

856 Series



Applications

Push-pull locking plug

Standards

Intermateable with
MIL-C 26482 G Series I

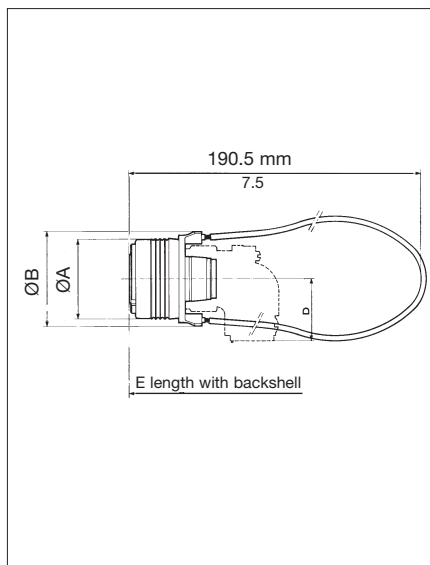
Description

- Locking by pushing on the coupling nut ;
unlocking by pulling a lanyard
- Mounting on all 851 MIL-C 26482 Series I
receptacles

Ordering information

basic series		crimp version	856	- 06	R	•• -	••	P	•	50-	••
		solder version	856	- 06	E	•• -	••	P	•	50-	••
shell type											
		06	- plug for use with straight backshell								
		08	- plug for use with 90° backshell								
backshell type											
		R/E	- backnut								
		RC/EC	- straight cable clamp								
		RA/A	- straight adapter								
		rp/p	- straight backshell for potting								
		RM/M	- straight removable backshell for heatshrink sleeving								
		RT/T	- straight removable backshell for screen termination and heatshrink sleeving								
		RC/EC	- 90° cable clamp								
		RP/P	- 90° backshell for potting								
shell size		8 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24									
contact layout		see 851 contact layout page 20									
contact type		P = male - S = female									
polarization		N normal (not included in part number) w, x, y, z, see 851 table page 20									
obligatory suffix											
specification											
		07	olive-green cadmium plate (solder version)								
		08	olive-green cadmium plate (crimp version)								
		09	white cadmium plate (crimp and solder version)								

Dimensions



backshell type	shell size	8	10	12	14	16	18	20	22	24
	A	19.50 .768	22.80 .898	27.30 1.075	30.80 1.213	34.00 1.339	37.00 1.457	41.00 1.614	44.50 1.752	49.20 1.937
	B	24.95 .982	28.25 1.112	32.55 1.281	36.05 1.419	39.05 1.537	42.05 1.656	45.80 1.803	49.20 1.937	53.45 2.104
06 R	E	32.00 1.260	32.00 1.260	32.00 1.260	32.00 1.260	32.00 1.260	32.00 1.260	31.80 1.252	31.80 1.252	31.80 1.252
06 RC	E	47.30 1.862	47.30 1.862	47.30 1.862	47.30 1.862	50.50 1.988	50.50 1.988	49.90 1.965	49.90 1.965	49.90 1.965
06 RP	E	42.10 1.657	42.10 1.657	42.10 1.657	42.10 1.657	42.10 1.657	45.40 1.787	49.80 1.961	49.80 1.961	49.80 1.961
06 RA	E	41.00 1.614	41.00 1.614	41.00 1.614	41.00 1.614	41.00 1.614	41.00 1.614	43.00 1.693	43.00 1.693	43.20 1.701
06 RM	E	50.00 1.969	50.00 1.969	50.00 1.969	50.00 1.969	50.00 1.969	50.00 1.969	51.70 2.035	51.70 2.035	51.70 2.035
06 RT Specifications 38 or 42	E	50.00 1.969	50.00 1.969	50.00 1.969	50.00 1.969	50.00 1.969	50.00 1.969	51.70 2.035	51.70 2.035	51.70 2.035
08 RC	E	50.10 1.972	52.60 2.071	54.90 2.161	58.50 2.303	60.80 2.394	65.00 2.559	68.80 2.709	71.20 2.803	76.20 3.000
	D Max	16.00 .630	18.00 .709	19.50 .768	22.00 .866	23.50 .925	25.00 .984	26.50 1.043	28.00 1.102	31.00 1.220
08 RP	E	40.70 1.602	44.90 1.768	47.00 1.850	49.20 1.937	50.60 1.992	51.80 2.039	53.10 2.091	54.50 2.146	57.90 2.280
	D Max	11.00 .433	14.35 .565	15.90 .626	16.30 .642	19.30 .760	20.60 .811	21.90 .862	23.50 .925	30.15 1.187

Note : For backshells dimensioning refer to values given in 851 Series.

HE 308 Rack Version

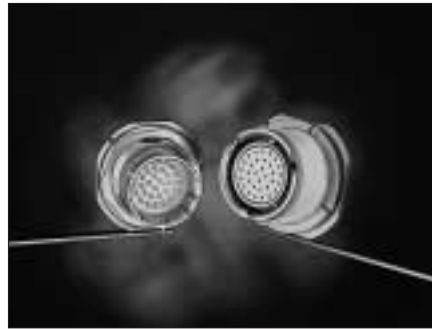


Applications

Rack and panel connectors

Standards

HE 308



Description

- Equipment receptacle
 - Male contacts (crimp or straight spill)
- Rack plug
 - female contacts (crimp)
 - Angular gap $\pm 6^\circ$ min.
 - Axial displacement : 1mm

Characteristics

Mechanical

- Shell : aluminum alloy
- Plating : olive green cadmium
- Insulator : thermoplastic or thermoset
- Grommet and interfacial seal : silicone elastomer
- Contact : copper alloy, gold plated
- Endurance : 500 cycles (mating / unmating)
- Shock : 1500 m/s² Rms. 3 ms 1/2 sinus
- Vibration : 264 m/s² random vibrations
- Contact retention :
 - # 22D : 45 N # 20 : 67 N
 - # 16 : 110 N # 12 : 110 N
 - # 8 : 110 N

Electrical

- Withstanding voltage (Vrms)

Service	sea level	21000 m
M	1300	800
I	1800	1000
II	2300	1000

- Contact resistance :
 - resistance of wire included in measurement :
 - # 22D : 14.6 m Ω # 16 : 3.8 m Ω
 - # 20 : 7.3 m Ω
- Insulation resistance : ≥ 5000 M Ω under 500 Vdc
- Current rating per contact :
 - # 22D : 5 A # 16 : 13 A
 - # 20 : 7.5 A # 12 : 23 A
- Electrical continuity : 2,5 m Ω
- Shielding : 90 dB to 50 dB /100 mHz to 10 GHz

- Triaxial :
 - Contact # 8 Bandwidth : 0 - 20 MHz
- Voltage rating :
 - 500 Vac Max
 - 125 Vac at 21 000 m
- Voltage drop :
 - inner and middle contact :
 - ≤ 55 mv under 1 A
 - outer contact :
 - ≤ 75 mV under 12 A

Climatic

- Working temperature : -65 °C to + 175 °C
- Resistance to salt spray : 500 hrs
- Damp heat : NFC 93422, 56 days

Ordering information

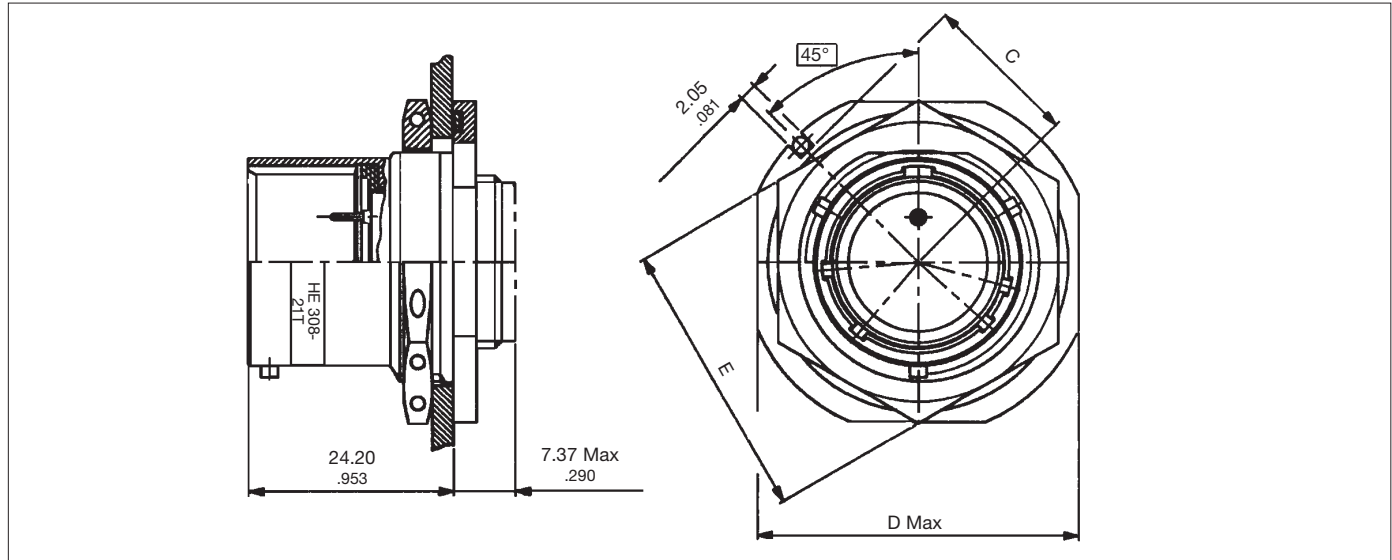
basic series	HE 308	-27	T	15	-35	P	N	7	M	•
shell type	27 - equipment receptacle 21 - straight spill receptacle 26 - rack plug (shell 11 to 23)									
class	T - environmental version									
shell size	11-13-15-17-19-21-23									
contact layout	- see table page 383									
contact type	P - male S - female									
polarization	N									
plating	7 - olive green cadmium									
contractual specification										
specification	without - connector supplied with contacts L - connector supplied without contacts									

HE 308 Rack Version



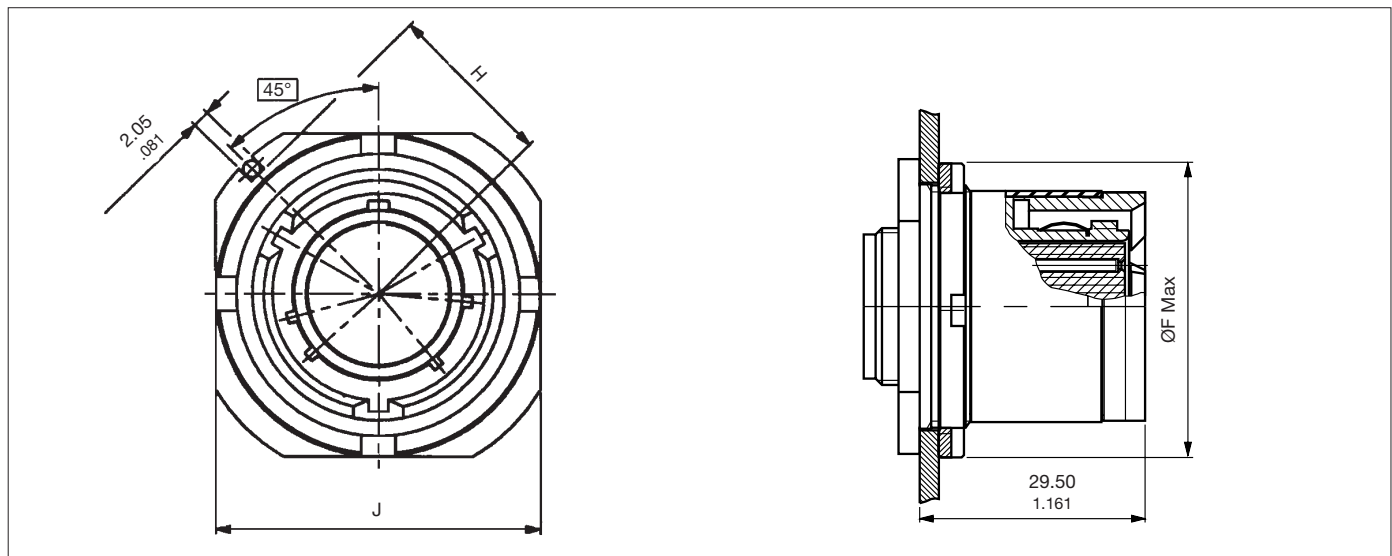
Dimensions

27 type receptacle



Shells	11	13	15	17	19	21	23
C	15.33 .604	16.92 .666	18.51 .729	20.10 .791	22.67 .893	24.26 .955	25.84 1.017
D Max	32.16 1.266	35.34 1.391	38.51 1.516	41.69 1.641	46.43 1.828	49.64 1.954	52.78 2.078
E	25.55 1.006	30.30 1.193	33.45 1.317	36.65 1.443	39.80 1.567	43 1.567	46.15 1.817

26 type plug

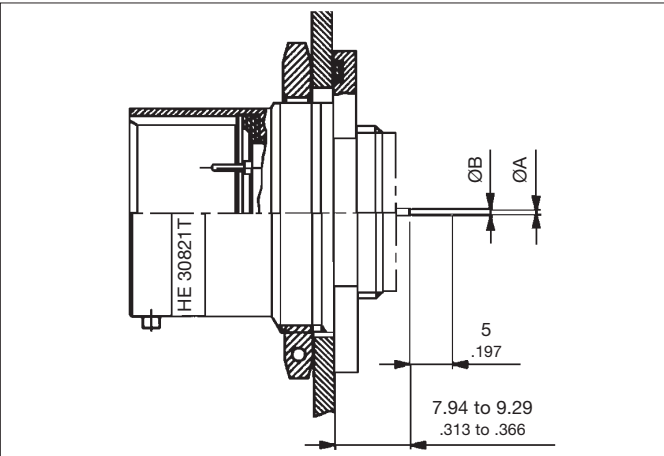


Shells	11	13	15	17	19	21	23
F Max	32.10 1.264	35.25 1.388	38.40 1.512	41.60 1.638	46.30 1.823	49.60 1.953	52.70 2.075
H	16.92 .666	18.51 .729	20.10 .791	22.67 .893	24.26 .955	25.84 1.017	27.43 1.080
J	32.16 1.266	35.34 1.391	38.51 1.516	41.69 1.641	46.43 1.828	49.64 1.954	52.78 2.078



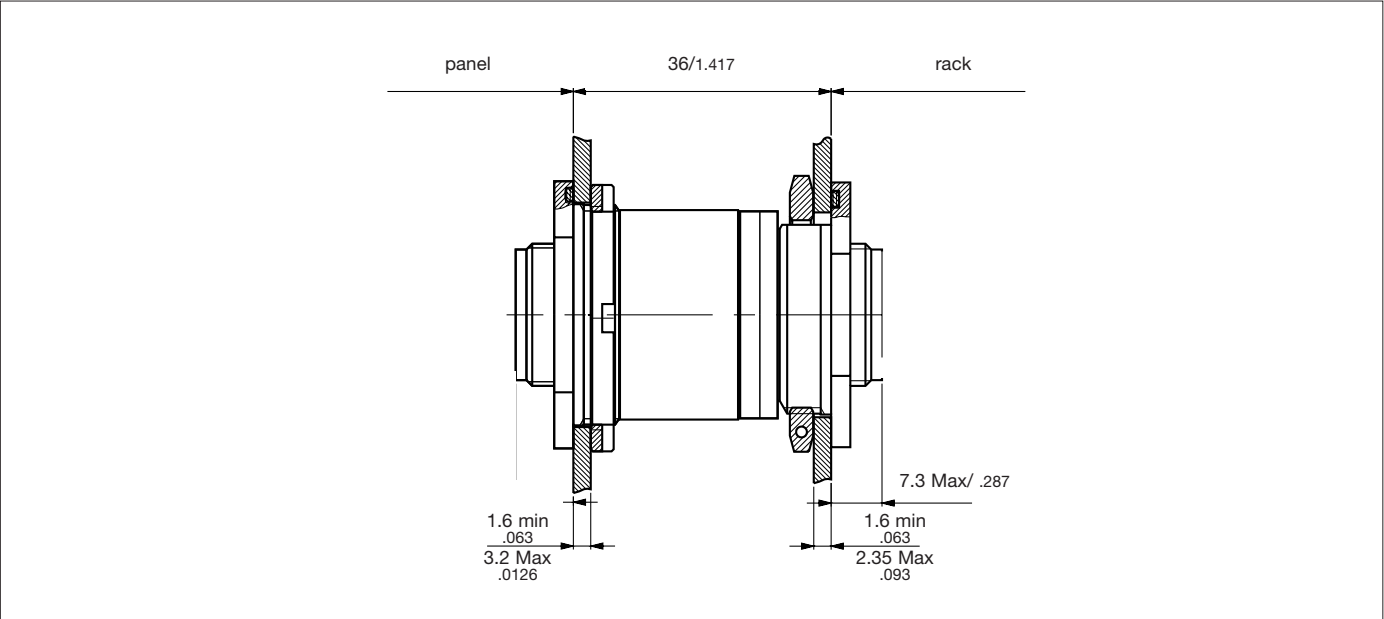
HE 308 Rack Version

21 type receptacle (with straight spill contacts)



Contact size	#22D	#20	#16
A	0.5 .020	0.7 .028	1.15 .045
B	1 .039	1.5 .059	2.2 .087

Mated connectors (26 type plug and 27 type receptacle)



HE 308 Rack Version



Contact layouts viewed from front face of male insulator

11	11-35 13#22D 	11-98 6#20 	11-01 1#12 	11-05 5#20 	11-04 4#20
	13-35 22#22D 	13-98 10#20 	13-08 8#20 	13-04 4#16 	
15	15-35 37#22D 	15-19 19#20 	15-05 5#16 	15-97 8#20 4#16 	15-18 18#20
	17-35 55#22D 	17-26 26#20 	17-06 6#12 	17-08 8#16 	17-99 2#16 21#20
17	17-28 2#8 				
19	19-35 66#22D 	19-32 32#20 	19-11 11#16 		
21	21-35 79#22D 	21-41 41#20 	21-16 16#16 	21-11 11#12 	21-75 4#8
					21-39 37#20 2#16
23	23-35 100#22D 	23-53 53#20 	23-21 21#16 		

HE 308 Rack Version



Crimp contacts

Contact size	Contact type	Admissible section				Ø over insulator		Part numbers	
		AWG		mm ²		mm		FCI Souriau	DAT
min	Max	min	Max	min	Max	min	Max		
# 22D	Male	28	22	0.095	0.34	0.76	1.37	M39029/58-360	DTAT2C1-22DPM
	Female							M39020/56-348	DTAT2C1-22DSM
# 20	Male	24	20	0.21	0.61	1.02	2.11	M39029/58-363	DTAT2C1-20PM
	Female							M39029/56-351	DTAT2C1-20SM
# 16	Male	20	16	0.60	1.34	1.65	2.77	M39029/58-364	DTAT2C1-16PM
	Female							M39029/56-352	DTAT2C1-16SM
# 12	Male	14	12	1.91	3.18	2.46	3.61	M39029/58-365	DTAT2C1-12PM
	Female							M39029/56-353	DTAT2C1-12SM

Coax and triax contacts

Contact size	Contact type	Admissible cable	Ø over insulator		Part numbers	
			min	Max	FCI Souriau	DAT
# 12	Male	RG174	1.65	2.77	8599-0916	
	Female	RG179 RG316			8599-0920	
# 08	Male	MIL.C 17/176. 00002 FILECA F .2703/14	3.15	3.40	8599-5210 *	
	Female	RAYCHEM CHEMINAX 10612 FILOTEX M 17/176.00002			8599-5220 *	

* Contact and sealing sleeve.

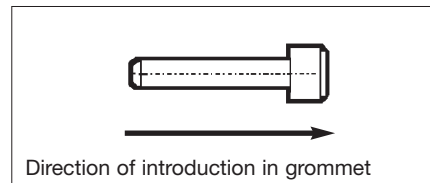
Straight spill contacts

Contact size	Contact type	Ø straight spill	Part numbers	
			FCI Souriau	DAT
# 22D	Male	0.50	8599-0796	DTAT2Y1-22DPM
	Female		8599-0797	DTAT2Y1-22DSM
# 20	Male	0.70	8599-0724	DTAT2Y1-20PM
	Female		8599-0725	DTAT2Y1-20SM
# 16	Male	1.15	8599-0726	DTAT2Y1-16PM
	Female		8599-0727	DTAT2Y1-16SM

Accessories

Filler plug

Contact size	Norm	Part numbers		Color
		FCI Souriau	DAT	
22D	MS27488-22	8660-212	HE308A01-22M	black
20	MS27488-20	8522-389A	HE308A01-20M	red
16	MS27488-16	8522-390A	HE308A01-16M	blue
12	MS27488-12	8522-391A	HE308A01-12M	yellow

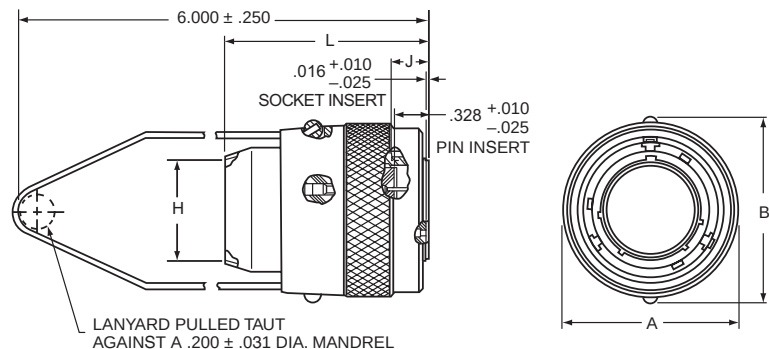


PT-CE Breakaway

twist pull plug

The PT-CE miniature breakaway connector has the following design features:

- crimp front release, front removable contacts in "CE" nylon wafer retention system
- 2 styles available: potted termination and environment style with a strain relief
- instant decoupling of plug and receptacle with an axial pull on the lanyard when they are fully mated
- intermateable with standard receptacles
- operating voltage to 900 VAC (RMS) at sea level
- quick positive bayonet coupling and 5 key/key-way polarization



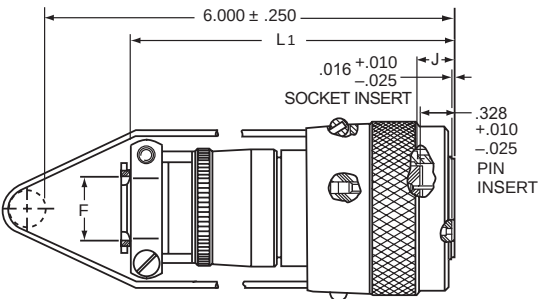
Breakaway PT-CE with Crimp Contacts,
Potted Termination
71-2512XX-()
72-2512XX-()

Part Number*	Part Number*	Shell Size	A Dia. Max.	B Max.	F Dia. $\pm .016$	H Dia. $\pm .016$	J $\pm .010$	L Max.	L ₁ Max.
71-251209	71-339508	8	.875	.984	.125	.327	.353	1.937	2.937
71-251210	71-339510	10	1.125	1.125	.188	.444	.353	1.890	2.937
71-251211	71-339512	12	1.281	1.406	.312	.558	.353	1.906	3.000
71-251212	71-339514	14	1.438	1.562	.375	.683	.353	1.953	3.000
71-251213	71-339516	16	1.562	1.688	.500	.808	.353	2.000	3.187
71-251214	71-339518	18	1.718	1.844	.625	.909	.353	2.031	3.375
71-251215	71-339520	20	1.875	2.000	.625	1.034	.415	2.234	3.375
71-251216	71-339522	22	2.031	2.188	.750	1.159	.415	2.328	3.375
71-251217	71-339524	24	2.156	2.312	.800	1.284	.415	2.359	3.625

All dimensions for reference only.

* See Finish information below to determine prefix 71 or 72 in part number.

Drawing above shows standard lanyard length.



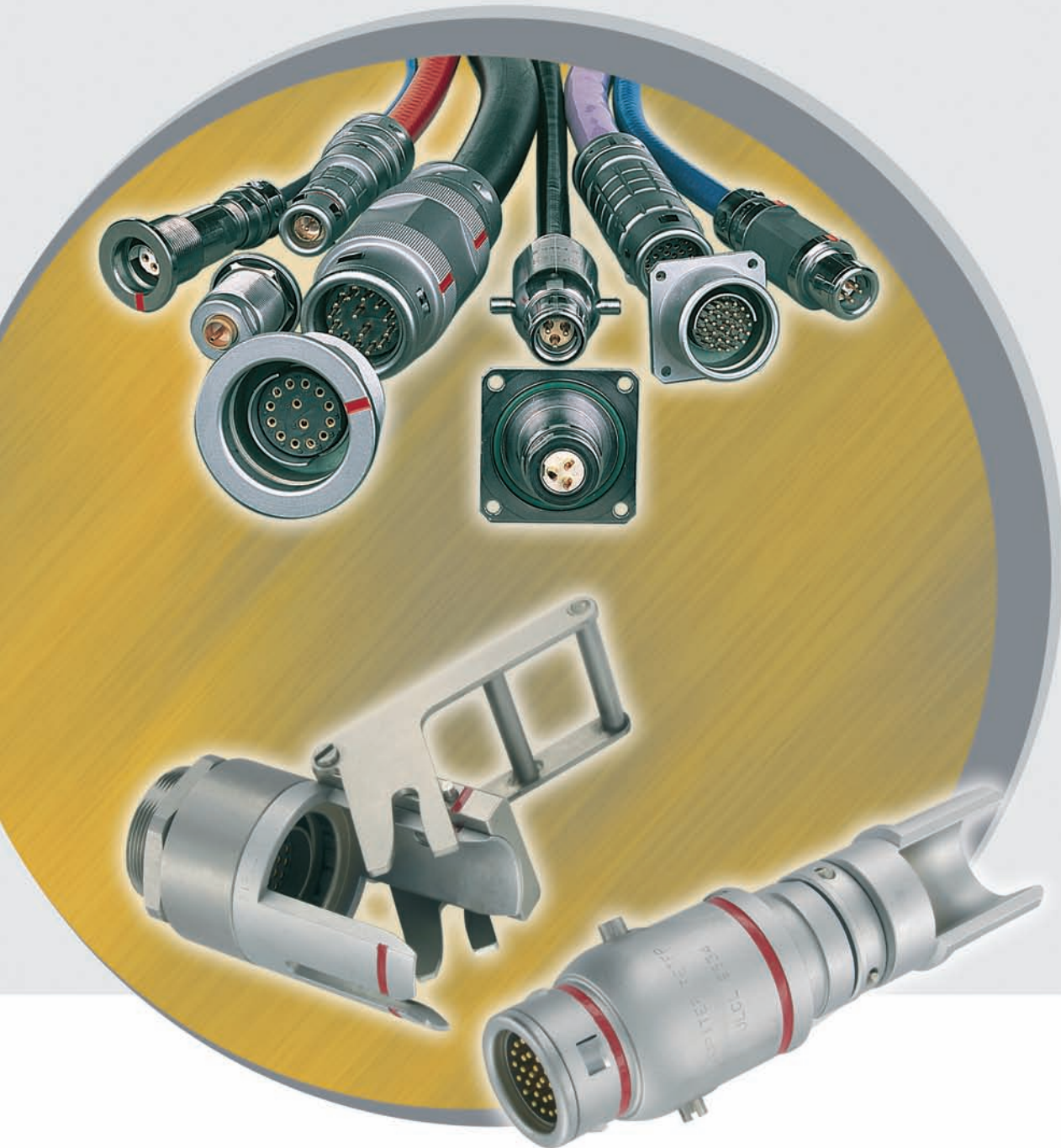
Breakaway PT-CE with Crimp Contacts,
Environmental with Strain Relief
71-3395XX-()
72-3395XX-()

Order by Amphenol Propriety number as follows (example part number shown):

71 -	2512	50	-	32	P
1	2	3	4	5	

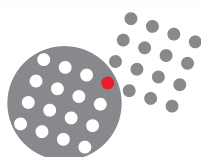
1. Finish
"71" designates corrosion resistant olive drab cadmium plate
"72" designates anodic coated (electrically nonconductive-anodic) finish providing extreme wear and corrosion resistance, 500 hr. extended salt spray.
2. Connector Type Identification
2512XX designates PT-CE plug, crimp, potted termination style
3395XX designates PT-CE plug, crimp, environmental with strain relief style
3. Shell Size
See part number columns in chart above for 2 digit number at end that correlates to the shell size. Example: '50' correlates to shell size 18.
4. Insert Arrangement Number
See insert availability for Miniature Breakaway connectors on page 6. The number following the hyphen is the insert arrangement number.
5. Contact Type/Alternate Insert Rotation
P designates pin, S designates socket for normal positioning of inserts. When an alternate position of the insert is required to prevent cross-mating a different letter (other than P or S) is used. See page 7 for description of alternate positions; then convert to Amphenol proprietary coding by the chart at right to complete the part number.

Pin Contacts		Socket Contacts	
Amphenol Letter	Equates to MS letter	Amphenol Letter	Equates to MS letter
G	PW	H	SW
I	PX	J	SX
K	PY	L	SY
M	PZ	N	SZ



ULC Series

Push-Pull Connectors for Nuclear Industry



SOURIAU
Connection Technology



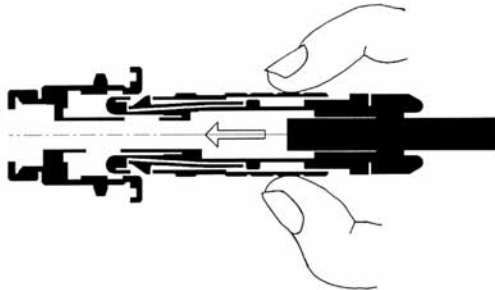
Summary

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• Overall dimensions :	
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ULC Series



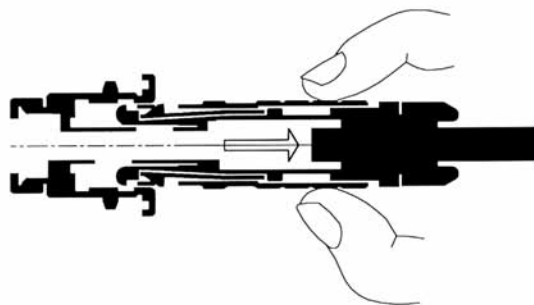
Push-pull system



The latching of plug into the receptacle is achieved by a simple axial pushing on the outer shell.

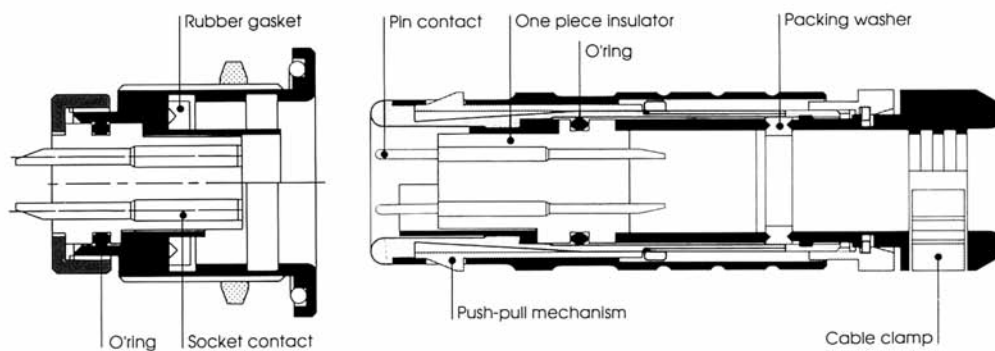


Connection cannot be broken by pulling the cable or any other parts of the plug than the outer shell.



To unmate the plug from the receptacle, just pull the outer shell axially.

Receptacle and plug sections





General description

Shells

- Easy to use : "PUSH-PULL" latching
- Watertight to 2 bars, mated connectors
- Brass shells with Nickel + Chrome plating, or stainless steel for special applications : nuclear, corrosive fields etc... (Stainless steel shells for remote manipulation)
- Alternative insulators to suit conditions (temperature, radiation, etc...)
- Gold and nickel plated contact, to solder
- Mechanical keying
- Pre-guiding available on remote manipulation versions
- Four shell sizes (I, III, IV, V) for multipin connectors
- O'ring :
 - . standard; nitrile for brass shell, epdm for stainless steel shell
 - . on request; silicon, neoprene, viton
- Shell to shell conductivity available on all multipin connectors.

CONSULT US FOR ANY SPECIFIC APPLICATIONS.

Insulators

Series	Insulator material	Ref.	Temperature range °C	Dielectric withstanding voltage kV/mm	Radiation withstanding Rad	Dielectric constant	M	C	TCX
Standard	NYLATRON GS **	S	-20 +90	12	1.10 ⁸	3,4	X	X	X
	TEFLON **	TF	-50 +170	60	1.10 ⁴	2,6	X	X	X
	KELANEX *	K	-50 +170	18	1.10 ⁶	3,8	X		
Special	TEFZEL	TZ	-50 +170	60	5.10 ⁷	2,6	X	X	X
	PEEK **	N	-50 +250	35	1.10 ⁹	2,6	X		
	POLYETHYLENE	P	-40 +100	33	1.10 ⁸	3,2	X		
	POLYPROPYLENE	PP	-10 +100	60	5.10 ⁴	2,5	X		
	VESPEL	V	-60 +260	22	4.10 ⁹	3,6	X		

M : Multipin C : Coaxial TCX : Triaxial.

* Size I only

** Recommended materials

Outer diameter of cable (mm)	Shell sizes	I	III	IV	V
	min.	2,2	3,5	8,2	10
	max.	7,2	11	18	24
Force (N)	mating	30 ± 5	30 ± 5	50 ± 5	100 ± 10
	unmating	30 ± 5	30 ± 5	50 ± 5	100 ± 10

ULC Series



How to order

Reference example :

Remote manipulated straight plug, socket contacts, size III, 4 contacts, brass ULC series standard insulator, cable outer diameter = 10,6 mm, P1 Keying.

Shells : (see pages 7 and 8)	FET	F	III	M4	ULCL	S	106	P1
FE : Straight plug								
FET : Remote manipulated straight plug								
RE : Round receptacle, front mounting								
REC : Square receptacle								
RECSC : Square receptacle with cable clamp								
RES : Round salient receptacle, rear mounting								
RESC : Round receptacle with cable clamp, front mounting								
RESSC : Round receptacle with cable clamp, rear mounting								
PCE : Cable receptacle								
TRE : Feed through bulkhead								
RME : Double receptacle								
FETFP : Remote manipulated straight plug with pre-guiding spurs								
REFFP : Round receptacle with pre-guiding fork								
RECFP : Square receptacle with pre-guiding fork								

Contacts * :

M	: Pin contacts
F	: Socket contacts

Shell sizes :

I III IV V

Contact layouts : (see pages 9, 10 and 11)

Mxxx	: Multipin + contact layout reference
Cxx	: Coaxial + Impedance (50Ω or 75Ω)
TCxxx	: Triaxial + impedance (50Ω or 75Ω)

Shell to shell conductivity ** :

T	: Contact n°1 connected to shell ground (multipins only, except feed through)
---	---

Series :

ULCL	: ULC series, brass shell
ULCT	: ULC series, titanium shell

Insulator material : (see table page 5)

S	: Nylatron G.S.
TF	: Teflon
K	: Kelanex
TZ	: Tefzel
N	: PEEK
P	: Polyethylene
PP	: Polypropylene
V	: Vespel (consult us)

Cable outer diameter :

xxx	: Mention cable outer diameter in 1/10 ^e of mm
A, B or C	: For 75Ω triaxial, state the letter in accordance with the cable used (see page 19).

Keying : P1, P2, P3, P4, P5 (see table page 21)

* For the feed through bulkhead (TRE) and double receptacle (RME) : DO NOT MENTION ANYTHING
TRE are delivered : Pin/socket in multipin versions
Socket/socket in coaxial and triaxial versions

RME are delivered : Socket/socket

** No shell to shell conductivity wanted : DO NOT WRITE ANYTHING.

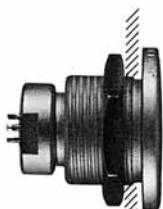
ULC Series



ULC shells • size I

Without pre-guiding
Multipin, coaxial connectors

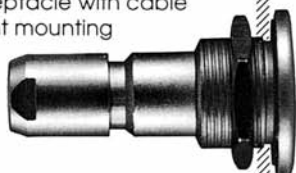
RE
Round flange
receptacle, front
mounting



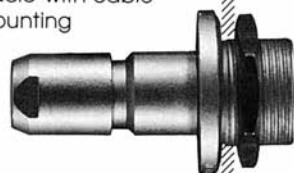
RES
Round flange
receptacle, rear
mounting



RESC
Round receptacle with cable
clamp, front mounting



RESSC
Round receptacle with cable
clamp, rear mounting



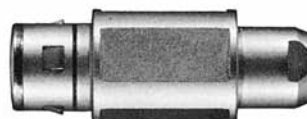
PCE
Cable receptacle



FE
Straight plug
(brass only)



FET
Remote manipulated
straight plug



ULC Series



ULC shells • size III, IV and V

Without pre-guiding

Multipin, coaxial and triaxial connectors

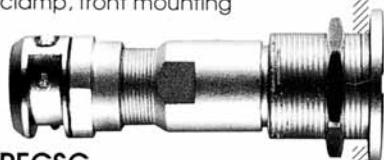
RE
Round flange
receptacle,
front mounting



REC
Square flange
receptacle



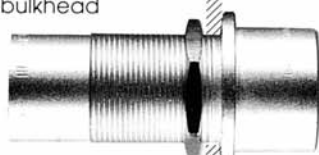
RESC
Round receptacle with cable
clamp, front mounting



RECSC
Square flange receptacle
with cable clamp



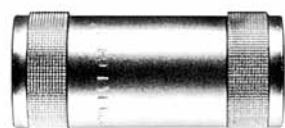
TRE
Feed through bulkhead



PCE
Cable receptacle



RME
Double
receptacle
(only for
coaxial
and triaxial
brass
connectors)



FE
Straight plug
(brass only)



FET
Remote manipulated straight plug



ULC Series



Contact layouts

Shell sizes I and III (operating voltage Vdc and description)

Insulator view from pin side						
ULC shells size 1	C50 1 Coax. 50Ω Kx 23		C75 1 Coax. 75Ω		M1 1 contact Ø2 1200V	
	M2 2 contacts Ø1,3 700V		M3 3 contacts Ø0,9 900V		M4 4 contacts Ø0,9 600V	
	M8 8 contacts Ø0,7 250V					
ULC shells size 3	M2 2 contacts Gage 16 700V		M3 3 contacts Gage 16 700V		M4 4 contacts Gage 16 700V	
	M5 5 contacts Gage 20 700V		M7 7 contacts Gage 20 700V		M8 8 contacts Gage 20 600V	
	M12 12 contacts Ø0,9 400V		M19 19 contacts Ø0,9 250V		C50 1 Coax. 50Ω Kx 23 1500V	
	C75 1 Coax. 75Ω 1500V		TCX50 1 Triax. 50Ω 1000V		TCX75 1 Triax. 75Ω 1000V	

Contact table

Symbol	Description	Ø (mm)	Ø solder bucket (mm)	Max current rating (A)	Contact resistance (mΩ)
	Contact Ø0,7	0,7	0,7	4	≤ 8
	Contact Ø0,9	0,9	0,8	5	≤ 5
	Contact Cal. 20	1,02	1,3	7	≤ 4
	Contact Ø1,3	1,3	1	10	≤ 4
	Contact Cal. 16	1,59	2	13	≤ 3
	Contact Ø2	2	1,8	18	≤ 3
	Contact Cal. 12	2,39	2,6	26	≤ 3
	Contact Ø4	4	4	33	≤ 3
	Contact Ø5	5	5,1	40	≤ 3
	Contact Ø7	7	9	115	≤ 0,6
	Contact HV		1,3	7	≤ 4
	Coax C 50 Kx23		for cable Kx23	3	≤ 5
	Coax C 50 Kx15		for cable Kx15	4	≤ 5
	Coax C 75		1,4	8	≤ 4
	Triax Tcx 50		1,4	6	≤ 3
	Triax Tcx 75		1	5	≤ 4

ULC Series



Contact layouts

Shell size IV (operating voltage Vdc and description)

Insulator view from pin side	
M2 2 contacts Gage 16 1200V	
M4 4 contacts Gage 12 1200V	
M7 7 contacts Gage 16 1200V	
M8 8 contacts Gage 20 1100V	
M8+2 8 cont. Ga.20 2 cont. Ga.16 1100V	
M14 14 contacts Gage 20 900V	
M18 18 contacts Gage 20 500V	
M30 30 contacts Ø1,3 400V	
M6+1C50/1C75 6 cont. Ga.16 1 Coax. 50Ω Kx 23/Kx 6 1000V	
M10+2C50 10 cont. Ga.20 2 Coax. 50Ω Kx 15 800V	
M12+1C50/1C75 12 cont. Ø1,3 1 Coax. 50Ω/75Ω Kx 23/Kx 6 500V	
M10+3C50 +1HV 10 cont. Ga.20 3 Coax. 50Ω Kx 3 + 1 HV Ø1,02 - 800V	
M12+2 12 cont. Ø1,3 2 cont. Ø4 500V	
M11+1HV 11 contacts Ø1,3 + 1 HV 500V/7000V	
M12 12 cont. Ga.16 700V	
U35 1 contact 35mm² 1000V	

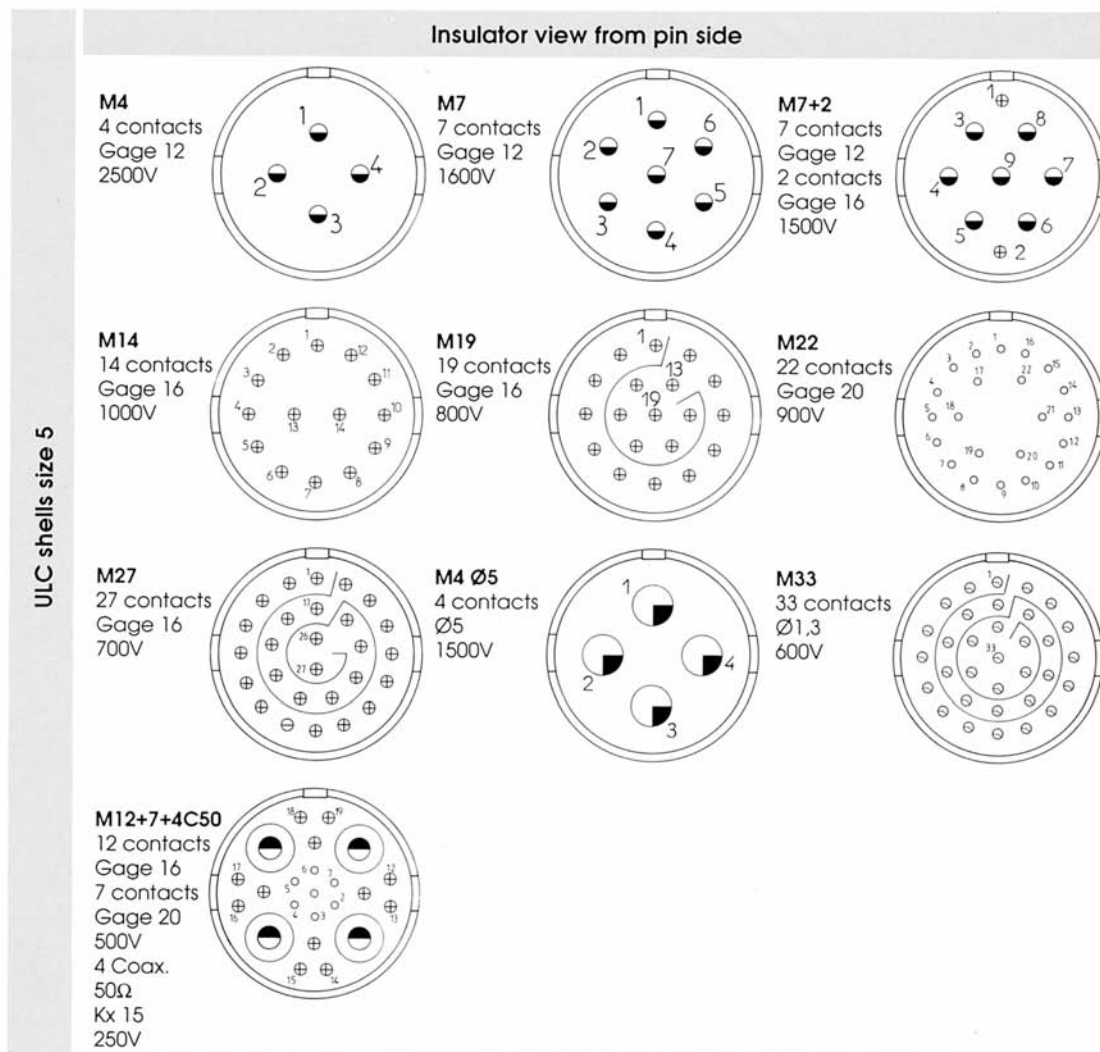
Insulation resistance size I, III, IV and V : ≥ 5000 Megohms under 500 Vdc
(Unmated connectors)

ULC Series



Contact layouts

Shell size V (operating voltage Vdc and description)



Electrical performance

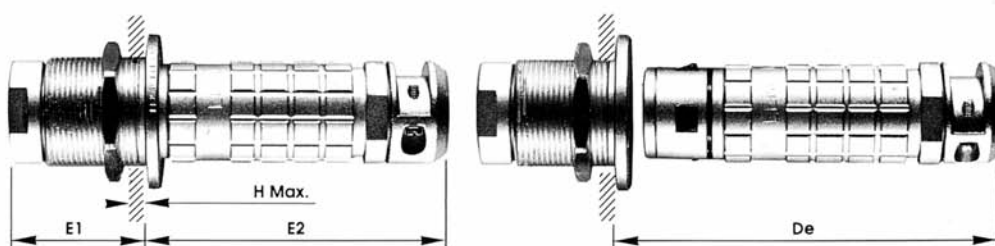
	Operating voltage Vdc	Test voltage Vdc	Operating voltage Vrms 50Hz	Test voltage Vrms 50Hz
Standard contacts	250	500	150	400
	400	800	250	600
	500	1000	350	700
	600	1200	400	800
	700	1500	500	1000
	800	1600	500	1000
	900	1800	600	1200
	1000	2000	700	1500
	1100	2200	700	1500
	1200	2500	800	1600
	1500	3000	1000	2000
	1600	3200	1000	2000
	2500	5000	1500	3000
	2500	3500	1500	2000
HV contact	2500	3500	1500	2000

ULC Series



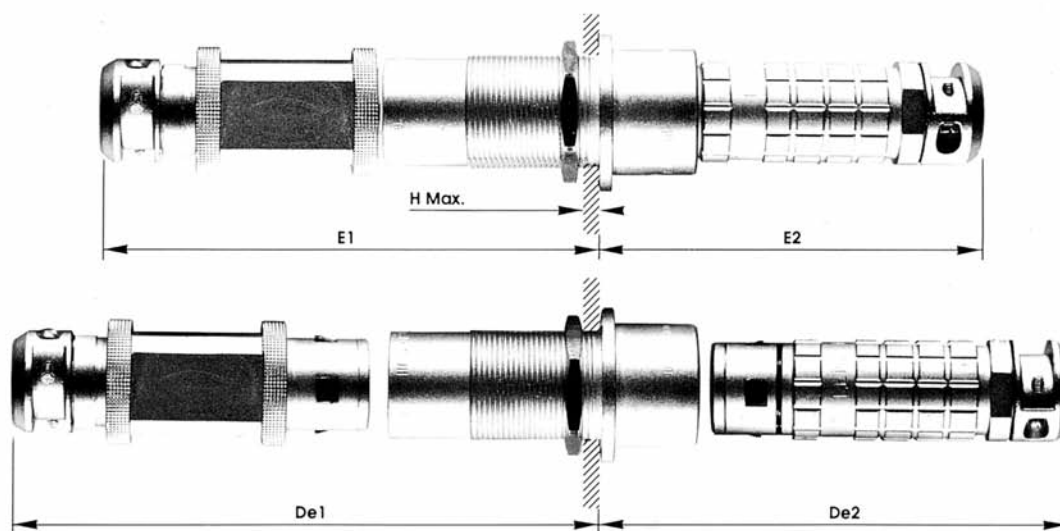
Overall dimensions • Size I, III, IV et V

Mated sets



		SIZE I					SIZE III					SIZE IV					SIZE V				
		E1	E2	De	H Max.		E1	E2	De	H Max.		E1	E2	De	H Max.		E1	E2	De	H Max.	
FE Mounted or FET with	RE	17,5	36	48	7		26	62	75	16		29	73	90	16		31	91	109	20	
	RESC	17,5	36	48	7		69	62	75	16		84	73	90	16		105	91	109	20	
	REC						10	74	91			20	90	107			18	112	135		
	RECSC						53	74	91			67	90	107			84	112	135		
	RES	9	44	56	7																
	RESSC	9	44	56	7																
	PCE*	75	88				125	143				154	173				191	214			

* Dimensions mentioned for cable receptacle are : mated length/unmated length



		SIZE III					SIZE IV					SIZE V				
		E1	E2	De1	De2	H Max.	E1	E2	De1	De2	H Max.	E1	E2	De1	De2	H Max.
FE Mounted or FET with	TRE	96	74	113	91	21	109	88	128	107	21	129	109	152	135	21
	RME	160	72	72												

ULC Series

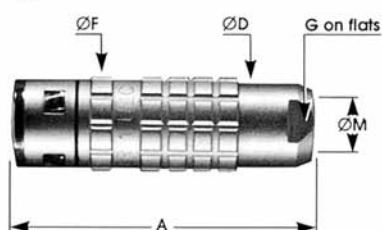


Overall dimensions • Size I

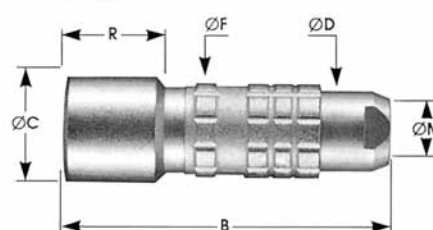
(multipin and coaxial connectors)
Plugs FE, FET, cable receptacle PCE

Size	A	B	ØC	ØD	ØE	ØF	G	□K	H	M Max.	R
I	45	59	15	11,6	16	13,2	10	14	18	7	14

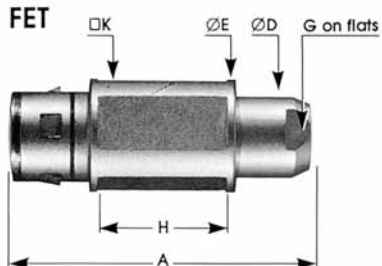
FE



PCE

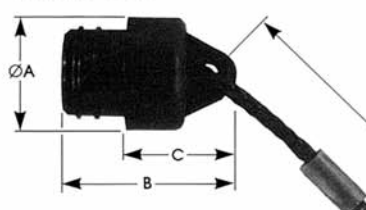


FET

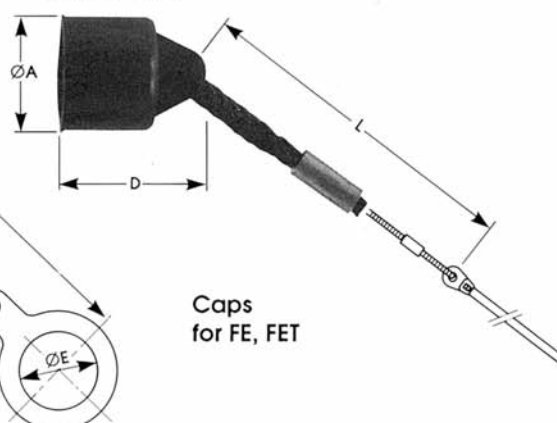


Plug and receptacle caps

BRE. I. 802



BFE. I. 802



Caps
for RE, RES,
RESC, RESSC, PCE

Caps
for FE, FET

Size	ØA	B	C	D	ØE	L
I	16	24	15	19,5	16	100

Material : EPDM

ULC Series

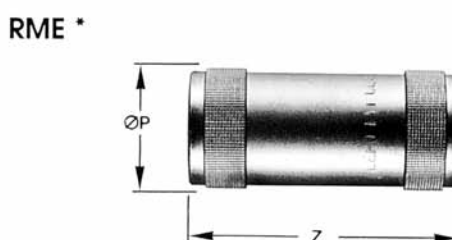
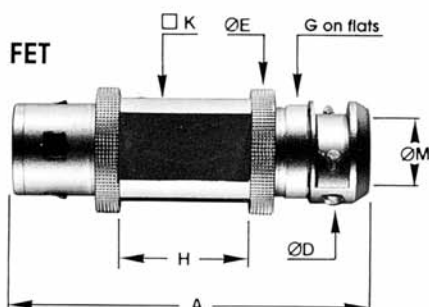
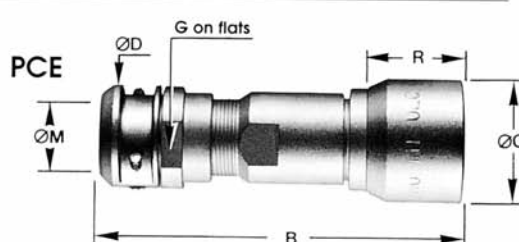
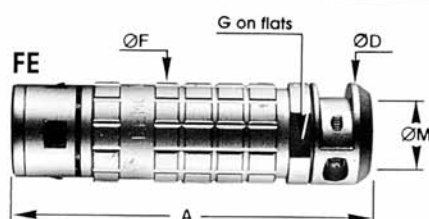


Overall dimensions • Size III, IV and V

(multipin and coaxial connectors)

Plugs FE, FET, cable receptacle PCE, double receptacle RME

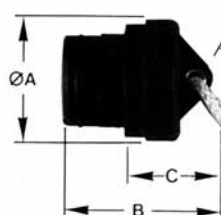
Size	A	B	ØC	ØD	ØE	ØF	G	H	□K	M	ØP	R	Z
III	70	71	24	20	24	19,5	18	25	19	11	23	18,5	52
IV	85	86	32	28	32	28,3	26	25	27	18		20	
V	104	107	41	36	42	38	34	25	36	24		24,5	



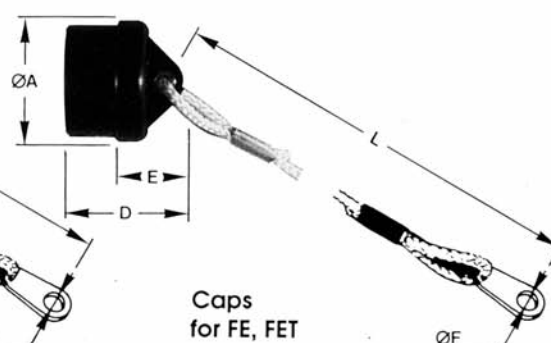
* RME are available in coaxial version and fitted with Socket/Socket contacts.

Plug and receptacle caps

BRE *... 802



BFE *... 802



Caps
for RE, REC, RESC,
RECSC, PCE, TRE

Caps
for FE, FET

Size	ØA	B	C	D	E	ØF	L
III	24	29	17	23	13	4,2	240
IV	34	31	17	25	13	4,2	300
V	45	34	17	45	13	4,2	300

Material : EPD

* To order ,
mention shell size.

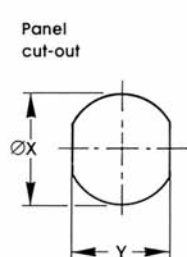
ULC Series



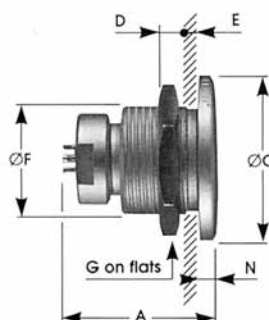
Overall dimensions • Size I

Receptacles (multipin and coaxial)

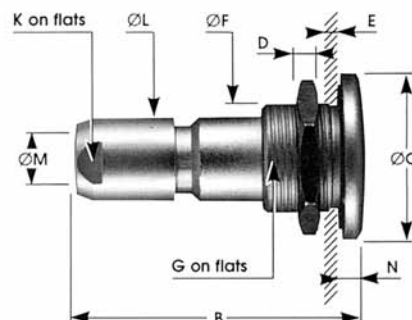
Round



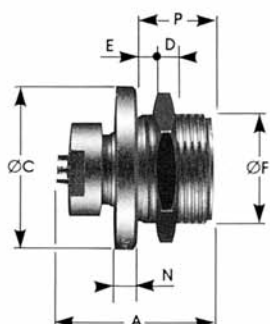
RE



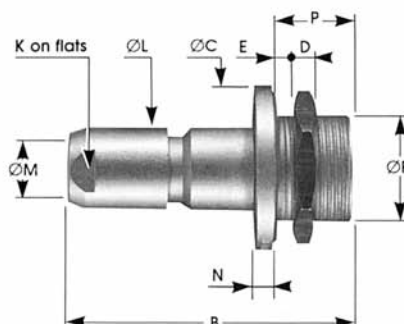
RESC



RES



RESSC



Size	A	B	ØC	D	E	ØF	G	K	ØL	ØM	N	P	ØX	Y
					Max.					Max.			+0.2 -0	+0.2 -0
I	23	42	23	3	7	M16x1	19	10	11,6	7	2,5	11	16,1	15,1

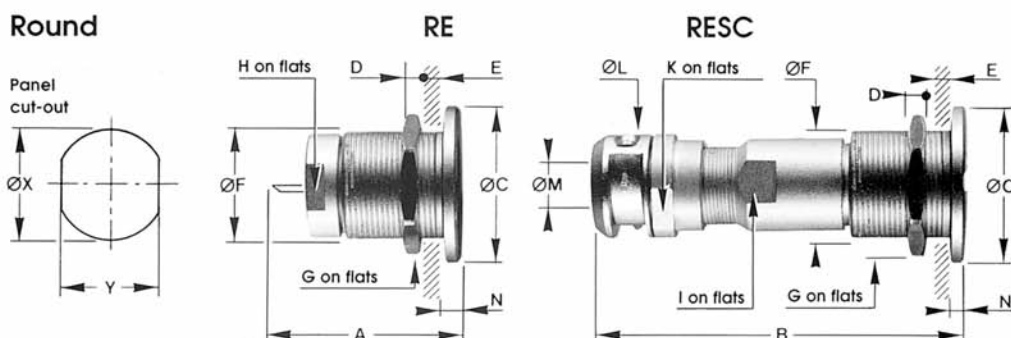
ULC Series



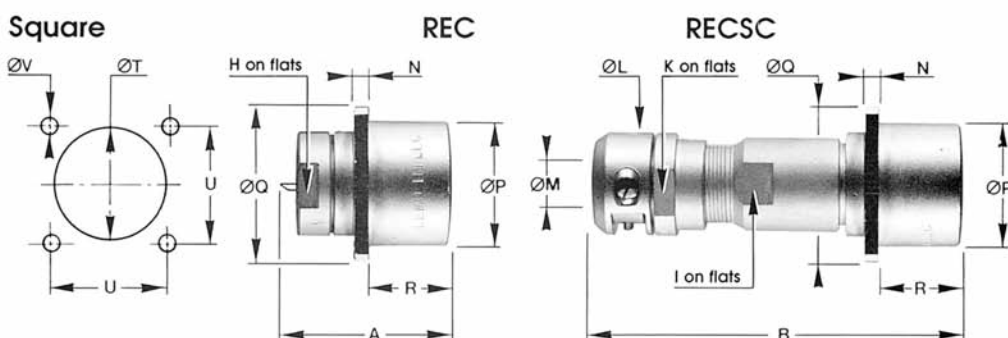
Overall dimensions • Size III, IV and V

Receptacles (multipin and coaxial)

Round



Square



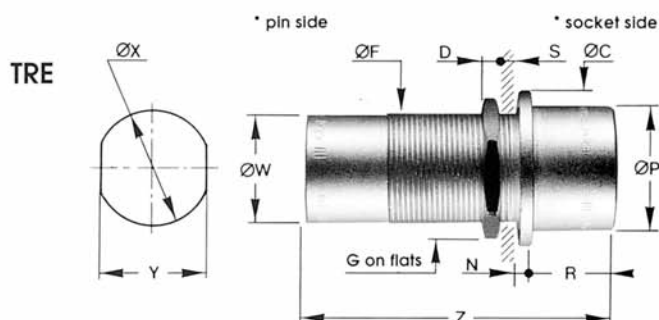
Size	A	B	ØC	D	E	ØF	G	H	I	K	ØL	ØM	N	ØP	Q	R	ØT	U	ØV	ØX	Y
					Max.							Max.					+0.2 -0	±0.1	+0.3 -0	+0.2 -0	+0.2 -0
III	34	71	30	3	16	M22x1	24	18	16	18	20	11	2,5	24	29	16,4	20,5	23	3,2	22,1	20,9
IV	34	86	39	5	16	M31x1	36	27	25	26	28	18	2,5	32	37	17	29,5	29,4	3,2	31,1	29,7
V	42	108	52	5	20	M41x1	46	33	32	34	36	24	3	41	43,5	21,5	35,5	34,9	4,2	41,1	39,7

Feed through

Possibility of pre-guiding fork, please consult us.

* For multipin, feed through are fitted with socket contacts on a side and pin contact on the other one.

For coaxial, feed through are fitted with socket contacts on both sides.



Size	ØC	D	ØF	G	N	ØP	R	S	ØW	ØX	Y	Z
								Max.		+0.2 -0	+0.2 -0	
III	30	3	M22x1	24	2,5	24	16	21	20,7	22,1	20,9	59
IV	39	5	M31x1	36	2,5	32	17	21	29,5	31,1	29,7	59,8
V	52	5	M41x1	46	3	41	21,5	21	39,4	41,1	39,7	69,4

ULC Series

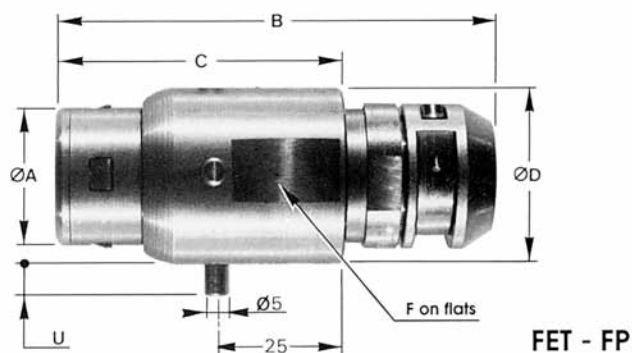


Overall dimensions

Remote manipulated plugs and receptacles with spurs and pre-guiding forks • size III and IV ULC

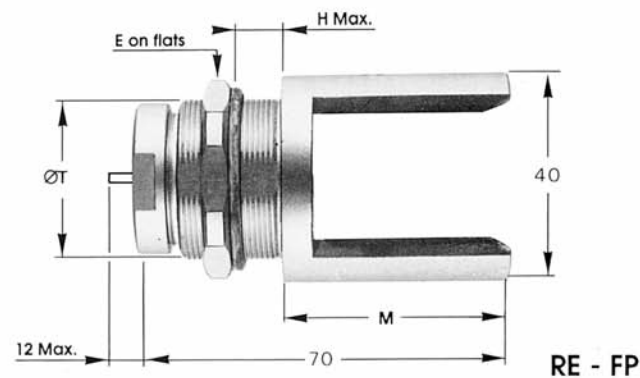
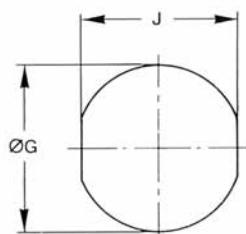
Size	ØA	B	C	ØD	E	F	ØG +0,2 - 0	H Max.	J +0,2 - 0	M	ØP +0,2 - 0	ØR +0,2 - 0	ØS +0,2 - 0	U	ØT
III	18	71,5	52,5	27	24	25	22,2	16	20,7	43,5	22	22,5	4,2	6	M22x1
IV	26,5	84,5	54,5	34	36	32	31,2	15	29,7	43	31	31,5	4,2	3	M31x1

Size	Force (N)	
	mating	unmating
III	40 ± 5	50 ± 5
IV	40 ± 5	50 ± 5

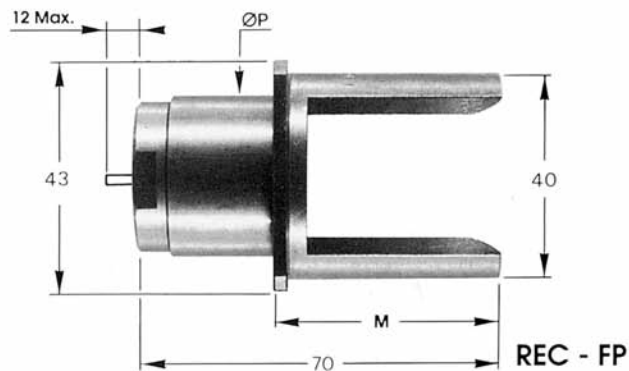
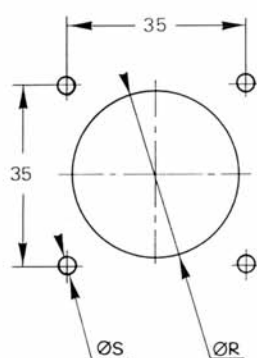


Round receptacles

Panel cut-out



Square receptacles

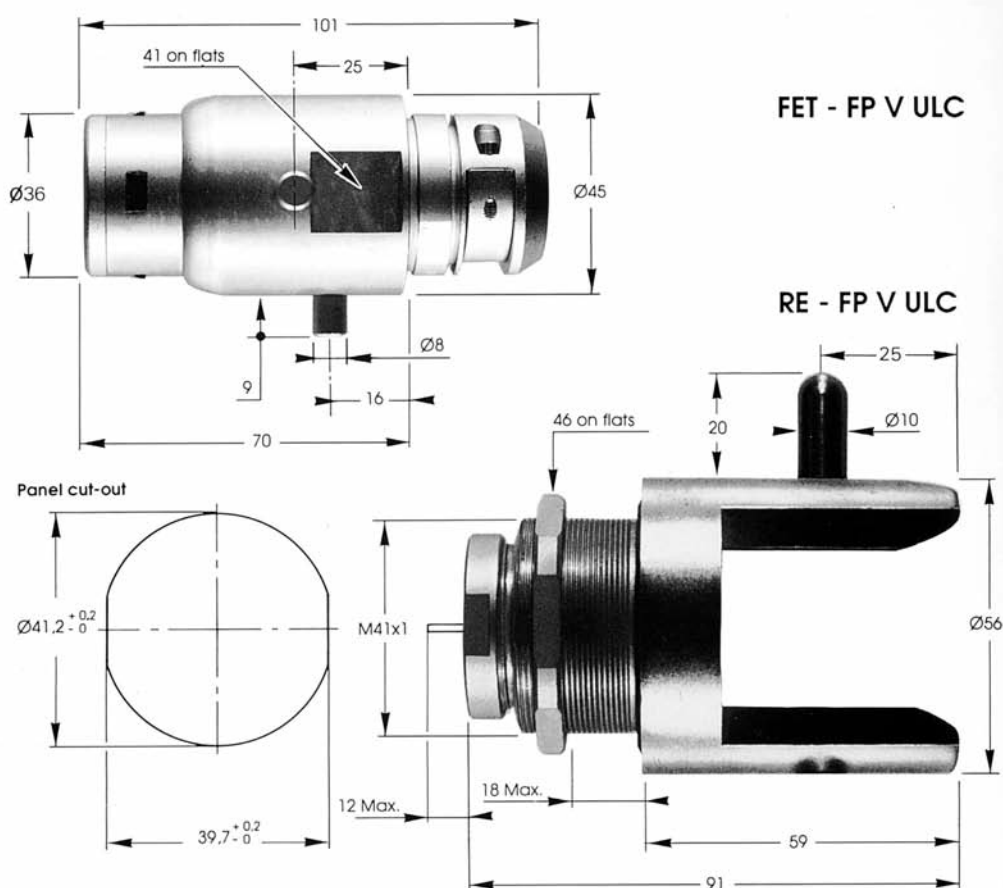


ULC Series



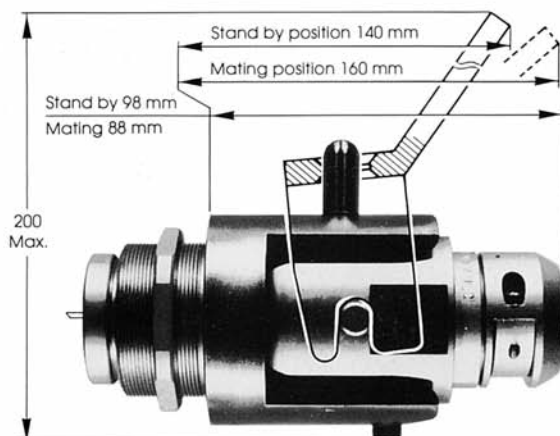
Overall dimensions

Remote manipulated plugs and receptacles with spurs and pre-guiding forks • size V ULC



Size IV on request

Assembly with coupling lever



	Force
Mating	150 N ± 15
Unmating	150 N ± 15

Gearing down lever

Ref. : OUT FE GVP GC ULC

Lever gear ratio : 1/3.

ULC Series

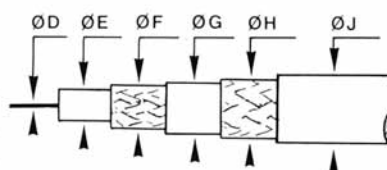


Watertight triaxial connectors

Available in size III for three types of 75Ω cable (A - B or C)
For any other 75Ω or 50Ω, state the cable type at the end of the part number

Cable type description :

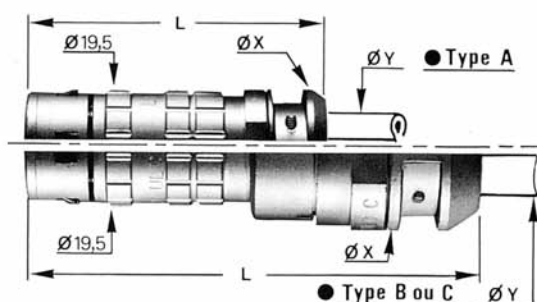
	ØD	ØE	ØF	ØG	ØH	ØJ
Type A	1 ± 0,03	4,4 ± 0,13	5,1 max.	6,5 ± 0,2	7,3 max.	9 ± 0,25
Type B	1,78 ± 0,03	8 ± 0,2	8,9 max.	10,2 max.	11,1 max.	13 ± 0,4
Type C	2,5 ± 0,03	11 ± 0,2	12,3 max.	13,7 ± 0,2	14,8 ± 0,5	17,4 ± 0,5



Plug overall dimensions

	L	ØX	ØY Max.
Type A	60	20	9,3
Type B	88	28	13,4
Type C	88	28	17,9

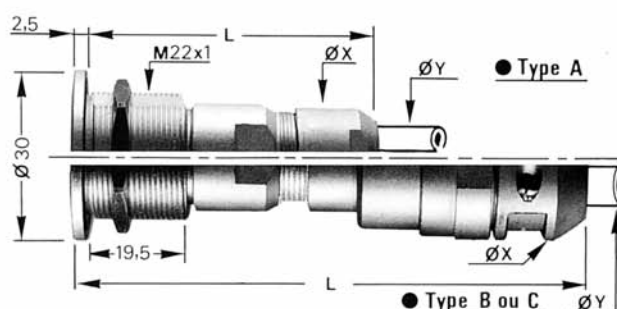
Reference :
FE III TCX75 A, B or C



Receptacle RESC overall dimensions

	L	ØX	ØY Max.
Type A	58	18	9,3
Type B	94	28	13,4
Type C	94	28	17,9

Reference :
RESC III TCX75 A, B or C



RE, REC, RME and TRE overall dimensions

Overall dimensions of these shells are standard, refer to tables on pages 14 and 16 (size III).



Nuclear specific products

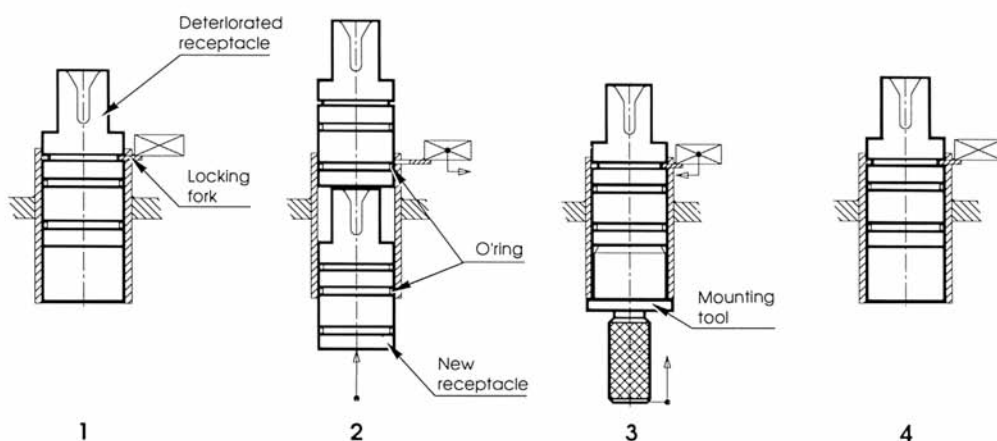
Nuclear feed through with pre-guiding fork, quick replacement by remote manipulator • Size IV and V ULC

- The replacement of a deteriorated feed through can be fully undertaken by remote manipulator.
- No leak from contaminated area to the outside during replacement due to special design.
- The deteriorated feed through remains in the contaminated area
- Positive clamping by a locking fork.

Ref : TRE FP

Feed through replacement process

CONTAMINATED AREA



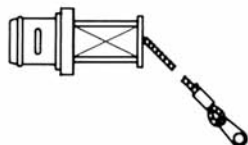
COLD SIDE

Remote manipulated caps for plugs and receptacles • Size III, IV and V ULC

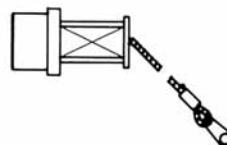
P/N : BERT*...802 for RE, REC, RESC, RECSC, PCE and TRE.
BEFT*...802 for FE, FT

* : shell size

Caps for
RE, REC,
RESC,
RECSC,
PCE, TRE



Caps for
FE, FET



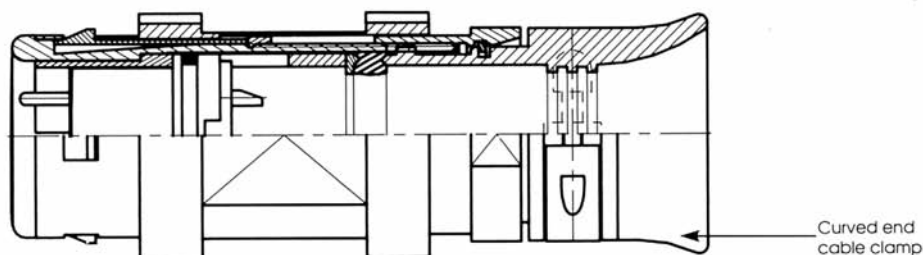
For further details : consult us



Other products

Curved end cable clamp

The curved shape at the cable clamp end reduces the mechanical strains in the cable

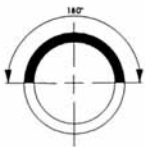
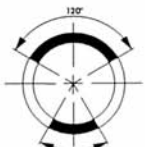
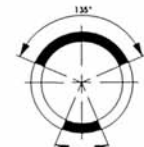
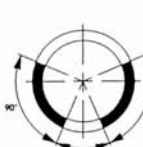
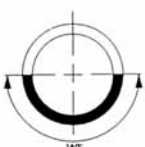
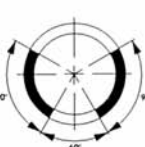
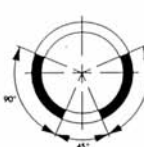
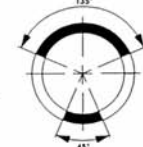


Conductive seals

The copper-silver charged rubber gasket and receptacle O'ring improve the shell to shell conductivity.

Keying

5 different polarizations available.

Position	P1 = standard	P2	P3	P4	P5
Color code	RED	BLUE	WHITE	YELLOW	GREEN
PLUG					
RECEPTACLE AND FEEDTHROUGH					

Note : only P1 keying for size 1.

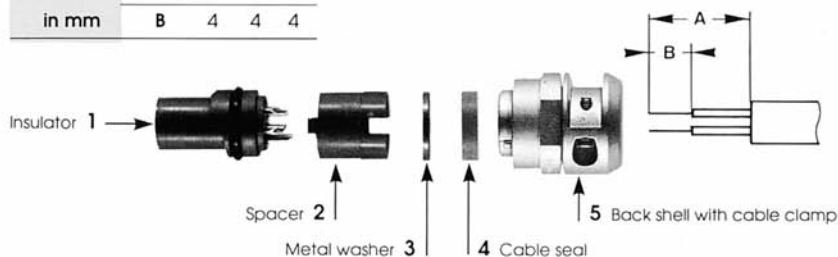
For any developments or further details : please consult us.



Wiring instructions

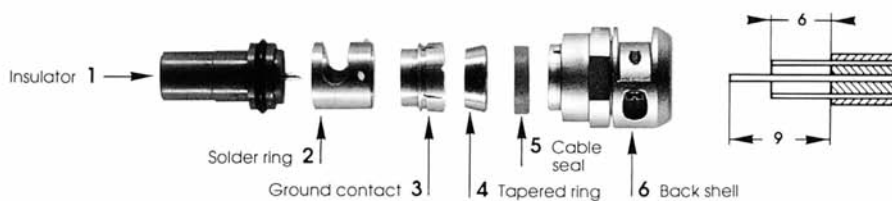
Multipin connectors

	Size	III	IV	V
Lenghts	A	13	14	27
in mm	B	4	4	4



- A Strip the cable in accordance with the diagram above
- Note :** The wires have to be cut to the position of the solder buckets
- B Slide the parts 5, 4, 3 and 2 over the cable in order
- C Slip a heat shrink tube on each conductor
- D Soft solder wires into contacts, starting at the center of insulator
- E Slide the heat shrink tubes against insulator and heat them
- F Mount the spacer n°2 on the insulator. Grease slightly the insulator O' ring
- G Use the mounting tools to mount and to rotate the set into the shell in order to find the correct polarization
- G Remove the tool, slide forward the metal washer, the cable seal and tighten the back-shell n°5, the connector being mated on a suitable receptacle

Coaxial connectors



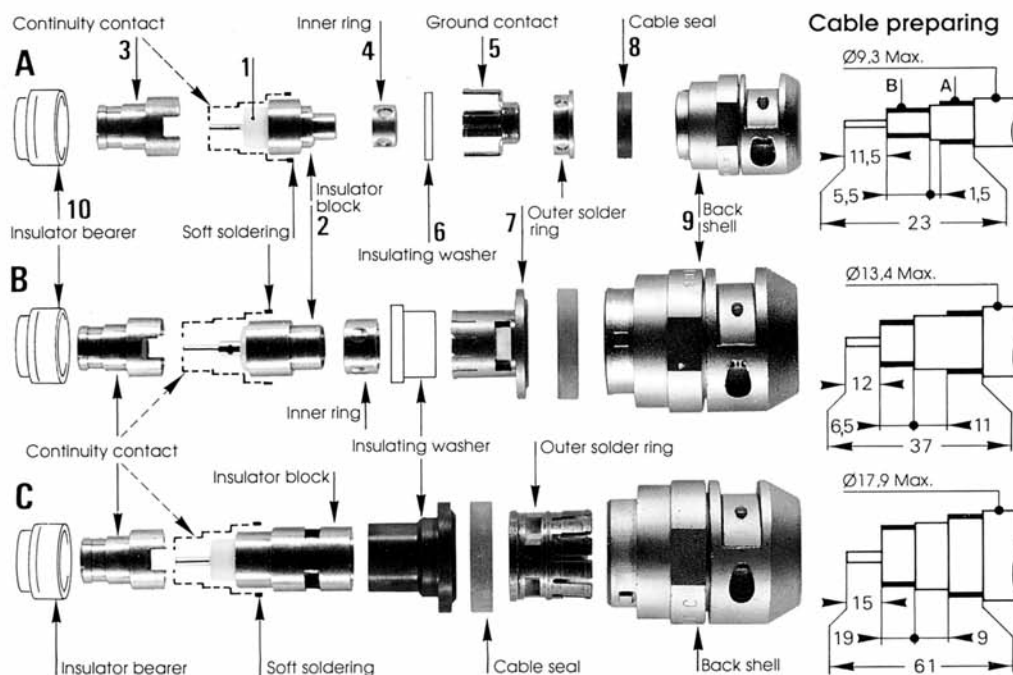
- A Mount the parts 6, 5, 4 and 3 over the cable
- B Strip the cable end in accordance with the diagram above
- C Comb out the braid, slide the part 3 up to edge of cable sheath and fold braid over it
- D Slide the part 2 over the braid, soft solder it in 4 spots
- E Insert the coaxial core into the contact and locate insulator in ring n°2 to soft solder the contact through the access window
- F Slide the tapered ring n°4 and the cable seal n°5 to come into contact with part 3
- G Engage the assembly into the connector shell and rotate to find the right polarization. Then, tighten the back-shell n°6, the connector being mated on a suitable receptacle

ULC Series



Wiring instructions

Triaxial connectors for cables A - B and C



- 1° Mount the parts 9, 8 and 7 over the cable in the correct order
- 2° Strip the cable end at Max. dimensions indicated above
- 3° Insert the ground contact n° 5 fitted with the insulating washer n°6 under the outer braid A, slide back the ring n°7 into contact with part 5, then soft solder both parts in 4 spots
- 4° Slide the part 4 over the inner braid B, separate the insulator n°1 from the block n°2, then slide this block over the braid B, taking care to correctly insert the coaxial core into the contact
- 5° Replace the insulator n°1 and the continuity contact n°3
Soft solder the contact n°3 and the block through the two access windows
- 6° Mount the insulator bearer onto the contact n°3 and slide back parts 8 and 9 into contact with ring n°7
- 7° Insert the assembly cable into the shell
- 8° Tighten the back-shell n°9 with a flat wrench, the connector being mated on a suitable receptacle

Note : When operations 3 and 4 are completed, check the quality of the solders by testing the insulation resistance under 500 Vdc.

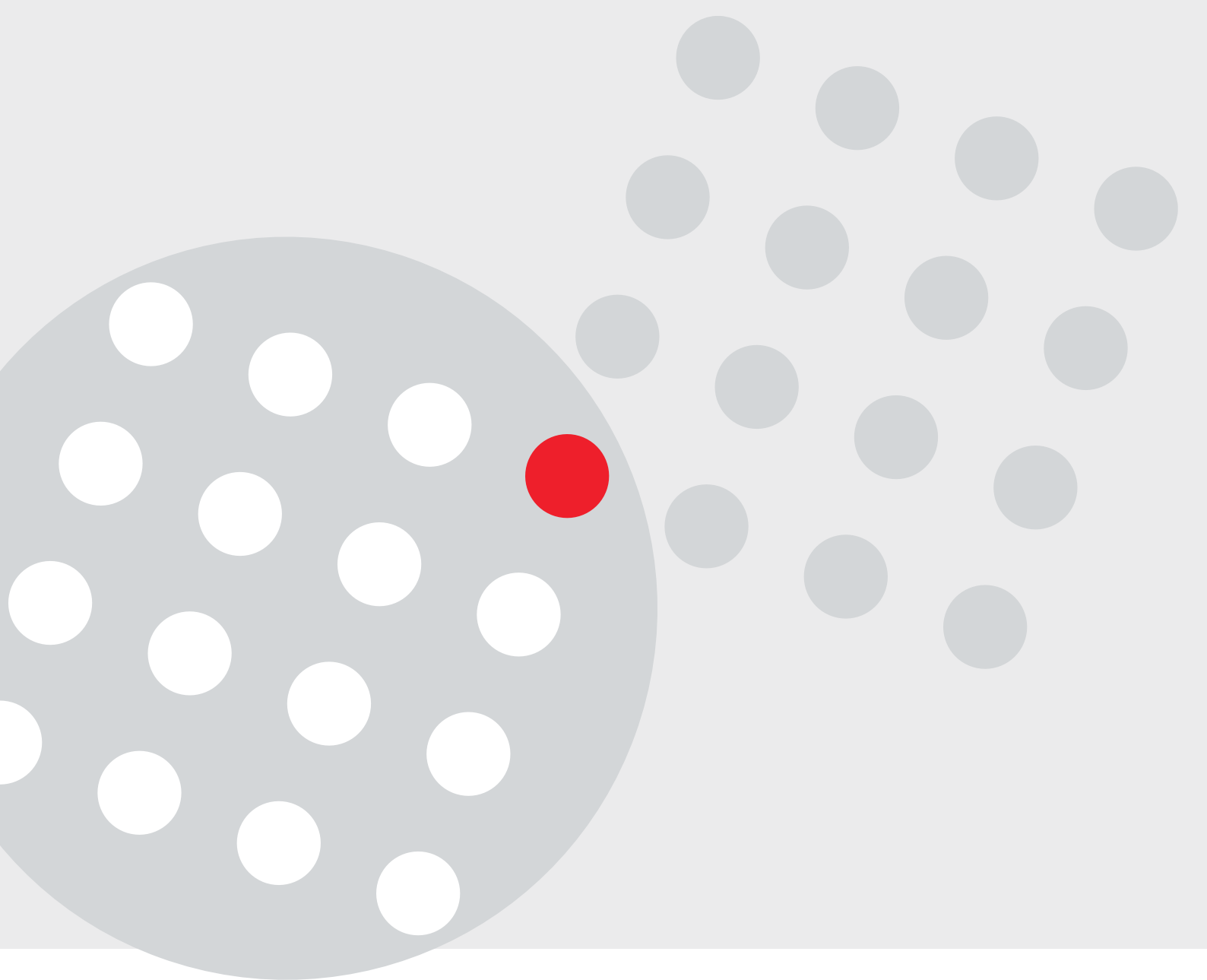
Max. torque :

• Receptacle nut :

Size	III	IV	V
Torque N.m	10 ± 0.5	20 ± 1	35 ± 2

• Back-shell :

Size	III	IV	V
Torque N.m	4.5 ± 0.3	15 ± 1	35 ± 2



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