DIP SWITCHES

2 POSITION  Standard style.
CAT# DWS-2  65¢ each

4 POSITION  Standard style.
CAT# DWS-4  50¢ each
100 for 30¢ each

4 POSITION  Low profile style.
CAT# DWS-4S  $1.00 each

7 POSITION  Piano style.
CAT# DWS-7P  50¢ each

8 POSITION  Standard style.
CAT# DWS-8  $1.00 each

10 POSITION  Standard style.
CAT# DWS-10  85¢ each

REED SWITCHES

Magnetically-operated reed switches. Hermetically-sealed glass body.

NORMALLY-OPEN REED SWITCHES
Coto #RI-01C
Body: 1.8mm diameter x 13.5mm long
CAT# RSW-41  $1.25 each
10 for $1.10 each • 100 for 95¢ each
ORD2201
1 Amp rating. 2.75mm diameter x 21.0 long
CAT# RSW-43  2 for $1.50

S.P.D.T. REED SWITCH
Hamlin
Body: 4.7mm diameter x 33mm long.
CAT# RSW-40  $1.50 ea. • 10 for $1.25 ea.

ALARM SWITCHES

SPDT
Can be used on normally open or normally closed loop systems. Switch measures 2" long X 3/8".
CAT# MS-7  $6.00 each
10 for $5.50 each

PRESS-FIT MAGNET SWITCH
Press-fit into 3/8" hole. Ideal for windows and doors. For normally closed systems. 0.75" operating gap. U.L. listed.
CAT# MS-11  $3.50 per set
10 sets for $32.50

SNAP-TOGETHER PROJECT BOXES

Two or three piece black ABS enclosures.

1.46" X 1.06" X 0.67"
Black ABS plastic project box. Bottom snap-fits tightly into place. 0.71" x 0.22" slot in one side of box.
CAT# MB-95  $1.50 ea. • 10 for $1.35 ea.

2.1" X 1.61" X 0.89"
3-pieces. Bottom and one (long) side snap-fit in place. Mounting ears with holes on 2.6" centers.
CAT# MB-96  $2.35 each
10 for $2.00 each

3.56" X 1.50" X 1.20"
Bottom snap-fits into place. Mounting ears with holes on 3.9" centers. 0.25" x 0.43" opening near the bottom of one long side.
CAT# MB-97  $1.95 ea. • 10 for $1.70 ea.

FOOT SWITCH
Spring-return metal foot switch for 120Vac devices. Momentary-on action, on when pressed; off when released. Ideal for rotary tool, scroll saw, devices using 200W or less. 6" cords for power input and output. 5" x 3" x 2 1/4".
CAT# FSW-15  $19.95 each

KEYPADS

16 BUTTON INDOOR / OUTDOOR KEYPAD
Fully-sealed, tactile snap-dome contacts. Contacts rated 30 mA @ 12 Vdc. 4 x 4 buttons (2.7" x 3" x 0.36). 9-pin headers, 0.1" spacing. See spec sheet on our web site for more info.
CAT# KP-23  $13.75 ea. • 10 for $12.75 ea.

12 BUTTON KEYPAD
Numerals 0-9, *, and #. One common terminal. Contacts rated 20 mA @ 24 Vdc. 2.01" x 2.24". Black with white buttons. Can be rear-mounted through a 2.25" x 1.81" cutout.
CAT# KP-12  $4.95 each

4 X 4 MATRIX MEMBRANE KEYPAD
Digits 0 through 9, letters A, B, C, D and symbols *, #. 3.0" x 2.7". Snap-action feel to switches. Peel-off adhesive backing and stick onto smooth, clean surface. 3.2" ribbon connector, terminated with 8-pin socket connector, 0.1" spacing.
CAT# ME-44  $3.55 each
### Project Enclosures

#### Hammond Manufacturing

#### Mini-ABS Cases
Black or gray ABS plastic with inter-locking lid. Integral standoffs for PC board mounting. Lid held in place with self-tapping #4 screws (included).

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Color</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.97” x 1.38” x 0.59”</td>
<td>Black</td>
<td>$1.90 each</td>
</tr>
<tr>
<td>1.97” x 1.38” x 0.8”</td>
<td>Gray</td>
<td>$1.90 each</td>
</tr>
<tr>
<td>2.36” x 1.38” x 0.8”</td>
<td>Black</td>
<td>$2.25 each</td>
</tr>
<tr>
<td>3.15” x 1.57” x 0.8”</td>
<td>Gray</td>
<td>$2.35 each</td>
</tr>
</tbody>
</table>

#### Instrument Cases
Gray ABS plastic. Two piece tongue and groove construction. 0.064” brushed aluminum front and rear panels. Integral PC standoffs. Front and rear vertical PC board guides.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Color</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3” x 2.2” x 0.8”</td>
<td>Black</td>
<td>$3.50 each</td>
</tr>
<tr>
<td>3.9” x 2.0” x 0.8”</td>
<td>Black</td>
<td>$3.75 each</td>
</tr>
<tr>
<td>4.4” x 2.4” x 1.1”</td>
<td>Black</td>
<td>$4.30 each</td>
</tr>
<tr>
<td>4.7” x 2.6” x 1.4”</td>
<td>Black</td>
<td>$4.65 each</td>
</tr>
</tbody>
</table>

#### Cases w/ Battery Compartments
Black ABS plastic cases with removable front panels and panel for battery compartment. Integral PC standoffs. Includes self-tapping screws. 9V batteries won’t fit in CAT#s 1593-SBK & TBK.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Color</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.25” x 1.73” x 1.37”</td>
<td>Black</td>
<td>$2.65 each</td>
</tr>
<tr>
<td>3.96” x 1.94” x 1.05”</td>
<td>Black</td>
<td>$3.00 each</td>
</tr>
<tr>
<td>4.4” x 2.4” x 1.6”</td>
<td>Black</td>
<td>$3.25 each</td>
</tr>
<tr>
<td>5.3” x 3” x 1.9”</td>
<td>Black</td>
<td>$4.00 each</td>
</tr>
</tbody>
</table>

#### Aluminum Enclosure
Hammond# 1411HU. 102 x 56 x 56mm (4” x 2” x 2”) light grey aluminum box. Four self-tapping screws included. CAT# 1411-HU $7.50 each

### Diecast Aluminum Enclosures
Aluminum enclosure with countersunk lid that machine screws into drilled and tapped holes. Lap joint construction provides protection from dust and water.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>CAT#</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.99” x 1.99” x 1.23”</td>
<td>1590-LB</td>
<td>$7.25 each</td>
</tr>
<tr>
<td>3.64” x 1.52” x 1.23”</td>
<td>1590-A</td>
<td>$7.05 each</td>
</tr>
<tr>
<td>4.39” x 2.34” x 1.23”</td>
<td>1590-B</td>
<td>$8.40 each</td>
</tr>
<tr>
<td>5.76” x 4.79” x 1.55”</td>
<td>1590-XX</td>
<td>$11.20 each</td>
</tr>
</tbody>
</table>

Black smooth-gloss, polyester powder, finish.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>CAT#</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4” x 2.4” x 1.2”</td>
<td>1590-BBK</td>
<td>$10.20 each</td>
</tr>
</tbody>
</table>

### Alumminum Boxes W/ Mounting Flanges
Black or gray ABS plastic with inter-locking lid secured with self-tapping screws. Slots for mounting PC board.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>CAT#</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.39” x 2.39” x 2.48”</td>
<td>1590-P1F</td>
<td>$24.70 each</td>
</tr>
<tr>
<td>7.55” x 4.39” x 1.60”</td>
<td>1590-R1F</td>
<td>$34.95 each</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimension</th>
<th>CAT#</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.65” x 2.24” x 0.83”</td>
<td>1590-BBK</td>
<td>$10.20 each</td>
</tr>
</tbody>
</table>

### Economy Project Boxes
ABS plastic project enclosure. Inter-locking lid secured with self-tapping screws. Interior slots for PC boards. Includes hardware. Boxes are black, except CAT#s with “G” are grey.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>CAT#</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0” x 3” x 1.6”</td>
<td>MB-131</td>
<td>$3.00 each</td>
</tr>
<tr>
<td>5.0” x 3” x 1.6”</td>
<td>MB-133</td>
<td>$2.65 each</td>
</tr>
<tr>
<td>4.0” x 1” x 1.6”</td>
<td>MB-173</td>
<td>$3.00 each</td>
</tr>
<tr>
<td>5.97” x 2.12” x 1.72”</td>
<td>MB-132</td>
<td>$3.00 each</td>
</tr>
<tr>
<td>4.33” x 2.24” x 0.83”</td>
<td>MB-420</td>
<td>$3.70 each</td>
</tr>
</tbody>
</table>

### Project Boxes W/ Mounting Flanges
High-impact ABS plastic utility boxes. Black textured finish. Interlocking lid held in place with screws. Interior card guides for 1.6mm thick PC board. Mounting flange has counter-sunk screw holes and adds 1” to 1.25” to overall length of box.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>CAT#</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.25” x 2.10” x 1.20”</td>
<td>MBF-20</td>
<td>2.75 Each</td>
</tr>
<tr>
<td>5.12” x 2.68” x 1.72”</td>
<td>MBF-22</td>
<td>3.50 Each</td>
</tr>
<tr>
<td>6.18” x 3.78” x 2.10”</td>
<td>MBF-24</td>
<td>5.45 Each</td>
</tr>
</tbody>
</table>
ENCLOSURES WITH ALUMINUM COVERS

Heavy-duty 3/32" molded plastic boxes with brushed aluminum covers. Built in stand-offs for PC or perf boards. Includes screws.

Solderable perf boards PC-1, 2, 3, 4 listed below fit these cases.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>CAT#</th>
<th>1-9</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7&quot; x 1.7&quot; x 1.2&quot; H</td>
<td>TB-1</td>
<td>1.90</td>
<td>1.75</td>
</tr>
<tr>
<td>3.3&quot; x 2.1&quot; x 1.4&quot; H</td>
<td>TB-2</td>
<td>2.50</td>
<td>2.30</td>
</tr>
<tr>
<td>4.2&quot; x 2.7&quot; x 1.6&quot; H</td>
<td>TB-3</td>
<td>2.95</td>
<td>2.75</td>
</tr>
<tr>
<td>5.3&quot; x 3.3&quot; x 1.6&quot; H</td>
<td>TB-4</td>
<td>3.75</td>
<td>3.50</td>
</tr>
</tbody>
</table>

SOLDERABLE BREADBOARDS

Perf board with mounting holes designed to fit our project enclosures TB-1,2,3 and 4. Boards have holes on 0.1" matrix to fit most standard components. Copper solder rings on one side.

1 1/2" x 1 3/4". Fits TB-1 enclosure
CAT# PC-1 75¢ each

1 7/8" x 2 1/4". Fits TB-2 enclosure
CAT# PC-2 $1.00 each

2 1/2" x 3 1/8". Fits TB-3 enclosure
CAT# PC-3 $1.50 each

3" x 4 1/4". Fits TB-4 enclosure.
CAT# PC-4 $2.00 each

60 x 80mm, 594 point multilayer epoxy board. Single hole pads. Holes on 0.1" centers. Double-sided with pre-tinned through-holes. Rows and columns are labeled alphabetically.
CAT# SB-25 $3.00 each

Same pattern and spacing as our solderless breadboard, CAT# PB-400.
Transfer your parts and wires, keeping the same layout to get a long-lasting prototype with reliable solder connections. High-quality FR4 glass epoxy PC board. Copper on one side. CAT# SB-300 has the same pattern as SB-400 w/o the bus strips on each side.

300 point CAT# SB-300 $4.00 each
400 point CAT# SB-400 $5.00 each
800 point CAT# SB-800 $6.50 each

SOLDERABLE PERF BOARD WITH SOLDER PADS AND BUSS STRIPS

Multilayer epoxy boards. Holes on 0.1" centers for SIP and DIP components.

SINGLE HOLE PADS
double sided w/ plated through-holes
50 x 80mm CAT# SB-24 $4.00 each
80 x 100mm CAT# SB-48 $6.60 each

TWO HOLE PADS
copper pads one side
50 x 80mm CAT# SB-2H1 $3.25 each

SOLID LINE PATTERN
copper pads one side
50 x 80mm CAT# SB-ST1 $3.15 each
100 x 80mm CAT# ECS-6 $4.00 each
160 x 100mm CAT# ECS-4 $6.95 each

SNAPPABLE BREADBOARD
Solderable, double-sided solderboard that can be used as a single proto board or snapped into four smaller boards for tiny projects. 2-hole strips and 4-hole strip areas. Four power rails. Centerline pads. High-quality FR4 glass epoxy PCB. Lead-free. Anti-tarnish coating. 0.042" holes drilled on 0.1" centers.
Size: 2.5" x 3.8" (63.5 x 96.5mm).
CAT# SBB-4 $5.50 each

SMT PADS
Grid of SMT pads on 0.05" centers allows SMT components of various sizes & pitches to be mounted. Larger components can span pads. Solid copper ground plane on bottom of board. Every 4th SMT pad has an unplated hole for easy connection to the ground plane.
50 x 80mm CAT# SB-5050 $4.00 each
100 x 160mm CAT# SB-3T $12.50 each

SOLDERLESS BREADBOARD

Design and change circuits quickly and cleanly. Breadboards accommodate all sizes of dips and discrete components with lead diameters up to 0.032". Interconnect with solid hook-up wire (#22 AWG recommended). Wires & components can be used & re-used many times without damage to board or components.

170 Contacts. 1.80" x 1.40" x 0.375" high.
CAT# PB-170 $2.50 each
10 for $2.00 each

400 contacts. 300 contacts on main board & 50 contacts on each of two power distribution strips. Distribution strips are removable. White.
CAT# PB-400 $4.00 ea. • 10 / $3.75 ea.

Same specs as PB-400 above, but made of clear plastic.
CAT# PB-400C $3.65 each
10 for $3.40 each

470 contacts plus two 70 contact buss strips, for a total of 610 contacts. 3 binding posts mounted on aluminum back plate. 5.92" x 3.75" x 0.43" high.
CAT# PB-610 $12.50 each
840 contacts. Dual row of buss terminals on each side of terminal strip. Double-sided adhesive tape backing. Holes for screw mounting. 2.2" x 6.5" x 0.38" high.
CAT# PB-840 $7.65 each

1680 contacts. 2 terminal strips. 4 buss strips, 3 binding posts mounted on an aluminum back plate. 5 1/8" x 6 7/8" x 3/8" high.
CAT# PB-1680 $15.95 each

ORDER TOLL FREE 1-800-826-5432 79