CS1 COMPACT POWERED SLIDE

- WELKER 50mm BORE COMPACT CYLINDER
- NPT OR G PORTS
- SOLID STATE CYLINDER SWITCH
- METAL SHROUD KEEPS RAILS COVERED AT ALL TIMES (MOVES WITH CARRIAGE)
- STANDARD MOUNTING FOR TOOLING
- ALUMINUM CARRIAGE & BASE PLATE
- 13mm LOCKOUT HOLE (2) FOR CUSTOMER DESIGNED LOCKOUT
- COMPACT FOOTPRINT

WELKER SMART STOP AVAILABLE
SHIM OPTIONS FOR STROKES UP TO 100mm
HORIZONTAL APPLICATIONS ONLY
WEIGHS ONLY 35 LBS.
250 LBS LOAD CAPACITY
**ORDERING INFORMATION**

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

| CS | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | W |

**Actuator**
- 30 Welker Compact Cylinder w/ NPT Ports
- 31 Welker Compact Cylinder w/ G Ports

**Port Position**
- 2 Port Position P2
- 4 Port Position P4

**Cylinder Switch**
- 00 No Switch
- LX See Welker Cylinder Switch Chart

**Additional Retract Shim**

<table>
<thead>
<tr>
<th>Whole (mm)</th>
<th>Quarter (mm)</th>
</tr>
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<tbody>
<tr>
<td>0.00</td>
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<tr>
<td>0.25</td>
<td>0.25</td>
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<tr>
<td>0.50</td>
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<tr>
<td>0.75</td>
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**Additional Extend Shim**

<table>
<thead>
<tr>
<th>Stop Options</th>
<th>NAAMS Stops</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>P</td>
<td>X</td>
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**Stroke Note:** Standard unit stroke is 100mm. If necessary, stops can be shimmed back to achieve the required travel.

**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 CS1 slides utilize 15-series rail bearings, lockout holes on both sides, hard shroud and a 50mm bore cylinder.

**Ordering examples:**
- For a CS1 slide with NPT ports at position 2, no additional shims, Welker Smart Stops, order as: CS1000100302000000P1W
- For a CS1 slide with G ports at position 4, cylinder switch, 20.50 shims at in the retract and 25.25 shims in the extend, and NAAMS stops, order as: CS1000100314L2LBSAX1W

**Standard Switch Option** - All other options may affect price and delivery

*Note that some mid and low frequency DC resistance applications (i.e. aluminum resistance welding applications) may cause a fault. In these applications, it is recommended that the sensor be ignored/bypassed during the welding cycle.*

<table>
<thead>
<tr>
<th>Switch</th>
<th>Part Number</th>
<th>Manufacturer</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L3</td>
<td>SWITCH L3*</td>
<td>Welker</td>
<td>4-Wire, 4-Pin, DC (PNP) M12 X 1 Quick Disconnect</td>
</tr>
<tr>
<td>L5</td>
<td>MKS113</td>
<td>ifm Elector</td>
<td>3-Wire, 4-Pin, DC (NPN) M12 X 1 Quick Disconnect</td>
</tr>
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LOAD CAPACITY: 250 LBS

(800) 229-0890 www.welkerproducts.com
GENERAL DIMENSIONS

SHROUD MOVES WITH CARRIAGE STROKE

251 CARRIAGE RETRACTED

345

278

WELKER 50mm BORE X 125mm STROKE COMPACT AIR CYLINDER
1/8" NPT OR G1/8 PORTS SHOWN IN P4 POSITION

135 CARRIAGE SEE SHEET 4 FOR CARRIAGE DIMENSIONS

100 MAX STROKE

2X RECEIVER HOLE FOR CUSTOMER SUPPLIED 1/2" LOCKOUT PIN

IF ADDITIONAL SHIMMING IS REQUIRED, LEAVE ACCESS TO 12X SHROUD MOUNTING SCREWS, 6X PER SHROUD

15 SERIES SQUARE RAIL BEARINGS

HARD STOPS BOTH ENDS NAAMS OR WELKER SMART STOPS

400 BASE

330.00

280.00

35

150.00 CENT

4X Ø8.00 S.F. THRU

4X M10x1.5 TAP THRU & THRU FOR M8 SHCS - MUST REMOVE SHROUD TO MOUNT THRU BOLTS

UNIT WEIGHT: 35lbs

AVAILABLE AS SERVICE PART ONLY
CARRIAGE DIMENSIONS

135 CARRIAGE
125.00 CENT.

185 CENT.
160.00 CENT.

2X Ø8.00 [0.315] P.F. \( \varphi \) 16.0
4X M8x1.25 TAP \( \varphi \) 16.0

AVAILABLE AS SERVICE PART ONLY

400 BASE PLATE REF 149.5 196
**General Specifications**

- **Switching function**: Normally Open (NO)
- **Output type**: PNP
- **Rated operating distance, sn**: 1.75 mm
- **Output polarity**: DC
- **Assured operating distance, sa**: 0 - 1.42 mm
- **Output type**: 3-wire

**Nominal Ratings**

- **Operating voltage, $U_B$**: 5 - 30 V DC
- **Switching frequency, $f_0$**: 0 - 6000 Hz
- **Reverse polarity protection**: Reverse polarity protected
- **Short-circuit protection**: Pulsing
- **Voltage drop, $U_d$**: ≤ 1.5 V
- **Operating current, $I_O$**: 0 - 100 mA
- **Off-state current, $I_r$**: 0 - 0.2 mA
- **No-load supply current, $I_0$**: ≤ 15 mA

**Indicators/Operating Means**

- **Operating voltage indicator**: LED green
- **Switching state indicator**: LED yellow

**Ambient Conditions**

- **Ambient temperature**: -40 - 85 °C (-40 - 185 °F)
- **Storage temperature**: -40 - 85 °C (-40 - 185 °F)

**Mechanical Specifications**

- **Connection type**: Connector plug M12 x 1, 4-pin
- **Cable length**: 255 mm
- **Degree of protection**: IP67
- **Cable material**: Weld spatter resistant, robotic quality POC
- **Cable color**: Orange

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**WELKER SMART STOP**

**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 outboard proxes 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

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**WIRING DIAGRAM (PNP)**

![Wiring Diagram](image)