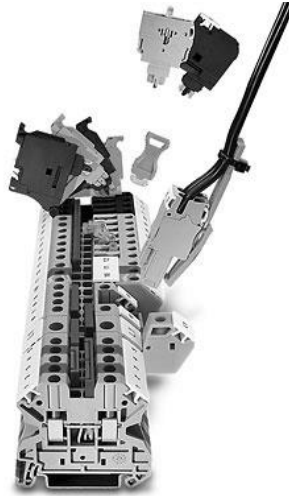


## Terminal Block System Elements, DIN Rail, Modular



### 1. Scope

This standard covers the requirements for DIN rail modular terminal block systems. DIN stands for Deutsches Institut für Normung, the German Institute for Standardization. This standard applies to the Seattle City Light (SCL) stock numbers cited in Section 4.

### 2. Application

DIN rail modular terminal block systems are used in stations.

DIN rail modular terminal block systems require significantly less space for the same functionality as traditional terminal blocks.

Components can be mixed or matched with complete compatibility. Other companies manufacture DIN rail modular terminal block systems, but their components are not necessarily compatible with the components cited in this standard.

### 3. Industry Standards

DIN rail modular terminal block system components shall meet the applicable requirements of the latest revision of the following industry standards:

**IEC EN 60715;** Dimensions of low-voltage switchgear and controlgear standardized mounting on rails for mechanical support of electrical devices

**IEC EN 60947-7-1;** Low-voltage switchgear and controlgear - Part 7-1: Ancillary equipment - Terminal blocks for copper conductors

Standard Coordinator  
John Shipek

Standards Engineering Supervisor  
John Shipek

Division Director  
Andrew Strong

**IEC EN 60947-7-2**; Low-voltage switchgear and controlgear - Part 7-2: Ancillary equipment - Protective conductor terminal blocks for copper conductors

**IEC EN 60947-7-3**; Low-voltage switchgear and controlgear - Part 7-3: Ancillary equipment - Safety requirements for fuse terminal blocks

**IEC/EN 60079-7**; Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

**DIN EN 50022**; Low voltage switchgear and controlgear for industrial use; mounting rails, top hat rails, 35 mm wide, for snap-on mounting of equipment

## 4. Requirements

### 4.1 General

DIN rail modular terminal block system components shall be designed to mount on a DIN rail system conforming to DIN EN 50022: 1977 35 mm x 15 mm.

Metal surfaces shall be nickel- or tin-plated.

Nominal voltage class shall be 600 V.

### 4.2 DIN Rail, Unperforated: NS 35/15 AL UNPERF 2000MM

|                                |   |
|--------------------------------|---|
| <b>Stock No.:</b>              | 012609  |
| <b>Manufacturer:</b>           | Phoenix Contact   |
| <b>Part No.:</b>               | 1201756   |
| <b>Color:</b>                  | Silver gray   |
| <b>Material:</b>               | Uncoated aluminum   |
| <b>Minimum Order Quantity:</b> | 2 meters  |
| <b>Dimensions (mm)</b>         |   |
| <b>Width:</b>                  | 35  |
| <b>Length:</b>                 | 2000  |
| <b>Height:</b>                 | 15  |
| <b>Application:</b>            | Used for setting up terminal blocks in a space-saving and easy-clamping fixture |

**Image:**



### 4.3 Bolt Connection Terminal Block: RT 3

|                                 |                 |
|---------------------------------|-----------------|
| <b>Stock No.:</b>               | 014892          |
| <b>Manufacturer:</b>            | Phoenix Contact |
| <b>Part No.:</b>                | 3049013         |
| <b>Voltage Rating, Nominal:</b> | 1000 V          |
| <b>Current Rating, Nominal:</b> | 24 A            |
| <b>Cross Section:</b>           | n/a             |
| <b>Color:</b>                   | Gray            |
| <b>Minimum Order Quantity:</b>  | 50              |

|                         |      |
|-------------------------|------|
| <b>Dimensions (mm)</b>  |      |
| <b>Width:</b>           | 12.3 |
| <b>End cover width:</b> | 2.2  |
| <b>Length:</b>          | 66   |
| <b>Height (35/15):</b>  | 58.5 |

|                     |   |
|---------------------|---|
| <b>Application:</b> | Bolt connection terminal block<br>Note: The BE-RT... path extension is to be used for non-insulated cable lugs. |
|---------------------|---|



**Image:**

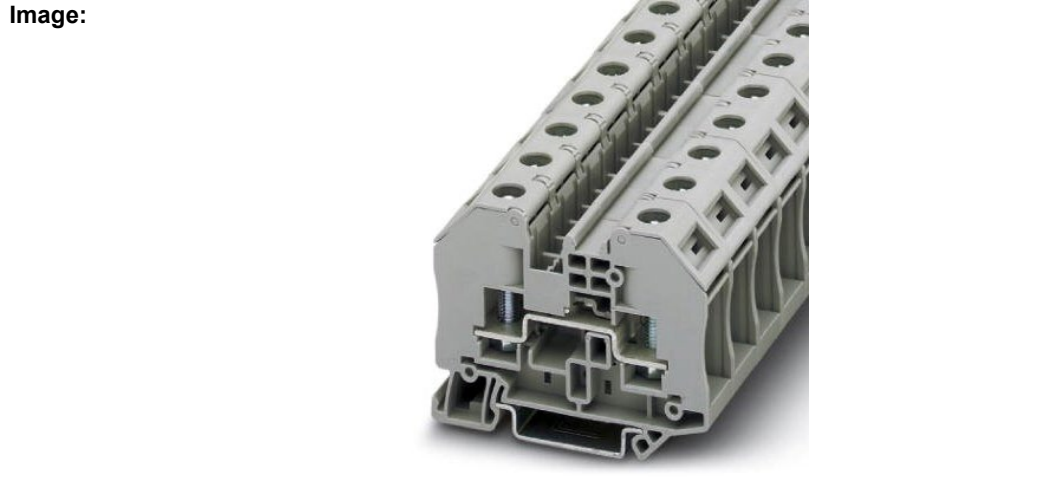
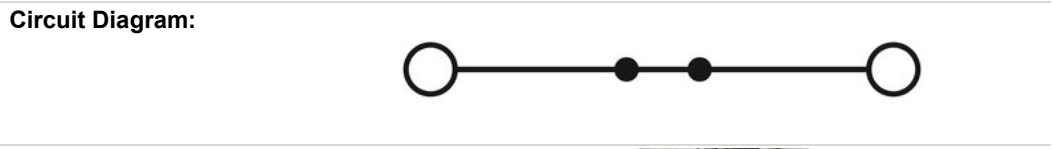


#### 4.4 Bolt Connection Terminal Block: RT 5

|                                 |                   |
|---------------------------------|-------------------|
| <b>Stock No.:</b>               | 014893            |
| <b>Manufacturer:</b>            | Phoenix Contact   |
| <b>Part No.:</b>                | 3049026           |
| <b>Voltage Rating, Nominal:</b> | 1000 V            |
| <b>Current Rating, Nominal:</b> | 41 A              |
| <b>Cross Section:</b>           | 6 mm <sup>2</sup> |
| <b>Color:</b>                   | Gray              |
| <b>Minimum Order Quantity:</b>  | 50                |

|                         |      |
|-------------------------|------|
| <b>Dimensions (mm)</b>  |      |
| <b>Width:</b>           | 16.3 |
| <b>End cover width:</b> | 2.2  |
| <b>Length:</b>          | 66   |
| <b>Height (35/15):</b>  | 58.5 |

|                     |   |
|---------------------|---|
| <b>Application:</b> | Bolt connection terminal block<br>Note: The BE-RT... path extension is to be used for non-insulated cable lugs. |
|---------------------|---|



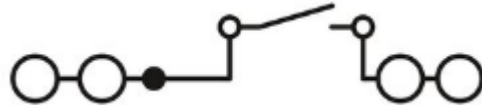
#### 4.5 Knife Disconnect Terminal Block: UT 4-QUATTRO-MT P/P

|                                 |                     |
|---------------------------------|---------------------|
| <b>Stock No.:</b>               | 014900              |
| <b>Manufacturer:</b>            | Phoenix Contact     |
| <b>Part No.:</b>                | 3064056             |
| <b>Voltage Rating, Nominal:</b> | 500 V               |
| <b>Current Rating, Nominal:</b> | 20 A                |
| <b>Cross section:</b>           | 2.5 mm <sup>2</sup> |
| <b>Color:</b>                   | Gray                |
| <b>Minimum Order Quantity:</b>  | 50                  |

|                         |      |
|-------------------------|------|
| <b>Dimensions (mm)</b>  |      |
| <b>Width:</b>           | 6.2  |
| <b>End cover width:</b> | 2.2  |
| <b>Length:</b>          | 65.4 |
| <b>Height (35/15):</b>  | 56.6 |

|                     |  |
|---------------------|--|
| <b>Application:</b> | Knife disconnect terminal block, with test socket screws for insertion of test plugs |
|---------------------|--|

**Circuit Diagram:**



**Image:**



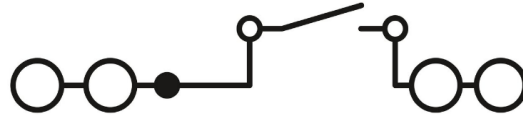
**4.6 Knife Disconnect Terminal Block: UT 4-QUATTRO-MT P/P BU**

|                                 |                     |
|---------------------------------|---------------------|
| <b>Stock No.:</b>               | 014901              |
| <b>Manufacturer:</b>            | Phoenix Contact     |
| <b>Part No.:</b>                | 3073063             |
| <b>Voltage Rating, Nominal:</b> | 500 V               |
| <b>Current Rating, Nominal:</b> | 20 A                |
| <b>Cross section:</b>           | 2.5 mm <sup>2</sup> |
| <b>Color:</b>                   | Blue                |
| <b>Minimum Order Quantity:</b>  | 50                  |

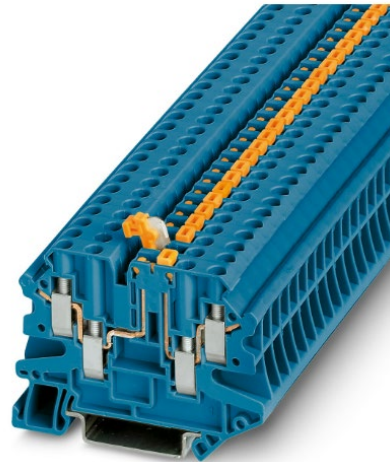
|                         |      |
|-------------------------|------|
| <b>Dimensions (mm)</b>  |      |
| <b>Width:</b>           | 6.2  |
| <b>End cover width:</b> | 2.2  |
| <b>Length:</b>          | 65.4 |
| <b>Height (35/15):</b>  | 49.1 |

|                     |  |
|---------------------|--|
| <b>Application:</b> | Knife disconnect terminal block, with test socket screws for insertion of test plugs |
|---------------------|--|

**Circuit Diagram:**



**Image:**

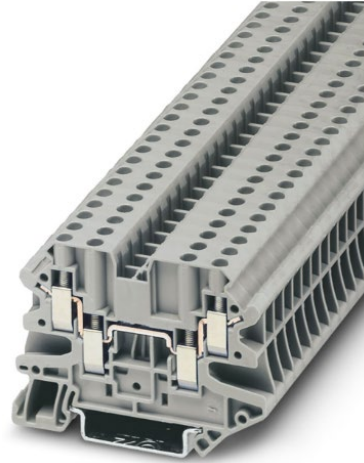


#### 4.7 Feed-Through Terminal Block: UT 4-QUATTRO


|                                 |   |
|---------------------------------|---|
| <b>Stock No.:</b>               | 014902  |
| <b>Manufacturer:</b>            | Phoenix Contact                               |
| <b>Part No.:</b>                | 3044571                                       |
| <b>Voltage Rating, Nominal:</b> | 500 V   |
| <b>Current Rating, Nominal:</b> | 32 A  |
| <b>Cross section:</b>           | 4 mm <sup>2</sup>                             |
| <b>Color:</b>                   | Gray  |
| <b>Minimum Order Quantity:</b>  | 50  |
| <b>Dimensions (mm)</b>          |   |
| <b>Width:</b>                   | 6.2   |
| <b>End cover width:</b>         | 2.2   |
| <b>Length:</b>                  | 65.4  |
| <b>Height (35/15):</b>          | 55  |
| <b>Application:</b>             | Feed-through terminal block, screw connection |
| <b>Circuit Diagram:</b>         |   |



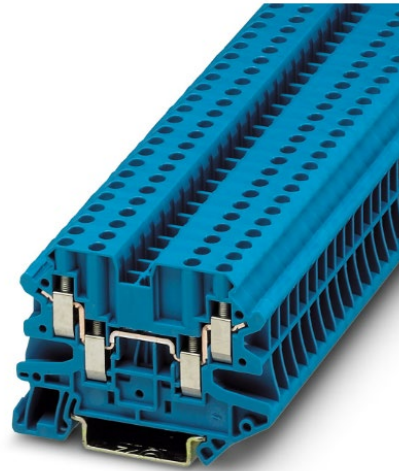
**Image:**



#### 4.8 Feed-Through Terminal Block: UT 4-QUATTRO BU

|                                 |  |
|---------------------------------|--|
| <b>Stock No.:</b>               | 014903   |
| <b>Manufacturer:</b>            | Phoenix Contact  |
| <b>Part No.:</b>                | 3044584  |
| <b>Voltage Rating, Nominal:</b> | 500 V  |
| <b>Current Rating, Nominal:</b> | 32 A   |
| <b>Cross section:</b>           | 4 mm <sup>2</sup>  |
| <b>Color:</b>                   | Blue   |
| <b>Minimum Order Quantity:</b>  | 50   |
| <b>Dimensions (mm)</b>          |  |
| <b>Width:</b>                   | 6.2  |
| <b>End cover width:</b>         | 2.2  |
| <b>Length:</b>                  | 65.4   |
| <b>Height (35/15):</b>          | 55   |
| <b>Application:</b>             | Feed-through terminal block, screw connection                                      |
| <b>Circuit Diagram:</b>         |  |

**Image:**

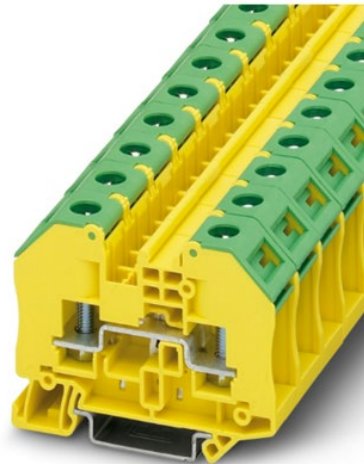




#### 4.9 Bolt Connection Terminal Block: RT 5-PE

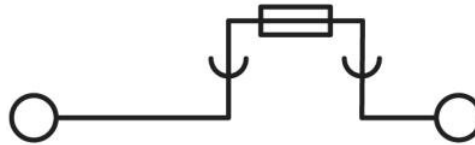
|                                 |  |
|---------------------------------|--|
| <b>Stock No.:</b>               | 014904                                     |
| <b>Manufacturer:</b>            | Phoenix Contact                            |
| <b>Part No.:</b>                | 3049424                                    |
| <b>Voltage Rating, Nominal:</b> | 1000 V                                     |
| <b>Current Rating, Nominal:</b> | 41 A                                       |
| <b>Cross section:</b>           | 6 mm <sup>2</sup>                          |
| <b>Color:</b>                   | Green-yellow                               |
| <b>Minimum Order Quantity:</b>  | 50   |
| <b>Dimensions (mm)</b>          |  |
| <b>Width:</b>                   | 16.3                                       |
| <b>End cover width:</b>         | 2.2  |
| <b>Length:</b>                  | 66   |
| <b>Height (35/15):</b>          | 58.5                                       |
| <b>Application:</b>             | Ground terminal block with bolt connection |
| <b>Circuit Diagram:</b>         |  |

**Image:**



#### 4.10 Fuse Modular Terminal Block: USIG

|                                 |  |
|---------------------------------|--|
| <b>Stock No.:</b>               | 012611   |
| <b>Manufacturer:</b>            | Phoenix Contact  |
| <b>Part No.:</b>                | 0920083  |
| <b>Voltage Rating, Nominal:</b> | 500 V  |
| <b>Current Rating, Nominal:</b> | 10 A as determined by the fuse used; 40 A as a disconnect terminal block |
| <b>Cross section:</b>           | 1.5 mm <sup>2</sup>  |
| <b>Color:</b>                   | Black  |
| <b>Minimum Order Quantity:</b>  | n/a  |
| <b>Dimensions (mm)</b>          |  |
| <b>Width:</b>                   | 10.2   |
| <b>End cover width:</b>         | n/a  |
| <b>Length:</b>                  | 61   |
| <b>Height (35/15):</b>          | 59.1   |
| <b>Application:</b>             | Fuse modular terminal block, without fuse plug                           |
| <b>Circuit Diagram:</b>         |  |



**Image:**



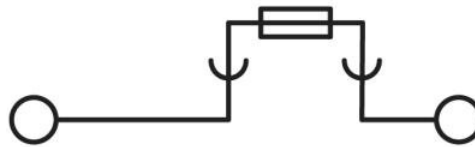
#### 4.11 Fuse Modular Terminal Block: UK 10 3 HESILED N 72

|                                 |                                     |
|---------------------------------|-------------------------------------|
| <b>Stock No.:</b>               | 014891                              |
| <b>Manufacturer:</b>            | Phoenix Contact                     |
| <b>Part No.:</b>                | 3048661                             |
| <b>Voltage Rating, Nominal:</b> | 72 V                                |
| <b>Current Rating, Nominal:</b> | 32 A as determined by the fuse used |
| <b>Cross section:</b>           | 16 mm <sup>2</sup>                  |
| <b>Color:</b>                   | Black                               |
| <b>Minimum Order Quantity:</b>  | 10                                  |

|                         |     |
|-------------------------|-----|
| <b>Dimensions (mm)</b>  |     |
| <b>Width:</b>           | 18  |
| <b>End cover width:</b> | n/a |
| <b>Length:</b>          | 81  |
| <b>Height (35/15):</b>  | 73  |

|                     |   |
|---------------------|---|
| <b>Application:</b> | Fuse modular terminal block, without fuse plug, for fuses measuring 13/32" x 1-1/2" (See SCL 6855.35) |
|---------------------|---|

**Circuit Diagram:**



**Image:**



#### 4.12 Fuse Plug: ST-SI

|                                 |                              |
|---------------------------------|------------------------------|
| <b>Stock No.:</b>               | 012612                       |
| <b>Manufacturer:</b>            | Phoenix Contact              |
| <b>Part No.:</b>                | 0920229                      |
| <b>Voltage Rating, Nominal:</b> | 400 V                        |
| <b>Current Rating, Nominal:</b> | 6.3 A                        |
| <b>Cross section:</b>           | n/a                          |
| <b>Color:</b>                   | Black                        |
| <b>Minimum Order Quantity:</b>  | 50                           |
| <b>Dimensions (mm)</b>          |                              |
| <b>Width:</b>                   | 9.9                          |
| <b>End cover width:</b>         | n/a                          |
| <b>Length:</b>                  | 45.4                         |
| <b>Height (35/15):</b>          | n/a                          |
| <b>Application:</b>             | Fuse plug for meter circuits |
| <b>Image:</b>                   |                              |



#### 4.13 End Cover: D-UT 2,5/4-QUATTRO

|                                 |                      |
|---------------------------------|----------------------|
| <b>Stock No.:</b>               | 014905               |
| <b>Manufacturer:</b>            | Phoenix Contact      |
| <b>Part No.:</b>                | 3047170              |
| <b>Voltage Rating, Nominal:</b> | n/a                  |
| <b>Current Rating, Nominal:</b> | n/a                  |
| <b>Cross section:</b>           | n/a                  |
| <b>Color:</b>                   | Gray                 |
| <b>Minimum Order Quantity:</b>  | 1 packing unit of 50 |
| <b>Dimensions (mm)</b>          |                      |
| <b>Width:</b>                   | 2.2                  |
| <b>End cover width:</b>         | 2.2                  |
| <b>Length:</b>                  | 64.4                 |
| <b>Height (35/15):</b>          | 39.8                 |
| <b>Application:</b>             | End cover            |
| <b>Circuit Diagram:</b>         | n/a                  |
| <b>Image:</b>                   |                      |



#### 4.14 End Clamp: E/NS 35 N

|                                 |   |
|---------------------------------|---|
| <b>Stock No.:</b>               | 014910                                  |
| <b>Manufacturer:</b>            | Phoenix Contact                         |
| <b>Part No.:</b>                | 0800886                                 |
| <b>Voltage Rating, Nominal:</b> | n/a                                     |
| <b>Current Rating, Nominal:</b> | n/a                                     |
| <b>Cross section:</b>           | n/a                                     |
| <b>Color:</b>                   | Gray                                    |
| <b>Minimum Order Quantity:</b>  | 50                                      |
| <b>Dimensions (mm)</b>          |   |
| <b>Width:</b>                   | 9.5                                     |
| <b>End cover width:</b>         | n/a                                     |
| <b>Length:</b>                  | 48.6                                    |
| <b>Height (35/15):</b>          | 32.8                                    |
| <b>Application:</b>             | End clamp, mounting on a DIN rail NS 35 |
| <b>Image:</b>                   |   |



#### 4.15 End Cover: D-RT 3/5

|                                 |   |
|---------------------------------|---|
| <b>Stock No.:</b>               | 014896                                  |
| <b>Manufacturer:</b>            | Phoenix Contact                         |
| <b>Part No.:</b>                | 3049097                                 |
| <b>Voltage Rating, Nominal:</b> | n/a                                     |
| <b>Current Rating, Nominal:</b> | n/a                                     |
| <b>Cross section:</b>           | n/a                                     |
| <b>Color:</b>                   | Gray                                    |
| <b>Minimum Order Quantity:</b>  | 50                                      |
| <b>Dimensions (mm)</b>          |   |
| <b>Width:</b>                   | 2.2                                     |
| <b>Length:</b>                  | 65                                      |
| <b>Height (35/15):</b>          | 50.4                                    |
| <b>Application:</b>             | End cover, mounting on a DIN rail NS 35 |
| <b>Image:</b>                   |   |



#### 4.16 Marker for Terminal Blocks: UCT-TM 6

|   |  |
|---|--|
| <b>Stock No.:</b>                           | 014894   |
| <b>Manufacturer:</b>                        | Phoenix Contact  |
| <b>Part No.:</b>                            | 0828736  |
| <b>Voltage Rating, Nominal:</b>             | n/a  |
| <b>Current Rating, Nominal:</b>             | n/a  |
| <b>Cross Section:</b>                       | n/a  |
| <b>Color:</b>                               | White  |
| <b>Minimum Order Quantity:</b>              | 10   |
| <b>Number of Individual Labels</b>          | 60   |
| <b>Number of Individual Labels Per Row:</b> | 10   |
| <b>Application:</b>                         | For use with Quattro labels.<br>Sheet can be labeled with: TOPMARK NEO,<br>TOPMARK LASER, BLUEMARK ID COLOR,<br>BLUEMARK ID, BLUEMARKCLED,<br>THERMOMARK PRIME, THERMOMARK CARD<br>2.0, THERMOMARK CARD, mounting type: snap<br>into tall marker groove, for terminal block width: 6.2<br>mm, lettering field size: 5.6 x 10.5 mm. |

**Image:**





#### 4.17 Marker for Terminal Blocks: UCT-TM 8

|   |   |
|---|---|
| <b>Stock No.:</b>                           | 014895  |
| <b>Manufacturer:</b>                        | Phoenix Contact   |
| <b>Part No.:</b>                            | 0828740   |
| <b>Voltage Rating, Nominal:</b>             | n/a   |
| <b>Current Rating, Nominal:</b>             | n/a   |
| <b>Cross Section:</b>                       | n/a   |
| <b>Color:</b>                               | White   |
| <b>Minimum Order Quantity:</b>              | 10  |
| <b>Number of Individual Labels:</b>         | 42  |
| <b>Number of Individual Labels Per Row:</b> | 7   |
| <b>Application:</b>                         | For use with RT 3 edge labels.<br>Sheet can be labeled with: TOPMARK NEO,<br>TOPMARK LASER, BLUEMARK ID COLOR,<br>BLUEMARK ID, BLUEMARK CLED,<br>THERMOMARK PRIME, THERMOMARK CARD<br>2.0, THERMOMARK CARD, mounting type: snap<br>into tall marker groove, for terminal block width: 8.2<br>mm, lettering field size: 7.6 x 10.5 mm. |

**Image:**



**4.18 Marker for Terminal Blocks: UCT-TM 12**

|   |   |
|---|---|
| <b>Stock No.:</b>                           | 014897  |
| <b>Manufacturer:</b>                        | Phoenix Contact   |
| <b>Part No.:</b>                            | 0829144   |
| <b>Voltage Rating, Nominal:</b>             | n/a   |
| <b>Current Rating, Nominal:</b>             | n/a   |
| <b>Cross section:</b>                       | n/a   |
| <b>Color:</b>                               | White   |
| <b>Minimum Order Quantity:</b>              | 10  |
| <b>Number of Individual Labels:</b>         | 30  |
| <b>Number of Individual Labels Per Row:</b> | 5   |
| <b>Application:</b>                         | For use with RT 3 center labels or RT 5 center and edge labels.<br>Sheet can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snap into tall marker groove, for terminal block width: 12 mm, lettering field size: 10.8 x 9.6 mm. |

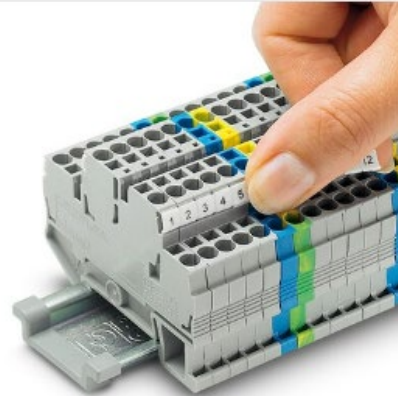
**Image:**



#### 4.19 Marker for Terminal Blocks: UCT-TMF 10

|   |   |
|---|---|
| <b>Stock No.:</b>                           | 014899  |
| <b>Manufacturer:</b>                        | Phoenix Contact   |
| <b>Part No.:</b>                            | 0829204   |
| <b>Voltage Rating, Nominal:</b>             | n/a   |
| <b>Current Rating, Nominal:</b>             | n/a   |
| <b>Cross Section:</b>                       | n/a   |
| <b>Color:</b>                               | White   |
| <b>Minimum Order Quantity:</b>              | 1   |
| <b>Number of Individual Labels:</b>         | 36  |
| <b>Number of Individual Labels Per Row:</b> | 6   |
| <b>Application:</b>                         | For use with fuse block labels. Fits UK fuse blocks. Sheet can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, for terminal block width: 10.2 mm, lettering field size: 9.4 x 4.7 mm. |

**Image:**



#### 4.20 Terminal Strip Marker Carrier: KLM-A

|                                |  |
|--------------------------------|--|
| <b>Stock No.:</b>              | 014898   |
| <b>Manufacturer:</b>           | Phoenix Contact  |
| <b>Part No.:</b>               | 1004348  |
| <b>Material:</b>               | ABS  |
| <b>Color:</b>                  | Transparent  |
| <b>Minimum Order Quantity:</b> | 100  |
| <b>Dimensions (mm)</b>         |  |
| <b>Width:</b>                  | 9.5  |
| <b>Height NS 35/7,5:</b>       | 19   |
| <b>Length:</b>                 | 46   |
| <b>Application:</b>            | Terminal strip markers, for strip marking, adjustable height, for use with end clamps E/UK, E/NS 35 N or CLIPFIX 35, lettering field size: 44 x 7 mm |

Image 1:



Image 2:



## 5. Packaging

DIN rail modular terminal block system components shall be packaged and shipped assembled.

DIN rail modular terminal block system components shall be packaged to prevent damage during shipping, handling, and inside storage.

Individual packages shall be legibly marked with:

- Manufacturer identification
- Product description
- Seattle City Light stock number

Each shipping container shall be legibly marked with the following information:

- Seattle City Light purchase order number

## 6. Issuance

Stock unit: EA

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## 7. Approved Manufacturers

See Section 4.

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## 8. Sources

**Cohn, Cole**; SCL PACE II Relay and subject matter expert for 6771.45

**Hughes, Michael**; SCL South Stations Coordinator and subject matter expert for 6771.45

**Rai, Rajinder**; SCL Substation Engineer and subject matter expert for 6771.45

**SCL Material Standard 2903.20**; Terminal Block, DIN Modular System (canceled and renumbered to 6771.45 in October 2015)

**Shetab, Muneer**; SCL Standards Engineer and subject matter expert for 6771.45

**Shipek, John**; SCL Standards Supervisor, originator, and subject matter expert for 6771.45

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