BearTrap™
TU-1AS2
1-Way Aluminum Side-Break Switches

Hubbell has a policy of continuous product improvement. Please visit hubbellpowersystems.com to confirm current design specifications.
Overview
The TU-1AS2 offers the most versatility, compared to other side break switches. The unique frame
design, with conductor deadends right on the frame, easily orients to the line angle. Additional
positions can be added quickly and with minimal effort. The TU-1AS2 can also be offered in two,
three, and four way mounting configurations for inline or 90 degree takeoffs. By adding a specially
designed pole bracket, you have maximum switching flexibility.

Features of the TU-1AS2 Beartrap™
• Speed Independent operation—can be closed either fast or slow
• Reverse-loop, silver plated copper jaw contacts— employ the natural repulsion of magnetic
  fields moving in opposite directions to exert holding forces against the blade edges.
• Components—The 6063-T6 aluminum tubular blade design provides the proper combination
  of current carrying capacity and rigidity. Silver-plated copper profiles are easily field-
  replaceable, as are the stationary and moving arcing horns.
• Blade Action—Both the blade and jaw contacts are wiped clean during the closing action to
  ensure a low resistance current transfer. A heavy-duty static blade locking device keeps the
  blade closed despite temporary faults or surge currents and is designed to pull the blade
  further into the jaw.
• Anti-Rollover Device—The BearTrap Switch from Turner employs a patented ramp and pin to
  securely position the blade in the jaw.
• Blade Position Indicator—High visibility stickers provide positive indication of the switch being
  open or closed. They also have high UV protection and come standard on every switch.
• Current Transfer—There are only two current transfer points in the hinge. The terminal pad is
  threaded to a stationary contact block creating a spring loaded, silver to silver connection,
  and the housing transfer current to the blade via a canted coil spring.
• Upgrade-Ability— Ratings can be increased from 600 amps to 1200 amps by adding bolt-on
  contact fingers to the jaw.
• Main Bearing Assembly And Stationary Insulator Mounting—The main pivot bearing assembly
  consists of two tapered roller bearings, which are adjusted and factory lubricated.
• Leveling —Leveling screws are provided on the movable and stationary insulator mounting
  flange for alignment of the insulator stacks. Three bolts are also on the jaw end for small final
  adjustments.
• Mounting—All frames are designed and constructed for termination of the transmission line a
  10,000 pounds working load. Line angles at full tension are limited to +/-5 Degrees of 90 or
  180 Degree dead end. If there is an application outside of these parameters, please contact
  the factory.

Accessories (Operating Mechanism complete with any of the following)
• Swing Handle (standard)
• Worm Gear
• Motor Operator

Load Break Devices
• TECORupters
  • Full Load Break
  • Loop Split
  • Line Charging
• High Speed Quick Whips
## Configurations

<table>
<thead>
<tr>
<th>kV</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>F*</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>25</td>
<td>18</td>
<td>33</td>
<td>30-3/4</td>
<td>29</td>
<td>72</td>
<td>89</td>
</tr>
<tr>
<td>48</td>
<td>30</td>
<td>22</td>
<td>37</td>
<td>34-3/4</td>
<td>34</td>
<td>84</td>
<td>96</td>
</tr>
<tr>
<td>72</td>
<td>42</td>
<td>30</td>
<td>45</td>
<td>42-3/4</td>
<td>46</td>
<td>86</td>
<td>108</td>
</tr>
<tr>
<td>123</td>
<td>60</td>
<td>45</td>
<td>62-1/4</td>
<td>60</td>
<td>64</td>
<td>144</td>
<td>180</td>
</tr>
<tr>
<td>145</td>
<td>72</td>
<td>54</td>
<td>71-1/4</td>
<td>69</td>
<td>76</td>
<td>156</td>
<td>240</td>
</tr>
<tr>
<td>170</td>
<td>84</td>
<td>62</td>
<td>79-1/4</td>
<td>79</td>
<td>88</td>
<td>168</td>
<td>240</td>
</tr>
</tbody>
</table>

- **F*** - with TECO-Ruptor
- **F* - and F** dimensions are minimum required
## Numbering Sequence

<table>
<thead>
<tr>
<th>TU-1AS2</th>
<th>V</th>
<th>A</th>
<th>I</th>
<th>P</th>
<th>TR</th>
<th>LB</th>
<th>OP</th>
</tr>
</thead>
<tbody>
<tr>
<td>038</td>
<td>06</td>
<td>INC</td>
<td>3</td>
<td></td>
<td></td>
<td>QW</td>
<td>SH</td>
</tr>
<tr>
<td>048</td>
<td>12</td>
<td>NA</td>
<td>5</td>
<td></td>
<td></td>
<td>VI</td>
<td>WG</td>
</tr>
<tr>
<td>072</td>
<td>20</td>
<td>SIP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>123</td>
<td>20</td>
<td>DS</td>
<td></td>
<td></td>
<td></td>
<td>LS</td>
<td></td>
</tr>
<tr>
<td>145</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FL</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Variant Configuration Key
- **V** - Voltage (kV)
- **A** - Current (A)
- **I** - Insulator Ship Method
- **P** - Pivot Size (inches)
- **TR** - Insulator TR
- **LB** - Load Break Device
- **OP** - Operator

### Insulator Shipping Methods
- **INC** - With Insulators
- **NA** - Insulators Not Included
- **SIP** - Ship in Place
- **DS** - Direct Ship

### Load Break Devices
- **QW** - Quick Whip
- **VI** - Vacuum Interrupter
- **FL** - Full Load
- **LS** - Loop Split

### Example
- TU-1AS207212INC3216VIFLSH

### Continuous Current (A) vs. BIL

<table>
<thead>
<tr>
<th>kV</th>
<th>BIL</th>
<th>TR</th>
<th>Whip Rating (A)</th>
<th>ACCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>200</td>
<td>210</td>
<td>18</td>
<td>D06</td>
</tr>
<tr>
<td>48</td>
<td>250</td>
<td>214</td>
<td>16</td>
<td>D06</td>
</tr>
<tr>
<td>72</td>
<td>350</td>
<td>216</td>
<td>12</td>
<td>D06</td>
</tr>
<tr>
<td>123</td>
<td>550</td>
<td>286</td>
<td>10</td>
<td>D06</td>
</tr>
<tr>
<td>145</td>
<td>650</td>
<td>288</td>
<td>10</td>
<td>D06</td>
</tr>
<tr>
<td>170</td>
<td>750</td>
<td>291</td>
<td>10</td>
<td>D06</td>
</tr>
</tbody>
</table>

### Short Time Rating-3 Sec (kA) vs. Peak Withstand Current (kA)

<table>
<thead>
<tr>
<th>Continuous Current (A)</th>
<th>Short Time Rating-3 Sec (kA)</th>
<th>Peak Withstand Current (kA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>600</td>
<td>25</td>
<td>65</td>
</tr>
<tr>
<td>1200</td>
<td>38</td>
<td>99</td>
</tr>
<tr>
<td>2000</td>
<td>63</td>
<td>164</td>
</tr>
</tbody>
</table>