



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

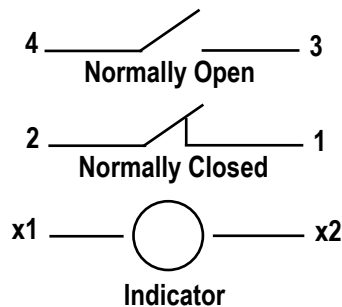
#### Standards and Certifications

- 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





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# HT800 30mm Pushbuttons

## Specifications

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 10 <sup>6</sup> 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 Type	Catalog Number	AC	DC
Standard Normally Open contact	N.O.	<a href="#">HT8A</a>	A600	P600
Standard Normally Closed contact	N.C.	<a href="#">HT8B</a>	A600	P600
Normally Open Early Make Contact will make circuit before standard N.O. contact. DC ratings do not apply.	N.O.E.M.	<a href="#">HT8C</a>	A600	—
Normally Closed Late Break contact will open after standard N.C. contact. DC ratings do not apply.	N.C.L.B.	<a href="#">HT8D</a>	A600	—
Logic level, low voltage N.O. contact. Gold plated contacts.	N.O.	<a href="#">HT8E</a>	5V 1mA (minimum) 28V 500mA (maximum)	

UL (NEMA) A600 and P600 Ratings							
Description	Volts AC 50/60 Hz				Volts DC <sup>1</sup>		
	120	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

# HT800 30mm Selector Switches

**HT8JAH3A** knob version**HT8JDH3A** lever version**HT8JBH1D** knob version**HT8JEH1D** lever version

## Two-position Selector Switches

Contact Type	Operator Type M=Maintained S=Spring Return	Standard Black Knob Operator		Standard Black Lever Operator	
		Part Number	Price	Part Number	Price
No Contacts	M M	<a href="#">HT8JAH3A</a>	\$0daa:	<a href="#">HT8JDH3A</a>	\$0dae:
	M<S	<a href="#">HT8JNH3A</a>	\$-0dai:	<a href="#">HT8JPH3A</a>	\$0dak:
1 N.O.	M M	<a href="#">*HT8JAH3AA5</a>	\$0dab:	<a href="#">*HT8JDH3AA5</a>	\$,0daf:
	M<S	<a href="#">*HT8JNH3AA5</a>	\$-0daj:	<a href="#">*HT8JPH3AA5</a>	\$-0dal:

Switch Part Numbers	Contact Blocks		Cam Code 3A	
<a href="#">HT8JAH3A</a> , <a href="#">HT8JNH3A</a> , <a href="#">HT8JAH3AA5</a> , <a href="#">HT8JNH3AA5</a> , <a href="#">HT8JDH3A</a> , <a href="#">HT8JPH3A</a> , <a href="#">HT8JDH3AA5</a> , <a href="#">HT8JPH3AA5</a> (Contact block configuration varies with part number)	Left	Right	Switch Position	
	N.O.	-----	X	0
	N.C.	-----	0	X
	-----	N.O.	0	X
Two-position Selector Switch	-----	N.C.	X	0
	Note: AutomationDirect only offers cam code 3A for two position selector switches.		X = On	0 = Off

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.

## Three-position Selector Switches

Contact Type	Operator Type M=Maintained S=Spring Return	Standard Black Knob Operator		Standard Black Lever Operator	
		Part Number	Price	Part Number	Price
No Contacts	M M M	<a href="#">HT8JBH1D</a>	\$0dac:	<a href="#">HT8JEH1D</a>	\$0dag:
	M M < S	<a href="#">HT8JUH1D</a>	\$0dan:	<a href="#">HT8JVH1D</a>	\$0dap:
	S > M < S	<a href="#">HT8JXH1D</a>	\$0das:	<a href="#">HT8JYH1D</a>	\$0dau:
2 N.O.	M M M	<a href="#">HT8JBH1DAA5</a>	\$0dad:	<a href="#">*HT8JEH1DAA5</a>	\$0dah:
	M M < S	<a href="#">*HT8JUH1DAA5</a>	\$0dao:	<a href="#">*HT8JVH1DAA5</a>	\$0daq:
	S > M < S	<a href="#">*HT8JXH1DAA5</a>	\$,0dat:	<a href="#">*HT8JYH1DAA5</a>	\$0dav:

Switch Part Numbers	Contact Blocks		Cam Code 1D		
<a href="#">HT8JBH1D</a> , <a href="#">HT8JUH1D</a> , <a href="#">HT8JXH1D</a> , <a href="#">HT8JBH1DAA5</a> , <a href="#">HT8JUH1DAA5</a> , <a href="#">HT8JXH1DAA5</a> , <a href="#">HT8JEH1D</a> , <a href="#">HT8JVH1D</a> , <a href="#">HT8JYH1D</a> , <a href="#">HT8JEH1DAA5</a> , <a href="#">HT8JVH1DAA5</a> , <a href="#">HT8JYH1DAA5</a> (Contact block configuration varies with part number)	Left	Right	Switch Position		
	N.O.	-----	X	0	0
	N.C.	-----	0	X	X
Three-position Selector Switch	-----	N.O.	0	0	X
	-----	N.C.	X	X	0
	*N.O.-----	-----N.O.	X	0	X
	**N.C.-----	-----N.C.	0	X	0
	* Indicates contact blocks wired in parallel ** Indicates contact blocks wired in series		X = On	0 = Off	

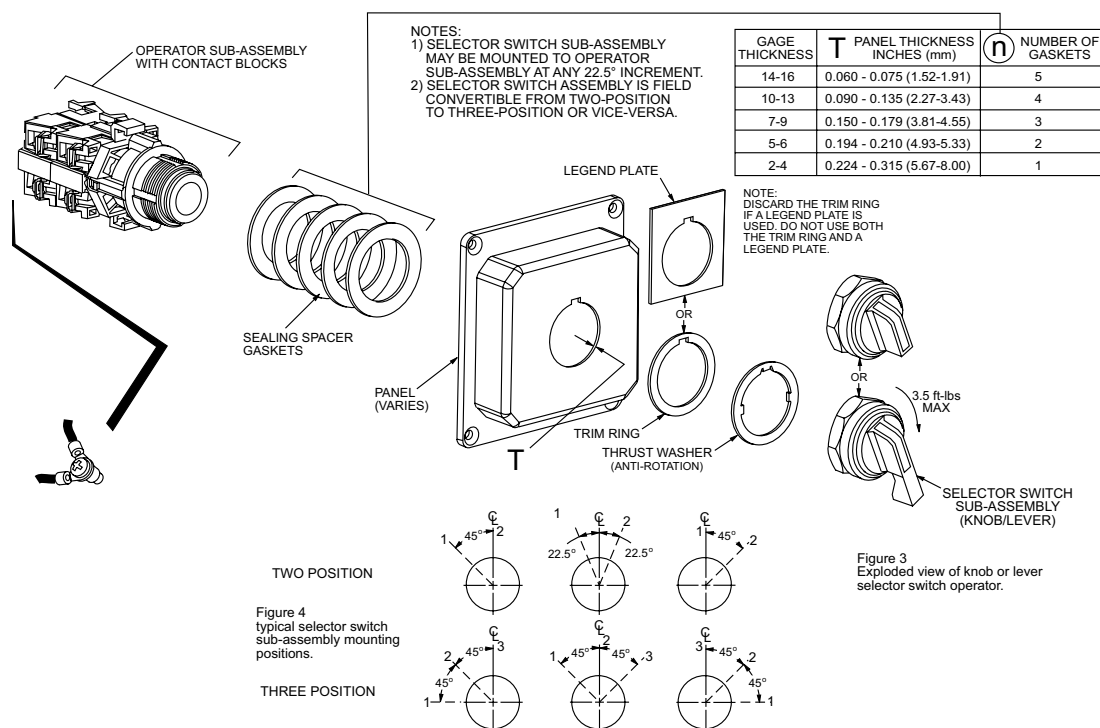
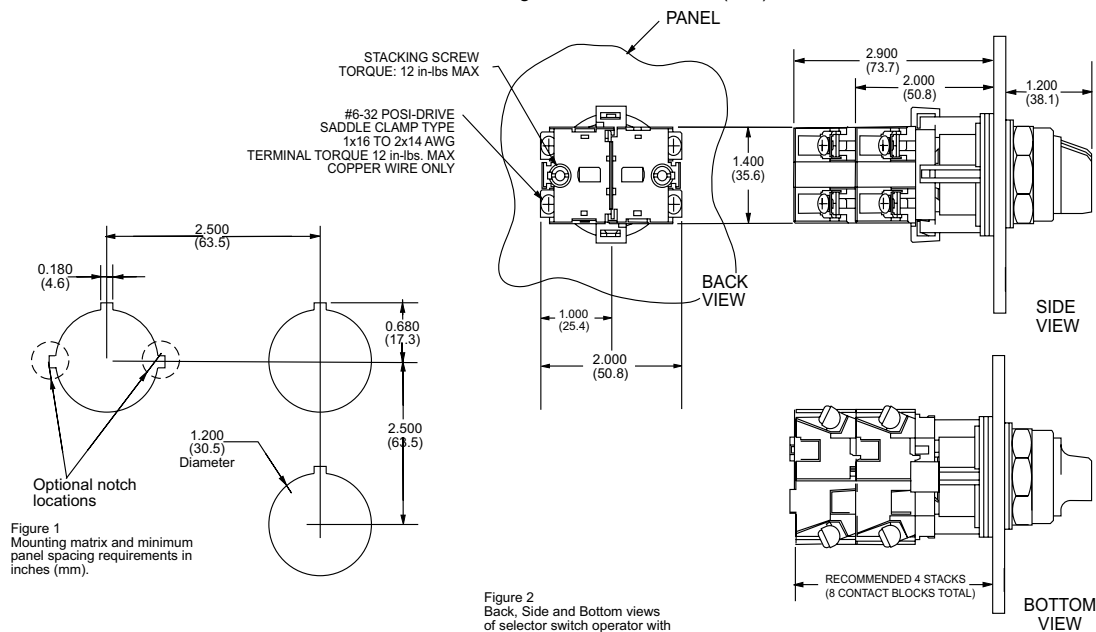
Note: AutomationDirect only offers cam code 1D for three-position selector switches.

Note: For additional contact blocks, see HT800 accessories in this section.

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# HT800 30mm Three-position Selector Switches

### 30.5 mm Selector Switch Installation and Mounting Instructions - inches (mm)





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# HT800 30mm Contact Blocks & Accessories

## Contact blocks

**HT8A****HT8B**

HT8 Series Contact Blocks		
Part Number	Description	Price
<b>HT8A</b>	Normally open contact block for HT8 series switches. NEMA Rated A600, P6001	\$0d7s:
<b>HT8B</b>	Normally closed contact block for HT8 series switches. NEMA Rated A600, P6001	\$;0d7t:
<b>HT8C</b>	Early closing normally open contact block for HT8 series switches. NEMA Rated A6001	\$0d7u:
<b>HT8D</b>	Late opening normally closed contact block for HT8 series switches. NEMA Rated A6001	\$0d7v:
<b>HT8E</b>	Logic level normally open contact block for HT8 series switches. Gold plated contacts for reliable low energy switching. Power Rating: Min 1mA @ 5V; Max 500mA 28V.	\$0d7x:

### Notes

1. See HT800 specifications in this section for typical contact wiring diagram.
2. 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****HT8BULBV3****HT8LEDYF3**

HT8 Series Spare Parts and Tools		
Part Number	Description	Price
<b>HT8WRENCH</b>	Installation wrench for Cutler-Hammer HT8 series and E22 series pushbuttons, switches, and indicators	\$04#5:
<b>HT8LAMPTOOL</b>	Bulb extraction tool for removing bulbs from switches, indicators and stacklights	\$0551:
<b>109305</b>	Knockout punch hole cutting tool for 30.5 mm mounting hole. Includes punch, die and draw stud	\$;0cfq:
<b>HT8X1</b>	Spare anti-rotation ring for HT8 series. Included with each HT8 device. (not shown)	\$6ua:
<b>HT8X2</b>	Spare trim ring for HT8 series. Included with each HT8 device. (not shown)	\$6ub:
<b>HT8X3</b>	Spare sealing/spacing ring for HT8 series. Included with each HT8 device. (not shown)	\$6uc:
<b>HT8GR1</b>	Spare grounding kit for HT8 series devices except non-PTT indicators. Included with each HT8 device. (not shown)	\$;6u[:
<b>HT8GR2</b>	Spare grounding kit for HT8 series non-PTT indicators. Included with each HT8 device. (not shown)	\$6u_:
<b>HT8BULBV3</b>	24 volt incandescent bulb for HT8 illuminated devices. This is an extended bulb for enhanced illumination with HT8 devices. 50mA at 24 volts.	\$0eap:
<b>HT8BULBV7</b>	120 volt incandescent bulb for HT8 illuminated devices. This is an extended bulb for enhanced illumination with HT8 devices. 19mA at 120 volts.	\$0eaq:
<b>HT8LEDRF3</b>	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Red	\$0e92:
<b>HT8LEDYF3</b>	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Yellow	\$0e96:
<b>HT8LEDGF3</b>	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Green	\$0e90:
<b>HT8LEDBF3</b>	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Blue	\$0e8?:
<b>HT8LEDWF3</b>	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: White	\$0e94:
<b>HT8LEDAF3</b>	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Amber	\$0e8#:
<b>HT8LEDRF7</b>	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Red	\$0e93:
<b>HT8LEDYF7</b>	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Yellow	\$0e97:
<b>HT8LEDGF7</b>	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Green	\$0e91:
<b>HT8LEDBF7</b>	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Blue	\$;0e8,:
<b>HT8LEDWF7</b>	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: White	\$0e95:
<b>HT8LEDAF7</b>	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Amber	\$;0e8!:

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



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# 30mm Legend Plates



## For Pushbutton Operators and Indicating Lights

Legend	Color of Field	Catalog Number	Price
Clamp	Black	<a href="#">HT8SP90</a>	\$d9c:
Close	Black	<a href="#">HT8SP73</a>	\$d87:
Down	Black	<a href="#">HT8SP74</a>	\$;d8,:
Emergency Stop	Red	<a href="#">HT8SP13</a>	\$d7_:
Fast	Black	<a href="#">HT8SP75</a>	\$d90:
Faster	Black	<a href="#">HT8SP87</a>	\$d9a:
Feeder On	Black	<a href="#">HT8SP94</a>	\$d9g:
Feeder Off	Black	<a href="#">HT8SP95</a>	\$d9h:
Forward	Black	<a href="#">HT8SP15</a>	\$d7#:
High	Black	<a href="#">HT8SP16</a>	\$;d7!:
In	Black	<a href="#">HT8SP17</a>	\$d7?:
Inch	Black	<a href="#">HT8SP18</a>	\$;d7,:
Jog	Black	<a href="#">HT8SP19</a>	\$d80:
Jog Forward	Black	<a href="#">HT8SP20</a>	\$d81:
Jog Reverse	Black	<a href="#">HT8SP21</a>	\$d82:
Low	Black	<a href="#">HT8SP22</a>	\$d83:
Lower	Black	<a href="#">HT8SP23</a>	\$d84:
Lube-fail	Black	<a href="#">HT8SP92</a>	\$d9e:
Motor Run	Black	<a href="#">HT8SP81</a>	\$d94:
Motor Stop	Black	<a href="#">HT8SP82</a>	\$d95:
Off	Red	<a href="#">HT8SP24</a>	\$d85:
On	Black	<a href="#">HT8SP25</a>	\$d86:
Open	Black	<a href="#">HT8SP26</a>	\$d87:
Out	Black	<a href="#">HT8SP27</a>	\$d88:
Power On	Black	<a href="#">HT8SP80</a>	\$d93:
Raise	Black	<a href="#">HT8SP28</a>	\$d89:
Ready	Black	<a href="#">HT8SP86</a>	\$d99:
Reset	Black	<a href="#">HT8SP29</a>	\$d8a:
Reverse	Black	<a href="#">HT8SP30</a>	\$d8b:
Run	Black	<a href="#">HT8SP31</a>	\$d8c:
Safe	Black	<a href="#">HT8SP85</a>	\$d98:
Slow	Black	<a href="#">HT8SP32</a>	\$d8d:
Slower	Black	<a href="#">HT8SP88</a>	\$d9b:
Start	Black	<a href="#">HT8SP33</a>	\$d8e:
Stop	Red	<a href="#">HT8SP34</a>	\$;d8f:
Test	Black	<a href="#">HT8SP83</a>	\$d96:
Transfer	Black	<a href="#">HT8SP93</a>	\$;d9f:
Trip	Black	<a href="#">HT8SP84</a>	\$d97:
Unclamp	Black	<a href="#">HT8SP91</a>	\$d9d:
Up	Black	<a href="#">HT8SP35</a>	\$d8g:

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

## For Selector Switch Operators/Two-Position

Legend	Color of Field	Catalog Number	Price
Forward Reverse	Black	<a href="#">HT8SP38</a>	\$d8h:
Hand Auto	Black	<a href="#">HT8SP39</a>	\$-d8i:
High Low	Black	<a href="#">HT8SP40</a>	\$-d8j:
Jog Run	Black	<a href="#">HT8SP41</a>	\$d8k:
Manual Auto	Black	<a href="#">HT8SP67</a>	\$;d8j:
Off On	Black	<a href="#">HT8SP42</a>	\$-d8l:
Open Close	Black	<a href="#">HT8SP43</a>	\$d8n:
Run Jog	Black	<a href="#">HT8SP44</a>	\$d8o:
Safe Run	Black	<a href="#">HT8SP45</a>	\$d8p:
Start Jog	Black	<a href="#">HT8SP46</a>	\$d8q:
Start Stop	Black	<a href="#">HT8SP47</a>	\$d8s:
Up Down	Black	<a href="#">HT8SP48</a>	\$;d8t:

## For Selector Switch Operators/Three-Position

Legend	Color of Field	Catalog Number	Price
Auto Off Hand	Black	<a href="#">HT8SP49</a>	\$d8u:
For. Off Rev	Black	<a href="#">HT8SP50</a>	\$d8v:
For. Safe Rev.	Black	<a href="#">HT8SP69</a>	\$d8_:
Hand Off Auto	Black	<a href="#">HT8SP51</a>	\$d8x:
Man. Off Auto	Black	<a href="#">HT8SP68</a>	\$;d8[:
Open Off Close	Black	<a href="#">HT8SP53</a>	\$d8y:
Run Safe Jog	Black	<a href="#">HT8SP70</a>	\$d8#:
Up Off Down	Black	<a href="#">HT8SP54</a>	\$d8z:
On Stop Safe	Black	<a href="#">HT8SP71</a>	\$;d8!:

## For PUSH/PULL Units

Legend 3/32" lettering	Color of Field	Catalog Number	Price
ON/OFF	Black	<a href="#">HT8PP5</a>	\$d7z:
OPEN/CLOSE	Black	<a href="#">HT8PP8</a>	\$;d7]:
UP/DOWN	Black	<a href="#">HT8PP11</a>	\$d7y:

## Square Blank Plastic Legend Plates

Lettering	Color of Field	Catalog Number	Price
Black	White/Silver	<a href="#">HT8SP76</a>	\$d91:
White	Red/Black	<a href="#">HT8SP77</a>	\$d92:

## Round Plastic Legend Plates

Legend	Color of Field	Catalog Number	Price
ESTOP	Yellow	<a href="#">HT8RP79</a>	\$;d7[:

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

NOTE: All 30 mm legend plates are plastic.