG WITH ENVIRONMENTAL CABLE GLAND



NUCLEAR-GRADE QUICK-DISCONNECT CONNECTORS

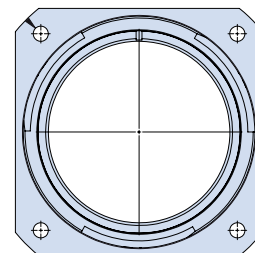
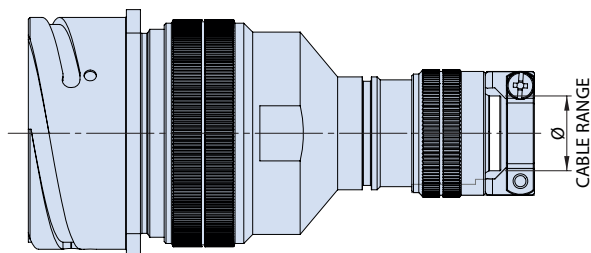
Reverse-Bayonet (5015 type) Interconnect for Legacy Containment Area (Class 1E) Applications



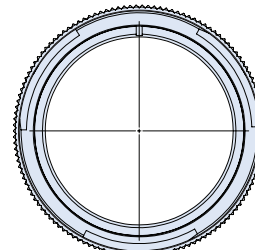
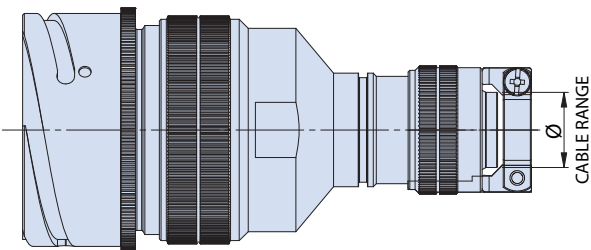
Series ITS-NG connectors with environmental cable clamp or backshell

ITS-NG RECEPTACLES AND PLUG WITH ENVIRONMENTAL CABLE CLAMP

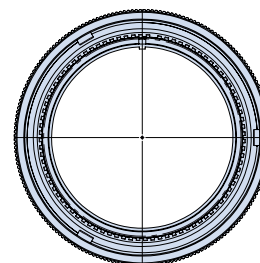
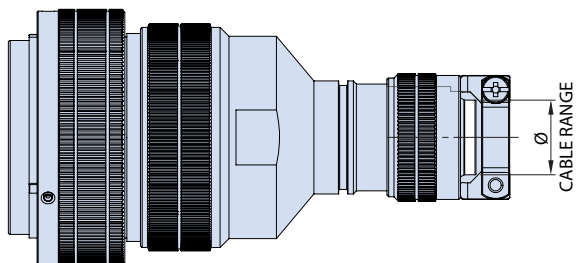
Square-Flange Receptacle



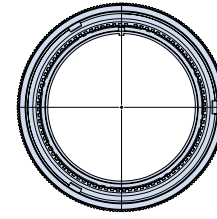
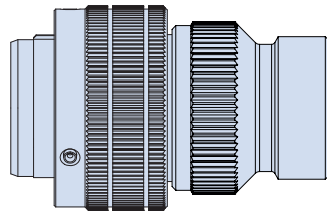
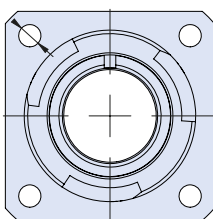
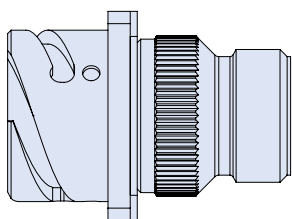
In-Line Receptacle



Plug



ITS-NG SQUARE-FLANGE RECEPTACLE AND PLUG WITH ENVIRONMENTAL BACKSHELL



Square-Flange Receptacle

Plug



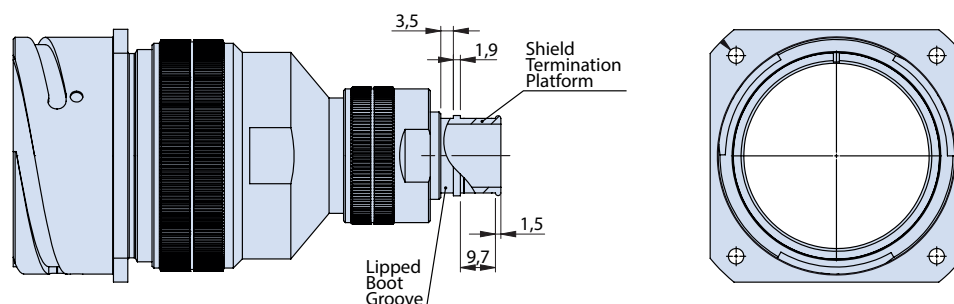
NUCLEAR-GRADE QUICK-DISCONNECT CONNECTORS

Reverse-Bayonet (5015 type) Interconnect for Legacy Containment Area (Class 1E) Applications

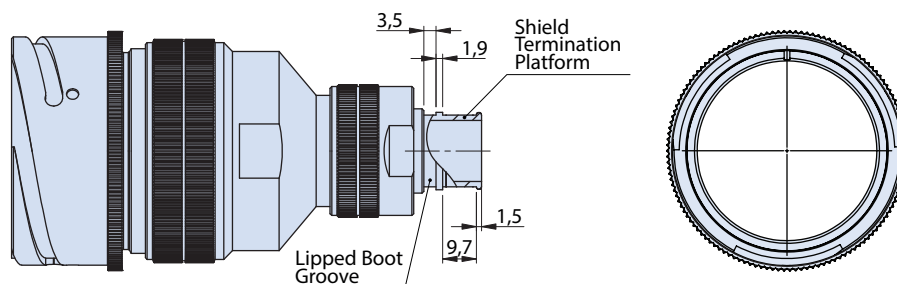
Series ITS-NG connectors with shield termination backshell

ITS-NG RECEPTACLES AND PLUG WITH SHIELD TERMINATION BACKSHELL

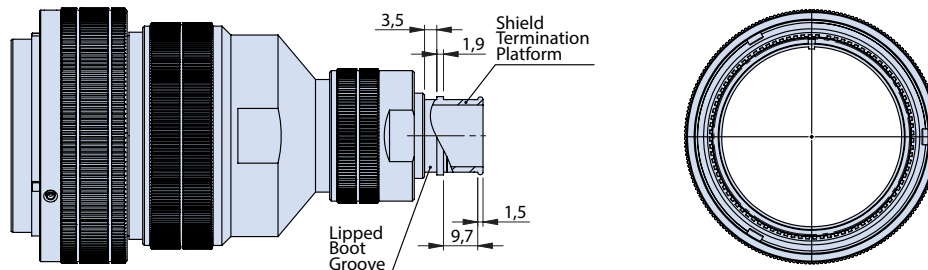
Square-Flange Receptacle



In-Line Receptacle



Plug

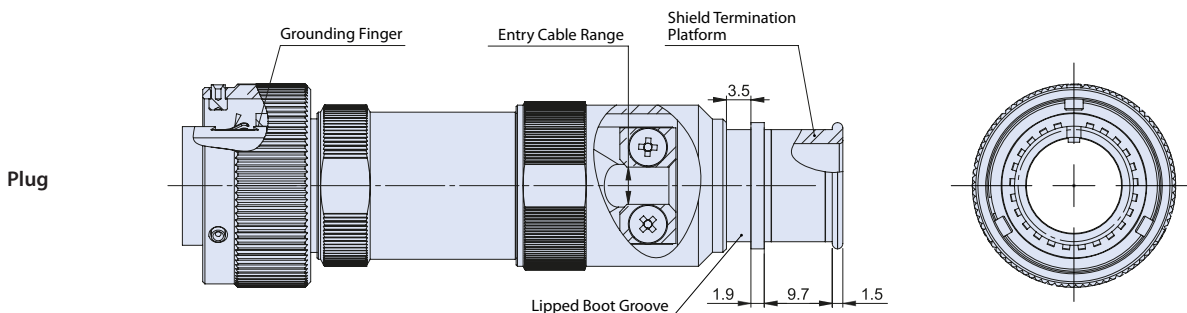


NUCLEAR-GRADE QUICK-DISCONNECT CONNECTORS Reverse-Bayonet (5015 type) Interconnect for Legacy Containment Area (Class 1E) Applications

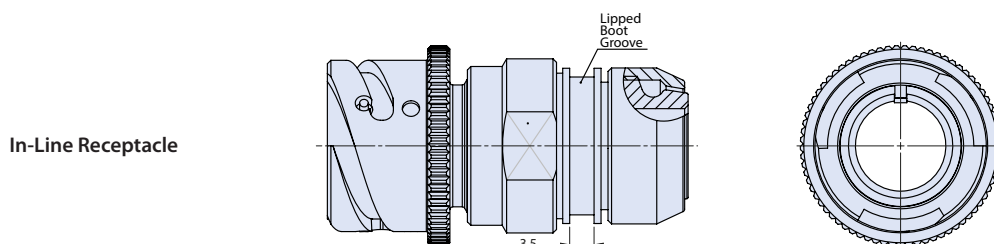
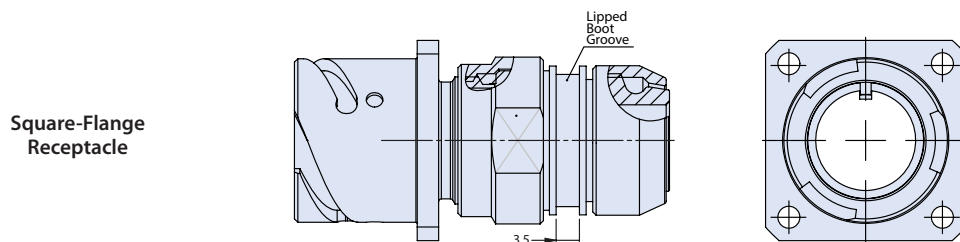


Series ITS-NG connectors with special backshell configurations

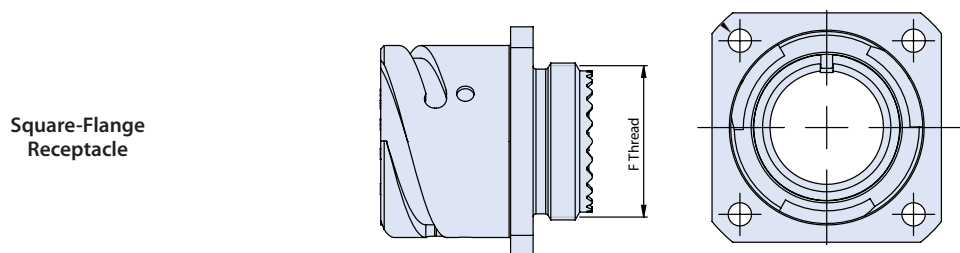
PLUG WITH INTERNAL STRAIN RELIEF AND SHIELD TERMINATION



IN-LINE AND PANEL MOUNT RECEPTACLE WITH EMI/RFI SHIELDING ENVIRONMENTAL BACKSHELL



SQUARE-FLANGE RECEPTACLE WITH ACCESSORY THREAD





NUCLEAR-GRADE QUICK-DISCONNECT CONNECTORS

Reverse-Bayonet (5015 type) Interconnect for Legacy Containment Area (Class 1E) Applications

Series ITS-NG contact arrangements

Arrangement	Rating	Contact Number	Contact Size								
			4/0	0	4	8	12	16	16S	18	20
10SL-3	A	3							3		
10SL-4	A	2							2		
14S-1	A	3							3		
14S-2	I	4							4		
14S-5	I	5							5		
14S-6	I	6							6		
14S-7	A	3							3		
14S-9	A	2							2		
14S-07	I	7							7		
16S-1	A	7							7		
16S-4	D	2							2		
16S-5	A	3							3		
16S-8	A	5							5		
16-2	E	1					1				
16-7	A	3				1		2			
16-9	A	4					2	2			
16-10	A	3					3				
16-11	A	2					2				
16-12	A	1			1						
16-A10	I	10								10	
18-1	I	10						10			
18-3	D	2					2				
18-4	D	4						4			
18-5	D	3					2	1			
18-6	D	1			1						
18-06	A	6					4	2			
18-7	B	1				1					
18-8	A	8					1	7			
18-9	I	7					2	5			
18-10	A	4					4				
18-10S MT	A	4					4				
18-11	A	5					5				
18-12	A	6						6			
18-13	A	4				1	3				
18-16	C	1					1				
18-19	A	10						10			
18-20	A	5						5			
18-22	D	3						3			
18-30 (18-20x10")	A	5						5			
20-2	D	1		1							
20-3	D	3					3				
20-4	D	4					4				
20-6	D	3						3			
20-7	A	8						8			
20-8	I	6				2		4			
20-9	A	8					1	7			
20-11	I	13						13			
20-14	A	5				2	3				
20-15	A	7					7				
20-16	A	9					2	7			
20-17	A	6					5	1			
20-18	A	9					3	6			
20-19	A	3				3					
20-21	A	9					1	8			
20-22	A	6				3		3			
20-23	A	2				2					
20-24	A	4				2		2			
20-A24	A	4				2		2			
20-25 (20-11x100")	I	13						13			
20-27	A	14						14			
20-29	A	17						17			

* Only Crimp Contact Version

Arrangement	Rating	Contact Number	Contact Size							
			4/0	0	4	8	12	16	18	20
20-30 (20-11x250")	I	13						13		
20-33	A	11						11		
20-A8	I	8				2		6		
20-A9	A	9					9			
20-A48	I	19						19		
20-B8	A	8					4	4		
22-1	D	2				2				
22-2	D	3				3				
22-4	A	4				2	2			
22-5	D	6					2	4		
22-7	E	1		1						
22-9	E	3					3			
22-10	E	4						4		
22-11	B	2						2		
22-12	D	5				2		3		
22-14	A	19						19		
22-15	A	6					5	1		
22-17	A	9					1	8		
22-18	A	8						8		
22-19	A	14						14		
22-20	A	9						9		
22-21	A	3		1				2		
22-22	A	4				4				
22-23	A	8					8			
22-27	A	9				1		8		
22-28	A	7					7			
22-34	D	5					3	2		
22-82	A	10				2		8		
22-A10	A	10						10		
22-A37	A	37							37	
22-22S MT	A	4				4				
24-2	D	7					7			
24-3	A	7					2	5		
24-4	D	4		1				3		
24-5	A	16						16		
24-06	D	6				4		2		
24-6	A	8					8			
24-07	D	7					7			
24-7	A	16					2	14		
24-9	A	2			2					
24-10	A	7				7				
24-11	A	9				3	6			
24-12	A	5			2		3			
24-013	A	13					6	7		
24-19	A	12						12		
24-20	D	11					2	9		
24-22	D	4				4				
24-27	E	7						7		
24-28	I	24						24		
24-67	A	19					19			
24-A1	B	1		1						
24-A8	A	8				5		3		
24-A11	A	11				2		9		
24-A12	A	12			2			10		
24-A25	A	25						25		
24-A28	I	28						28		
24-A55*	I	55								55
24-G5	A	5				5				
28-1	A	9				3	6			
28-2	D	14					2	12		
28-3	E	3				3				
28-6	D	3			3					
28-09	A	9			4			5		

NUCLEAR-GRADE QUICK-DISCONNECT CONNECTORS

Reverse-Bayonet (5015 type) Interconnect for Legacy Containment Area (Class 1E) Applications

Series ITS-NG contact arrangements



Arrangement	Rating	Contact Number	Contact Size							
			4/0	0	4	8	12	16	18	20
28-9	D	12					6	6		
28-10	A	7			2	2	3			
28-11	A	22					4	18		
28-12	A	26						26		
28-13 (28-12x100")	A	26						26		
28-15	A	35						35		
28-16	A	20						20		
28-17	A	15						15		
28-18	I	12						12		
28-19	A	10					4	6		
28-20	A	14					10	4		
28-21	A	37						37		
28-22	D	6			3			3		
28-51	D	12					12			
28-59	A	17					7	10		
28-70	A	7				7				
28-72*	I	72								72
28-79	A	16				7		9		
28-84	A	9				9				
28-124	A	16				4		12		
28-A29	A	29				2		27		
28-A31*	A	31				6				25
28-A35	A	35						35		
28-A63	I	28					9	19		
28-B1	B	1		1						
28-B2	E	2				2				
32-1	D	5		2			3			
32-2	E	5			3			2		
32-3	D	9		1	2		2	4		
32-5	D	2		2						
32-6	A	23			2	3	2	16		
32-7	I	35					7	28		
32-8	A	30					6	24		
32-9	D	14			2			12		
32-013	D	13					13			
32-13	D	23					5	18		
32-15	D	8		2			6			
32-17	D	4			4					
32-22	A	54						54		
32-31	A	31						31		
32-59	A	42				2		40		
32-68	A	16			4			12		
32-689	A	9			3			6		
32-A5GM	A	5			5					
32-76	A	19					19			
32-79	D	5			4	1				
32-88	A	54						54		
32-A1	A	1		1						
32-A3	E	3			3					
32-A8	A	8				8				
32-A25	A	25					25			
32-A27	A	27					10	17		
32-A28	A	28					28			
32-A30	A	30					10	20		
32-A40	A	40						40		
32-A48	I	48						48		
32-A55	A	55						55		
32-B22	A	22			2			20		
36-01	C	1		1						
36-3	D	6		3			3			
36-4	A	3		3						
36-5	A	4		4						
36-6	A	6		2	4					

Arrangement	Rating	Contact Number	Contact Size							
			4/0	0	4	8	12	16	18	20
36-7	A	47					7	40		
36-8	A	47					1	46		
36-9	A	31			1	2	14	14		
36-10	A	48						48		
36-14	D	16				5	5	6		
36-15	A	35						35		
36-18 (36-9x100")	A	31			1	2	14	14		
36-22	D	22					22			
36-35	A	36				4		32		
36-54=36-B39	A	39				8		31		
36-66	A	56					4	52		
36-74	A	44				1		43		
36-77	D	7			7					
36-A7	A	7		3	2		2			
36-A10	A	10			2	8				
36-A35	A	8		4				4		
36-A51	D	6		3	2			1		
36-A72	I	72					4	16	52	
36-A99*	A	65						15		50
36-B61	E	6			2		4			
36-B78	D	14				12		2		
36-B90	D	1	n.1 Special Contact							
36-D78	D	14				10		4		
40-1	D	30					6	24		
40-9	A	47				1	22	24		
40-10	A	29			4	9		16		
40-26	A	26				7	19			
40-31	D	31					31			
40-35	D	35					35			
40-47	A	47				1	22	24		
40-53	A	60						60		
40-56	A	85						85		
40-62	A	60						60		
40-63	A	61						61		
40-67	A	11			10			1		
40-100	A	100							100	
40-150	I	150							150	
40-951	A	51					25	26		
40-A3	A	5		3			2			
40-A4	A	6		4			2			
40-A5	A	5		3	1		1			
40-A5GM	A	5		5						
40-A6	B	6					6			
40-A8	E	8		4				4		
40-A9	A	9		3		6				
40-A10	D	8			4			4		
40-A14	A	14			8		6			
40-A20	D	20				2	18			
40-A24	D	24				8	16			
40-A38	A	38					38			
40-A51	A	31				15		16		
40-A55	A	5		5						
40-A56	A	85						85		
40-A62	A	62				2		60		
40-A65	A	65						65		
40-A70	A	70						70		
40-B4	E	4		4						
40-B19	A	19				19				
40-B25	A	29		4				25		
40-B37	A	37					37			
40-D4	C	4				4				
40-G4	E	4				4				

* Only Crimp Contact Version



NUCLEAR-GRADE QUICK-DISCONNECT CONNECTORS

Reverse-Bayonet (5015 type) Interconnect for Legacy Containment Area (Class 1E) Applications

Series ITS-NG insert rotation alternate positions

Arrangement	$\alpha \pm 2^\circ$			
	W	X	Y	Z
10SL-3				
10SL-4				
14S-1	90	180	270	
14S-2		120	240	
14S-5		110		
14S-6	90			
14S-7	90	180	270	
14S-9	70	145	215	290
14S-07				
16S-1	80			280
16S-4	35	110	250	325
16S-5	70	145	215	290
16S-8		170	265	
16-2				
16-7	80	110	250	280
16-9	35	110	250	325
16-10	90	180	270	
16-11	35	110	250	325
16-12				
16A-10	35	112	235	315
18-1	70	145	215	290
18-3	35	110	250	325
18-4	35	110	250	325
18-5	80	110	250	280
18-6				
18-06	180			
18-7				
18-8	70			290
18-9	80	110	250	280
18-10		120	240	
18-10S MT				
18-11		170	265	
18-12	80			280
18-13	80	110	250	280
18-16				
18-19		120	240	
18-20	90	180	270	
18-22	70	145	215	290
18-29	90	180	270	
18-30				
20-2				
20-3	70	145	215	290

Arrangement	$\alpha \pm 2^\circ$			
	W	X	Y	Z
20-4	45	110	250	
20-6	70	145	215	290
20-7	80	110	250	280
20-8	80	110	250	280
20-9	80	110	250	280
20-11				
20-14	80	110	250	280
20-15	80			280
20-16	80	110	250	280
20-17	90	180	270	
20-18	35	110	250	325
20-19	90	180	270	
20-21	35	110	250	325
20-22	80	110	250	280
20-23	35	110	250	325
20-24	35	110	250	325
20-A24	55	125	200	340
20-25				
20-27	35	110	250	325
20-29	80			280
20-30				
20-33				280
20-A8				
20-A9		110	250	
20-A48		80	280	
20-B8	80	110	250	280
22-1	35	110	250	325
22-2	70	145	215	290
22-4	35	110	250	325
22-5	35	110	250	325
22-7				
22-9	70	145	215	290
22-10	35	110	250	325
22-11	35	110	250	325
22-12	80	110	250	280
22-14	80	110	250	280
22-15	80	110	250	280
22-17	80	110	250	280
22-18	80	110	250	280
22-19	80	110	250	280
22-20	35	110	250	325
22-21	80	110	250	280

Arrangement	$\alpha \pm 2^\circ$			
	W	X	Y	Z
22-22		110	250	
22-23	35		250	
22-27	80		250	280
22-28	80			280
22-34	80	110	250	280
22-82	80	110	250	280
22A-10		120	240	
22-A37	80	112	250	280
22-22S MT				
24-2	80			280
24-3	80	110	250	280
24-4	80	110	250	280
24-5	80	110	250	280
24-06	40			320
24-6	80	110	250	280
24-07	80			280
24-7	80	110	250	280
24-9	35	110	250	325
24-10	80			280
24-11	35	110	250	325
24-12	80	110	250	280
24-013				
24-19				
24-20	80	110	250	280
24-22	45	110	250	
24-27	80			280
24-28	80	110	250	280
24-67	80			335
24-A1				
24-A8				
24-A11	35	110	250	325
24-A12				
24-A25	80	110	250	280
24-A28	65	146	235	
24-A55	80	110	250	280
24-G5	70	110	240	270
28-1	80	110	250	280
28-2	35	110	250	325
28-3	70	145	215	290
28-6	70	145	215	290
28-09	110	250	260	280
28-9	80	110	250	280

NUCLEAR-GRADE QUICK-DISCONNECT CONNECTORS

Reverse-Bayonet (5015 type) Interconnect for Legacy Containment Area (Class 1E) Applications

Series ITS-NG insert rotation alternate positions

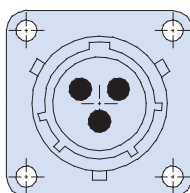


Arrangement	$\alpha \pm 2^\circ$			
	W	X	Y	Z
28-10	80	110	250	280
28-11	80	110	250	280
28-12	90	180	270	
28-13				
28-15	80	110	250	280
28-16	80	110	250	280
28-17	80	110	250	280
28-18	70	145	215	290
28-19	80	110	250	280
28-20	80	110	250	280
28-21	80	110	250	280
28-22	70	145	215	290
28-51	80	135	190	
28-59	35	110	250	325
28-70	80			280
28-72	72	144	216	288
28-79	70	133	227	290
28-84	45	157	90	135
28-124	80	110	250	280
28A-29	80	110	250	280
28A-31	35		260	310
28A-35	80	110	250	280
28A-63		100	260	
28-B1				
28-B2				
32-1	80	110	250	280
32-2	70	145	215	290
32-3	80	110	250	280
32-5	35	110	250	325
32-6	80	110	250	280
32-7	80	125	235	280
32-8	80	125	235	280
32-9	80	110	250	280
32-013	65	130	230	295
32-13	80	110	250	280
32-15	35	110	250	280
32-17	45	110	250	
32-22	80	110	250	280
32-31	80	125	215	280
32-59	36	108	252	324
32-68	65	135	225	275
32-689				

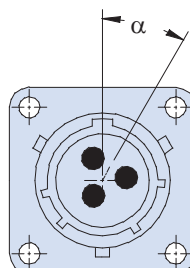
Arrangement	$\alpha \pm 2^\circ$			
	W	X	Y	Z
32-A5 GM				
32-76	80	110	250	280
32-79				
32-88	80	110	250	280
32-A1				
32-A3	22	44	76	98
32A-8	35	122		315
32A-25	60	120		
32-A27	30	115	285	335
32-A28				
32-A30				
32A-40	35	130		
32A-48	80	125	235	
32-A55	80	110	250	280
32-B22	35	110	250	325
36-01				
36-3	70	145	215	290
36-4	70	145	215	290
36-5		120	240	
36-6	35	110	250	325
36-7	80	110	250	280
36-8	80	110	250	280
36-9	80	125	235	280
36-10	80	125	235	280
36-14	90	180	270	
36-15	60	125	245	305
36-18				
36-22	80	110	250	280
36-35				
36-54 = 36-B39	67			
36-66	110	250	260	280
36-74				
36-77	45	90		
36-A7				
36-A10	45	110	250	315
36-A35				
36-A51	45	135	225	315
36A-72		110		
36-A99	30	135		
36B-61				
36B-78	35	106	254	325
36B-90				

Arrangement	$\alpha \pm 2^\circ$			
	W	X	Y	Z
36D-78	35	106	254	325
40-1	65	130	235	300
40-9	65	125	225	310
40-10	65	125	225	310
40-26	80	110	250	280
40-31	80	110	250	280
40-35	70	130	230	290
40-47	65	125	225	310
40-53	80	110	250	280
40-56	72	144	216	288
40-62	30	130	220	290
40-63	80			280
40-67	70	110	230	280
40-100	30	105	230	315
40-150				
40-951	90	105		
40-A3	70	145	215	290
40-A4	50	120	240	325
40-A5	33			270
40-A6	35	110	250	280
40-A5GM	33			270
40-A8	35	110	250	325
40-A9				
40-A10	65			
40-A14	80	135	195	
40-A20	80	110	250	280
40-A24				
40-A38	37			
40-A51				
40-A55				
40-A56	72	144	216	288
40-A62	80	130	230	280
40-A65	70	145	215	285
40-A70	80	110	250	280
40-B4	45	110	215	300
40-B19	35	105	255	325
40-B25				
40-B37				
40-D4				
40-G4				

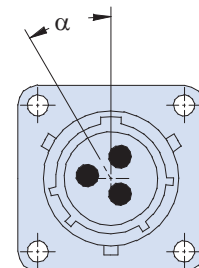
Insert Rotation (front view)



Normal Position



Alternate Position
with Pin Contacts



Alternate Position
with Socket Contacts