

COMPONENT SPECIFICATION**M22 SERIES CONNECTORS**

SEPTEMBER 1996

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APPENDICES NOTES:

1. Third angle projection is used where projected views are shown.
2. All dimensions are in millimetres.
3. For explanation of dimensions, etc. see BS308.
4. Unless otherwise stated, all dimensions are maxima.

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<u>ISSUE</u>	<u>C/NOTE</u>	<u>DATE</u>
01	----	15.05.90
02	1860	18.07.91
03	1987	29.04.92
04	2014	01.06.92
05	2585	21.03.93
06	3526	06.09.96

COMPONENT SPECIFICATION M22 SERIES CONNECTORS

1. DESCRIPTION OF COMPONENT AND INTENDED APPLICATION.

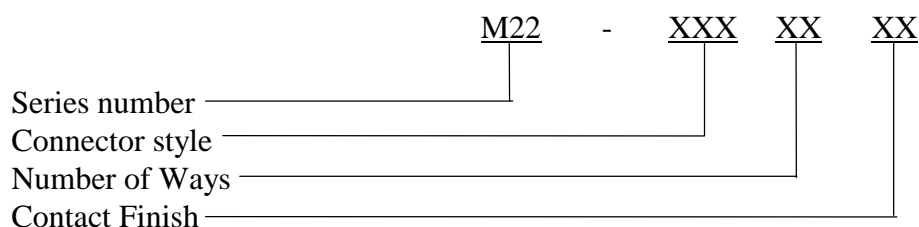
A range of 2mm pitch square pin connectors for interconnecting board to board. The socket is a box section design with barbs, to locate and hold in an insulated housing. Terminations are available for through-board solder or surface mount in a vertical mounting.

The 0.5mm square plug pins are retained in a moulding, and are available in either horizontal or vertical through-board solder mounting or surface mount.

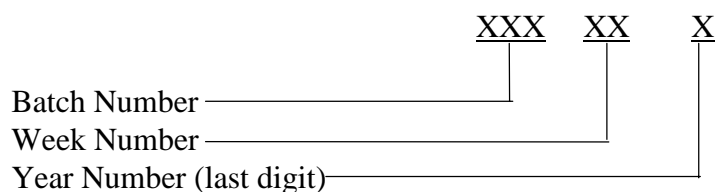
Connectors are available in single and double row variations. Contacts may be gold/tin, gold or tin plated.

2. MARKING OF COMPONENT AND/OR PACKAGE.

The marking shall appear on the component and/or package and shall be of the following style:



The Batch Code shall appear on the package, and shall be of the following style:



The Batch Number is 001 to 999 repeated each week.

3. RATINGS.

3.1. MATERIAL.

Female Housing	Polyester UL94V-0
Female Contacts	Phosphor Bronze
Male Mouldings.....	Polyester UL94V-0 or High Temp. Thermoplastic UL94V-0
Male Contacts	Phosphor Bronze

3.2. ELECTRICAL CHARACTERISTICS.

Current per contact in isolation, at an ambient temperature of 25°C	2.0A max
Current per contact through all contacts, at an ambient temperature of 25°C.....	1.0A max
Voltage proof.....	650V rms at 50Hz (sea level)
Contact resistance (initial).....	20mΩ max (tin), 15mΩ max (gold)
Contact resistance (after conditioning).....	30mΩ max (tin), 20mΩ max (gold)
Insulation resistance (initial)	1,000MΩ min
Insulation resistance (after conditioning)	100MΩ min

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3. RATINGS (continued).

3.3. ENVIRONMENTAL CHARACTERISTICS.

Environmental Classification	40/105/21
Low air pressure severity.....	300 mbar

3.4. MECHANICAL CHARACTERISTICS.

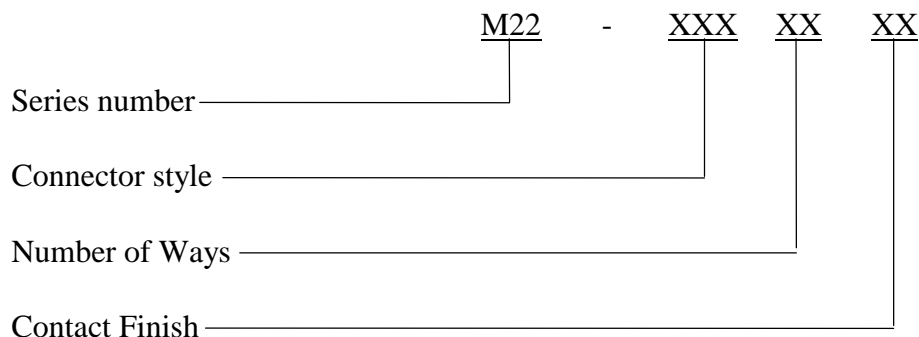
Durability.....	300 operations (Gold), 50 operations (Tin)
High temperature, long term (current as in section 3.1.).....	1000 hours at 70°C
High temperature, short term (no electrical load).....	250 hours at 85°C
Insertion and withdrawal forces (n = No. of contacts)	
Maximum insertion force.....	2.0N x n
Minimum insertion force	0.8N x n
Maximum withdrawal force.....	1.0N x n
Minimum withdrawal force	0.3N x n
Insertion and withdrawal forces for M22-634 (n = No. of contacts)	
Maximum insertion force.....	2.0N x n
Minimum insertion force	0.5N x n
Maximum withdrawal force.....	1.5N x n
Minimum withdrawal force	0.5N x n
Insertion and withdrawal forces for M22-644 (n = No. of contacts)	
Maximum insertion force.....	2.5N x n
Minimum insertion force	0.5N x n
Maximum withdrawal force.....	2.0N x n
Minimum withdrawal force	0.8N x n
Contact retention in moulding	5N (Female), 4N (Plug)
Contact holding force	0.2N min

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APPENDIX 1 - ORDERING INFORMATION.

Connectors are ordered as follows (for detailed order codes see current catalogue):



A1.1. SERIES NUMBER.

M22 = 2mm pitch. M22 to appear on all orders.

A1.2. CONNECTOR STYLE.

A three-digit number designating connecting style, i.e.:

NO.	GENDER	ORIENTATION	TAIL TYPE	NO. OF ROWS
201	Male	Vertical	P.C. Tail	Single row
202	Male	Vertical	P.C. Tail	Double row
203	Male	Horizontal	P.C. Tail	Single row
204	Male	Horizontal	P.C. Tail	Double row
208	Male	Vertical Bottom Entry	P.C. Tail	Double row
531	Male	Vertical	Surface Mount	Single row
532	Male	Vertical	Surface Mount	Double row
611	Female	Vertical	P.C. Tail	Single row
612	Female	Vertical	P.C. Tail	Double row
621	Female	Horizontal	P.C. Tail	Single row
622	Female	Horizontal	P.C. Tail	Double row
634	Female	Vertical	Surface Mount	Double row
644	Female	Bottom Entry	P.C. Tail	Double row

A.2.3. NUMBER OF WAYS.

Two digits indicating number of ways per row, 02 to 50.

A.2.4. CONTACT FINISH.

06 = Tin 22 = Selective Gold.

EXAMPLE:

M22-6212522 = 25+25 way double row vertical female socket assembly with selective gold contacts.

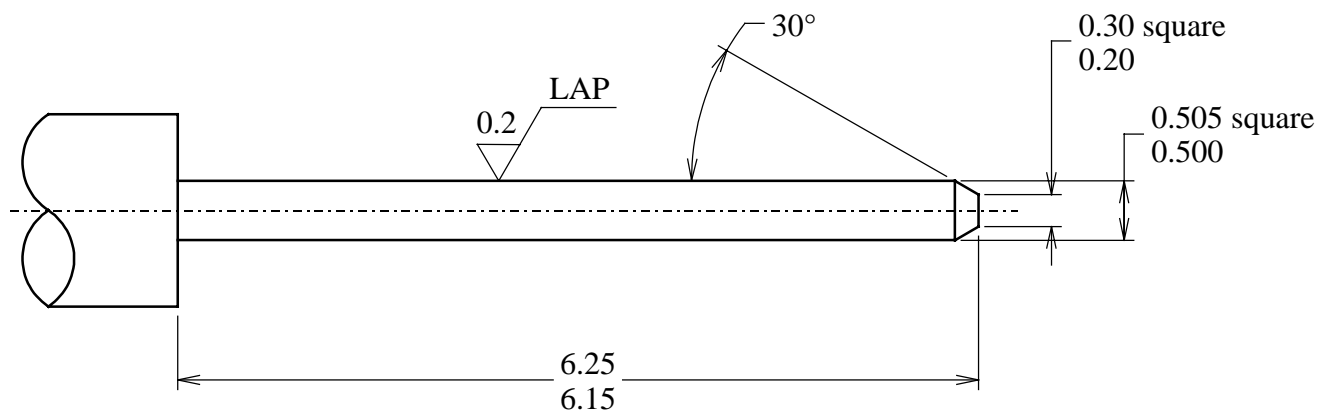
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APPENDIX 2 - GAUGES.

NOTES:

1. Material = Steel to BS1407 or equivalent.
2. Gauging surfaces to be hardened/ground, 650 HV5 min.
3. These gauges to be used for testing fully assembled components only.
4. Ultimate wear limit 0.005mm is allowable on gauging dimensions.

A2.1. SIZING GAUGE.



A2.2. HOLDING GAUGE (after conditioning)

