COMPONENT SPECIFICATION

M22 SERIES CONNECTORS

AUGUST 2016

CONTENTS:

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:.....

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1. DESCRIPTION OF CONNECTOR AND INTENDED APPLICATION.

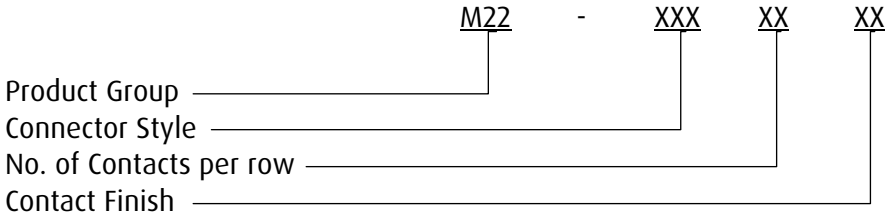
A range of 2mm pitch square pin connectors for interconnecting board to board. The socket is a box section design with barbs, to locate and hold in an insulated housing. Terminations are available for through-board solder or surface mount in a vertical mounting.

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.

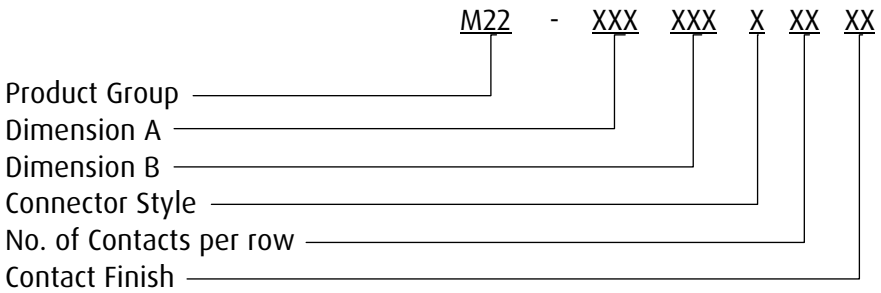
Connectors are available in single and double row variations. Contacts may be gold with tin tails, all-over gold or all-over tin plated.

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

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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.

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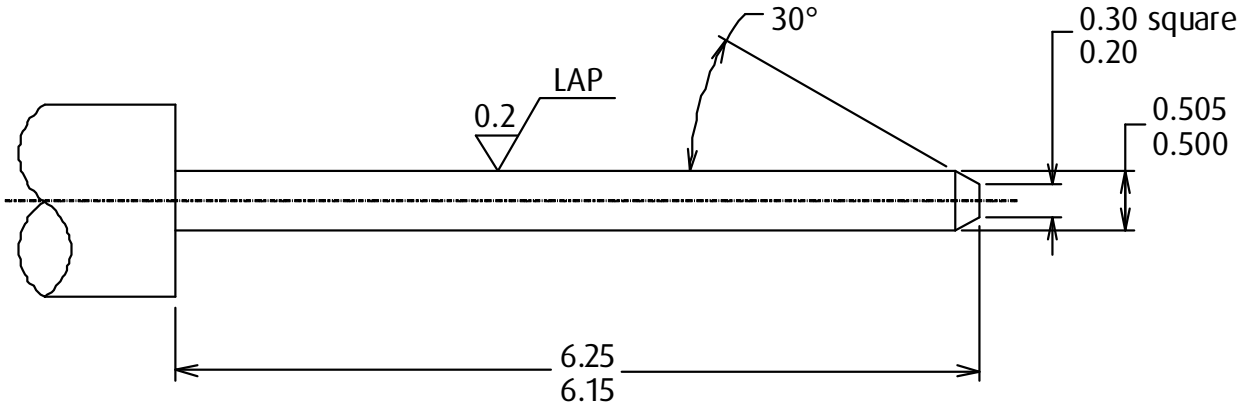
APPENDIX 1 - GAUGES.

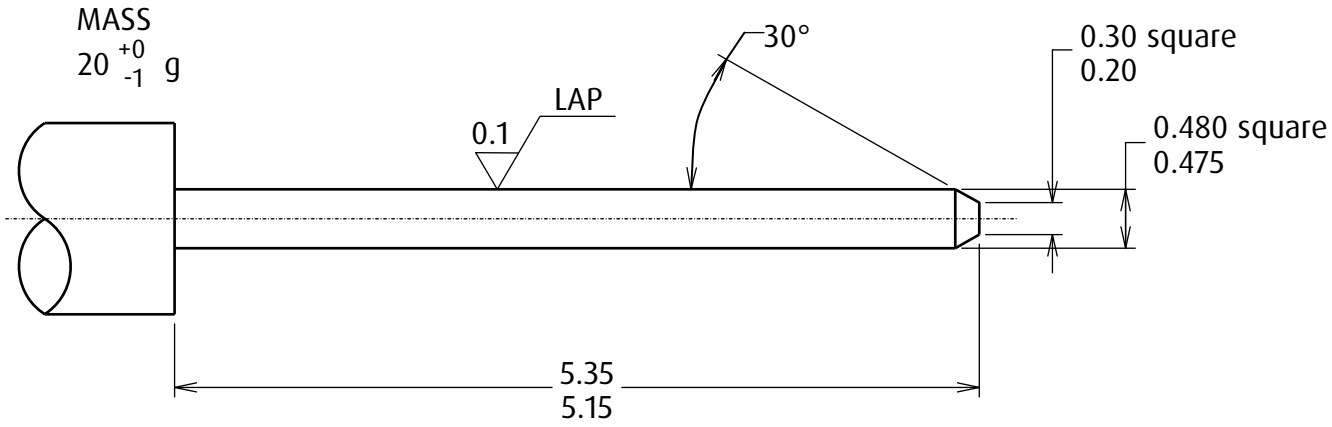
NOTES:

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)



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Harwin:

M22-5300205R M22-5301005 M22-5300305 M22-5300305R M22-5300405 M22-5300505 M22-5300505R M22-5300605