DISTRIBUTED TECHNOLOGY LIMITED

SPECIALISE IN

Connectors

Fully approved styles to BS 9522 F0017

TEC GROUP

Pattern 105

FKI

#MIL-C 26482 Connectors

Pattern 105 Connectors

Pattern 105 bayonet coupling connectors are designed to meet the stringent requirements of BS9522F0017, Defence Standard 59-35 (Part 3) Sect. 7 Pattern 105 and MIL-C-26482 (solder).

Initially developed for aircraft applications, Pattern 105 connectors are extensively used in the fighting vehicle, military communications and general industrial markets where high reliability, miniaturisation and cost effectiveness are of prime importance.

Positive coupling is indicated by an audible "click" and by visual alignment of the three bayonet pins within locating "windows" in the coupling nut. Coupling nuts are removable to enable damaged items to be replaced.

Aluminium shells, cadmium plated with an olive drab chromate finish offer high resistance to corrosion. Insulators are polychloroprene with an operating temperature range of –55°C to + 125°C. Contact arrangements from 2 to 61 ways, feature Size 16 AWG (13 amp) or size 20 AWG (7.5 amp) contacts.

To prevent mismating or cross plugging, shell to shell key and keyway orientations are offered in normal (N) or any of four alternatives (B, C, E or F). Insert orientation, although permissible in Pattern 105 connectors to enable replacement of existing MIL-C-26482 types, is not available except by special request.

Sealing against water ingress is achieved between mating connectors by a square section gasket between shells, by a peripheral seal on the insulators and by grommet wire sealing at the rear of the connector.

How to order PT connectors

BS9000

PT connectors may be ordered or specified using either the THORN EMI proprietary coding system which carries the prefix 'PT' or the BS 9000 system which has the prefix 'C' for connectors and 'A' for accessories.

CONNECTORS

PT55A — Free, Straight with Accessory Thread ..... (C2092)
PTG55A — Free, Straight with Accessory Thread and Grounding Ring ..... (C2093)
PT55A (T01) — Free, Straight with Accessory Thread and Ribbed Coupling Nut ..... (C2094)
PTG55A (T01) — Free, Straight with Accessory Thread, Grounding Ring and Ribbed Coupling Nut ..... (C2095)
PT44A — Line Connecting Receptacle ..... (C2101)
PT33A — Wall Mounting Receptacle ..... (C2096)
PT77A — Fixed Receptacle (Jam Nut) with Accessory Thread ..... (C2100)
PT07E — Fixed Receptacle (Grommet Seal) ..... (C2098)
PT07A — Fixed Receptacle (No rear Fittings) ..... (C2099)
PT02 — Fixed Receptacle (No rear Fittings) ..... (C2097)

ACCESSORIES

05 - 0114 — Grommet Nut Assembly ..... (A2102)
05 - 0120 — Cable Clamp Complete with Grommet ..... (A2103)
10 - 36565 — Cable Grommet ..... (A2011)
05 - 0507 — Cap for Free Connector ..... (A2012)
05 - 0517 — Cap for Fixed Connector ..... (A2013)
05 - 0527 — Cap for Fixed Connector (Jam Nut) ..... (A2014)

THORN EMI proprietary coding

Select the shell style and classification PT55A
Add the shell size and contact arrangement PT55A-10-6
Add the contact style (P = pin contacts, S = socket contacts) PT55A-10-6P
If polarisation is required, add the relevant letter B, C, E or F.
If orientation of the insert is required, use the letter W, X, Y or Z PT55A-10-6PB
Add the applicable variant (T01 = with ribbed coupling nut) PT55A-10-6PB (T01)

BS 9000 coding

BS9000

Select the connector style C2092
Add the shell size and contact arrangement* C2092-10-06
Add the contact style (M = pin contacts, F = socket contacts) C2092-10-06M
Add the relevant letter N, B, C, E or F for polarisation, or for orientation
of the insert use the letter N, W, X, Y or Z C2092-10-06MN
Add the letter 'O' for the standard connector or relevant letter denoting a variant C2092-10-06MNO

** When using this system, the contact arrangement is always indicated by two digits, using the 'O' as shown.*

NOTE: When the connector is to be supplied complete with an accessory, the reference number shall include the applicable accessory style number. ie: C2092 -10-06MNO-A2102.

DISTRIBUTED TECHNOLOGY

PT ELECTRICAL CONNECTORS

DISTRIBUTED TECHNOLOGY

Hermetically sealed PT connectors


box mounting receptacle


line connecting receptacle


wall mounting receptacle


straight plug


jam nut receptacle


9 degree plug


through bulkhead receptacle


solder mount receptacle


box mounting receptacle


jam nut receptacle

Connector selection chart

PT connectors are available in the different shell styles illustrated below and can be specified complete with the cable fittings shown opposite. When specified together, the type of cable fitting invariably determines the connector classification.
Alternatively, the connector may be specified by its basic style number and the cable fittings ordered separately.


A type adaptor
05-0532-xx


A type strain relief clamp
05-1778-xx


E type clamp nut
05-0114-xx-xx


E type strain relief clamp
05-0120-xx-xx


P type potting boot
05-2042-xx


P type strain relief clamp
05-1778-xx

{add shell size/contact arrangement}


W type sealing gland
05-2330-xx

for DEF STAN 61-12 cables


straight outlet
05-2058-xx-xx


75° outlet
05-2060-xx-xx


A type 90° elbow
05-1774-xx


E type 90° elbow
05-1774-xx plus grommet 10-1138-xx-xx

PT solder type connectors

Qualified to BS 9522 F0017 and conform to MIL-C-26482

Thorn PT connectors are a modern conception, conforming to internationally accepted design standards and are compatible with similar British, European and American types

PT connectors have resilient inserts and non-removable contacts that are designed for solder connection only.

Standard finish is olive drab over cadmium plate.

Straight plug PT55A		PT06A	PT06A(SR)	PT06E	PT06E(SR)	PT06P	PT06P(SR)	PT06W	PT66*	PT88*	PT08A / PT08E
Straight plug with grounding ring PTG55A		PTG06A	PTG06A(SR)	PTG06E	PTG06E(SR)	PTG06P	PTG06P(SR)	PTG06W	PTG66*	PTG88*	PTG08A / PTG08E
Straight plug with ribbed coupling nut PT55A(T01)		PT06A(T01)	PT06A(T02)	PT06E(T01)	PT06E(T02)	PT06P(T01)	PT06P(T02)	PT06W(T01)	PT66*(T01)	PT88* (T01)	PT08A(T01) / PT08E(T01)
Straight plug with ribbed coupling nut and grounding ring PTG55A(T01)		PTG06A(T01)	PTG06A(T02)	PTG06E(T01)	PTG06E(T02)	PTG06P(T01)	PTG06P(T02)	PTG06W(T01)	PTG66*(T01)	PTG88* (T01)	PTG08A(T01) / PTG08E(T01)
Wall mounting receptacle PT33A		PT00A	PT00A(SR)	PT00E	PT00E(SR)	PT00P	PT00P(SR)	PT00W			
Line connecting receptacle PT44A		PT01A	PT01A(SR)	PT01E	PT01E(SR)	PT01P	PT01P(SR)	PT01W			
Jam nut receptacle PT07A		PT07A	cable fittings not applicable	PT07E / PT07E(T11)	PT07E(SR) / PT07E(T12)	PT07P	cable fittings not applicable	cable fittings not applicable			

connector and fitting supplied only as one complete assembly

How to order PT connectors

1. select the shell style and classification, e.g. PT06E
2. add the shell size and contact arrangement, e.g. PT06E-22-55
3. add the contacts. P = pins, S = sockets, e.g. PT06E-22-55S
4. for polarisation, add the relevant fetter (E, B, C or F), or for orientation of the insert add W, X, Y or Z, e.g. PT06E-22-55SB
5. add suffix (SR), (T01), (T02) as required.

PT06 E-22-55 SB (SR)

- PT — designates a connector to meet the requirements of BS 9522 F0017 and MIL-C-26482
- 06 — specifies the shell style.
- E — designates classification.
- 22-55 — specifies shell size and insert arrangement.
- S — specifies socket contacts (use P for pin contacts)
- B — specifies that polarisation other than Normal is required
- SR — specifies a connector with a strain relief clamp

Box Mounting Receptacle PT02

Through Bulkhead Receptacle PTB

Hermetically Sealed types

for mounting directly on to a panel, using a fillet of good quality solder between the shell and mounting surface

PT1H


solder mount receptacle

PT02H


box mounting receptacle

PT07H


jam nut receptacle

Protection Caps

CAP ONLY for all types
05-0056-xx
with cord
05-0507-xx-L
with chain
05-0057-xx-L

CAP ONLY for all types of receptacles
10-123094-xx3

	with chain	with cord
for wall mounting receptacles	10-101960-xx3-L	05-0517-xx-L
for line connecting receptacles	10-101961-xx3-L	05-0537-xx-L
for jam nut receptacles	10-101964-xx3-L	05-0527-xx-L

'xx' add shell size to complete the part number

"L" The length of the cord or chain is indicated as follows
30 = 3", 35 = 3½", 40 = 4", 45 = 4½"
50 = 5", 60 = 6", 70 = 7", 80 = 8"

Contact arrangements

Legend: ○ 20 ● 16 ⊕ 12 ⊙ coaxial

All views are approximate size and looking into the front face of a pin insert

Shell size

Arrangement No
No. of contacts
Contact size
Voltage rating

8

8–2 — 2 — 20 — 1

8–3 — 3 — 20 — 1

8–4 — 4 — 20 — 1

8–33 — 3 — 20 — 1

8–98 — 3 — 20 — 1

10

10–2 — 2 — 16 — 2

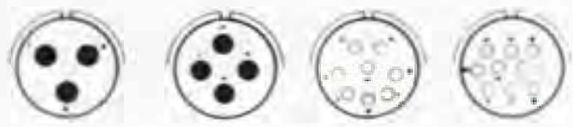
10–6 — 6 — 20 — 1

10–7 — 7 — 20 — 1

10–98 — 6 — 20 — 1

10–99 — 7 — 20 — 1

12



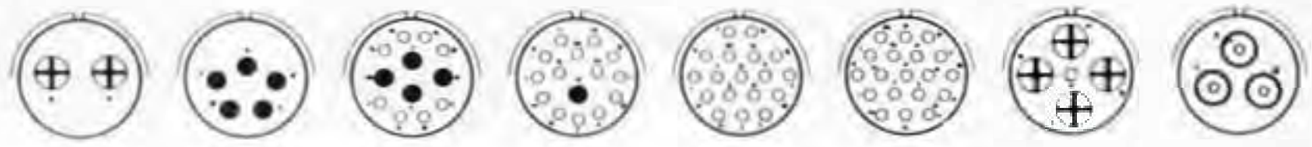
12–3 — 3 — 16 — 2

12–4 * — 4 — 16 — 2

12–8 — 8 — 20 — 1

12–10 — 10 — 20 — 1

14



14–2 — 2 — 12 — 2

14–5 — 5 — 16 — 2

14–12 — 8 — 4 — 20 — 16 — 1

14–15 — 14 — 1 — 20 — 16 — 1

14–18 * — 18 — 20 — 1

14–19 — 19 — 20 — 1

14–22 — 1 — 4 — 20 — 12 — 1

14–91 — 3 — 20 — 5kV rms

16

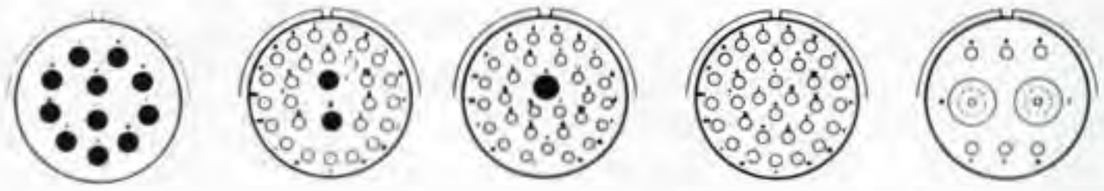
16–8 — 8 — 16 — 2

16–23 — 22 — 1 — 20 — 16 — 1

16–26 — 26 — 20 — 1

16–99 * — 21 — 2 — 20 — 16 — 1

18



18–11 — 11 — 16 — 2

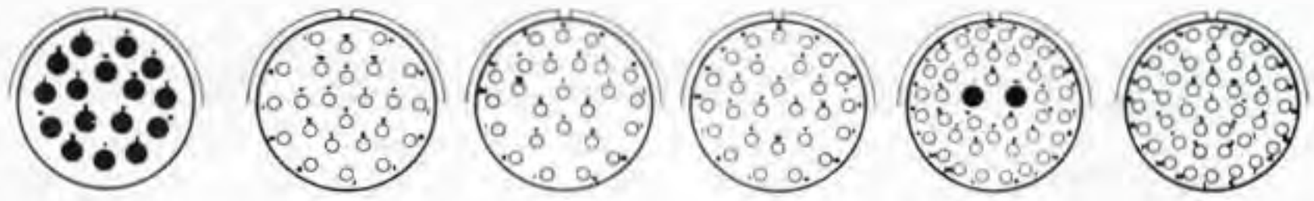
18–28 * — 26 — 2 — 20 — 16 — 1

18–30 * — 29 — 1 — 20 — 16 — 1

18–32 — 32 — 20 — 1

18–80 * — 6 — 2 — 20 coax — 2

20



20–16 — 16 — 16 — 2

20–24 * — 24 — 20 — 1

20–25 * — 25 — 20 — 1

20–27 * — 27 — 20 — 1

20–39 * — 37 — 2 — 20 — 16 — 1

20–41 — 41 — 20 — 1

22

22–7 * — 7 — coax — —

22–21 — 21 — 16 — 2

22–32 * — 32 — 20 — 1

22–34 * — 34 — 20 — 1

22–36 * — 36 — 20 — 1

22–41 — 27 — 14 — 20 — 16 — 1

22–55 — 55 — 20 — 1

24

24–61 — 61 — 20 — 1

Electrical ratings

Maximum current per individual contact (in isolation) at a maximum ambient temperature of 85°C size 20: 7.5A size 16: 13A size 12: 23A

Maximum working current per contact through all contacts simultaneously at 85°C ambient temperature: size 20: 5A size 16: 10A size 12: 20A

The performance of any plug or socket at all times exceeds the maximum continuous bunched rating of the appropriate size wire or cable of equivalent temperature rating, and this bunched rating shall be the determining factor. In the case of mixed loadings, the greatest individual load shall be, for this purpose, taken to be the bunched loading.

Sea Level	Voltage rating 1	2
† working voltage dc or ac peak	700	1250
Voltage proof dc or ac peak	2200	3250

† the establishment of electrical safety factors when the connector is used at other than the working voltage is the responsibility of the user

Alternative positions

To avoid mis mating of similar connectors which may be adjacently mounted, polarisation is achieved by shell key/keyways and is available with up to five alternative positions designated N, B, C, E, or F. Where no specific polarisation is requested, then neutral (N) will be supplied.

D.T.L. can also supply connectors incorporating varying orientations of the contact arrangement layout, orientated within the shells, which are designated W, X, Y, or Z. This system defined by early original U.S.A. sources is non preferred.

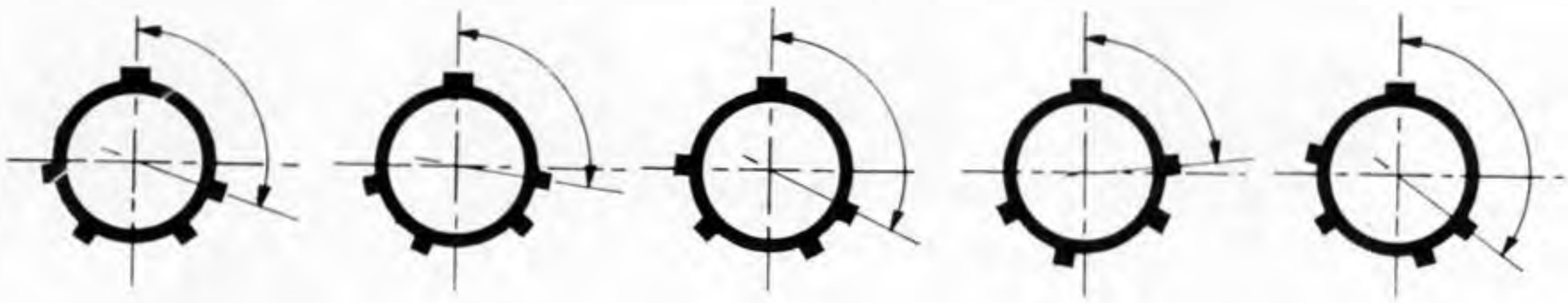
**Consult DTL for availability of the contact arrangement shown.*

Polarisation

To avoid mis-mating of similar connectors which may be adjacently mounted, polarisation is achieved by shell key/keyways, giving up to five alternative positions designated N, B, C, E or F.
The diagrams illustrate the angular variation of the keys/keyways with the major key being the datum point.

Where no specific polarisation is requested, the neutral position N will always be supplied.

Polarisation availability is shown below



Normal **B** **C** **E** **F**

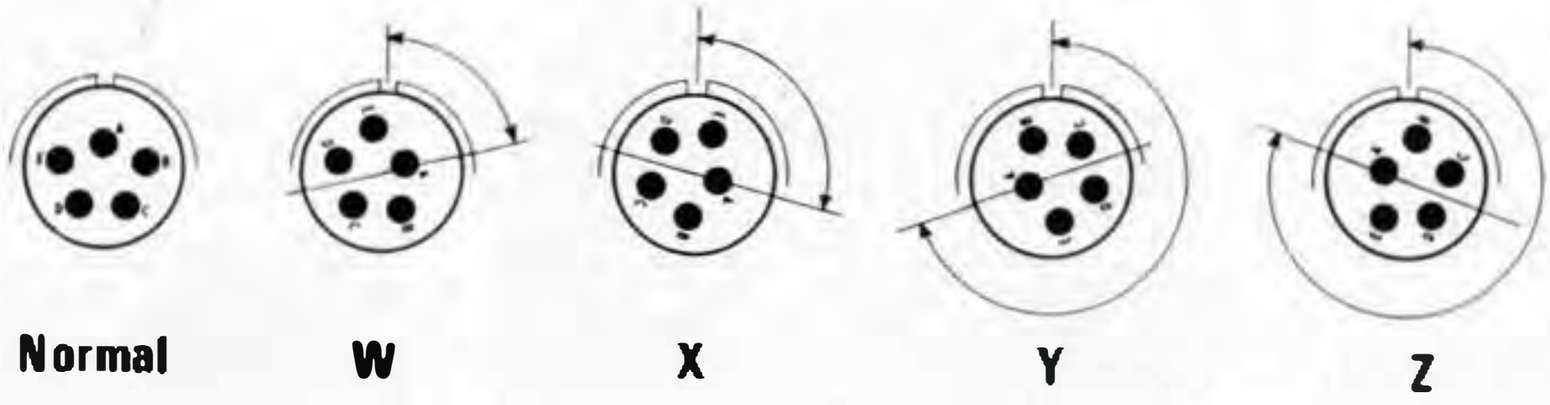
Shell size	Normal	B	C	E	F
8	105	-	-	118	82
10	105	85	125	115	85
12	105	89	121	115	85
14	105	91	119	75	120
16	105	93	117	75	120

Shell size	Normal	B	C	E	F
18	105	95	115	75	120
20	105	95	115	75	120
22	105	97	113	75	120
24	105	97	113	75	120

Insert orientation

Orientation availability is shown below and can only be supplied with 'N' polarisation.

The diagrams illustrate the angular displacement of the insert within the housing, for each orientation in the range.
This method is non-preferred and is intended for replacement purposes only.



Normal **W** **X** **Y** **Z**

Availability by contact arrangement

Contact arrangement	Degrees W	X	Y	Z
8- 2	58	122	—	—
8- 3	60	210	—	—
8- 4	45	—	—	—
8-33	90	—	—	—
10- 2	45	90	135	—
10- 6	90	—	—	—
10-98	90	180	240	270
12- 3	—	—	180	—
12- 8	90	112	203	292
12-10	60	155	270	295
14- 2	58	122	—	—
14- 5	40	92	184	273
14-12	43	90	—	—
14-15	17	110	155	234
14-18	15	90	180	270
14-19	30	165	315	—
14-22	45	—	—	—
16- 8	54	152	180	331
16-23	158	270	—	—
16-26	60	—	275	338

Contact arrangement	Degrees W	X	Y	Z
18- 8	—	—	—	—
18-11	62	119	241	340
18-30	180	193	285	350
18-32	85	138	222	265
18-80	45	90	135	160
20-16	238	318	333	347
20-24	70	145	215	290
20-25	72	144	216	288
20-27	72	144	216	288
20-39	63	144	252	333
20-41	45	126	225	—
22- 7	19	41	—	—
22-21	16	135	175	349
22-32	72	145	215	288
22-34	62	144	216	298
22-36	72	144	216	288
22-41	39	—	—	—
22-55	30	142	226	314
24-61	90	180	270	324