WELKER SMART STOP™ DOES ALL STOPPING & SENSING FUNCTIONS IN ONE PART. MINIMIZES ENGINEERING, FIELD SET UP AND OPERATOR ADJUSTMENT TIME.

**ELIMINATES:**

- NEED FOR SEPARATE MOUNTS, BRACKETS & FLAGS.
- NEED FOR SWITCH ADJUSTMENTS WHEN SHIMMING.
- IMPROPER ADJUSTMENT OF OUTBOARD SWITCHES.
- OUTBOARD SWITCH VIBRATING LOOSE IN BRACKET.
- PROTECTING OUTBOARD PROXES FROM BEING STEPPED ON OR BENT IN TOOLS.

**ASC020-PD**

**ASC021-PD**

**SMART STOP SHOWN ON NL3 RAIL SLIDE (2 REQUIRED)**

**DO NOT CARRY BY CORD**

**SMART STOP IS ALWAYS USED ON STATIONARY SIDE**

RELEASED 8/30/21

Welker Engineered Products 1401 Piedmont, Troy MI 48083 (800) 229-0890 www.welkerproducts.com
ORDERING INFORMATION: 25mm TALL SERIES USING M10 FASTENERS

ORDER AS OPTION "P" ON THESE WELKER SLIDES:

- P5, P7 Plane Bearing Slides
- H7 Plane Bearing Slide
- R2 Rolling Element Slide
- NL3 Narrow Low Profile Rail Slide
- WL3 Wide Low Profile Rail Slide
- LP1, LP2, LPM Compact Rail Slides
- DB4 Guided Slide

TO ORDER SEPARATELY OR AS REPLACEMENT PART USE PART NUMBERS BELOW:

DIMENSIONS

(CABLE & CONNECTOR NOT SHOWN FOR CLARITY)

- ASC020-PD
  - Crowned & C'BORE
- ASC021-PD
  - Crowned & TAP
- ASF020-PD
  - Flat & C'BORE
- ASF021-PD
  - Flat & TAP

25 TYP.

50 TYP.

30.00 CENT.

M10X1.5 TAP THRU

DO NOT SCALE DRAWING

ENGINEERED PRODUCTS
800-229-0890 www.welkerproducts.com
ORDERING INFORMATION: 20mm TALL SERIES USING M8 FASTENERS

DIMENSIONS
(CABLE & CONNECTOR NOT SHOWN FOR CLARITY)

C'BORE FOR M8 SHCS

M8X1.25 TAP

ASC018-PD
CROWNED & C'BORE

ASC019-PD
CROWNED & TAP

C'BORE FOR M8 SHCS

M8X1.25 TAP

ASF018-PD
FLAT & C'BORE

ASF019-PD
FLAT & TAP

DO NOT SCALE DRAWING

DO NOT CARRY BY CORD
SMART STOP SWITCH

**General Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switching function</td>
<td>Normally Open (NO)</td>
</tr>
<tr>
<td>Output type</td>
<td>PNP</td>
</tr>
<tr>
<td>Rated operating distance, sn</td>
<td>1.75mm</td>
</tr>
<tr>
<td>Output polarity</td>
<td>DC</td>
</tr>
<tr>
<td>Assured operating distance sa</td>
<td>0 - 1.42 mm</td>
</tr>
<tr>
<td>Output type</td>
<td>3-wire</td>
</tr>
</tbody>
</table>

**Nominal Ratings**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage, $U_B$</td>
<td>5 - 30 V DC</td>
</tr>
<tr>
<td>Switching frequency, $f$</td>
<td>0 - 6000 Hz</td>
</tr>
<tr>
<td>Reverse polarity protection</td>
<td>Reverse polarity protected</td>
</tr>
<tr>
<td>Short-circuit protection</td>
<td>Pulsing</td>
</tr>
<tr>
<td>Voltage drop, $U_d$</td>
<td>≤ 1.5 V</td>
</tr>
<tr>
<td>Operating current, $I_L$</td>
<td>0 - 100 mA</td>
</tr>
<tr>
<td>Off-state current, $I_R$</td>
<td>0 - 0.2 mA</td>
</tr>
<tr>
<td>No-load supply current, $I_0$</td>
<td>≤ 15 mA</td>
</tr>
</tbody>
</table>

**Indicators/Operating Means**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage indicator</td>
<td>LED green</td>
</tr>
<tr>
<td>Switching state indicator</td>
<td>LED yellow</td>
</tr>
</tbody>
</table>

**Ambient Conditions**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient temperature</td>
<td>-40 - 85 °C (-40 - 185 °F)</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40 - 85 °C (-40 - 185 °F)</td>
</tr>
</tbody>
</table>

**Mechanical Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection type</td>
<td>Connector plug M12 x 1, 4-pin</td>
</tr>
<tr>
<td>Cable length</td>
<td>255mm</td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IP67</td>
</tr>
<tr>
<td>Cable material</td>
<td>Weld spatter resistant, robotic quality POC</td>
</tr>
<tr>
<td>Cable color</td>
<td>Orange</td>
</tr>
</tbody>
</table>

*SMART STOP IS USED TO SENSE FULL STOP AGAINST BLOCK (ONLY)*

**WIRING DIAGRAM (PNP)**

```
+    BRN

BLK | LOAD

BLU
```
SMART STOP™ PANCAKE SWITCHES

ALL PANCAKE SWITCH BLOCKS USE THESE FASTENERS:
M8 IN C’BORES  M10 IN TAPS

ORDERING INFORMATION

W P S

Block
01 Wide Flat
02 Wide Crown
03 Wide Target
04 Narrow Flat
05 Narrow Crown
06 Narrow Target

Switch
00 No Switch
( Default for blocks 03 & 06)
01 Turck ~ BI 5U-Q08-AP6X2-0.2M-RS 4T/S1589 (3-Wire, 4-Pin)
02 Balluff ~ BES R01ZC-PSC50B-BZ00,2-GS04-W05 (3-Wire, 4-Pin)
03 Pepprl + Fuchs ~ NMB6-F104M-E2-C-FE-200MM-V1 (3-Wire, 3-Pin)
Metal faced, weld immune

All Switches are DC M12 X 1 (PNP) Connector

WIDE SERIES PANCAKE SWITCHES*

WIDE SERIES SwitchES CAN BE FIELD REVERSED TO HAVE THE CORD EXTEND THE OPPOSITE DIRECTION

NARROW SERIES PANCAKE SWITCHES*

*BLOCK DIMENSIONS ARE ON FOLLOWING PAGES

(WDO NOT SCALE DRAWING)

SHEET 5
WIDE SERIES BLOCK DIMENSIONS

BLOCK 01
WIDE FLAT

M3x0.5 TAP ¥ 6.00
(2) PLACES

C’BORE FOR M8 &
M10x1.5 TAP THRU
(2) PLACES

BLOCK 02
WIDE CROWN

BLOCK 03
WIDE TARGET

30.00 CENT.

WELKER ENGINEERED PRODUCTS
800-229-0890 www.welkerproducts.com

SHEET 6
NARROW SERIES BLOCK DIMENSIONS

BLOCK 04
NARROW FLAT

BLOCK 05
NARROW CROWN

BLOCK 06
NARROW TARGET

M3x0.5 TAP
\( \varphi \ 6.00 \)
(2 PLACES)

M10x1.5 TAP THRU
\( \varphi \ 14.50 \ \varphi \ 13.00 \)
CLEARANCE FOR M8 S.H.C.S
(2 PLACES)

CLEARANCE FOR M8 S.H.C.S
(2 PLACES)

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