CS2 COMPACT POWERED SLIDE

WELKER 63mm BORE COMPACT CYLINDER
(NPT or G PORTS AVAILABLE)

20mm LOCKOUT HOLE (2)
FOR CUSTOMER DESIGNED
LOCKOUT

METAL SHROUDS KEEP RAILS
COVERED AT ALL TIMES
(MOVES WITH CARRIAGE)

25-SERIES SQUARE
RAIL BEARINGS

STANDARD MOUNTING
FOR TOOLING

WELKER SMART STOPS AVAILABLE
SHIM OPTIONS FOR STROKES UP TO 75mm
ALUMINUM CARRIAGE & BASE PLATE
WEIGHS ONLY 69 lbs.
500 lbs. LOAD CAPACITY
**ORDERING INFORMATION**

NOTE: ALL BOXES MUST BE FILLED IN FOR A COMPLETE PART NUMBER

Series  
CS2 Slide Series

*Stroke  
075 Stroke (This does not change)

**Actuator (Sheet 3)**
- 30 Welker Compact cylinder w/ NPT Ports
- 31 Welker Compact cylinder w/ G Ports

**Port Position (Sheet 4)**
- 2 Port Position P2
- 4 Port Position P4

**Shroud**
- 0 No Shroud
- 1 Shroud

**Additional Retract Shim**

Whole (mm)
- 00 G 16
- 11 H 17
- 22 J 18
- 33 K 19
- 44 L 20
- 55 M 21
- 66 N 22
- 77 P 23
- 88 R 24
- 99 S 25
- A10 T 26
- B11 U 27
- C12 V 28
- D13 W 29
- E14 X 30
- F15

**Additional Retract Shim**

Quarter (mm)
- A 0.25
- B 0.50
- C 0.75

Whole (mm)
- 00 G 16

**Additional Extend Shim**
- 11 H 17
- 22 J 18
- 33 K 19
- 44 L 20
- 55 M 21
- 66 N 22
- 77 P 23
- 88 R 24
- 99 S 25
- A10 T 26
- B11 U 27
- C12 V 28
- D13 W 29
- E14 X 30
- F15

**Stop Options**
- X NAAMS Stops
- P Welker Smart Stops

**Shim Note:** When ordering the shim option, units will have shim packs/grind spacers added to the NAAMS stops on both ends and it will shorten the total working stroke.

Welker CS2 slides utilize 25-series square rail bearings, lockout holes on both sides, hard shrouds and a 63mm bore compact cylinder.

**Ordering examples:**
- For a CS2 slide with NPT ports at position 2, no additional shims, Welker smart stops, shrouds, order as: CS2000075020000P1W
- For a CS2 slide with G ports at position 4, 11.75 shims at in the retract and 7.50 shims in the extend, NAAMS stops and no shroud, order as: CS2000075318BC7BX0W

LOAD CAPACITY: 500 LBS  
(SEE SHEET 6)
GENERAL DIMENSIONS

302 CARRIAGE RETRACTED

237

304.8 CARRIAGE SEE SHEET 4 FOR CARRIAGE DIMS.

SHROUD MOVES WITH CARRIAGE STROKE

313 SHROUD

63mm BORE X 100mm STROKE COMPACT AIR CYLINDER MAGNETIC PISTON STANDARD FOR CYLINDER SWITCHES. CONTACT WELKER FOR ELECTRIC OPTION

SHROUD MOVES WITH CARRIAGE STROKE

HARD STOPS BOTH ENDS NAAMS or WELKER SMART STOPS

75 MAX STROKE

25 SERIES SQUARE RAIL BEARINGS

2X RECEIVER HOLE FOR CUSTOMER SUPPLIED 3/4" LOCKOUT PIN

1/4NPT OR G1/4 CYL PORTS @ P2 POSITION

4X Ø10.0 S.F. THRU MOUNTING HOLES

4X Ø12.5 DRILL THRU MOUNTING HOLES

80

510

161

10

530 BASE

275 CENT

225 CENT

304.8 CARRIAGE

& BASE

304.8 CARRIAGE

& BASE

UNIT WEIGHT: 69 LBS

AVAILABLE AS SERVICE PART ONLY

(800) 229-0890 www.welkerproducts.com

SHEET 3
CARRIAGE DIMENSIONS

- 304.8 SQUARE CARRIAGE
- 275 CENT
- 200 CENT

- 4X Ø10.0 DOWEL P.F. THRU
- 8X M12 X 1.75 TAP THRU

530 BASE PLATE REF

AVAILABLE AS SERVICE PART ONLY
WELKER SMART STOP does all stopping & sensing functions in one part.
SMART STOP minimizes engineering, field set up and operator adjustment time.

WELKER SMART STOP 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 outboardproxes from being stepped on or bent in tools.

MODEL NO:
ASC020-PD FOR CROWNED, DRILL & C’BORE FOR M10 SHCS + DC SWITCH
ASC021-PD FOR CROWNED, M10X1.5 TAP + DC SWITCH
ASF020-PD FOR FLAT, DRILL & C’BORE FOR M10 SHCS + DC SWITCH
ASF021-PD FOR FLAT, M10X1.5 TAP + DC SWITCH

General Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</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>
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Nominal Ratings

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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</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>
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</table>

Indicators/Operating Means

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

<table>
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<tr>
<th>Specification</th>
<th>Value</th>
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</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>
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</tbody>
</table>

Mechanical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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</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>
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Loading Example for CS2 Slide:
For an application with a 250 lbf (1.1 kN) payload, offset 8 inches and operating at a 30 degree incline, first verify if the payload falls inside the "Load-Incline" chart. The 250 lbf payload falls under the 60 psi curve at the 30° incline. This is an acceptable payload. Next, the center of mass, at 8" offset has an applied moment load of 2000 in-lbf. (226 N-m). Using the Moment-Load Capacity chart at 250 lbf, shows an allowable moment load of approx. 11,000 in-lbf (1243 N-m). The 2000 in-lb moment is less than the 11,000 allowable. This is an acceptable moment load. Note that the offset distance is the same regardless of the slide orientation to the floor.

Applications are evaluated in two separate calculations: payload and moment load. An approvable application meets both criteria. For applications outside the graph safety zone, contact Welker.