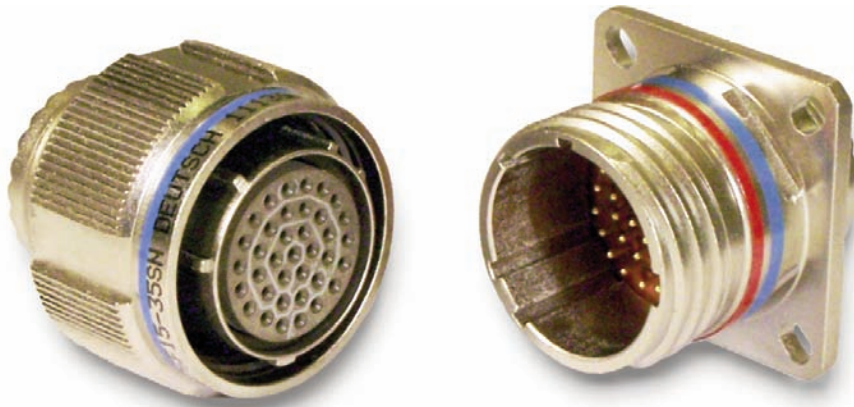




DEUTSCH

DEFENSE AEROSPACE OPERATIONS

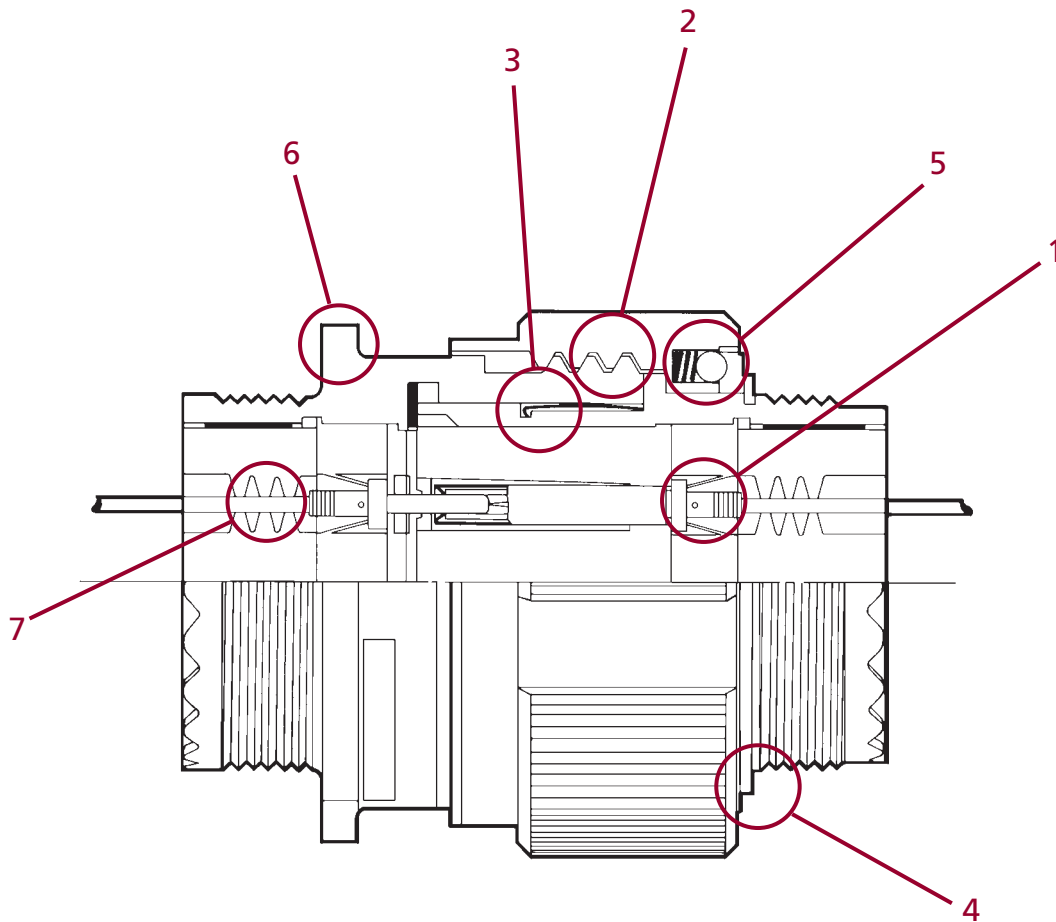


## **DTS series** MIL-C-38999 Series III

Circular bayonet connector

Aeronautics industry connector

<b>Introduction</b>	<b>1</b>
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- 1 - Deutsch proven dielectric retention system provides superior contact retention under severe vibration.**
- 2 - The DTS series provides 100 % metal to metal bottoming for maximum EMI grounding protection.**
- 3 - Grounding fingers provide excellent EMI protection.**
- 4 - Non-reflective olive drab cadmium over nickel shell plating provides 500 hours salt spray corrosion protection.**
- 5 - Threaded coupling with self locking feature.**
- 6 - Elongated mounting holes permit the DTS connector to intermount with existing standard MIL-C 38999 box or wall mount receptacles, giving it a design replacement advantage.**
- 7 - Deutsch uses superior silicone seals providing maximum tear resistance and sealing memory.**

## ***Deutsch's MIL-C-38999 Series III qualified with triple start, self locking, threaded coupling and crimp-type terminations.***

The Deutsch DTS Series is qualified to MIL-C-38999 Series III, This rugged design offers the maximum in vibration, shock and EMI resistance. A general duty threaded connector, the DTS Series, offers thicker wall sections and greater coupling surface with 100% metal to metal bottoming, a superior anti-coupling system and Deutsch's proven dielectric contact retention. The positive metal to metal design, superior interfacial seals and cadmium over

nickel plating provide excellent EMI, moisture and corrosion resistance. In a 360° turn of the coupling nut, the DTS quickly mates and self locks. Blunting of the thread on both the coupling nut and receptacle makes cross threading virtually impossible. Elongated mounting holes permit the DTS Connector to intermount with existing standard MS/38999 box or wall mount receptacles, giving it a design replacement advantage.

- *Threaded coupling with self locking.*
- *100 % scoop-proof shells.*
- *High resistance mechanical aluminium shells.*
- *Stainless steel shells for hermetic version.*
- *Corrosion : 500 hours salt spray protection for class W.*
- *R.F.I. fingers.*
- *Plugs and receptacles are equipped with thermoplastic and elastomer insert.*
- *Thermoplastic clips molded directly with insert.*
- *Hermetic receptacle shells with glass insert.*
- *Removable crimping contacts (MIL-C 39029).*
- *Sealing receptacle with contacts for printed circuit.*
- *Hermetic receptacle with solder contacts, contacts for printed circuit.*
- *Connector in accordance with specifications MIL-C 38999 series III.*
- *Connector QPL (to order as per QPL).*

## ● Mechanical

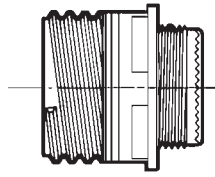
Shell	Material	Sealed Version	: Aluminum alloy
		Hermetic Version	: Stainless steel
	Finish	Sealed Version	: O.D. cadmium over nickel (class W) or Nickel plated (class F)
		Hermetic Version	: Passivated or Nickel
Silicone Insert	Material	: Thermoplastic and fluorinated silicone elastomer	
	Fluid Immersion	: Withstands fluids to MIL-C 26482 G standard	
Contact	Type	: Pin contact - copper alloy	
	Finish	: Gold over nickel	
Fluid Immersion	: Fluid resistant to fuels, coolants and solvents per MIL-C-38999		
Corrosion	: (Class W) 500 hours salt spary per MIL-C-38999		
Durability	: 500 cycles		
Temperature	: - 55° C to + 200° C (- 85°F to + 347°F)		
Vibration	: (Class W) Sine - Up to 60 Gs rms for 16 hrs. per MIL-C-38999		
Thermal Shock	: Per MIL-C-38999		
Shock	: High impact per MIL-S-901		

## ● Electrical

Dielectric withstanding voltage	at sea level	: 1300 VAC (rms)
	at 50,000 ft.	: 550 VAC (rms)
	at 70,000 ft.	: 350 VAC (rms)
	at 100,000 ft.	: 200 VAC (rms)
Insulation resistance	: 5000 megaohms min. at + 25°C (+ 77°F)	
Contacts maximum current	: Size 22D : 5.0 amps	
	: Size 20 : 7.5 amps	
	: Size 16 : 13.0 amps	
	: Size 12 : 23.0 amps	
Contact millivolt drop	: Size 22D : 73 millivolts at 5.0 amps	
	: Size 20 : 55 millivolts at 7.5 amps	
	: Size 16 : 49 millivolts at 13.0 amps	
	: Size 12 : 42 millivolts at 23.0 amps	
Usable Wire Size	: Size 22D accepts 22 thru 28 AWG	
	: Size 20 accepts 20 thru 24 AWG	
	: Size 16 accepts 16 thru 20 AWG	
	: Size 12 accepts 12 thru 14 AWG	
EMI Shielding	: (Class W) Effective over a range of 100MHz to 10GHz with a minimum 50 dB effectiveness at 10 GHz	

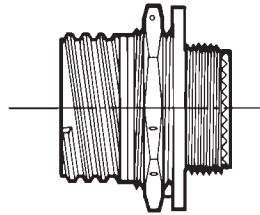
SEALED RECEPTILES

TYPE 20



4 hole square wall mounting

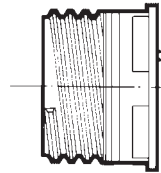
TYPE 24



Single hole mounting

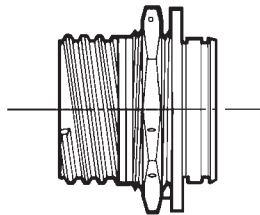
HERMETIC RECEPTILES

TYPE 21



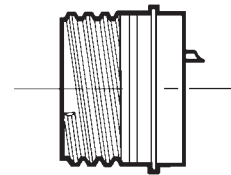
4 hole square wall mounting

TYPE 23



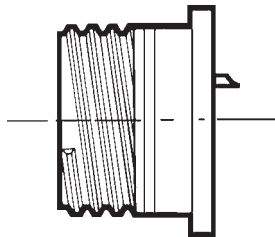
Single hole mounting

TYPE 25



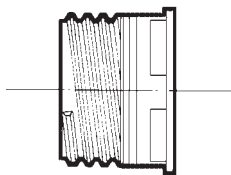
Hard solder receptacle

TYPE 27



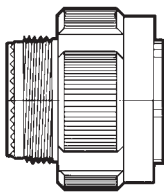
Solder box mounting

TYPE PR



Dummy receptacle

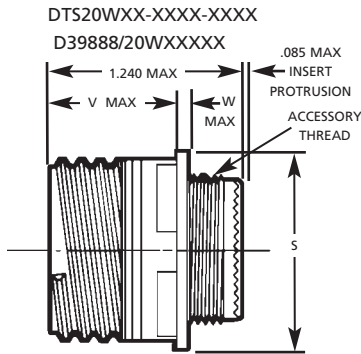
PLUG



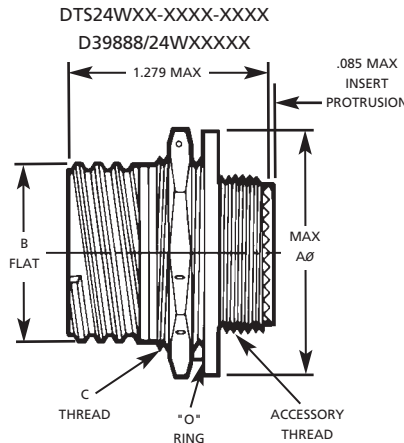
TYPE 26

**Deutsch's MIL-C-38999 Series III qualified with triple start, self locking, threaded coupling and crimp-type terminations.**

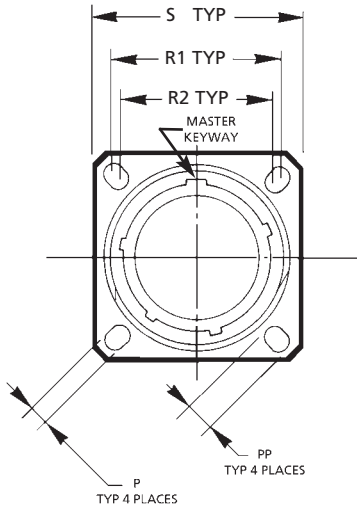
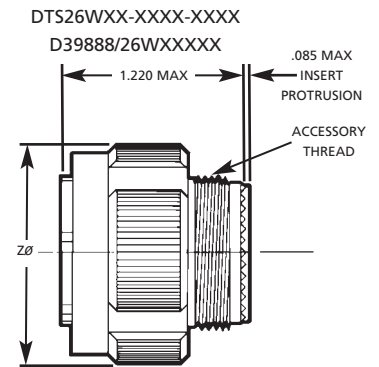
**SQUARE FLANGE RECEPTACLE**



**JAM NUT RECEPTACLE**

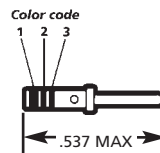
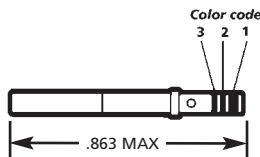
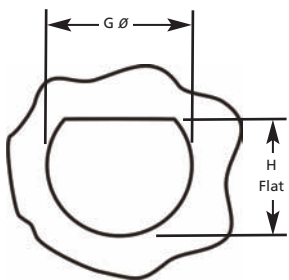


**RFI PLUG**



SHELL SIZE	A Ø MAX	+0.04 -0.06 B FLAT	C THREAD	H FLAT +0.00 -0.10	G Ø +0.10 -0.00	S +0.01	V MAX	W MAX	R1 TYP	R2 TYP	P +0.04 -0.02	PP +0.04 -0.02	2 Ø MAX	ACCESSORY THREAD
9	1.200	.651	M17X1-6g 0.100R	.669	.697	.937	.822	.098	.719	.594	.128	.216	.858	M12X1/0-6g 0.100R
11	1.385	.751	M20X1-6g 0.100R	.769	.822	1.031	.822	.098	.812	.719	.128	.194	.984	M15X1/0-6g 0.100R
13	1.511	.938	M25X1-6g 0.100R	.955	1.007	1.126	.822	.098	.906	.812	.128	.194	1.157	M18X1/0-6g 0.100R
15	1.637	1.062	M28X1-6g 0.100R	1.084	1.134	1.220	.822	.098	.969	.906	.128	.173	1.279	M22X1/0-6g 0.100R
17	1.763	1.187	M32X1-6g 0.100R	1.208	1.259	1.311	.822	.098	1.062	.969	.128	.194	1.405	M25X1/0-6g 0.100R
19	1.948	1.312	M35X1-6g 0.100R	1.333	1.384	1.437	.822	.098	1.156	1.062	.128	.194	1.515	M28X1/0-6g 0.100R
21	2.074	1.437	M38X1-6g 0.100R	1.459	1.507	1.563	.791	.126	1.250	1.156	.128	.194	1.641	M31X1/0-6g 0.100R
23	2.200	1.562	M41X1-6g 0.100R	1.584	1.634	1.689	.791	.126	1.375	1.250	.154	.242	1.768	M34X1/0-6g 0.100R
25	2.322	1.687	M44X1-6g 0.100R	1.709	1.759	1.811	.791	.126	1.500	1.375	.154	.242	1.889	M37X1/0-6g 0.100R

Contact size	Insertion/ removal tool	Crimp tool	Crimp tool positioner	Sealing plug (Military P/N)
22	M81969/14-01 MS3160-23	M22520/7-01	M22520/7-07 M22520/7-05	MS27488-22
20	M81969/14-10	M22520/1-01	M22520/1-04	MS27488-20
16	M81969/14-03	M22520/1-01	M22520/1-04	MS27488-16
12	M81969/14-04	M22520/1-01	M22520/1-04	MS27488-12



**Sockets, Gold Finish**

Deutsch Part No.	MIL-C-39029 Equivalent No.	Size	1st	2nd	3rd
38943-22	MIL-C-39029/56-348	22D	ORANGE	YELLOW	GRAY
38943-20	MIL-C-39029/56-351	20	ORANGE	GREEN	BROWN
38943-16	MIL-C-39029/56-352	16	ORANGE	GREEN	RED
38943-12	MIL-C-39029/56-353	12	ORANGE	GREEN	ORANGE

**Pins, Gold Finish**

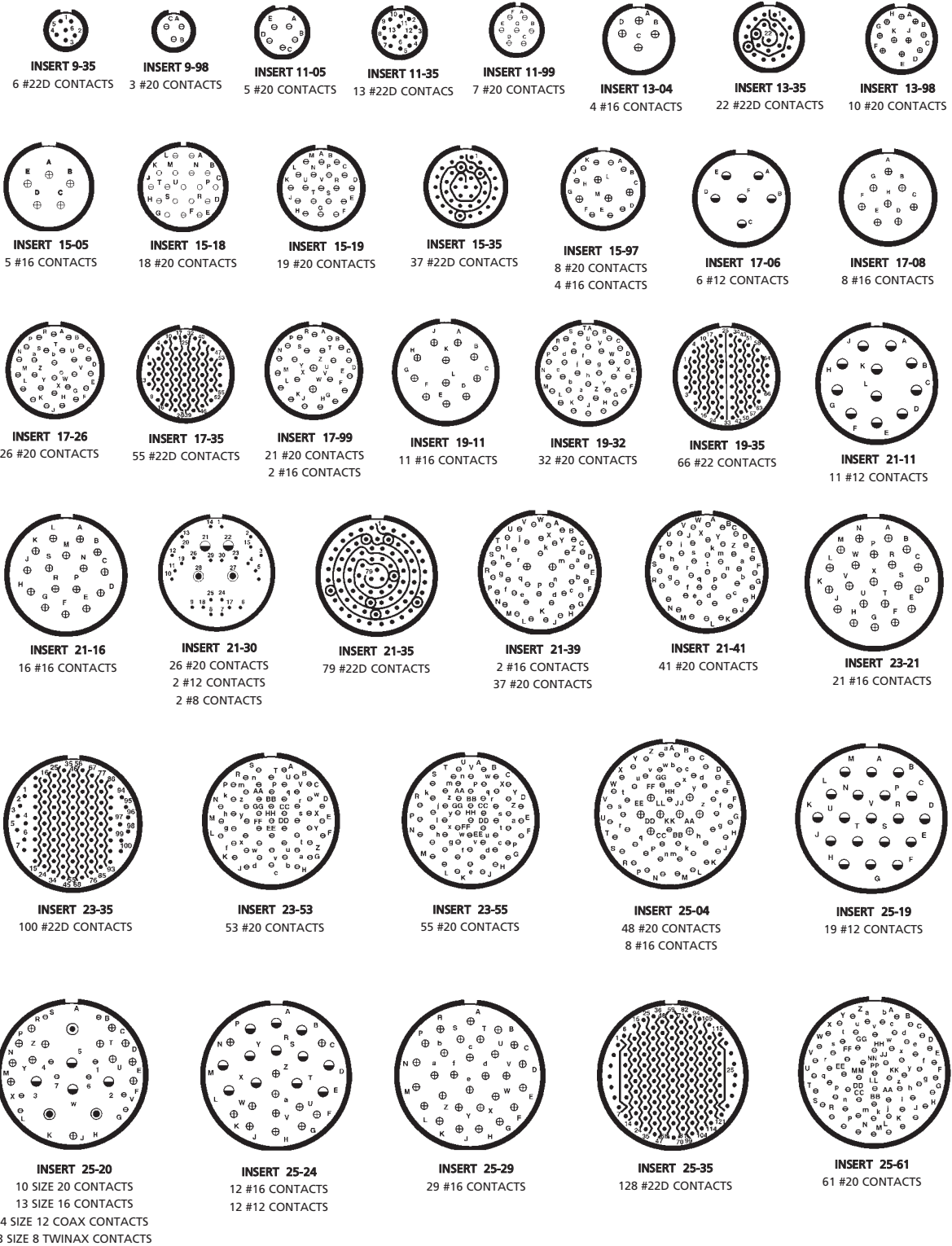
Deutsch Part No.	MIL-C-39029 Equivalent No.	Size	1st	2nd	3rd
38941-22	MIL-C-39029/58-360	22D	ORANGE	BLUE	BLACK
38941-20	MIL-C-39029/58-363	20	ORANGE	BLUE	ORANGE
38941-16	MIL-C-39029/58-364	16	ORANGE	BLUE	YELLOW
38941-12	MIL-C-39029/58-365	12	ORANGE	BLUE	GREEN

**Sockets, Deutsch Extended Life Finish**

Deutsch Part No.	Military Part No.	Size	1st	2nd	3rd
12333-22	MIL-C-39029/106-614	22D	BLUE	BROWN	YELLOW
12333-20	MIL-C-39029/106-615	20	BLUE	BROWN	GREEN
12333-16	MIL-C-39029/106-616	16	BLUE	BROWN	BLUE
12333-12	MIL-C-39029/106-617	12	BLUE	BROWN	VIOLET

**Pins, Deutsch Extended Life Finish**

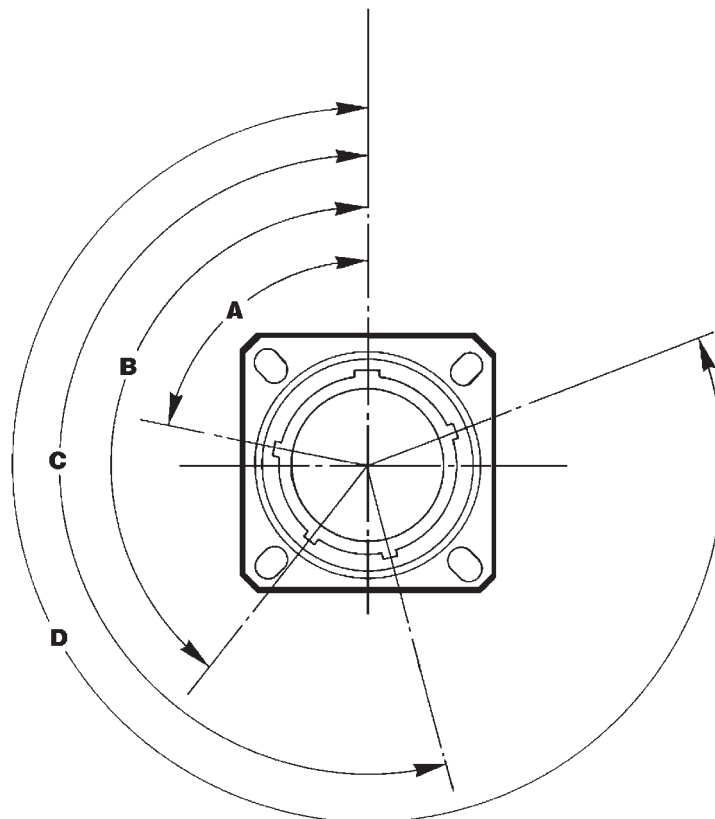
Deutsch Part No.	Military Part No.	Size	1st	2nd	3rd
12331-22	MIL-C-39029/107-620	22D	BLUE	RED	BLACK
12331-20	MIL-C-39029/107-621	20	BLUE	RED	BROWN
12331-16	MIL-C-39029/107-622	16	BLUE	RED	RED
12331-12	MIL-C-39029/107-623	12	BLUE	RED	ORANGE



Note: For additional insert arrangements consult factory.

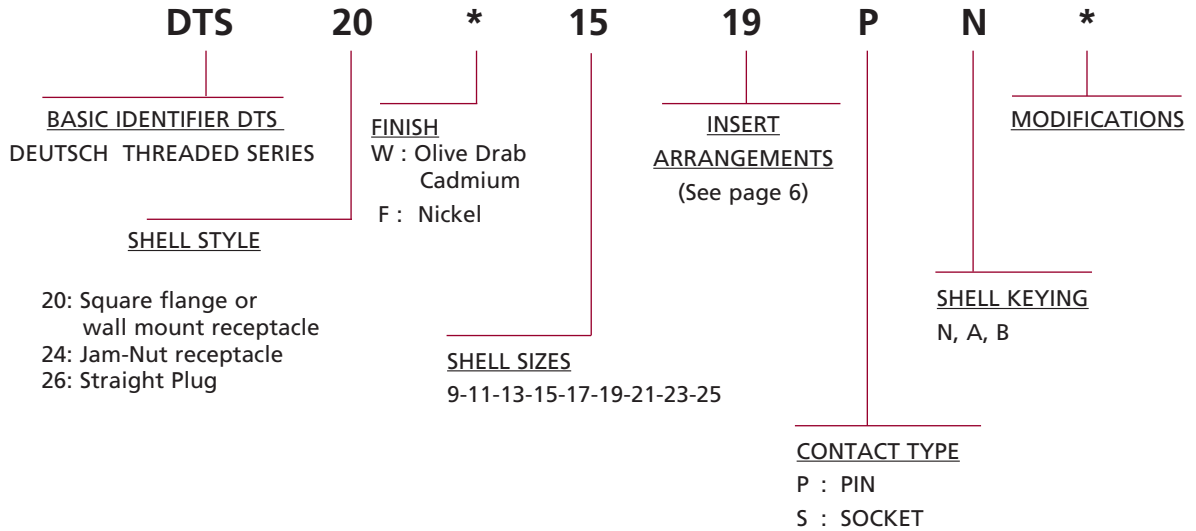
This information is for reference only. Consult factory for envelope drawings, updated specifications and additions to the product line.



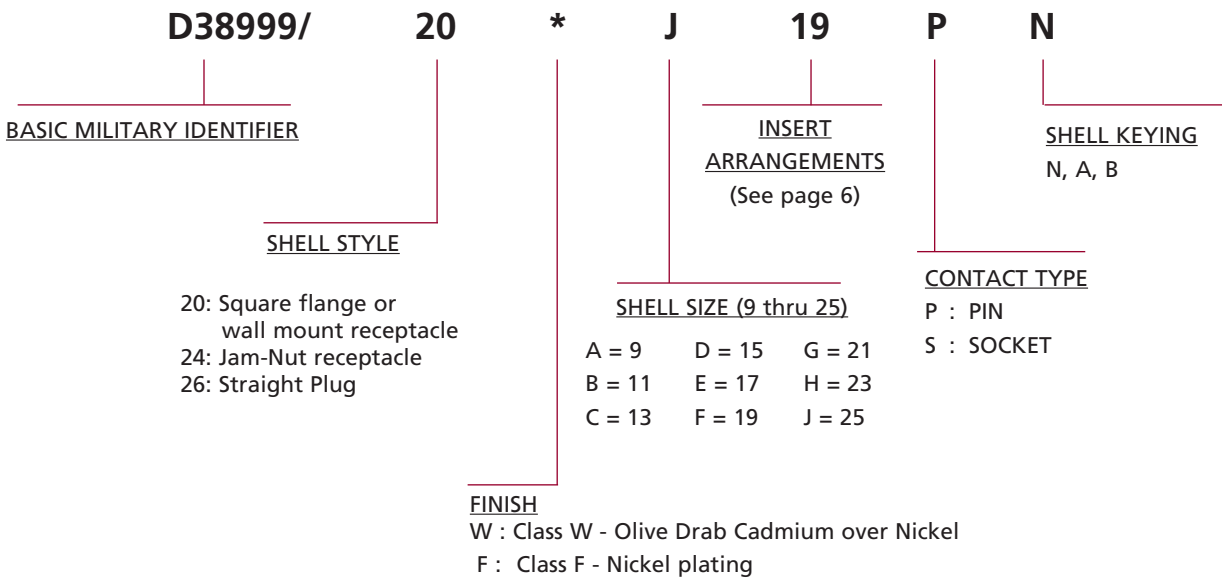


Size	Orientation	Polarization in degrees			
		A	B	C	D
9	N	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
	D	64	155	234	304
11 thru 15	E	91	131	197	240
	N	95	141	208	236
	A	113	156	182	292
	B	90	145	195	252
	C	53	156	220	255
17 thru 25	D	119	146	176	298
	E	51	141	184	242
	N	80	142	196	293
	A	135	170	200	310
	B	49	169	200	244
17 thru 25	C	66	140	200	257
	D	62	145	180	280
	E	79	153	197	272

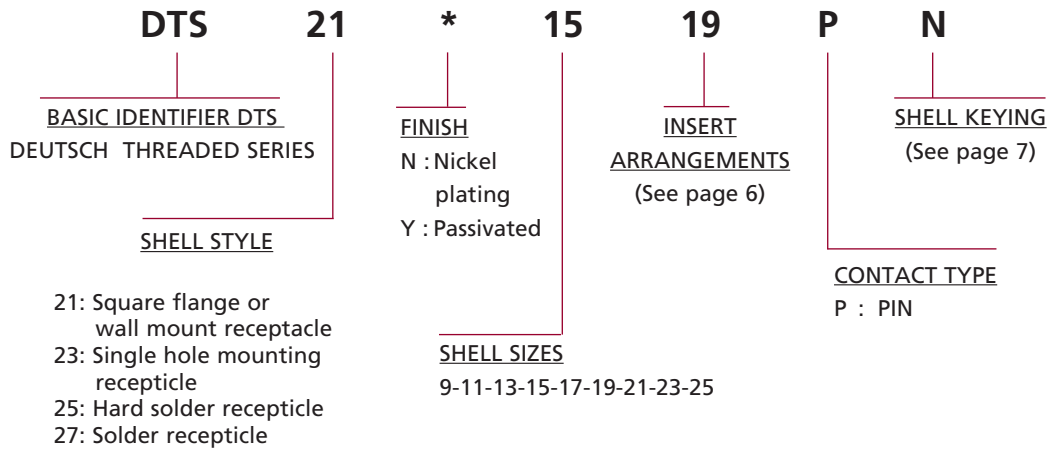
**BASIC DEUTSCH NUMBER - SEALED VERSION**



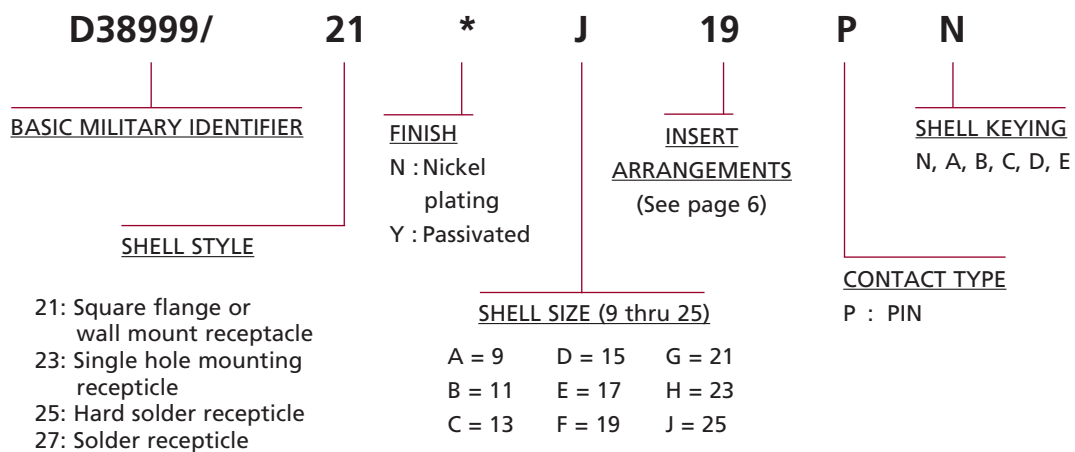
**BASIC MILITARY NUMBER - SEALED VERSION**



**BASIC DEUTSCH NUMBER - HERMETIC VERSION**



**BASIC MILITARY NUMBER - HERMETIC VERSION**





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