

COMPONENT SPECIFICATION

M22 SERIES CONNECTORS

AUGUST 2016

CONTENTS:

SECTION	TITLE	PAGE
1	Description of Connector and Intended Application	2
2	Marking of Connector and/or Package	2
3	Ratings	2
Appendix 1	Gauges	5

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 BS8888.
4. Unless otherwise stated, all dimensions are maximum.

PREPARED BY: *Matthew Perren*

APPROVED BY:.....

COMPONENT SPECIFICATION
M22 SERIES CONNECTORS

1. DESCRIPTION OF CONNECTOR AND INTENDED APPLICATION.

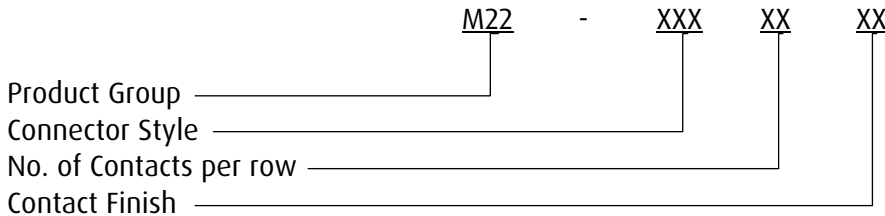
A range of 2mm pitch square pin connectors for interconnecting board to board. The socket is a box section design with barbs, to locate and hold in an insulated housing. Terminations are available for through-board solder or surface mount in a vertical mounting.

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.

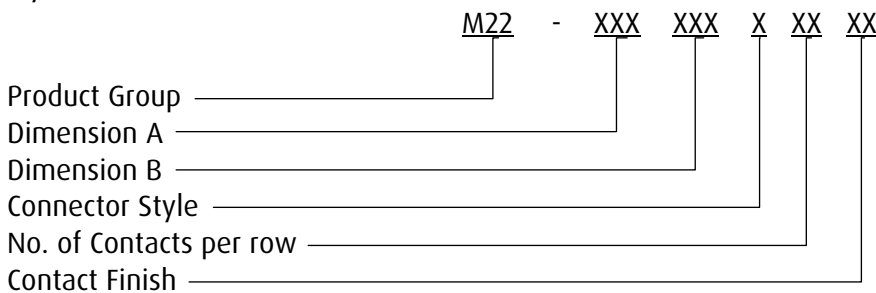
Connectors are available in single and double row variations. Contacts may be gold with tin tails, all-over gold or all-over tin plated.

2. MARKING OF THE CONNECTOR AND/OR PACKAGE (ORDER CODE).

The marking (order code) shall appear on the package and shall be of the following style:



The marking (order code) for a pin header variant shall appear on the package and shall be of the following style:



For details of Connector Style, Finish and No. of Contacts per row, see individual drawings or Harwin catalogue.

3. RATINGS.

For all M22 Pin Headers, including Pin header variants (detailed below as "M22-PH"), but excluding M22-220, 221 and 241. Note: individual components may exceed above ratings – check individual customer information sheets.

3.1. MATERIAL & FINISH.

Moulding Material:

For PC Tail or SMT connectors High Temperature Thermoplastic, UL94V-0

For Cable connectors..... See individual drawing

Contact Material Copper alloy

Contact Finish..... See individual drawing

COMPONENT SPECIFICATION
M22 SERIES CONNECTORS

3. RATINGS (CONTINUED)

3.2. ELECTRICAL CHARACTERISTICS.

Current Rating (per contact):	
M22-301/302/304/305	1A max
Other	2A max
Contact Resistance	20mΩ max
Dielectric Withstanding Voltage (Voltage Proof)	500V AC/DC for 1 minute
Insulation Resistance.....	1,000MΩ min

3.3. ENVIRONMENTAL CHARACTERISTICS.

Operating Temperature Range:	
M22-301/302/304/305	-25°C to +85°C
M22-220/221/306/307/308	-25°C to +105°C
Others	-40°C to +105°C
Vibration:	
M22-PH/241/532/533/543/634/636/654/655	50-2000Hz, 3.13G _{rms} , duration 15mins in each axis
Other	Not tested
Shock:	
M22-PH/241//532/533/543/634/636/654/655.....	30G for 11ms
Other	Not tested

3.4. MECHANICAL CHARACTERISTICS.

Durability:	
M22-307	1 operation MAX*
M22-306/308.....	100 operations
Others:	300 operations
Insertion force (maximum):	
M22-304/305	2.94N per contact
M22-306/308.....	6.9N per contact
M22-533/543/634/636/654/655/713/714	2.0N per contact
Withdrawal force (minimum):	
M22-304/305/306/308	0.98N per contact
M22-533/543/634/636/654/655/713/714	0.2N per contact
Contact Retention force (minimum):	
M22-PH/220/221/306/308/530.....	9.8N per contact
M22-241/532/533/543/655/713/714.....	4.9N per contact

3.5. SOLDERING DATA.

Solderability (for PC Tail & SMT products):	
M22-220/221	235°C for 3 seconds
M22-PH/241/532/533/543/634/636/655	245°C for 5 seconds
M22-530.....	250°C for 5 seconds

*M22-307 is not designed to be pulled apart or separated easily. This connector is ideal for one cycle only.

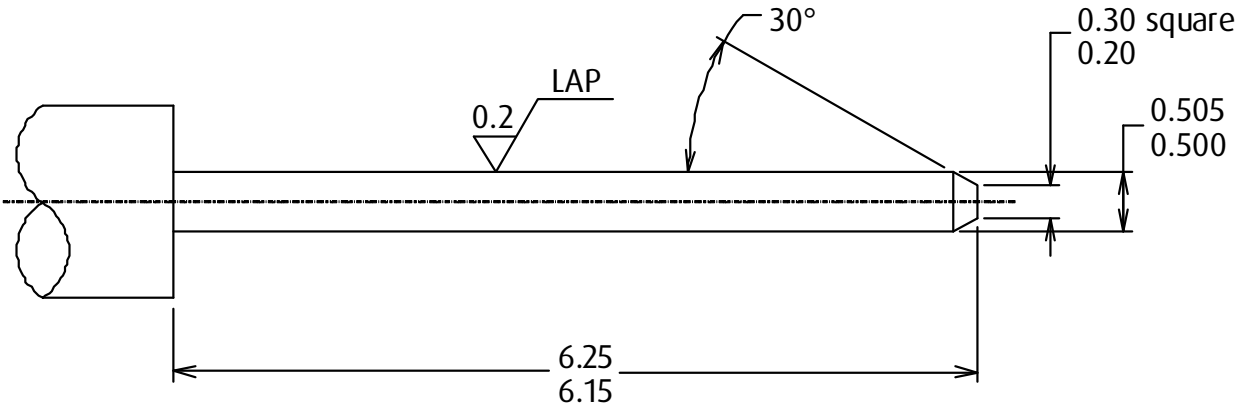
COMPONENT SPECIFICATION
M22 SERIES CONNECTORS

APPENDIX 1 - 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.

A1.1. SIZING GAUGE.



A1.2. HOLDING GAUGE (after conditioning)

