## 1-800-633-0405 FAT-N Cutler-Hammer HT800 30mm Pushbuttons Specifications

# Overview

The HT800 family of 30.5 mm pushbutton devices includes momentary, illuminated and mushroom-head pushbuttons, selector switches, indicating lights and push-pull switches.

#### Features

- Anodized aluminum mounting rings
- Watertight double V-gasket seals
- Extended height bulbs
- Transparent housing contact blocks
- Color-coded contact blocks
- Gold-plated contacts (on low voltage contact block)
- Reliability ridge on movable contact
- Stackable screw-mounted contact blocks
- Contact blocks can be mounted in left/right or top/bottom positions
- Standard N.C. contact opens before N.O. contact closes (break before make operation)
- Bright and long lasting LED indicating lights in six colors
- Field convertible maintained selector switches from two-position to three-position and vice versa
- Field selectable knob/lever mounting positions at any 22.5° increment

## Benefits

- Corrosion resistant NEMA 4X finish
- Watertight and oil-tight NEMA 4, 13 ingress protection
- Increased side illumination of indicating lights and illuminated pushbuttons
- Easy visual inspection of contact conditions
- Easily identifiable N.O. (white) or N.C. black) contact blocks
- Gold-plated contacts suitable for logic level circuits
- Reliability ridge penetrates
   contamination buildup on stationary contacts
- Left/right or top/bottom mounted contact blocks allow correct positioning in retrofit applications
- All-purpose selector switches are convertible and can rotate in 22.5° increments to suit panel layouts

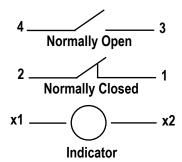
### **Standards and Certifications**

- UL508, File No. E131568
- CSA C22.2 No. 14, File No. LR68551

#### Ingress Protection

• UL (NEMA) 1, 2, 3, 3R, 4, 4X, 12 and 13 when mounted in similarly rated enclosures

# **Typical Wiring**



## 1-800-633-0405

## HT800 30mm Pushbuttons F-T•N **Specifications Cutler-Hammer**

| HT800 — Specifications       |  |  |  |  |  |
|------------------------------|--|--|--|--|--|
| Mechanical Ratings           |  |  |  |  |  |
| Frequency of Operation       |  |  |  |  |  |
| Pushbuttons                  | 6,000 Operations per hour  |  |  |  |  |
| Selector Switches            | 3,000 Operations per hour  |  |  |  |  |
| Push-Pull Operators          | 3,000 Operations per hour  |  |  |  |  |
| Mechanical Endurance/Life    |  |  |  |  |  |
| Pushbuttons                  | 10 x 106 Operations 6K Ops/Hr with 6 N.O. on left and 6 N.C. on right              |  |  |  |  |
| Selector Switches            | 250 x 10 <sup>3</sup> Operations 3K Ops/Hr with 2 N.O. on left and 2 N.C. on right |  |  |  |  |
| Push-Pull Operators          | 250 x 10 <sup>3</sup> Operations 3K Ops/Hr with 6 N.O. on left and 6 N.C. on right |  |  |  |  |
| Environmental Specifications |  |  |  |  |  |
| Operating Temperature        | 10 to 140°F (-12° to 60°C)   |  |  |  |  |
| Storage Temperature          | -40 to 176°F (-40° to 80°C)  |  |  |  |  |
| Altitude                     | 6,562 ft. (2,000m)   |  |  |  |  |
| Humidity                     | 95% RH @ 60°C  |  |  |  |  |
| Terminals                    |  |  |  |  |  |
| Contact Blocks               | #6-32 posi-drive saddle clamp type, 1 x 16 AWG to 2 x 14 AWG, 12 in-lbs max.       |  |  |  |  |
| Light Units                  | #6-32 posi-drive saddle clamp type, 1 x 22 AWG to 2 x 14 AWG, 7 in-lbs max.        |  |  |  |  |

| HT800 Standard Contact Blocks UL (NEMA) Rating  |                 |                   |      |                       |  |
|---|-----------------|-------------------|------|-----------------------|--|
| Electrical Ratings Description/Function   | Contact<br>Type | Catalog<br>Number | AC   | DC                    |  |
| Standard Normally Open contact  | N.O.            | <u>HT8A</u>       | A600 | P600                  |  |
| Standard Normally Closed contact  | N.C.            | <u>HT8B</u>       | A600 | P600                  |  |
| Normally Open Early Make Contact will make circuit before standard N.O. contact. DC ratings do not apply. | N.O.E.M.        | <u>HT8C</u>       | A600 | _                     |  |
| Normally Closed Late Break contact will open after standard N.C. contact. DC ratings do not apply.        | N.C.L.B.        | <u>HT8D</u>       | A600 | _                     |  |
| Logic level, low voltage N.O .contact.<br>Gold plated contacts.   | N.O.            | <u>HT8E</u>       |      | minimum)<br>(maximum) |  |

| UL (NEMA) A600 and P600 Ratings             |      |                   |      |      |                  |                  |                  |
|---|------|-------------------|------|------|------------------|------------------|------------------|
| Description                                 |      | Volts AC 50/60 Hz |      |      | Volts DC 1       |                  |                  |
|   |      | 240               | 480  | 600  | 125              | 250              | 600              |
| Make and Emerg. Interrupting Capacity (Amp) | 60   | 30                | 15   | 12   | 1.1              | 0.55             | 0.2              |
| Normal Load Break (Amp)                     | 6    | 3                 | 1.5  | 1.2  | 1.1              | 0.55             | 0.2              |
| Thermal Current (Amp)                       | 10   | 10                | 10   | 10   | 5                | 5                | 5                |
| Volt amperes                                |      |                   |      |      |                  |                  |                  |
| Make and Emerg. Interrupting Capacity       | 7200 | 7200              | 7200 | 7200 | 138 <sup>2</sup> | 138 <sup>2</sup> | 138 <sup>2</sup> |
| Normal Load Break                           | 720  | 720               | 720  | 720  | 138              | 138              | 138              |

Note: 1: DC ratings do not apply to N.O.E.M. (Normally Open Early Make) and N.C.L.B. (Normally Closed Late Break) contact blocks HT8C and HT8D. 2: Maximum make or break volt-amperes at 300V or less

## 1-800-633-0405 **FAT-N** Cutler-Hammer HT800 30mm Extended Illuminated Pushbuttons



HT8GBRV7



HT8GBGV7



HT8GBAV7



HT8GBCV7

| HT80                  | 0 30mm Extended  | Illumi   | nated Pushbuttons  |          |  |  |  |
|-----------------------|--|----------|--|----------|--|--|--|
| Contact Configuration | 24 Volt Incandescent full<br>Voltage Lamp 50mA @ 24<br>Volts | Price    | 120 Volt Incandescent Full<br>Voltage Lamp<br>19mA @ 120 Volts | Price    |  |  |  |
| Red Lens              |  |          |  |          |  |  |  |
| Operator only         | HT8GBRV3   | \$96.00  | HT8GBRV7   | \$96.00  |  |  |  |
| 1 N.O.                | *HT8GBRAV3   | \$112.00 | *HT8GBRAV7   | \$112.00 |  |  |  |
| 1 N.C.                | *HT8GBRBV3   | \$112.00 | * <u>HT8GBRBV7</u>   | \$112.00 |  |  |  |
| Green Lens            |  |          |  |          |  |  |  |
| Operator only         | HT8GBGV3   | \$96.00  | HT8GBGV7   | \$96.00  |  |  |  |
| 1 N.O.                | *HT8GBGAV3   | \$112.00 | *HT8GBGAV7   | \$112.00 |  |  |  |
| 1 N.C.                | *HT8GBGBV3   | \$112.00 | *HT8GBGBV7   | \$112.00 |  |  |  |
| Amber Lens            |  |          |  |          |  |  |  |
| Operator only         | HT8GBAV3   | \$96.00  | HT8GBAV7   | \$96.00  |  |  |  |
| 1 N.O.                | *HT8GBAAV3   | \$112.00 | *HT8GBAAV7   | \$112.00 |  |  |  |
| 1 N.C.                | *HT8GBABV3   | \$112.00 | *HT8GBABV7   | \$112.00 |  |  |  |
| Clear Lens            |  |          |  |          |  |  |  |
| Operator only         | HT8GBCV3   | \$96.00  | HT8GBCV7   | \$96.00  |  |  |  |
| 1 N.O.                | *HT8GBCAV3   | \$112.00 | *HT8GBCAV7   | \$112.00 |  |  |  |
| 1 N.C.                | *HT8GBCBV3   | \$112.00 | *HT8GBCBV7   | \$112.00 |  |  |  |
| White Lens            |  |          |  |          |  |  |  |
| Operator only         | HT8GBWV3   | \$96.00  | HT8GBWV7   | \$96.00  |  |  |  |
| 1 N.O.                | *HT8GBWAV3   | \$112.00 | * <u>HT8GBWAV7</u>   | \$112.00 |  |  |  |
| 1 N.C.                | *HT8GBWBV3   | \$112.00 | *HT8GBWBV7   | \$112.00 |  |  |  |
| Yellow Lens           |  |          |  |          |  |  |  |
| Operator only         | HT8GBYV3   | \$96.00  | HT8GBYV7   | \$96.00  |  |  |  |
| 1 N.O.                | *HT8GBYAV3   | \$112.00 | *HT8GBYAV7   | \$112.00 |  |  |  |
| 1 N.C.                | * <u>HT8GBYBV3</u>   | \$112.00 | * <u>HT8GBYBV7</u>   | \$112.00 |  |  |  |
| Blue Lens             |  |          |  |          |  |  |  |
| Operator only         | HT8GBBV3   | \$96.00  | HT8GBBV7   | \$96.00  |  |  |  |
| 1 N.O.                | * <u>HT8GBBAV3</u>   | \$112.00 | *HT8GBBAV7   | \$112.00 |  |  |  |
| 1 N.C.                | * <u>HT8GBBBV3</u>   | \$112.00 | * <u>HT8GBBBV7</u>   | \$112.00 |  |  |  |
|                       | Spare Incandescent   | Lamps Fo | r HT8 Series   |          |  |  |  |
| Spare lamp            | HT8BULBV3  | \$14.00  | HT8BULBV7  | \$14.00  |  |  |  |

See HT800 accessories in this section.

Notes: A grounding kit is included with each operator or switch assembly.

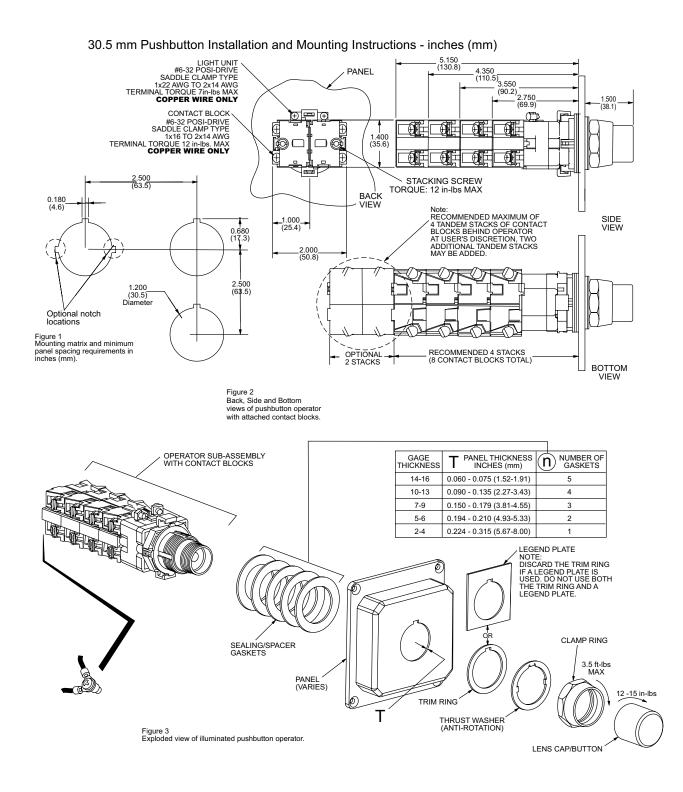
Part numbers with an \* are kitted from individual components at AutomationDirect. The individual components are picked and shipped in the same shipping box. Final assembly of the individual components must be done by the customer. Lens not sold separately.







# I-800-633-0405 HT800 30mm Extended Cutler-Hammer Illuminated Pushbuttons



## 1-800-633-0405 HT800 30mm Contact Blocks & F1·N **Cutler-Hammer Accessories**

# **Contact blocks**



| HT8 Series Contact Blocks |   |         |  |  |
|---------------------------|---|---------|--|--|
| Part Number               | Description   | Price   |  |  |
| <u>HT8A</u>               | Normally open contact block for HT8 series switches.<br>NEMA Rated A600, P6001  | \$16.50 |  |  |
| <u>HT8B</u>               | Normally closed contact block for HT8 series switches.<br>NEMA Rated A600, P6001  | \$16.50 |  |  |
| <u>HT8C</u>               | Early closing normally open contact block for HT8 series switches.<br>NEMA Rated A6001  | \$40.00 |  |  |
| <u>HT8D</u>               | Late opening normally closed contact block for HT8 series switches.<br>NEMA Rated A6001   | \$16.50 |  |  |
| <u>HT8E</u>               | Logic level normally open contact block for HT8 series switches.<br>Gold plated contacts for reliable low energy switching.<br>Power Rating: Min 1mA @ 5V; Max 500mA 28V. | \$33.00 |  |  |

#### Notes

 See HT800 specifications in this section for typical contact wiring diagram.
 NEMA ICS 5-2000. For more information, refer to HT800 technical specifications and control circuit contact electrical ratings at the beginning of this section.

# Spare parts and tools











**HT8WRENCH** 

**HT8LAMPTOOL** 

109305

| 8BULBV3 |
|---------|
|---------|

HT8LEDYF3

| HI8 Series Spare Parts and Tools |   |         |  |  |  |
|----------------------------------|---|---------|--|--|--|
| Part Number                      | Description   | Price   |  |  |  |
| HT8WRENCH                        | Installation wrench for Cutler-Hammer HT8 series and E22 series pushbuttons, switches, and indicators   | \$19.00 |  |  |  |
| HT8LAMPTOOL                      | Bulb extraction tool for removing bulbs from switches, indicators and stacklights   | \$10.00 |  |  |  |
| <u>109305</u>                    | Knockout punch hole cutting tool for 30.5 mm mounting hole. Includes punch, die and draw stud   | \$34.50 |  |  |  |
| <u>HT8X1</u>                     | Spare anti-rotation ring for HT8 series. Included with each HT8 device. (not shown)   | \$3.25  |  |  |  |
| <u>HT8X2</u>                     | Spare trim ring for HT8 series. Included with each HT8 device. (not shown)  | \$3.25  |  |  |  |
| <u>HT8X3</u>                     | Spare sealing/spacing ring for HT8 series. Included with each HT8 device. (not shown)   | \$3.25  |  |  |  |
| <u>HT8GR1</u>                    | Spare grounding kit for HT8 series devices except non-PTT indicators. Included with each HT8 device. (not shown)                                | \$3.25  |  |  |  |
| <u>HT8GR2</u>                    | Spare grounding kit for HT8 series non-PTT indicators. Included with each HT8 device. (not shown)   | \$3.25  |  |  |  |
| <u>HT8BULBV3</u>                 | 24 volt incandescent bulb for HT8 illuminated devices. This is an extended bulb for enhanced illumination with HT8 devices. 50mA at 24 volts.   | \$14.00 |  |  |  |
| HT8BULBV7                        | 120 volt incandescent bulb for HT8 illuminated devices. This is an extended bulb for enhanced illumination with HT8 devices. 19mA at 120 volts. | \$14.00 |  |  |  |
| HT8LEDRF3                        | 24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Red   | \$38.50 |  |  |  |
| HT8LEDYF3                        | 24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Yellow  | \$38.50 |  |  |  |
| HT8LEDGF3                        | 24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Green   | \$40.00 |  |  |  |
| HT8LEDBF3                        | 24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Blue  | \$44.00 |  |  |  |
| HT8LEDWF3                        | 24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: White   | \$48.50 |  |  |  |
| HT8LEDAF3                        | 24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Amber   | \$39.00 |  |  |  |
| HT8LEDRF7                        | 120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Red  | \$38.50 |  |  |  |
| HT8LEDYF7                        | 120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Yellow   | \$38.50 |  |  |  |
| HT8LEDGF7                        | 120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Green  | \$40.00 |  |  |  |
| HT8LEDBF7                        | 120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Blue   | \$44.00 |  |  |  |
| HT8LEDWF7                        | 120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: White  | \$48.50 |  |  |  |
| HT8LEDAF7                        | 120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Amber  | \$39.00 |  |  |  |

NOTE: LED modules have very low current draw and should not be used with triac output devices like PLC triac output modules.

# 1-800-633-0405 **5-T-N** 30mm Legend Plates

**Cutler-Hammer** 

| For Pushbutton Operators and |                   |                   |        |  |  |
|------------------------------|-------------------|-------------------|--------|--|--|
| In                           | dicating          | Lights            |        |  |  |
| Legend                       | Color of<br>Field | Catalog<br>Number | Price  |  |  |
| Clamp                        | Black             | <u>HT8SP90</u>    | \$7.75 |  |  |
| Close                        | Black             | <u>HT8SP73</u>    | \$7.75 |  |  |
| Down                         | Black             | <u>HT8SP74</u>    | \$7.75 |  |  |
| Emergency<br>Stop            | Red               | <u>HT8SP13</u>    | \$7.75 |  |  |
| Fast                         | Black             | <u>HT8SP75</u>    | \$7.75 |  |  |
| Faster                       | Black             | <u>HT8SP87</u>    | \$7.75 |  |  |
| Feeder On                    | Black             | <u>HT8SP94</u>    | \$7.75 |  |  |
| Feeder Off                   | Black             | <u>HT8SP95</u>    | \$7.75 |  |  |
| Forward                      | Black             | <u>HT8SP15</u>    | \$7.75 |  |  |
| High                         | Black             | <u>HT8SP16</u>    | \$7.75 |  |  |
| In                           | Black             | <u>HT8SP17</u>    | \$7.75 |  |  |
| Inch                         | Black             | <u>HT8SP18</u>    | \$7.75 |  |  |
| Jog                          | Black             | <u>HT8SP19</u>    | \$7.75 |  |  |
| Jog<br>Forward               | Black             | <u>HT8SP20</u>    | \$7.75 |  |  |
| Jog<br>Reverse               | Black             | <u>HT8SP21</u>    | \$7.75 |  |  |
| Low                          | Black             | <u>HT8SP22</u>    | \$7.75 |  |  |
| Lower                        | Black             | <u>HT8SP23</u>    | \$7.75 |  |  |
| Lube-fail                    | Black             | <u>HT8SP92</u>    | \$7.75 |  |  |
| Motor Run                    | Black             | <u>HT8SP81</u>    | \$7.75 |  |  |
| Motor Stop                   | Black             | <u>HT8SP82</u>    | \$7.75 |  |  |
| Off                          | Red               | HT8SP24           | \$7.75 |  |  |
| On                           | Black             | HT8SP25           | \$7.75 |  |  |
| Open                         | Black             | <u>HT8SP26</u>    | \$7.75 |  |  |
| Out                          | Black             | HT8SP27           | \$7.75 |  |  |
| Power On                     | Black             | <u>HT8SP80</u>    | \$7.75 |  |  |
| Raise                        | Black             | HT8SP28           | \$7.75 |  |  |
| Ready                        | Black             | <u>HT8SP86</u>    | \$7.75 |  |  |
| Reset                        | Black             | <u>HT8SP29</u>    | \$7.75 |  |  |
| Reverse                      | Black             | <u>HT8SP30</u>    | \$7.75 |  |  |
| Run                          | Black             | <u>HT8SP31</u>    | \$7.75 |  |  |
| Safe                         | Black             | HT8SP85           | \$7.75 |  |  |
| Slow                         | Black             | HT8SP32           | \$7.75 |  |  |
| Slower                       | Black             | HT8SP88           | \$7.75 |  |  |
| Start                        | Black             | HT8SP33           | \$7.75 |  |  |
| Stop                         | Red               | HT8SP34           | \$7.75 |  |  |
| Test                         | Black             | HT8SP83           | \$7.75 |  |  |
| Transfer                     | Black             | HT8SP93           | \$7.75 |  |  |
| Trip                         | Black             | HT8SP84           | \$7.75 |  |  |
| Unclamp                      | Black             | HT8SP91           | \$7.75 |  |  |
| Up                           | Black             | HT8SP35           | \$7.75 |  |  |
| ~p                           |                   | 11103133          | ψι.15  |  |  |

\*Note: Dimensions: 1.77" (45mm) x1.77" (45mm)

| <b>For Selector Switch Operators</b> / |                   |                   |        |  |  |
|--|-------------------|-------------------|--------|--|--|
| Two-Position                           |                   |                   |        |  |  |
| Legend                                 | Color of<br>Field | Catalog<br>Number | Price  |  |  |
| Forward<br>Reverse                     | Black             | <u>HT8SP38</u>    | \$7.75 |  |  |
| Hand Auto                              | Black             | <u>HT8SP39</u>    | \$7.75 |  |  |
| High Low                               | Black             | <u>HT8SP40</u>    | \$7.75 |  |  |
| Jog Run                                | Black             | <u>HT8SP41</u>    | \$7.75 |  |  |
| Manual Auto                            | Black             | <u>HT8SP67</u>    | \$7.75 |  |  |
| Off On                                 | Black             | <u>HT8SP42</u>    | \$7.75 |  |  |
| Open Close                             | Black             | <u>HT8SP43</u>    | \$7.75 |  |  |
| Run Jog                                | Black             | <u>HT8SP44</u>    | \$7.75 |  |  |
| Safe Run                               | Black             | <u>HT8SP45</u>    | \$7.75 |  |  |
| Start Jog                              | Black             | <u>HT8SP46</u>    | \$7.75 |  |  |
| Start Stop                             | Black             | <u>HT8SP47</u>    | \$7.75 |  |  |
| Up Down                                | Black             | <u>HT8SP48</u>    | \$7.75 |  |  |

| For PUSH/PULL Units          |                   |                   |        |  |
|------------------------------|-------------------|-------------------|--------|--|
| Legend<br>3/32"<br>lettering | Color of<br>Field | Catalog<br>Number | Price  |  |
| ON/OFF                       | Black             | HT8PP5            | \$7.75 |  |
| OPEN/CLOSE                   | Black             | <u>HT8PP8</u>     | \$7.75 |  |
| UP/DOWN                      | Black             | <u>HT8PP11</u>    | \$7.75 |  |

| JOG | RUN | OFF |   |
|-----|-----|-----|---|
|     |     | ON  | 1 |
|     |     |     |   |
|     |     |     |   |

#### For Selector Switch Operators/ **Three-Position** Color of Catalog Legend Price Field Number Auto Off Black <u>HT8SP49</u> \$7.75 Hand For. Off Rev Black HT8SP50 \$7.75 For. Safe Black HT8SP69 \$7.75 Rev. Hand Off Black HT8SP51 \$7.75 Auto Man. Off Black <u>HT8SP68</u> \$7.75 Auto Open Off Black <u>HT8SP53</u> \$7.75 Close Run Safe Black <u>HT8SP70</u> \$7.75 Jog Up Off Down Black HT8SP54 \$7.75 On Stop Black HT8SP71 \$7.75 Safe

| Square Blank Plastic Legend<br>Plates |                   |                   |        |  |
|---------------------------------------|-------------------|-------------------|--------|--|
| Lettering                             | Color of<br>Field | Catalog<br>Number | Price  |  |
| Black                                 | White/Silver      | <u>HT8SP76</u>    | \$7.75 |  |
| White                                 | Red/Black         | <u>HT8SP77</u>    | \$7.75 |  |

| Round Plastic Legend Plates |                   |                   |        |
|-----------------------------|-------------------|-------------------|--------|
| Legend                      | Color of<br>Field | Catalog<br>Number | Price  |
| ESTOP                       | Yellow            | <u>HT8RP79</u>    | \$7.75 |

NOTE: 70 mm / 2-3/4" diameter

NOTE: All 30 mm legend plates are plastic.