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ELECTRONICS

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Jameco Part Number 1299876

■ No exposed leads to meet British Telecom 4000V test

 Contact tips guided within FCC-specified target zone— Positive alignment prevents shorting

■ 100% tested for hi-pot and continuity

Reference Information

Product Specification: PS-42410

Packaging: Tray UL File No.: E107635 CSA File No.: LR19980

Mates With: WE Co. and FCC 68 plugs

Designed In: Inches

Electrical

Voltage: 125V Current: 1.5A

Contact Resistance: $10m\Omega$ max.

Dielectric Withstanding Voltage: 1000V AC rms Insulation Resistance: 500 M Ω min.

Mechanical

Durability: 500 cycles min.

Physical

Housing: Black glass-filled polyester, UL 94V-0

Contact: Phosphor Bronze

Plating: $1.27\mu m$ (50 μ ") min. Gold in contact area and $1.27\mu m$ (50 μ ") Tin/Lead on solder tails both

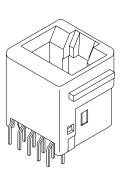
over Nickel overall

Operating Temperature: -40 to +80°C

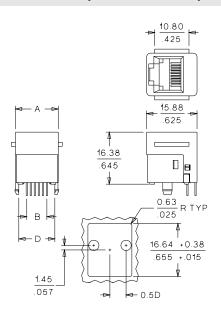
nolex[®] Modular Jack

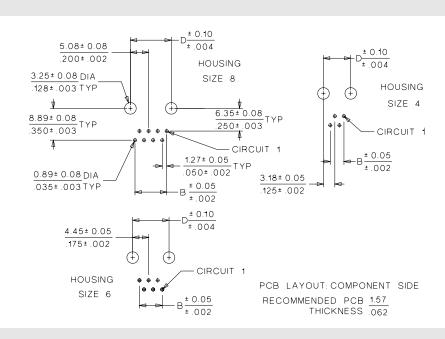
42410

Vertical, Standard Profile For .062 and .125" PCB



CATALOG DRAWING (FOR REFERENCE ONLY)





ORDERING INFORMATION AND DIMENSIONS

| Circuits | l | | Orde | er No. | Dimension | | | | | |
|----------|--------------------|-----------------------|------------|-------------|-----------------------|--------------|-------------|--------------|--|--|
| | Loaded Contacts | .062 | " PCB | .125 | " PCB | | | | | |
| | Comucis | Flush Mount | Flangeless | Flush Mount | Flangeless | A | В В | D | | |
| 6 | 2 | 42410-6456 | 42410-6458 | 42410-6552 | 42410-6554 | 13.46 (.530) | 1.27 (.050) | 10.16 (.400) | | |
| 6 | 4 | 42410-6312 | 42410-6314 | 42410-6408 | 42410-6410 | 13.46 (.530) | 3.81 (.150) | 10.16 (.400) | | |
| 6 | 6 | 42410-6168 | 42410-6170 | 42410-6264 | 42410-6264 42410-6266 | | 6.35 (.250) | 10.16 (.400) | | |
| 8 | 2 | 42410-9176 | 42410-9178 | 42410-9368 | 42410-9370 | 15.49 (.610) | 1.27 (.050) | 11.43 (.450) | | |
| 8 | 4 | 42410-8888 | 42410-8890 | 42410-9080 | 42410-9082 | 15.49 (.610) | 3.81 (.150) | 11.43 (.450) | | |
| 8 | 6 | 42410-8600 42410-8602 | | 42410-8792 | 42410-8794 | 15.49 (.610) | 6.35 (.250) | 11.43 (.450) | | |
| 8 | 8 | 42410-8312 | 42410-8314 | 42410-8504 | 42410-8506 | 15.49 (.610) | 8.89 (.350) | 11.43 (.450) | | |

Note: Contact Molex for keying order numbers RJ-45 only

0-56 MX01



VERTICAL MODULAR JACKS

1.0 SCOPE

This Product Specification covers the 1.27 mm (.050 inch) centerline (pitch) printed circuit board (PCB) modular jack connector series with selective gold and tin-lead plating.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

Low Profile Vertical Modular Jacks

42410

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate sales drawings (SDA-42410-****) for information on dimensions, materials, plating and markings.

2.3 SAFETY AGENCY APPROVALS

UL File Number.....E107635 CSA File Number.....LR19980

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

FCC Rules and Regulations, Part 68, Subpart F REA Bulletin 345-81, PE-76; Specification for modular telephone set hardware ANSI/EIA/TIA-568

IEC-60603-7

UL 1863

MIL-STD-202; General requirements for test specifications

4.0 RATINGS

4.1 VOLTAGE

56.5 V DC

150 V_{RMS} AC (Ringing voltage only)

4.2 CURRENT

1.5 Amps @ 25°C

4.3 TEMPERATURE

Operating: - 40°C to + 70°C

| REVISION: | ECR/ECN INFORMATION: | TITLE: PRODU | SHEET No. | | | | | | | | |
|---|----------------------|--|---------------------------|--------|---------|--|--|--|--|--|--|
| С | EC No: UCR2002-0267 | | VERTICAL MODULAR JACKS | | | | | | | | |
| | DATE: 2001 / 09/19 | Mo | | | | | | | | | |
| DOCUMEN | T NUMBER: | CREATED / REVISED BY: | CHECKED BY: | APPRO\ | /ED BY: | | | | | | |
| | PS-42410 | MKAMAR 01/09/19 MKAMAR 01/09/19 BWIRKUS 01/0 | | | | | | | | | |
| TEMPLATE FILENAME: PRODUCT_SPEQSIZE_A](V.1).DOC | | | | | | | | | | | |



5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

| DESCRIPTION | TEST CONDITION | REQUIREMENT |
|---------------------------------------|---|--|
| Contact Resistance (Low Level) | Mate connectors: apply a maximum voltage of 20 mV and a current of 15 mA. (Measurement locations in Section 7.0) | 10 milliohms MAXIMUM [initial] |
| Insulation Resistance | Unmated connector, mounted to a PCB: apply a voltage of 500 VDC between adjacent terminals and between terminals to ground. | 500 Megohms MINIMUM |
| Dielectric Withstanding Voltage | Mate connectors: apply a voltage of 1000 VAC for 1 minute between adjacent terminals and between terminals to ground. | No breakdown; current leakage < 5 mA |
| Temperature Rise | Mate connectors: measure the temperature rise at the rated current after: 96 hours | Temperature rise; +30°C MAXIMUM |

| C REVISION: | ECR/ECN INFORMATION: EC No: UCR2002-0267 DATE: 2001 / 09/19 | TROBE | PRODUCT SPECIFICATION VERTICAL MODULAR JACKS | | | | | | | | | | |
|------------------|--|---|--|-------------------|--------------------|--|--|--|--|--|--|--|--|
| DOCUMENT NUMBER: | | CREATED / REVISED BY: | APPRO' | VED BY: | | | | | | | | | |
| | PS-42410 | MKAMAR 01/09/19 MKAMAR 01/09/19 BWIRKUS 01/09 | | | | | | | | | | | |
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5.2 MECHANICAL REQUIREMENTS

| DESCRIPTION | TEST CONDITION | REQUIREMENT |
|--------------------------|--|--|
| Connector Mate Force | Mate connector at a rate of 25 ± 6 mm (1 ± 1/4 inch) per minute. (Gage dimensions in Section 7.0) | 22 N (5 lbf) MAXIMUM insertion force |
| Durability | Mate connectors up to 500 cycles at a maximum rate of 20 cycles per minute prior to Environmental Tests. | 10 milliohms MAXIMUM (change from initial) |
| Vibration (Random) | Mate connectors and vibrate per MIL-STD-202 | 10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond |
| Plug Retention Force | Apply an axial pullout force on the plug at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch). | 58 N (13 lbf) MINIMUM retention force |
| PCB Separation Forces | Apply a perpendicular static load on the plug at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch). | 4.5 N (1 lbf) MINIMUM withdrawal force before solder reflow 58 N (13 lbf) MINIMUM withdrawal force after solder reflow |

| REVISION: | ECR/ECN INFORMATION: | TITLE: PRODI | JCT SPECIFICATION | ON | SHEET No. | | | | | | |
|----------------------|----------------------|-----------------------|--|----|-----------|--|--|--|--|--|--|
| C | EC No: UCR2002-0267 | | VERTICAL | | | | | | | | |
| | DATE: 2001 / 09/19 | M | 3 of 5 | | | | | | | | |
| DOCUMEN [*] | T NUMBER: | CREATED / REVISED BY: | /ED BY: | | | | | | | | |
| | PS-42410 | MKAMAR 01/09/19 | MKAMAR 01/09/19 MKAMAR 01/09/19 BWIRKU | | | | | | | | |

TEMPLATE FILENAME: PRODUCT_SPEC[SIZE_A](V.1).DOC



5.3 ENVIRONMENTAL REQUIREMENTS

| DESCRIPTION | TEST CONDITION | REQUIREMENT |
|----------------------|--|--|
| Thermal (Cycling) | Connectors to be placed in 95% relative humidity. Maximum temperature change is 15°C/hour. Cycle linearly per chart below. Mate connectors; expose to 10 cycles of: Temperature °C Duration (Minutes) 30 to 5 120 Hold at 30 240 30 to 5 180 Hold at 5 180 | 10 milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at 500 VAC & Insulation Resistance: 500 Megohms MINIMUM & Visual: No Damage |

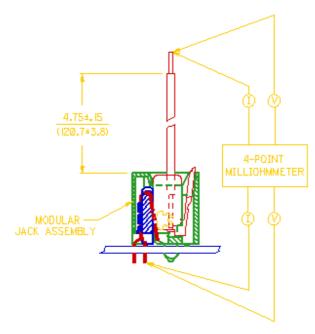
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| TEMPLATE FILENAME: PRODUCT_SPEQSIZE_A](V.1).DOC | | | | | | | | | | |



6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage. See appropriate sales drawings on Sheet 1 for packaging descriptions.

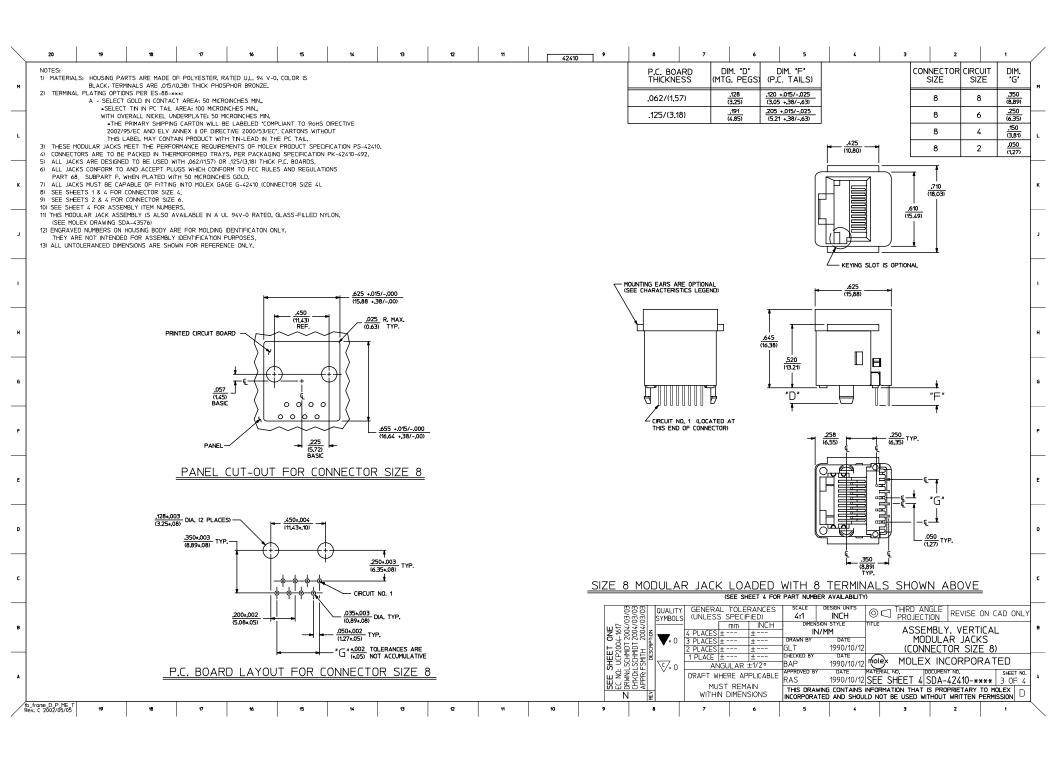
7.0 GAGES AND FIXTURES



TERMINATION RESISTANCE MEASUREMENT POINTS

8.0 OTHER INFORMATION

| REVISION: | ECR/ECN INFORMATION: | TITLE: PRODU | SHEET No. | | | | | | |
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| | ITEM NUMBER | CONNECTOR | 0F POSITIONS | BOARD THICKNESS | EARS F | PLATING OPTION | | | ITEM NUMBER | | ECTOR | OF POSITIONS | BOARD THICKNESS | OPTION | EARS OPTION | PLATING OPTION | | | | | | | | | |
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| | 42410-4168 | 4 POS. BODY | 4 | .062/(1.57) | YES | Α |] | | 42410-8312 | | S. BODY | 8 | .062/(1.57) | NO | YES | Α | | | | | | | | | |
| | 42410-4170 | | 1 | .062/(1.57) | NO VEE | A | 4 | | 42410-8314 | | 1 | | .062/(1,57) | NO | NO. | A | | | | | | | | | ١. |
| - | 42410-4264 42410-4266 | 4 POS, BODY | T | .125/(3.18) | YES NO | A | 1 | | 42410-8366 42410-8366 | | | | .062/(1.57) | YES YES | YES NO | A | | | | | | | | | - |
| 1 | 424.0 4200 | 14103, 0001 | - | ,123/13,10/ | 1 | | 1 | | 42410-850 | | 1 1 | | ,125/(3,18) | NO NO | YES | Ā | | | | | | | | | |
| | | 4 POS, BODY | 2 | ,062/(1,57) | YES | Α |] | | 42410-850 | 5 | | | .125/(3,18) | NO | N0 | Α | | | | | | | | | |
| | 42410-4314 | 1 1 | + | .062/(1,57) | NO YES | A | 1 | | 42410-855 | 2 | † | <u> </u> | ,125/(3,18) | YES | YES | A | | | | | | | | | |
| ĸ | 42410-4408 | 4 POS. BODY | 2 | 125/(3.18) 125/(3.18) | NO YES | A | 4 | | 42410-855 | 8 POS | s. BODY | 8 | .125/(3.18) | YES | N0 | Α | | | | | | | | | K |
| l l | 42410-4410 | 4 103, 8001 | | .12.3/\3,10/ | 1,10 | | J | | 42410-8600 | 8 POS | S. BODY | 6 | .062/(1.57) | NO | YES | А | | | | | | | | | |
| | | | | | | | | | 42410-8602 | | 4 | 4 | .062/(1.57) | NO | NO. | A | | | | | | | | | \vdash |
| | | | | | | | | | 42410-8648 | | | | ,062/(1,57) | YES | YES | Α | | | | | | | | | |
| ر | | | | | | | | | 42410-8650 | | | | .062/(1.57) | YES | NO NEC | A | | | | | | | | | ı |
| ■ | CI | ZE 6 VERTICA | ו אטט ועכה | ASSEMBI IES | : | | 1 | | 42410-8793 42410-8793 | | + | | ,125/(3,18) | NO NO | YES NO | A A | | | | | | | | | |
| | <u>a</u> | LL O VERTILA | | HARACTERIS | | | † | | 42410-8841 | | + + | + | .125/(3.18) | YES | YES | Ā | | | | | | | | | <u></u> |
| | ASSEMBLY | EXTERNAL | NUMBER | PC | | ERMINAL | 1 | | 42410-884 | | S. BODY | 6 | ,125/(3,18) | YES | NO | A | | | | | | | | | |
| | 는 ITEM | CONNECTOR | 0F | BOARD | EARS F | LATING | | | 1,0,00,000 | | nen. | | 0/0":== | 1 110 | \ \v== | | | | | | | | | | 1. |
| ' | NUMBER | SIZE | POSITIONS | THICKNESS | OPTION | OPTION | | | 42410-8888 42410-8898 | | s. BODY | 4 | .062/(1.57) | NO NO | YES NO | A A | | | | | | | | | ' |
| Ī | 42410-6168 | 6 POS. BODY | 6 | .062/(1.57) | YES | A | 1 | | 42410-893 | | 1 | Ť | .062/(1,57) | YES | YES | Ā | | | | | | | | | |
| | 42410-6170 | 4 | 4 | 062/(157) | NO NO | Α | 1 | | 42410-8931 | 3 | | | .062/(1,57) | YES | NO. | Α | | | | | | | | | |
| | 42410-6264 | + | t | .125/(3,18) | YES | A | | | 42410-9080 | | | | .125/(3.18) | NO | YES | Α | | | | | | | | | |
| н | 42410-6266 | 6 POS. BODY | 6 | .125/(3.18) | N0 | A | 4 | | 42410-9082 42410-9128 | | \vdash | | ,125/(3,18) | NO YES | NO YES | A | | | | | | | | | н |
| - | 42410-6312 | 6 POS. BODY | 4 | ,062/(1,57) | YES | Α | 1 | | 42410-9126 | | S. BODY | 4 | ,125/(3,18) | YES | NO NO | A | | | | | | | | | |
| | 42410-6314 | 4 | À | .062/(157) | NO NO | Α | 1 | | 1 | 1 | | • | 1 | | 1 | | | | | | | | | | |
| | 42410-6320 | | | .062/(1.57) | YES | В | 1 | | 42410-9176 | | BODY | 2 | .062/(1.57) | NO NO | YES | Α | | | | | | | | | |
| G | 42410-6408 | † | * | .125/(3.18) | YES | _ A | | | 42410-9178 | | ↑ | | .062/(1,57) | NO NO | NO. | A | | | | | | | | | G |
| | 42410-6410 | 6 POS. BODY | 4 | .125/(3.18) | N0 | Α | 4 | | 42410-9224 42410-9224 | | 1 | | .062/(1.57) | YES YES | YES NO | A | | | | | | | | | - |
| 1 | 42410-6456 | 6 POS. BODY | 2 | .062/(1,57) | YES | A | † | | 42410-936 | | 1 1 | | ,125/(3,18) | NO NO | YES | Â | | | | | | | | | |
| | 42410-6458 | | 4 | .062/(1.57) | NO NO | Α | 1 | | 42410-9370 | | | | .125/(3,18) | NO | NO | Α | | | | | | | | | |
| | 42410-6552 | + | † | .125/(3,18) | YES | Α | 1 | | 42410-9416 | | † | t | .125/(3,18) | YES | YES | Α | | | | | | | | | |
| F | 42410-6554 | 6 POS, BODY | 2 | .125/(3.18) | NO NO | A | J | | 42410-9418 | 8 POS | s. BODY | 2 | ,125/(3,18) | YES | N0 | Α | | | | | | | | | F |
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