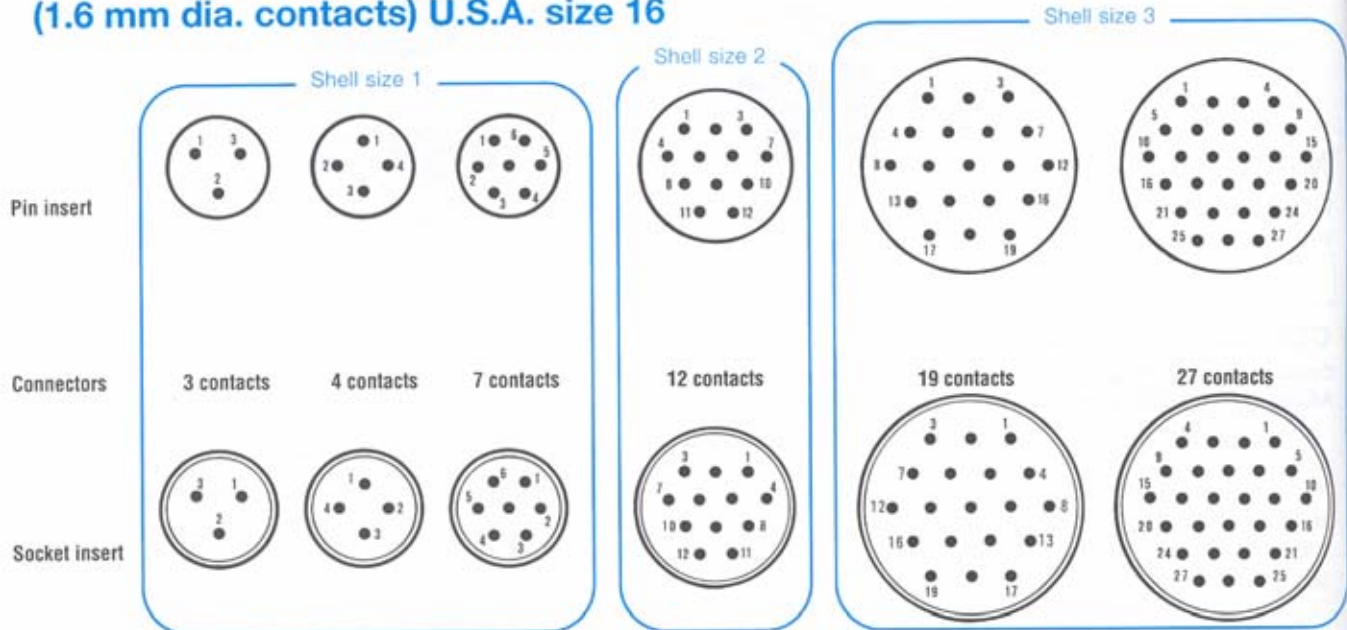


# "INDUSTRIAL" and "MARINE" Series

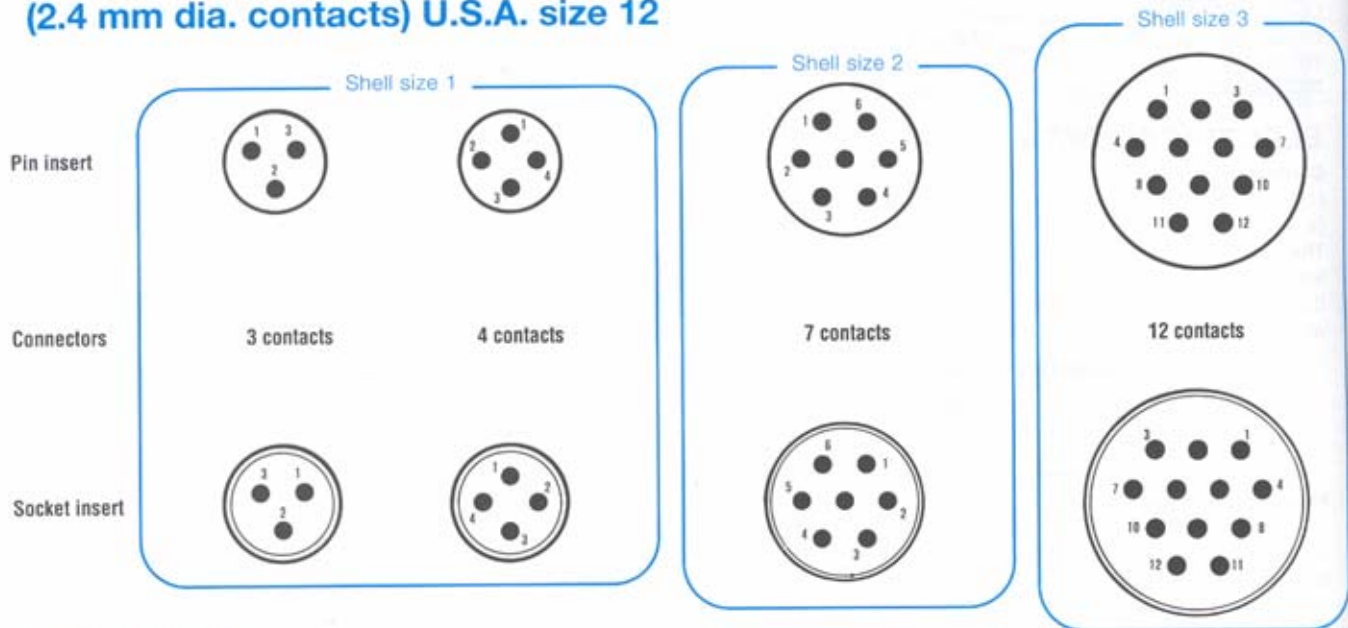
## CONTACT ARRANGEMENT

### (REAR FACE OF INSERT)

#### (1.6 mm dia. contacts) U.S.A. size 16



#### (2.4 mm dia. contacts) U.S.A. size 12



### DESCRIPTION

Identical to the connectors in the "MINIATURE" series with 12, 19, 27 and 55 contacts (page 36).

### DIMENSIONS

Identical to the dimensions of the corresponding **CASINGS** in the "MINIATURE" series (page 43).

### FITTING OF CONTACTS

Similar to the fitting of contacts in the "MINIATURE" series with a (6 to 7 mm) .236 to .276 in. bared length of conductor (page 48).

# "MARINE" Series

## MATERIAL NON-FERROUS ALLOY (ARCAP)

I.P. 68



Specification : (NF-EN 60529) I.P. 68.

Pressure : mated connectors  
 Use : 10 bar (test : 15 bar)  
 Maximum depth of 325 ft.

### MAIN FEATURES

The **Marine** series is composed of a range of a very high mechanical performance waterproof connectors strictly protected from "Sea water" and "Saline atmosphere".

### CONTACTS

Pin or socket of (1 mm dia.) US size 20, of (1.6 mm dia.) US size 16, of (2.4 mm dia.) US size 12 are **removable** and carry a **gold plated** finish (UTE-C 93-422).

### CONTACT TERMINATION

Contact may be either crimped or soldered on to the wire ends. Adjustable crimping tool : (specification : M 22520-1/01 and M 22520-1 02)  
**PART NUMBER : 5794 810 06.**

(1 mm dia. cont.) USA size 20	(1.6 mm dia. cont.) USA size 16	(2.4 mm dia. cont.) USA size 12
(0.60 sq. mm) AWG 20 (0.93 sq. mm) AWG 18 (2.1 mm dia.) .083 dia. cont.	(1.50 sq. mm) AWG 16 (0.6 to 1.5 sq. mm) AWG 20 to 16 (2.7 mm dia.) .106 dia. cont.	(3.18 sq. mm) AWG 12 (1.34 to 3.18 sq. mm) AWG 16 to 12 (3.5 mm dia.) .138 dia. cont.

- Max. cross section area for soldered wires : ..
- Max cross section area for crimped wires : ..
- Maximum insulated wire diameter : .....

### ELECTRICAL DATA

Contact resistance between pin and socket :

- (1 mm dia. contacts) U.S.A. size 20 : **less than 0.0020 ohm.**
- (1.6 mm dia. contacts) U.S.A. size 16 : **less than 0.0015 ohm.**
- (2.4 mm dia. contacts) U.S.A. size 12 : **less than 0.0010 ohm.**

The **maximum current** rating will be determined by the number of contacts carrying the current and by the receptacle increase in temperature. If a number **N** of contacts, carry a continuous lead **I** the rise in temperature of the connector will approximatively be as follows :

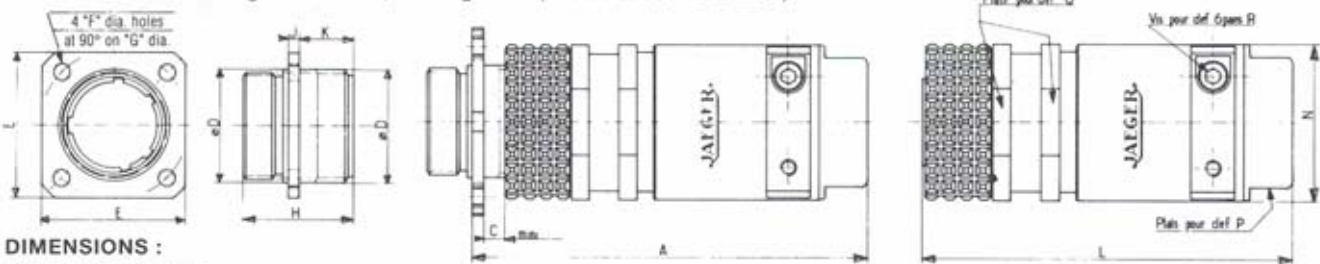
(1 mm dia. contacts) USA size 20	(1.6 mm dia. contacts) USA size 16	(2.4 mm dia. contacts) USA size 12
(1° C) 1.8° F x N where I = 4 amp. (3° C) 5.4° F x N where I = 7 amp.	(< 1° C) < 1.8° F x N where I = 4 amp. (2° C) 3.6° F x N where I = 7 amp. (10° C) 18° F x N where I = 15 amp.	(< 1° C) < 1.8° F x N where I = 7 amp. (2° C) 3.6° F x N where I = 12 amp. (10° C) 18° F x N where I = 30 amp.

Flashover voltage at (20 °C) 68 °F  
 (mated connectors)

- at sea level greater (r.m.s.) .....
- at 56 mm Hg (66,000 feet) .....

(1 mm dia. cts) 4, 19 or 37 cts USA size 20	(1 mm dia. cts) 3, 7, 12, 19, 27 or 55 cts USA size 20	(1.6 mm dia. cts) USA size 16	(2.4 mm dia. cts) USA size 12
> 2,000 V (r.m.s.) > 400 V (r.m.s.)	> 2,500 V (r.m.s.) > 500 V (r.m.s.)	> 2,500 V (r.m.s.) > 500 V (r.m.s.)	> 2,500 V (r.m.s.)

Insulation resistance : greater than 5,000 megohms. (Tested at 500 Volts D.C.)



### DIMENSIONS :

Dimensions : (mm) in

Shell size	Mated assembly		RECEPTACLE								PLUG				
	A	C	D	E	F	G	H	J	K	L	N	O	P	R	
1	(75) 2.95	(4) .157	(21) .827	(27) 1.06	(3,2) .126	(28) 1.10	(23) .905	(2) .078	(12,5) .492	(70) 2.76	(29) 1.14	(26) 1.02	(24) .945	(2,5) .098	
2	(84) 3.30	(4) .157	(27) 1.06	(32) 1.26	(3,2) .126	(34) 1.34	(23,5) .925	(2) .078	(12,5) .492	(78) 3.07	(36) 1.42	(32) 1.26	(30) 1.18	(3) .118	

# "MARINE" Series

## SOCKETS, PLUGS AND CABLE CONNECTING PLUGS

with 12, 19, 27 and 37 contacts  
(of 1 mm dia. contacts)

USA size 20

(100 °C) 212 °F



Specification : (NF-EN 60529) I.P. 68

### PART NUMBERS

## PIN INSERT RECEPTACLES, SOCKET INSERT PLUGS, PIN INSERT CABLE CONNECTING PLUGS.

Dimensions : (mm) in.

Shell size	Number of contacts (1 mm dia.) USA size 20	Circular flanged male receptacle with gasket	Pin insert receptacle	Socket insert plug	Pin insert cable connecting plug	Protection caps for receptacle	Protection caps for plug	Cable dia. for cable-clamp		Gaskets for receptacle
								dia. mini	dia. maxi	
1	12	-	6370 120 06	6380 120 06	6390 120 06	6378 200 06	6388 200 06	(9) .354	(14) .551	5369 450 06
1	19	-	6370 190 06	6380 190 06	6390 190 06	6378 200 06	6388 200 06	(9) .354	(14) .551	5369 450 06
2	27	-	6370 270 06	6380 270 06	6390 270 06	6378 250 06	6388 250 06	(12) .472	(18) .708	5369 460 06
2	37	-	6370 370 06	6380 370 06	6390 370 06	6378 250 06	6388 250 06	(12) .472	(18) .708	5369 460 06

## SOCKET INSERT RECEPTACLES, PIN INSERT PLUGS, SOCKET INSERT CABLE CONNECTING PLUGS.

Dimensions : (mm) in.

Shell size	Number of contacts (1,6 mm dia.) USA size 20	Circular flanged female receptacle with gasket	Socket insert receptacle	Pin insert plug	Socket insert cable connecting plug	Protection caps for receptacle	Protection caps for plug	Cable dia. for cable-clamp		Gaskets for receptacle
								dia. mini	dia. maxi	
1	12	-	6371 120 06	6381 120 06	6391 120 06	6378 200 06	6388 200 06	(9) .354	(14) .551	5369 450 06
1	19	-	6371 190 06	6381 190 06	6391 190 06	6378 200 06	6388 200 06	(9) .354	(14) .551	5369 450 06
2	27	-	6371 270 06	6381 270 06	6391 270 06	6378 250 06	6388 250 06	(12) .472	(18) .708	5369 460 06
2	37	-	6371 370 06	6381 370 06	6391 370 06	6378 250 06	6388 250 06	(12) .472	(18) .708	5369 460 06

NOTE : Tool, Part. No 5971 040 06 is necessary, for inserting and extracting contacts.

### OPERATING TEMPERATURE

(- 40 °C to + 100 °C) -40 °F to + 212 °F (500 hours at (100 °C) 212 °F)

(- 55 °C to + 200 °C) - 67 °F to + 392 °F (500 hours at (200 °C) 392 °F) (Consult our sales engineering office)

### CONNECTOR COUPLING SYSTEM

Coupling of the plug by a knurled ring which screws on to the threaded shell of the receptacle.

**DURABILITY** : No damage after 1,000 engagements and disengagements, as in service.

**Important** : Maximum tightening torque to be effected to optimize immersion characteristics (300 N. cm)

**INSTALLATION, DIMENSIONS** (refer to page 62).

# "MARINE" Series

## SOCKETS, PLUGS AND CABLE CONNECTING PLUGS

with 3, 4 and 12 contacts  
(of 1.6 mm dia. contacts)

USA size 16

(100 °C) 212 °F

Specification : (NF-EN 60529) I.P. 68



### PART NUMBERS

## PIN INSERT RECEPTACLES, SOCKET INSERT PLUGS, PIN INSERT CABLE CONNECTING PLUGS.

Dimensions : (mm) in.

Shell size	Number of contacts (1,6 mm dia.) USA size 16	Circular flanged male receptacle with gasket	Pin insert receptacle	Socket insert plug	Pin insert cable connecting plug	Protection caps for receptacle	Protection caps for plug	Cable dia. for cable-clamp		Gaskets for receptacle
								dia. mini	dia. maxi	
1	3	6372 036 06	6372 030 06	6382 030 06	6392 030 06	6378 200 06	6388 200 06	(9) .354	(14) .551	5369 450 06
1	4	6372 046 06	6372 040 06	6382 040 06	6392 040 06	6378 200 06	6388 200 06	(9) .354	(14) .551	5369 450 06
1	7	6372 076 06	6372 070 06	6382 070 06	6392 070 06	6378 200 06	6388 200 06	(9) .354	(14) .551	5369 450 06
2	12	6372 126 06	6372 120 06	6382 120 06	6392 120 06	6378 250 06	6388 250 06	(12) .472	(18) .708	5369 460 06

## SOCKET INSERT RECEPTACLES, PIN INSERT PLUGS, SOCKET INSERT CABLE CONNECTING PLUGS.

Dimensions : (mm) in.

Shell size	Number of contacts (1,6 mm dia.) USA size 16	Circular flanged female receptacle with gasket	Socket insert receptacle	Pin insert plug	Socket insert cable connecting plug	Protection caps for receptacle	Protection caps for plug	Cable dia. for cable-clamp		Gaskets for receptacle
								dia. mini	dia. maxi	
1	3	6373 036 06	6373 030 06	6383 030 06	6393 030 06	6378 200 06	6388 200 06	(9) .354	(14) .551	5369 450 06
1	4	6373 046 06	6373 040 06	6383 040 06	6393 040 06	6378 200 06	6388 200 06	(9) .354	(14) .551	5369 450 06
1	7	6373 076 06	6373 070 06	6383 070 06	6393 070 06	6378 200 06	6388 200 06	(9) .354	(14) .551	5369 450 06
2	12	6373 126 06	6373 120 06	6383 120 06	6393 120 06	6378 250 06	6388 250 06	(12) .472	(18) .708	5369 460 06

NOTE : Tool, Part. No 5774 540 06 is necessary, for inserting and extracting contacts.

### EARTHED CONTACT

Contact No 1 establishes the electrical connection first and breaks it last. So this contact can be used for earthing purposes (Specification : UTE - C 15-100).

If this contact needs to be connected to the earth of the casing, insert the small plate provided for this purpose behind the two parts of the connector and between the casing and the earth contact.

### OPERATING TEMPERATURE

(- 40 °C to + 100 °C) - 40 °F to + 212 °F (500 hours at (100 °C) 212 °F)

(- 55 °C to + 200 °C) - 67 °F to + 392 °F (500 hours at (200 °C) 392 °F) (Consult our sales engineering office).

### CONNECTOR COUPLING SYSTEM

Coupling of the play by a knurled ring which screws on to the threaded shell of the receptacle.

**DURABILITY** : No damage after 1,000 engagements and disengagements, as in service.

### INSTALLATION, DIMENSIONS (refer to page 62).

# "MARINE" Series

## SOCKETS, PLUGS AND CABLE CONNECTING PLUGS

with 3, 4 and 7 contacts  
(of 2.4 mm dia. contacts)

USA size 12

(100 °C) 212 °F

Specification : (NF-EN 60529) I.P. 68



### PART NUMBERS

## PIN INSERT RECEPTACLES, SOCKET INSERT PLUGS, PIN INSERT CABLE CONNECTING PLUGS.

Dimensions : (mm) in.

Shell size	Number of contacts (2,4 mm dia.) USA size 12	Circular flanged male receptacle with gasket	Pin insert receptacle	Socket insert plug	Pin insert cable connecting plug	Protection caps for receptacle	Protection caps for plug	Cable dia. for cable-clamp		Gaskets for receptacle
								dia. mini	dia. maxi	
1	3	–	6374 030 06	6384 030 06	6394 030 06	6378 200 06	6388 200 06	(9) .354	(14) .551	5369 450 06
1	4	–	6374 040 06	6384 040 06	6394 040 06	6378 200 06	6388 200 06	(9) .354	(14) .551	5369 450 06
2	7	–	6374 070 06	6384 070 06	6394 070 06	6378 250 06	6388 250 06	(12) .472	(18) .708	5369 460 06

## SOCKET INSERT RECEPTACLES, PIN INSERT PLUGS, SOCKET INSERT CABLE CONNECTING PLUGS.

Dimensions : (mm) in.

Shell size	Number of contacts (2,4 mm dia.) USA size 12	Circular flanged female receptacle with gasket	Socket insert receptacle	Pin insert plug	Socket insert cable connecting plug	Protection caps for receptacle	Protection caps for plug	Cable dia. for cable-clamp		Gaskets for receptacle
								dia. mini	dia. maxi	
1	3	–	6375 030 06	6385 030 06	6395 030 06	6378 200 06	6388 200 06	(9) .354	(14) .551	5369 450 06
1	4	–	6375 040 06	6385 040 06	6395 040 06	6378 200 06	6388 200 06	(9) .354	(14) .551	5369 450 06
2	7	–	6375 070 06	6385 070 06	6395 070 06	6378 250 06	6388 250 06	(12) .472	(18) .708	5369 460 06

NOTE : Tool, Part. No 5774 580 06 is necessary. for inserting and extracting contacts.

### EARTHED CONTACT

Contact No 1 establishes the electrical connection first and breaks it last. So this contact can be used for earthing purposes (Specification : UTE - C 15-100).

If this contact needs to be connected to the earth of the casing, insert the small plate provided for this purpose behind the two parts of the connector and between the casing and the earth contact.

### OPERATING TEMPERATURE

(- 40 °C to + 100 °C) - 40 °F to + 212 °F (500 hours at (100 °C) 212 °F)

(- 55 °C to + 200 °C) - 67 °F to + 392 °F (500 hours at (200 °C) 392 °F) (Consult our sales engineering office)

### CONNECTOR COUPLING SYSTEM

Coupling of the play by a knurled ring which screws on to the threaded shell of the receptacle.

**DURABILITY** : No damage after 1,000 engagements and disengagements, as in service.

### INSTALLATION, DIMENSIONS (refer to page 62)