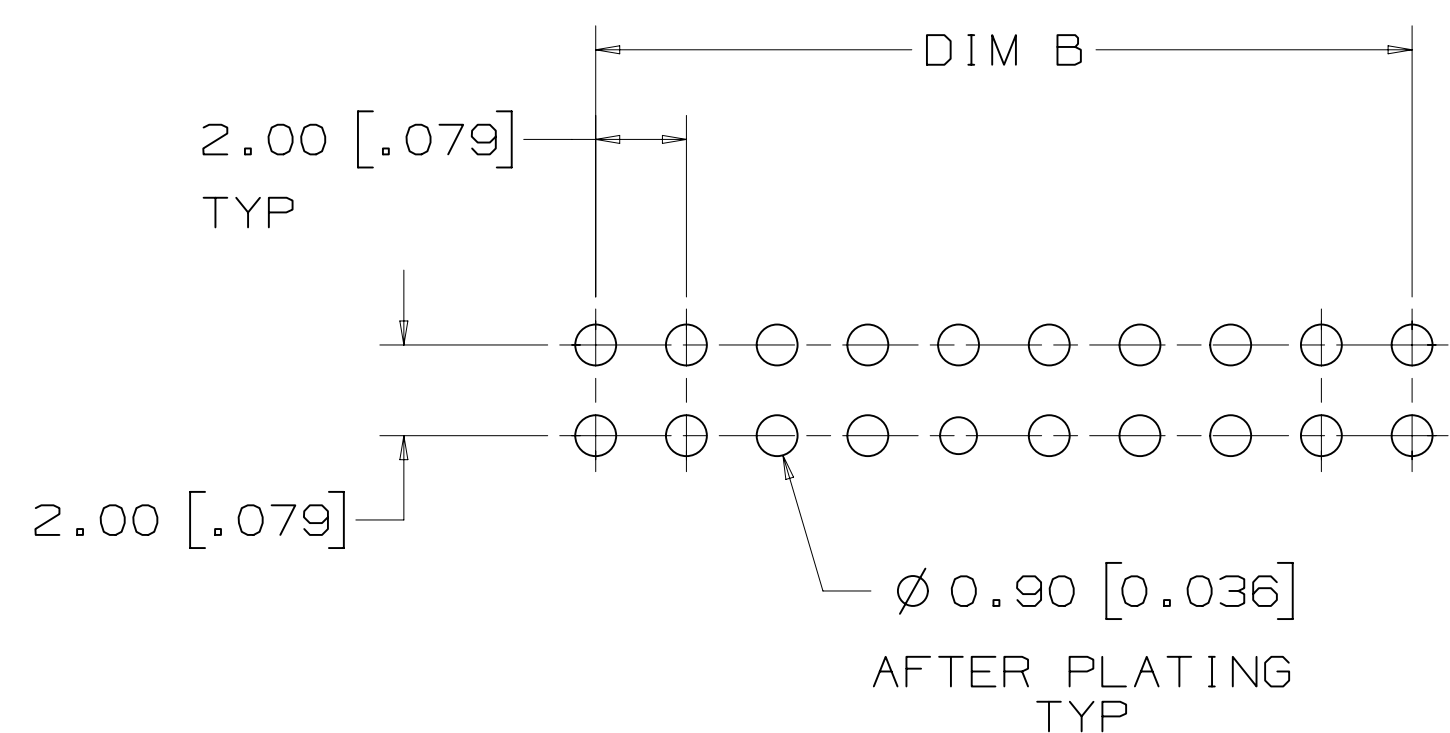


3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length [3] and Extended Length [4]



RECOMMENDED PCB HOLE PATTERN
TOLERANCE = 0.05 [.002]



| PERFORMANCE [5] [7] | |
|-----------------------------|--------------------------------------|
| CURRENT: | 1A, 6 LINES ENERGIZED |
| INSULATION RESISTANCE: | >1 X 10 ⁹ OHMS AT 500 VDC |
| WITHSTANDING VOLTAGE: | 500 VACrms AT SEA LEVEL |
| TEMPERATURE RATING: | -55° C TO +105° C |
| SOLDER PROCESS TEMPERATURE: | 260° C MAX PER IPC/JEDEC J-STD-020D |

REFERENCE TABLE ON SHEET 4
FOR AVAILABLE TAIL POSITIONS AND
SOLDER TAIL LENGTHS

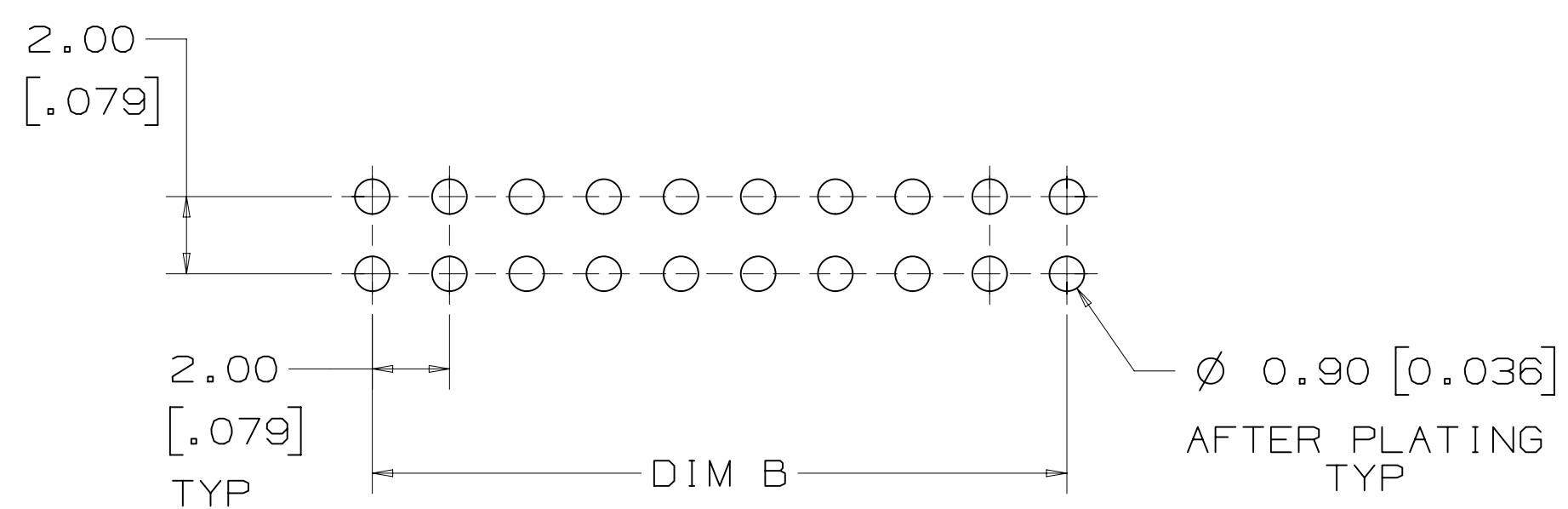
METRIC [ENGLISH]

NOTES

- 1 MATERIAL:
BODY: HIGH TEMPERATURE
GLASS FILLED LCP, BLACK
UL94V-0
CONTACTS: COPPER ALLOY
- 2 PLATING:
2.03-3.81 μm [80-150 μin]
NICKEL UNDERPLATE.
0.38 μm [15 μin] OR
0.76 μm [30 μin] AVG GOLD
ON WIPING AREA.
5.08 μm [200 μin] MIN
MATTE TIN ON SOLDER TAILS.
- 3 STANDARD LENGTH HEADERS
MATE WITH 3M™ SOCKETS,
158 SERIES (REFERENCE 3M
DRAWING 78-5100-2358-9).
- 4 EXTENDED LENGTH HEADERS
MATE WITH 3M™ SOCKETS,
870 SERIES.
- 5 FOR PRODUCT
SPECIFICATIONS AND
WARRANTY INFORMATION SEE
3M 78-5102-0078-1.
- 6 SEE THE REGULATORY
INFORMATION APPENDIX (RIA)
IN THE "ROHS COMPLIANCE"
SECTION OF
WWW.3MCONNECTOR.COM FOR
COMPLIANCE INFORMATION
(RIA E1 & C1 APPLY).
- 7 IN THE EVENT OF CONFLICT
BETWEEN THIS DATA AND
THAT CONTAINED IN THE
PRODUCT SPECIFICATION,
THE PRODUCT SPECIFICATION
TAKES PRECEDENT.

| | | | | | | |
|--|---------------|--|-----|--|------|------|
| DESIGN REFERENCE | NEXT ASSEMBLY | REV | ECO | ISSUE DATE AND DESCRIPTION | DRFT | CHKD |
| | | | | | | |
| DIVISION DO NOT SCALE DRAWING THIRD ANGLE PROJECTION INTERPRET PER ASME Y14.5 - 1994 MAX SURFACE ROUGHNESS 125 <input type="checkbox"/> ALL SURFACES <input checked="" type="checkbox"/> MARKED ONLY | | SCALE 6 1 TOLERANCES EXCEPT AS NOTED INCHES .00 ± .000 ± .0000 ± MILLIMETERS 0 ± .00 ± .00 ± 0.13 .000 ± ANGLES ±1° | | A 30741 OCT 28, 2010 INITIAL RELEASE L. SCHMIDT DATE JUL 29, 2010 DATE S. FELDMAN DATE AUG 09, 2010 DIVISION CODE 3M Center St. Paul, MN 55144 © 3M COPYRIGHT 2010 This document and the information it contains are 3M property and may not be reproduced or further distributed without 3M permission, or used or disclosed other than for 3M authorized purposes. All rights reserved. TITLE 3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES CAGE NUMBER D 78-5100-2359-7 MODEL SHT 1 OF 4 | | |

3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3 and Extended Length 4



RECOMMENDED PCB HOLE PATTERN
TOLERANCE = ±0.05 [.002]



POLARIZATION SLOT
RIGHT ANGLE HEADER
6-12 POSITIONS ONLY



POLARIZATION SLOT AND
DUAL FRICTION LATCHES
RIGHT ANGLE HEADER
14-50 POSITIONS



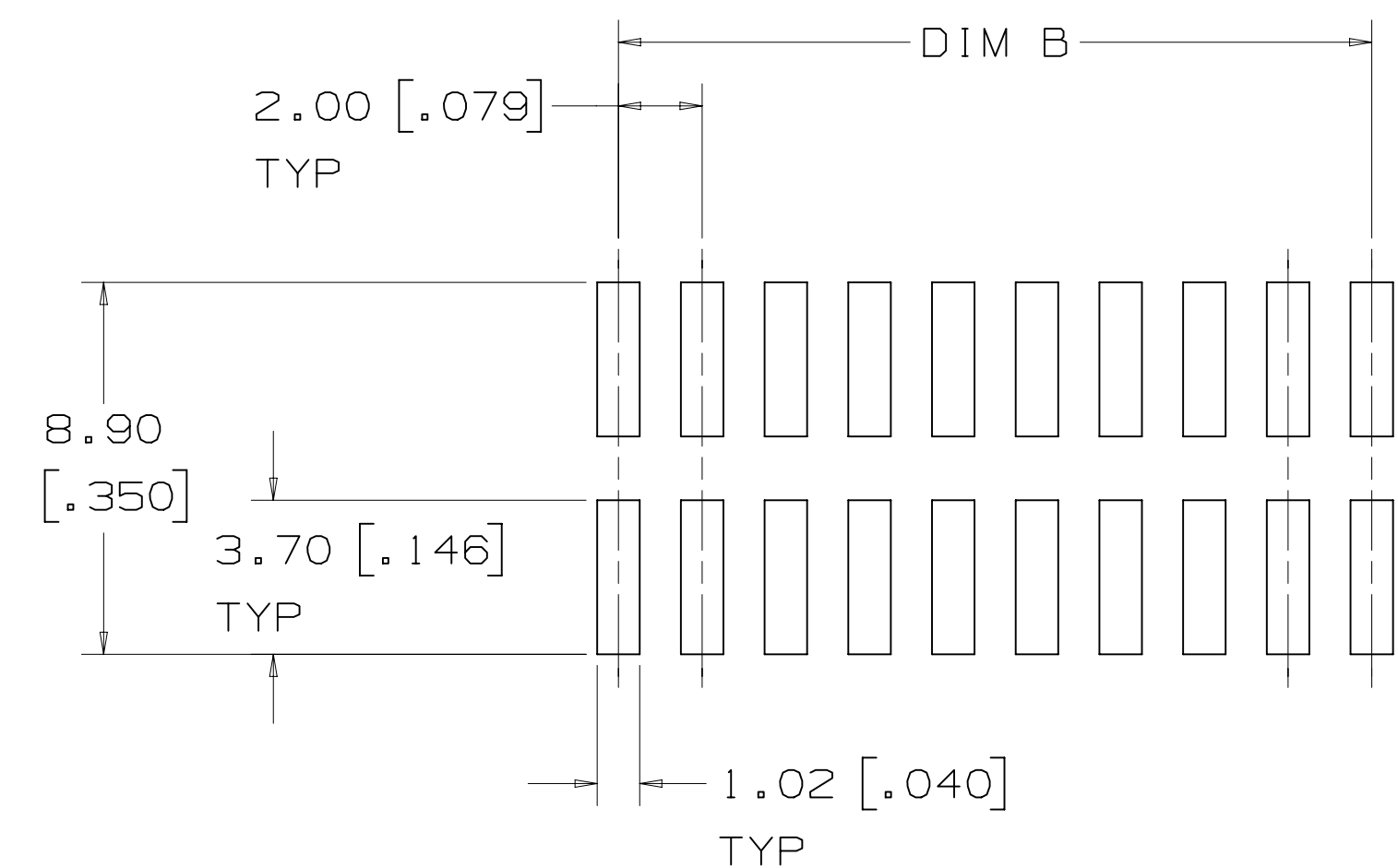
SINGLE FRICTION LATCH
RIGHT ANGLE HEADER
6-12 POSITIONS ONLY

REFERENCE TABLE ON SHEET 4
FOR AVAILABLE POSITIONS AND
SOLDER TAIL LENGTHS

METRIC [ENGLISH]

| | | | | | | |
|---------------------------------|---------------|---|------|--|------|------|
| DESIGN REFERENCE | NEXT ASSEMBLY | REV | ECO | ISSUE DATE AND DESCRIPTION | DRFT | CHKD |
| | | | | | | |
| DIVISION | | DIVISION CODE | | DATE | | |
| DO NOT SCALE DRAWING | | SCALE 4/1 | | TOLERANCES EXCEPT AS NOTED | | |
| THIRD ANGLE PROJECTION | | INCHES | | MILLIMETERS | | |
| INTERPRET PER ASME Y14.5 - 1994 | | 0 ± | | .00 ± | | |
| MAX SURFACE ROUGHNESS | | .00 ± 0.13 | | .000 ± | | |
| 125 | | ALL SURFACES | | .000 ± | | |
| ✓ | | MARKED ONLY | | ANGLES ±1° | | |
| A 30741 | | OCT 28, 2010 | | LDS SF | | |
| L. SCHMIDT | | JUL 29, 2010 | | S FELDMAN | | |
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| TITLE | | 3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES | | | | |
| CAGE NUMBER | SIZE | DRAWING NO. | REV. | | | |
| D | | 78-5100-2359-7 | A | | | |
| MODEL | DEF | | YES | | NO | |
| | | SHT 2 OF 4 | | | | |

3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3 and Extended Length 4



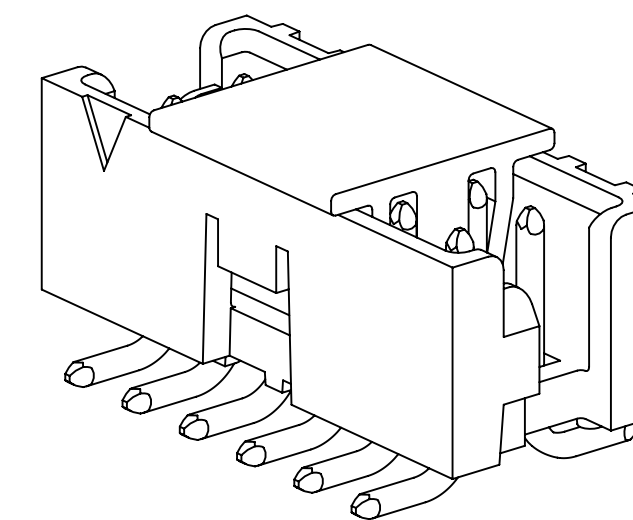
RECOMMENDED PCB PAD PATTERN
TOLERANCE = ±0.08 [.003]



POLARIZATION SLOT
SURFACE MOUNT HEADER
6-12 POSITIONS ONLY



POLARIZATION SLOT AND
DUAL FRICTION LATCHES
SURFACE MOUNT HEADER
14-50 POSITIONS



SINGLE FRICTION LATCH
SURFACE MOUNT HEADER
6-12 POSITIONS ONLY

REFERENCE TABLE ON SHEET 4
FOR AVAILABLE POSITIONS

METRIC (ENGLISH)

| | | | | | | |
|---------------------------------|---------------|---------------|-----|----------------------------|------|------|
| DESIGN REFERENCE | NEXT ASSEMBLY | REV | ECO | ISSUE DATE AND DESCRIPTION | DRFT | CHKD |
| | | | | | | |
| DIVISION | | DIVISION CODE | | TITLE | | |
| DO NOT SCALE DRAWING | | SCALE 4/1 | | TOLERANCES EXCEPT AS NOTED | | |
| THIRD ANGLE PROJECTION | | MILLIMETERS | | INCHES | | |
| INTERPRET PER ASME Y14.5 - 1994 | | 0 ± | | .00 ± | | |
| MAX SURFACE ROUGHNESS | | .00 ± 0.13 | | .000 ± | | |
| 125 / ALL SURFACES | | .000 ± | | .000 ± | | |
| ✓ MARKED ONLY | | ANGLES ±1° | | CAGE NUMBER | | |
| | | | | DRAWING NO. | | |
| | | | | REV. | | |
| | | | | D 78-5100-2359-7 A | | |
| | | | | SHT 3 OF 4 | | |

78-5100-2359-7
DRAWING NUMBER

A

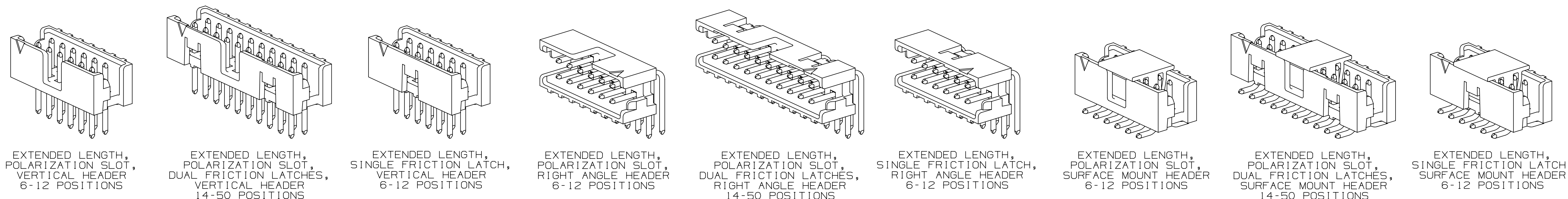
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3

STANDARD LENGTH HEADERS ARE AVAILABLE



3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Extended Length 4

CALL 3M INTERCONNECT SOLUTIONS AT 800-225-5373 FOR AVAILABILITY OF EXTENDED LENGTH HEADERS



ORDERING INFORMATION

TIER 1 - BEST
 1591XX-XXXX

TIER 1 = BEST 0.76 μm [30 μin] GOLD

CONTACT TAIL LENGTH
 2 = 2.84 mm [.112]
 3 = 3.94 mm [.155]

POLARIZATION/LATCHING
 0 = POLARIZATION SLOT AND DUAL FRICTION LATCHES (14-50 POSITIONS ONLY)
 1 = POLARIZATION SLOT (6-12 POSITIONS ONLY)
 2 = SINGLE FRICTION LATCH (6-12 POSITIONS ONLY)

POSITION COUNT (SEE TABLE)

PART CONFIGURATION
 2 = VERTICAL SMT
 5 = RIGHT ANGLE THRU HOLE
 6 = VERTICAL THRU HOLE

BODY LENGTH
 0 = STANDARD LENGTH (MATES TO 158 SERIES)
 1 = EXTENDED LENGTH (MATES TO 870 SERIES)

TIER 2 - BETTER
 1592XX-XXXX

TIER 2 = BETTER 0.38 μm [15 μin] GOLD

CONTACT TAIL LENGTH
 2 = 2.84 mm [.112]
 3 = 3.94 mm [.155]

POLARIZATION/LATCHING
 0 = POLARIZATION SLOT AND DUAL FRICTION LATCHES (14-50 POSITIONS ONLY)
 1 = POLARIZATION SLOT (6-12 POSITIONS ONLY)
 2 = SINGLE FRICTION LATCH (6-12 POSITIONS ONLY)

POSITION COUNT (SEE TABLE)

PART CONFIGURATION
 2 = VERTICAL SMT
 5 = RIGHT ANGLE THRU HOLE
 6 = VERTICAL THRU HOLE

BODY LENGTH
 0 = STANDARD LENGTH (MATES TO 158 SERIES)
 1 = EXTENDED LENGTH (MATES TO 870 SERIES)

| NUMBER OF POSITIONS | SHROUDED BOX HEADER | | | | | | | |
|---------------------|---------------------|---------------|---------------|---------------|---------------|-------------|-------------|--|
| | DIM A | | DIM B | DIM C | | DIM D | | |
| | STANDARD | EXTENDED | | STANDARD | EXTENDED | | | |
| 6 | 8.35 [.329] | 9.52 [.375] | 4.00 [.157] | 6.83 [.269] | 7.99 [.315] | 2.84 [.112] | 3.94 [.155] | |
| 8 | 10.35 [.407] | 11.52 [.453] | 6.00 [.236] | 8.83 [.347] | 9.99 [.393] | 2.84 [.112] | 3.94 [.155] | |
| 10 | 12.35 [.486] | 13.52 [.532] | 8.00 [.315] | 10.83 [.426] | 11.99 [.472] | 2.84 [.112] | 3.94 [.155] | |
| 12 | 14.35 [.565] | 15.52 [.611] | 10.00 [.394] | 12.83 [.505] | 13.99 [.551] | 2.84 [.112] | 3.94 [.155] | |
| 14 | 16.36 [.644] | 17.52 [.690] | 12.00 [.472] | 14.83 [.584] | 15.99 [.630] | 2.84 [.112] | 3.94 [.155] | |
| 16 | 18.35 [.722] | 19.52 [.768] | 14.00 [.551] | 16.83 [.662] | 17.99 [.708] | 2.84 [.112] | 3.94 [.155] | |
| 20 | 22.35 [.880] | 23.52 [.926] | 18.00 [.709] | 20.83 [.820] | 21.99 [.866] | 2.84 [.112] | 3.94 [.155] | |
| 22 | 24.35 [.959] | 25.52 [1.005] | 20.00 [.787] | 22.83 [.899] | 23.99 [.945] | 2.84 [.112] | 3.94 [.155] | |
| 24 | 26.35 [1.037] | 27.52 [1.083] | 22.00 [.866] | 24.83 [.977] | 25.99 [1.023] | 2.84 [.112] | 3.94 [.155] | |
| 26 | 28.35 [1.116] | 29.52 [1.162] | 24.00 [.945] | 26.83 [1.056] | 27.99 [1.102] | 2.84 [.112] | 3.94 [.155] | |
| 30 | 32.35 [1.274] | 33.52 [1.320] | 28.00 [1.102] | 30.83 [1.214] | 31.99 [1.260] | 2.84 [.112] | 3.94 [.155] | |
| 34 | 36.35 [1.431] | 37.52 [1.477] | 32.00 [1.260] | 34.83 [1.371] | 35.99 [1.417] | 2.84 [.112] | 3.94 [.155] | |
| 40 | 42.35 [1.667] | 43.52 [1.713] | 38.00 [1.496] | 40.83 [1.607] | 41.99 [1.653] | 2.84 [.112] | 3.94 [.155] | |
| 44 | 46.35 [1.825] | 47.52 [1.871] | 42.00 [1.654] | 44.83 [1.765] | 45.99 [1.811] | 2.84 [.112] | 3.94 [.155] | |
| 50 | 52.35 [2.061] | 53.52 [2.107] | 48.00 [1.890] | 50.83 [2.001] | 51.99 [2.047] | 2.84 [.112] | 3.94 [.155] | |

METRIC (ENGLISH)

| | | | | | | |
|------------------------|--|----------------------------------|--------------|---|----------------|-------------|
| DESIGN REFERENCE | NEXT ASSEMBLY | REV | ECO | ISSUE DATE AND DESCRIPTION | DRFT | CHKD |
| | | | | INITIAL RELEASE | LDS | SF |
| DISTRICT CODES | | DRP | DATE | MFG | DATE | |
| | | L. SCHMIDT | JUL 29, 2010 | | | |
| DIVISION | DIVISION CODE | CHKD | DATE | APPV | DATE | |
| | | S FELDMAN | AUG 09, 2010 | | | |
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| THIRD ANGLE PROJECTION | INTERPRET PER ASME Y14.5 - 1994 | MILLIMETERS | | TITLE | | |
| | | 0 ± .00 ± .000 ± 2000 ± | | 3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES | | |
| MAX SURFACE ROUGHNESS | ALL SURFACES | .00 ± .00 ± .000 ± | | CAGE NUMBER | SIZE | DRAWING NO. |
| 125 | <input checked="" type="checkbox"/> ALL SURFACES | .00 ± .00 ± .000 ± | | D | 78-5100-2359-7 | REV. A |
| | <input checked="" type="checkbox"/> MARKED ONLY | ANGLES ±1° | | MODEL | SHT 4 OF 4 | |