



Makers of the:  
**Universal Test Switch - UTS1 & UTS3** <sup>TM</sup>



## UTS1

Universal Test Switch assembly with rear connection and a semi-flush mount of up to ten poles.



## UTS3

Any combination of three UTS1 assemblies installed on a 19" rack mount plate.



## Applications

- Provides a safe, easy, quick, and reliable method to isolate equipment for either repairs, maintenance or testing.
- Offers a safe and reliable method to connect inputs and outputs of relays, lockouts, and other equipment for efficient testing and commissioning.

## Advantages

### Cost Savings

The list price of the Universal Test Switch is competitively priced as one of the lowest, if not the lowest, of all the test switches currently on the market. The price difference leads to savings into the thousands of dollars on large projects that require an extensive amount of test switches.

### Delivery

Along with same day order processing, MPS continually replenishes inventories and stocks all of the most commonly used test switch configurations and by doing so is able to maintain a 3-5 day delivery time. All configurations not kept in stock will be shipped within one week after receipt of order. This allows for a quick turnaround on orders and prevents project delays. Same day shipping is available on most test switches if rush delivery is requested.

### Interchangeability

The design of the UTS1 test switch allows it to be used in any position on a UTS3 assembly. This is a unique feature that MPS designed into the test switch which allows for a substantial reduction of inventory and provides flexibility for last minute design changes. UTS1 test switches require the same cutout as all existing test switches allowing for a quick and easy exchange. No new schematics or wiring diagrams are required and the test plugs that are currently on the market can be used with testing equipment wired through the UTS1.

### Customer Service

All aspects of customer service including order status, delivery, and quality assurance are directly handled by Mega Power Systems and its Representatives.

### Simplified Part Numbering System

The part number system used for the UTS1 and UTS3 test switches is considerably easier to navigate when compared to the part numbering systems of the test switches currently on the market. A part number matrix assists in building part numbers. Some of the most commonly ordered part numbers can be found in this catalog; please refer to the MPS website for a complete cross reference guide.

### High Quality Product

All Universal Test Switches are manufactured in accordance with a strict quality assurance program. This ensures that all Universal Test Switches are produced to the highest quality. All test switches are put through a series of inspections and tests before being shipped to the customer. **A 15 year warranty is issued on all MPS test switches, parts, and assemblies.**



## Specifications

### Ratings

- All Universal Test Switches are rated for 600 volts and 30 amps.
- Universal Test Switches are UL recognized under file E319380.

### Mounting

- The UTS1 is designed for semi-flush mounting on the front of panels allowing easy inspection and accessibility.
- Mounting hardware is supplied with each test switch.
- Plates are available for mounting switches on 19" equipment racks.
- Fits into existing panel cutouts from previous test switches.

## Construction

### Housing

- Housing of the Universal Test Switch is made from molded polycarbonate providing a solid insulated base.
- Dividers are molded into the housing to separate the switch units from one another on the front and rear.
- Dividers provide insulation between each pole and leaves plenty of space between terminals for wiring.

### Covers

- The cover for the Universal Test Switch is made of a polycarbonate material providing a touch insulated enclosure for the test switch. Covers are secured to the switches with thumbscrews on both ends.
- The UTS1 can be purchased with either a black cover, clear cover or no cover while the UTS3 is available with either a single piece clear cover or individual clear covers over each test switch.
- Clear or black covers can be ordered separately to retrofit any existing test switch.

### Switch Handles

- Switch handles are made from Nylon 6 plastic which bonds well to the metal blades while eliminating the likelihood of handles becoming brittle, cracking or breaking off.
- Each handle has a dovetail indentation that accepts circuit identification labels.
- Standard handle colors are black and red, but other options are available and found below.

### Poles

- Each pole or switch unit is labeled with a letter (A to J) clearly visible across the front of the housing from left to right to ensure quick and accurate testing.
- There are two types of poles: potential and current. Potential poles consists of a single non-shorting blade used in potential, trip or control circuits. Current poles typically come in sets of two for use in current transformer circuits.

### Terminals


- The terminal connections are located on the rear of the test switch.
- Terminals are numbered (1 to 20) along the rear of the test switch for easy identification and wiring assistance.
- All required termination hardware is supplied with each test switch.
- Test Switches are available with either a screw type terminal or a stud & nut type terminal.

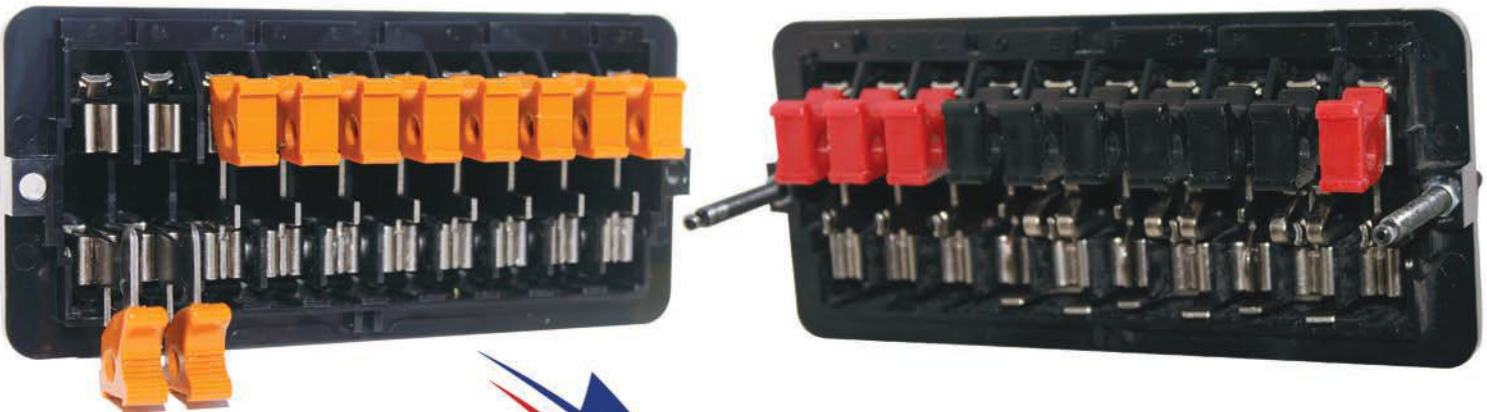
| Color Handles | Potential Blade Type | Current Blade Type |
|---------------|----------------------|--------------------|
| Green         | G                    | I                  |
| Yellow        | Y                    | Z                  |
| Red           | T                    | R                  |
| Purple        | V                    | U                  |
| Orange        | O                    | N                  |
| Brown         | D                    | K                  |
| White         | W                    | H                  |
| Black         | P                    | C                  |
| Blue          | B                    | L                  |
| Blank Pole    | X                    | X                  |



## Ordering Information - UTS1

Universal Test Switches come in numerous configurations to meet the needs of any customer configuration. All switch configurations are assigned a three digit number called the configuration code. This three digit number helps to complete the part number for each test switch. The most common configurations have already been assigned a configuration code. Any configuration can be created. If there is no part number for the needed configuration, customers may place an order by completing a switch configuration description or by calling the factory direct. To complete a switch configuration description use the letter designation for the blade type and the handle color [please refer to pages 6 and 7].


|   |   |   |  |
|---|---|---|--|
|    |   | <b>UTS1 Test Switch<br/>Part Number Selection</b> |  |
| <b>Model: UTS1</b>  |   |   |  |
| <b>Cover Type</b>   |   | <b>Option Codes</b>                               |  |
| Black Cover   | B |   |  |
| Clear Cover   | C |   |  |
| No Cover  | X |   |  |
| <b>Terminal Type</b>  |   |   |  |
| Screw Type Terminal   |   | T   |  |
| Stud & Nut Type Terminal  |   | S   |  |
| <b>Blade Configuration</b>  |   |   |  |
| Configuration Code***   |   |   |  |
| Choose from the above options and insert Option Codes to complete the part number.<br><br><b>Example:</b> A test switch with 10 potential, black handled poles, with a clear cover and screw type terminals will have a part number : CT100<br><br><b>For custom configurations not assigned a configuration code, please contact the factory or representative directly.</b> |   |   |  |





## Ordering Information - UTS3

UTS3 assemblies are a combination of any three UTS1 blocks. These switches come mounted in a 19" rack mount plate that use as little as two rack units of space. All UTS3 test switches are purchased with options of a full sized clear cover or with individual clear covers that are to go over each assembled test switch position.

|   |  |                     |  | UTS3 Test Switch<br>Part Number Selection |   |   |   |
|--|--|---------------------|--|---|---|---|---|
| <b>Model: UTS3</b>   |  |                     |  | -   | - | - | - |
| <b>Cover Type</b>  |  | <b>Option Codes</b> |  |   |   |   |   |
| Clear Cover (Single Piece)   |  | C                   |  |   | - | - | - |
| <b>Terminal Type</b>   |  |                     |  |   |   |   |   |
| Screw Type Terminal  |  | T                   |  |   | - | - | - |
| Stud & Nut Type Terminal   |  | S                   |  |   | - | - | - |
| <b>Plate Size</b>  |  |                     |  |   |   |   |   |
| 2 Rack Mount Units (3.50")   |  | 2                   |  |   | - | - | - |
| 3 Rack Mount Units (5.25")   |  | 3                   |  |   | - | - | - |
| 4 Rack Mount Units (7.00")   |  | 4                   |  |   | - | - | - |
| Other Plate Sizes Available  |  | Z                   |  |   | - | - | - |
| <b>Plate Type and Color</b>  |  |                     |  |   |   |   |   |
| Aluminum - Brushed Finish  |  | A                   |  |   | - | - | - |
| Steel - Ansi 61 Gray   |  | G                   |  |   | - | - | - |
| Steel - Tan  |  | T                   |  |   | - | - | - |
| Steel - Ansi 61 Front with White Rear  |  | X                   |  |   | - | - | - |
| Steel - Ansi 70 Gray   |  | H                   |  |   | - | - | - |
| Steel - Ansi 70 Front & White Rear   |  | F                   |  |   | - | - | - |
| Steel - Black  |  | B                   |  |   | - | - | - |
| Other Materials & Finishes Available   |  | O                   |  |   | - | - | - |
| <b>UTS1 Switch Configuration Code</b>  |  |                     |  |   |   |   |   |
| Position 1 Configuration Code  |  |                     |  |   | - | - | - |
| Position 2 Configuration Code  |  |                     |  |   | - | - | - |
| Position 3 Configuration Code  |  |                     |  |   | - | - | - |
| <p>Choose from the above options. Insert the UTS1 Switch Configuration Code for positions 1, 2 and 3 to complete the part number. For a blank cover plate in any option, use configuration code: 000</p> <p><b>Example 1:</b> A UTS3 test switch with a clear single-piece cover and screw type terminals on a 3 rack unit aluminum plate with UTS1 configuration of 100, Cover Plate, and 584 will have a part number: CT3A-100-000-584.</p> <p><b>Example 2:</b> A UTS3 test switch with 3 individual clear covers and screw type terminals on a 3 rack unit aluminum plate with UTS1 configuration of 100, 100, and 100 will have part number: CT3A-100-100-100C. <b>Note:</b> A "C" at the end of a UTS3 part number denotes 3 individual clear covers, as opposed to the standard triple-wide single clear cover.</p> <p><b>Note:</b> Custom plates include flat panel and 3 rack unit low.</p> <p><b>Contract factory or Sales Representative directly for other options or visit the MPS website.</b></p> |  |                     |  |   |   |   |   |



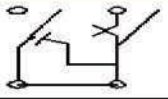
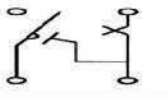
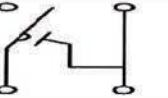


| Cross Reference For Most Commonly Used Test Switch Configurations |                             |                     |               |     |     |     |     |     |     |     |     |   |
|---|-----------------------------|---------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|---|
| ABB<br>Part Number  | Avo (States)<br>Part Number | MPS'<br>Part Number | Configuration |     |     |     |     |     |     |     |     |   |
|   |                             |                     | A             | B   | C   | D   | E   | F   | G   | H   | I   | J |
| 129A501G01  | FMS - 10A1                  | 100                 | P             | P   | P   | P   | P   | P   | P   | P   | P   | P |
| 129A514G01  | FMS - 10E1                  | 564                 | P             | P   | P   | C-C |     | C-C |     | C-C |     | P |
| 129A518G01  | FMS - 10E4                  | 711                 | P             | C-C |     | C-C |     | C-C |     | C-C |     | P |
| 129A517G01  | FMS - 08G                   | 080                 | X             | C-C |     | C-C |     | C-C |     | C-C |     | X |
| 774B430G20  | FMS - 10FF                  | 552                 | C-C           |     | C-C |     | C-C |     | P   | P   | P   | P |
| 837A407G01  | FMS - 10G                   | 701                 | C-C           |     | C-C |     | C-C |     | C-C |     | P   | P |
| 129A539G01  | FMS - 10A                   | 162                 | T             | T   | T   | T   | T   | T   | T   | T   | T   | T |
| 498A020G01  | FMS - 10F                   | 855                 | C-C           |     | C-C |     | C-C |     | C-C |     | C-C |   |
| 670B197G18  | FMS - 10GK                  | 567                 | P             | P   | P   | P   | C-C |     | C-C |     | C-C |   |
| 498A010G01  | FMS - 10D                   | 584                 | T             | T   | T   | T   | C-C |     | C-C |     | C-C |   |
| 129A516G01  | FMS - 061                   | 060                 | X             | X   | X   | C-C |     | C-C |     | C-C |     | X |

For more information, custom part numbers, or help building a UTS1 or UTS3 Test Switch, please call us at 909-548-4169 or visit our on-line configurator at [www.megapowersystems.com](http://www.megapowersystems.com).





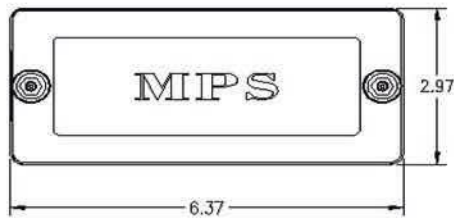
## Pole Types, Color Codes, and Schematics

| Pole Type                            | Pole Letter | Handle Color | Description                                     | Schematic   |
|--------------------------------------|-------------|--------------|---|---|
| Potential                            | P           | Black        | Potential pole, non shorting blade              |    |
|                                      | T           | Red          |   |   |
|                                      | W           | White        |   |   |
|                                      | B           | Blue         |   |   |
|                                      | G           | Green        |   |   |
|                                      | Y           | Yellow       |   |   |
|                                      | O           | Orange       |   |   |
|                                      | D           | Brown        |   |   |
| Current                              | V           | Purple       | Current pole, non shorting blade with test jack |    |
|                                      | C           | Black        |   |   |
|                                      | R           | Red          |   |   |
|                                      | H           | White        |   |   |
|                                      | L           | Blue         |   |   |
|                                      | I           | Green        |   |   |
|                                      | Z           | Yellow       |   |   |
|                                      | N           | Orange       |   |   |
| Current Shorting (Make-Before-Break) | K           | Brown        | With test jack and blade                        |   |
|                                      | U           | Purple       |   |   |
|                                      | C-C         |              |   |   |
|                                      | C-A         |              |   |   |
|                                      | C-E         |              |   |   |
|                                      | C-F         |              |   |   |
| Miscellaneous                        | C-J         |              | With current test jack and no switch blade      |  |
|                                      | C-S         |              | With fixed shorting strap                       |  |
|                                      | X           | X            | Blank Pole                                      |   |
|                                      | S           | S            | Fixed Strap                                     |  |
|                                      | J           | J            | Current Test Jack                               |  |

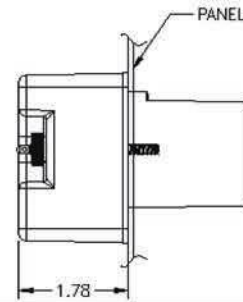
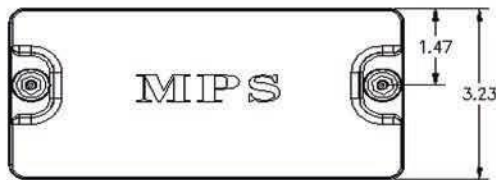
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## Dimensional Data of the UTS1 & UTS3

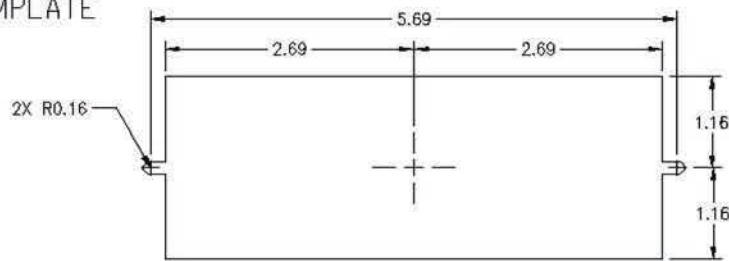
UTS1 WITH BLACK COVER



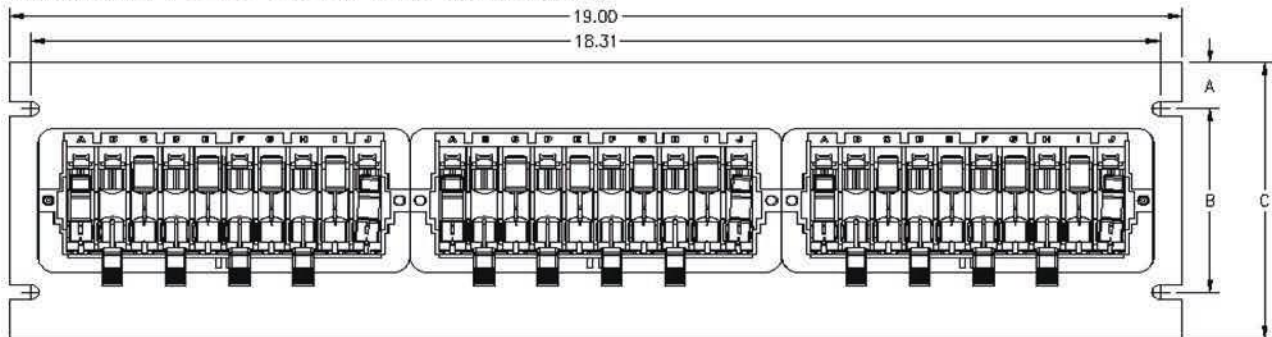
UTS1 WITH CLEAR COVER



UTS1 CUTOUT TEMPLATE



UTS3 MOUNTING PLATE SIZES AND DIMENSIONS



| PLATE HEIGHT | DIM. A | DIM. B | DIM. C |
|--------------|--------|--------|--------|
| 2 RACK UNITS | 0.25"  | 3.00"  | 3.50"  |
| 3 RACK UNITS | 0.88"  | 3.50"  | 5.25"  |
| 4 RACK UNITS | 1.50"  | 4.00"  | 7.00"  |

For additional drawings of different plate options, please contact the factory direct at (909) 548-4169





## Key Features - UTS1 & UTS3

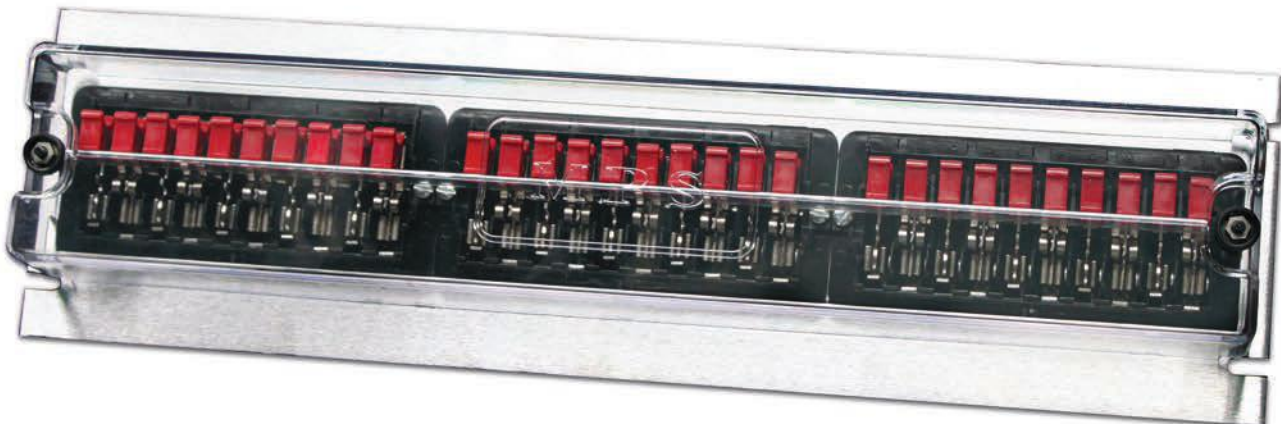
### UTS1

- UTS1 housing is made of polycarbonate which provides a rigid insulating base.
- Letter designations above each switch blade ensures for easy and accurate testing and commissioning.
- Terminal numbers along the rear of the switch allow for easy identification and wiring assistance.
- Covers are made of a polycarbonate which provides for a tough insulated enclosure.
- Clear and black covers are available on any UTS1.
- Clear covers allow operators to **install covers with the blades in an open or closed position**. Covers can be locked with a meter style lock out tag to ensure safe commissioning.
- The cover mounting stud is recessed below the surface of the clear cover to prevent operators from becoming caught and injured.
- Switch blade knobs come in 9 standard colors. Other colors available upon request. Standard colors include: black, red, white, green, blue, orange, yellow, purple, and brown.
- Screw type terminals or stud & nut type terminals are available on any UTS1.
- All required mounting hardware is included with every Universal Test Switch.
- Universal Test Switches are rated for 600 volts and 30 amps and are UL and CUL recognized.
- Increased resistance while opening and closing blades enhances safety for the Technicians by eliminating accidental opening or closing of unwanted blades.



### UTS3

- Create a UTS3 assembly with any combination of three Universal Test Switches (UTS1).
- UTS3 assemblies come with either a single piece clear cover or separate individual clear covers. Both cover options have the same features as the UTS1 cover.
- UTS3 assemblies are installed on a 19" rack mount plate that is available in 2 (3.50"), 3 (5.25") or 4 (7.00") rack units. All plate sizes are available in various materials and finishes.
- UTS3 assemblies can be purchased with cover plates in any of the 3 cutout locations to provide space for future expansion or design changes.





## Additional Parts and Miscellaneous Items

### Universal Test Plug – 10-Pole

- Part Number – UTP-10
- Used for circuit testing.
- Isolates the external connections from the equipment under test.
- Extended handle grip and insulated plastic divider allows for an easier usage.
- All common size banana clips can be used on the Universal Test Plug.



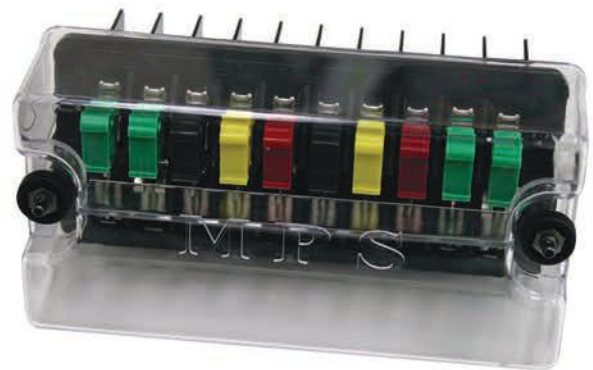
**UTP-10**

### Universal Test Switch Cover Types

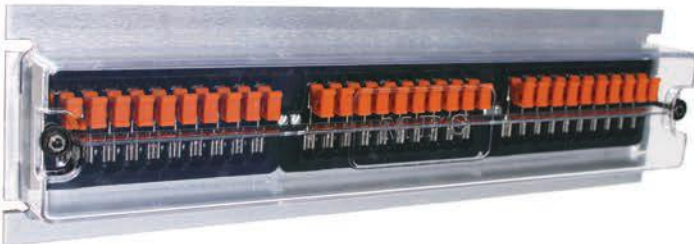
- UTS1 Black Cover: Part Number SBC001
- UTS1 Clear Cover: Part Number SCC001
- UTS3 Individual Clear Cover: Part Number ICC003
- UTS3 Single Piece Clear Cover: Part Number BCC003



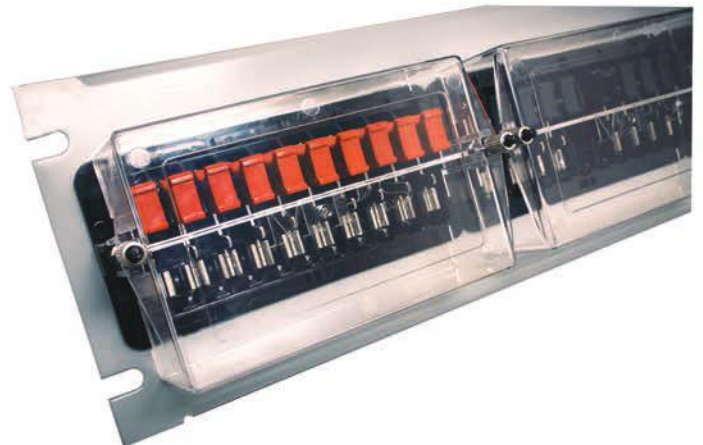
**Small Black Cover for the UTS1**



**Small Clear Cover for the UTS1**



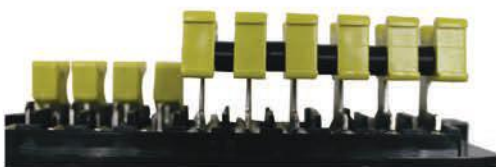
**Single Piece Clear Cover for the UTS3**



**Individual Clear Cover for the UTS3**

### Other Miscellaneous Items

- T-Type & S-Type Tooling [T-Type Tooling for Screw Terminals and S-Type Tooling for Stud & Nut Terminals].
- Ganging Bars [Ganging Bar Options of 2, 3, 4, 5, 6, 8 or 10 bars]



**Ganging Bars**



**T-Type & S-Type Tooling**