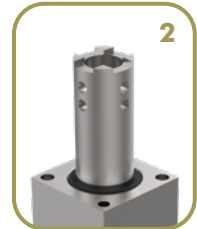


# 86P30-5

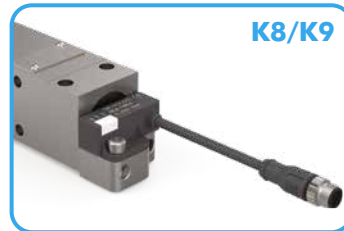
## Pneumatic Pin Package | Single Shaft | Ordering and Technical Information

<b>86P30-5</b>	<b>02</b>	<b>L8</b>	<b>00</b>	<b>4</b>
<b>Accessories</b>				
<b>00</b>				
<b>Description</b>	<b>Stroke</b>		<b>Description</b>	
No Accessories	<b>2</b>	20 mm Stroke		
	<b>4</b>	40 mm Stroke		

<b>Piston Rod</b>	<b>Description</b>
<b>02</b>	Ø16 mm M6 Threaded Inside Hole, Cross Groove
<b>05</b>	Ø10 mm M8 Threaded Inside Hole, Cross Groove



<b>Sensor</b>	<b>Description</b>
<b>L8</b>	PNP Sensor with In-line M12x1 Connector (8EA-146-4-B)
<b>N8</b>	NPN Sensor with In-line M12x1 Connector (8EA-154-4-B)
<b>L9</b>	PNP Sensor with 90° M12x1 Connector (8EA-147-4-B)
<b>N9</b>	NPN Sensor with 90° M12x1 Connector (8EA-155-4-B)
<b>K8</b>	PNP Sensor with M12x1 Cable Connector (8EA-158-4-B)
<b>K9</b>	NPN Sensor with M12x1 Cable Connector (8EA-167-4-B)



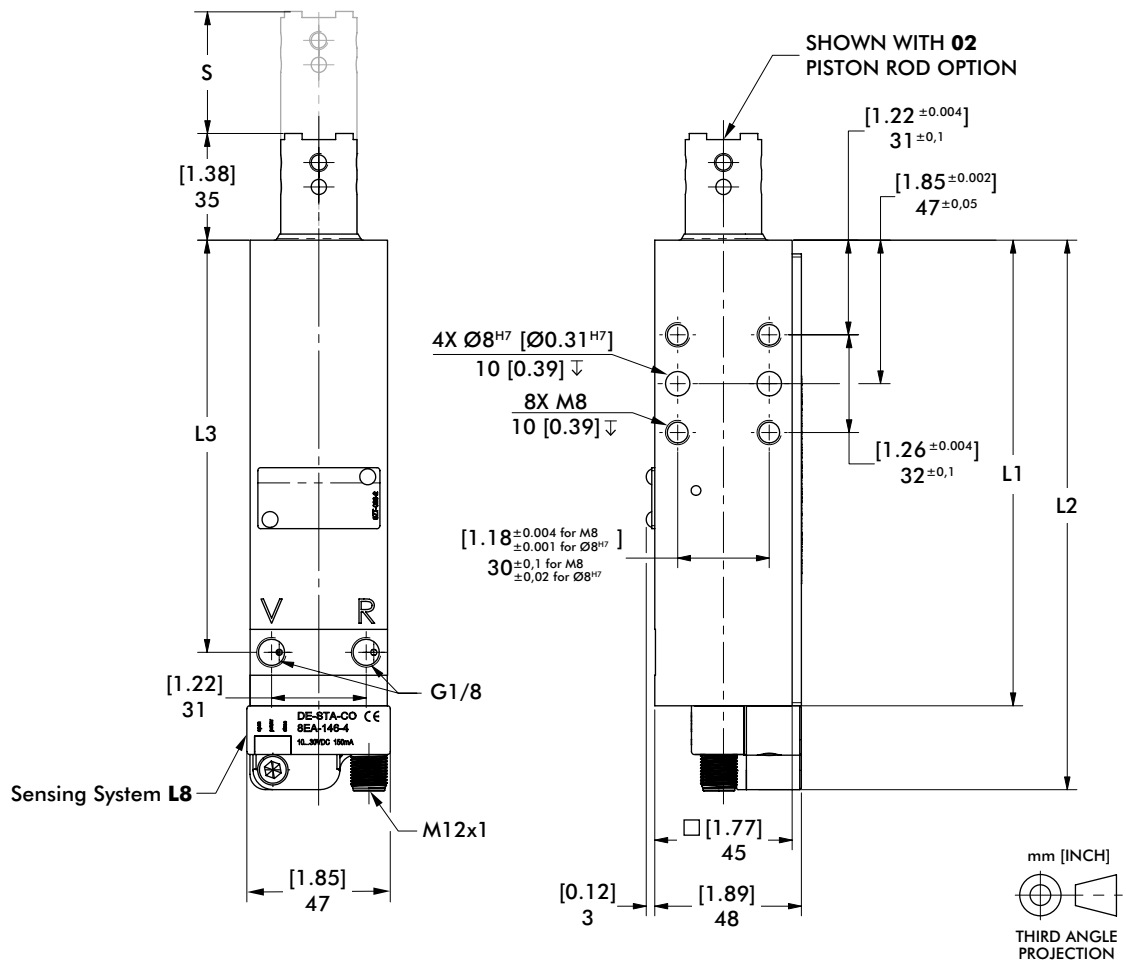
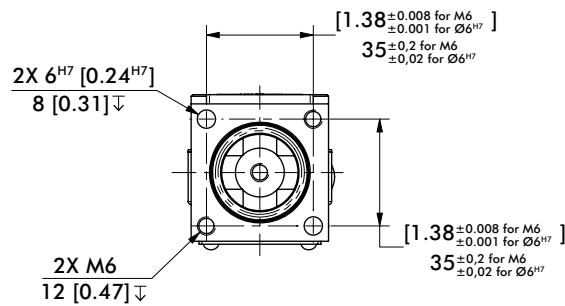
**Sensor Cables** Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft.] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable

**86P30-5**

<b>Stroke Option:</b>	<b>2, 4</b>
<b>Max Pushing Force at 5 bar [72 psi]:</b>	340 N [76 lbf]
<b>Max Retracting Force at 5 bar [72 psi]:</b>	250 N [56 lbf]

## Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications



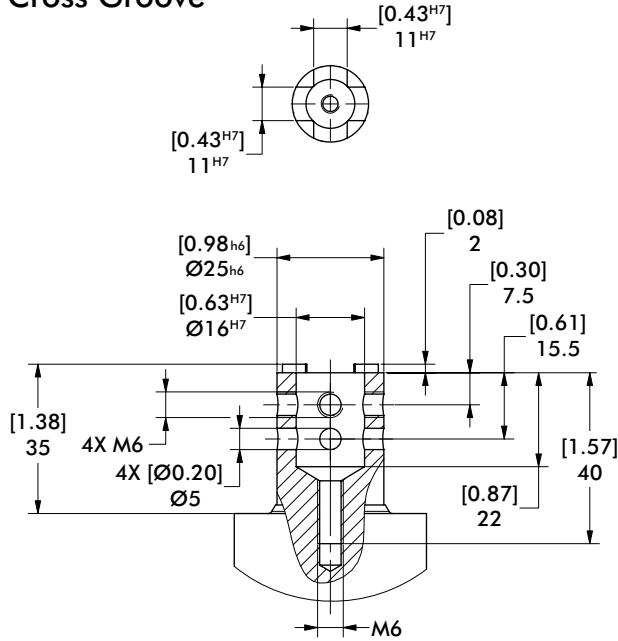
Medium: Operation with oil free air permissible

Base Model	Stroke Option	S Stroke mm [in]	L1 mm [in]	L2 mm [in]	L3 mm [in]	Pushing force at 5 bar N [lbs]	Retraction force at 5 bar N [lbs]	Max. operating pressure bar [psi]	Piston Ø mm [in]	Weight Kg [lbs]	Air consumption per double stroke at 5 bar dm <sup>3</sup> [ft <sup>3</sup> ]
86P30-5	2	20 [0.79]	112,5 [4.43]	140 [5.51]	95 [3.74]	340 [76]	250 [56]	6 [87]	30 [1.18]	0,8 [1.76]	0,32 [0.011]
	4	40 [1.57]	152,5 [6.00]	180 [7.09]	135 [5.30]	340 [76]	250 [56]	6 [87]	30 [1.18]	1 [2.20]	0,45 [0.015]

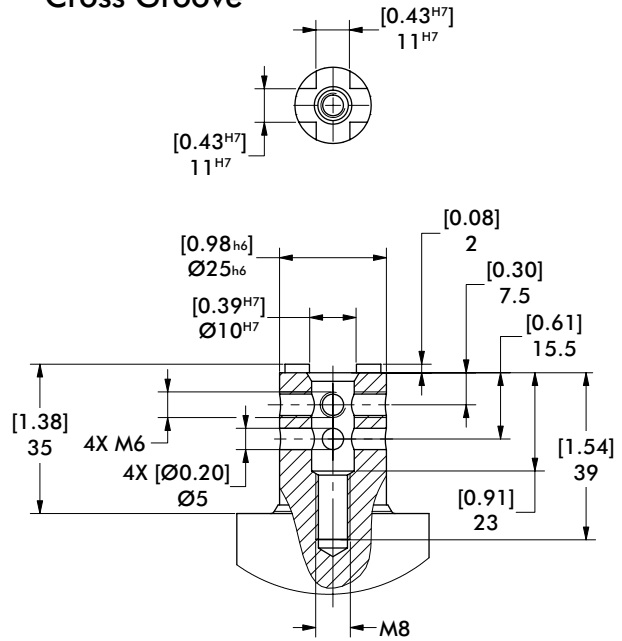
# 86P30-5 PISTON RODS

Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

## 02 Ø16 mm M6 Threaded Inside Hole, Cross Groove

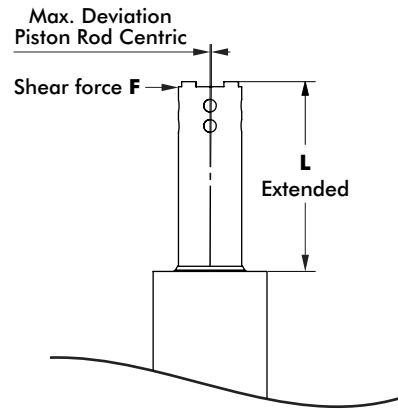


## 05 Ø10 mm M8 Threaded Inside Hole, Cross Groove

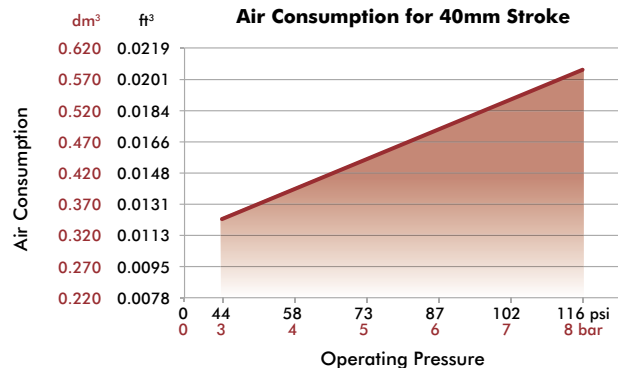
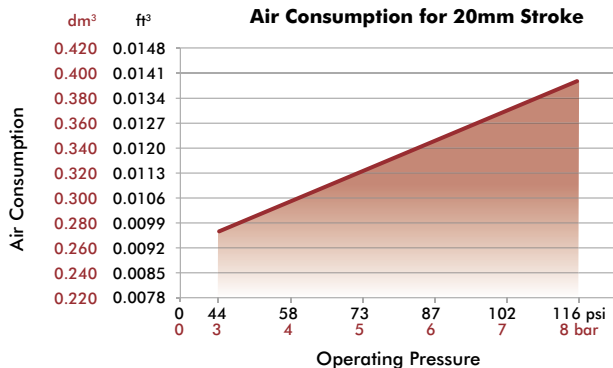


## Max Deflection for Centering Pin

Model no.	Shear force N [lbs]	L mm [in]	Stroke mm [in]	Deflection ± mm [in]
86P30-50***004	200 [45]	75 [2.95]	40 [1.58]	0,12 [0.0047]
	150 [34]			0,10 [0.0039]
	100 [22]			0,08 [0.0031]
	75 [17]			0,06 [0.0023]
86P30-50***002	200 [45]	55 [2.17]	20 [0.79]	0,07 [0.0027]
	150 [34]			0,06 [0.0023]
	100 [22]			0,05 [0.0019]
	75 [17]			0,05 [0.0019]



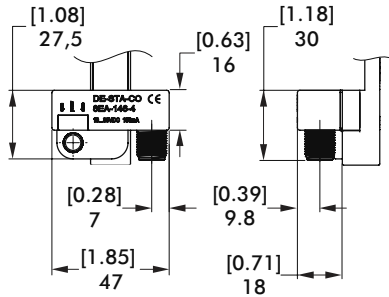
## Angle Deviation and Air Consumption



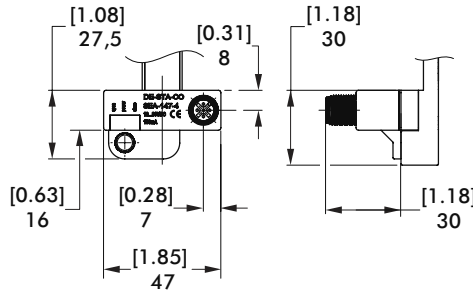
# 86P30-5 SENSORS

Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

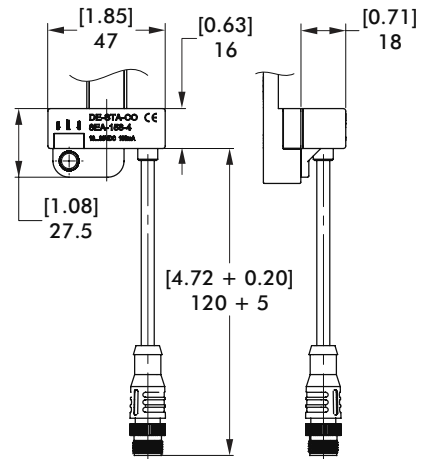
## L8, N8 Inductive Sensing System



## L9, N9 Inductive Sensing System with 90° Connector

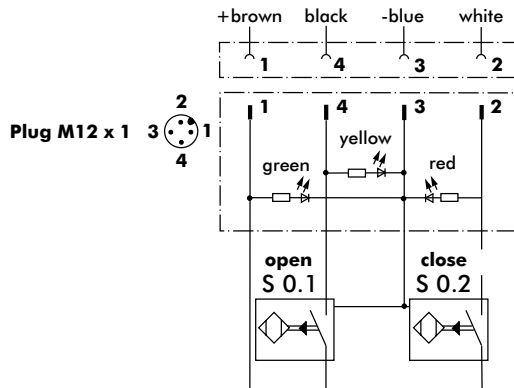


## K8, K9 Inductive Sensing System with Pigtail Connector



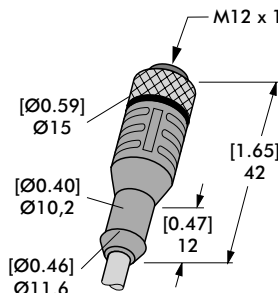
## Inductive Sensor Wiring Diagram

Sensing system immune to interference from AC / DC arc welding.

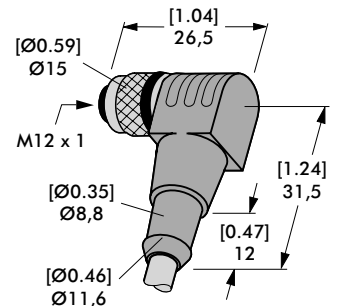


## Sensor Cable Accessories

Sensor Cables (1 connector & 5m cable)	Order no.
M12x1 connector, straight, 5-pin	<b>8EL-002-1</b>
M12x1 connector, 90° angular, 4-pin	<b>8EL-003-1</b>



**Straight Cable**  
**8EL-002-1**



**Angular Cable**  
**8EL-003-1**

# 86P40/86P60

## Pneumatic Pin Package | Single Shaft | Ordering and Technical Information

**86P40**

**-2**

**02**

**C8**

**G1**

**A**

**-K**

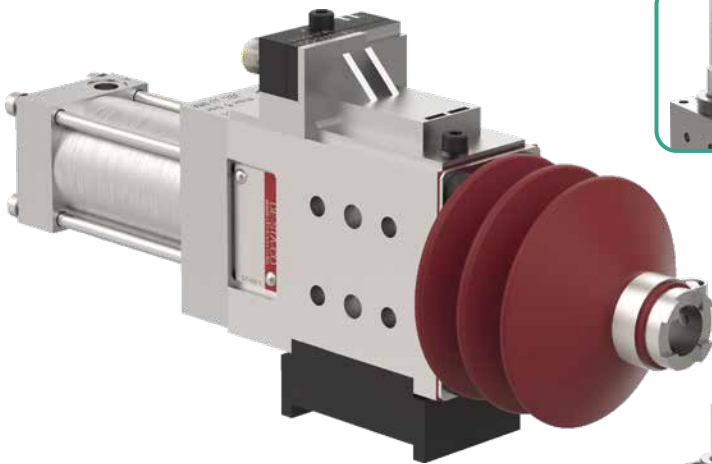
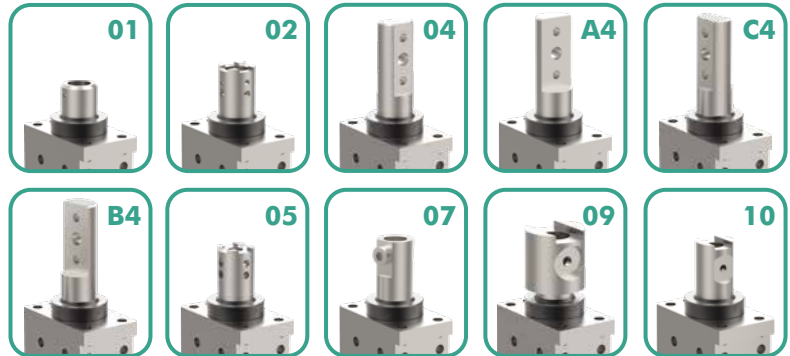
Ceramic Option  
for Piston Rod  
K

Base Model	Description
<b>86P40</b>	40 mm Cylinder (G1/8 Port)
<b>86P60</b>	63 mm Cylinder (G1/4 Port)

Hand Lever	Description
<b>-2</b>	No Handle
<b>H2</b>	Handle for Manual Control for 86P60 only (excludes <b>F, 8</b> stroke option)



Piston Rod	Description
<b>01</b>	Ø16 mm Inside Hole (Standard)
<b>02</b>	Ø16 mm M6 Threaded Inside Hole, Cross Groove
<b>04</b>	NAAMS Standard
<b>A4</b>	NAAMS Standard Rotated 180°
<b>B4</b>	NAAMS Standard Rotated 90°
<b>C4</b>	NAAMS Standard Rotated 270°
<b>05</b>	Ø10 mm Inside Hole, Cross Groove
<b>07</b>	Ø16 mm Inside Hole, NAAMS
<b>09</b>	Ø20 mm Straight Groove
<b>10</b>	Ø12 mm Straight Groove



**86P40**

**86P60**

Stroke Option:

**A, B, 2, 4    C, 6    F, 8**

**A, B, 2, 4    C, 6    F, 8**

Max Pushing Force at 5 bar [72 psi]:

620 N [139 lbf]

1550 N [348 lbf]

Max Retracting Force at 5 bar [72 psi]:

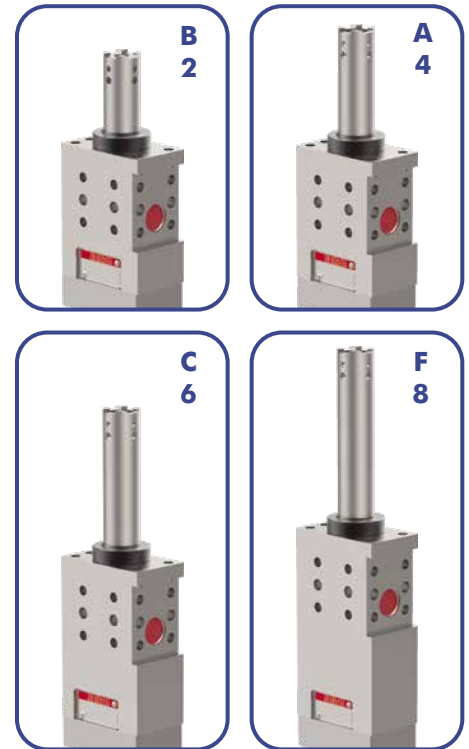
520 N [117 lbf]

1400 N [315 lbf]

Accessories	Description
<b>00</b>	No Accessories
<b>H1</b>	Adaptor (86P0-20000H1)
<b>E1</b>	External Guide for <b>A, B</b> (82ZB-009-2, Ceramic 82ZB-181-1)
<b>E2</b>	External Guide for <b>C</b> (82ZB-090-1, Ceramic 82ZB-105-1)
<b>E4</b>	External Guide for <b>F</b> (82ZB-180-1, Ceramic 82ZB-179-1)
<b>J1</b>	External Guide for <b>A, B</b> (82ZB-184-1, Ceramic 82ZB-183-1) + Adaptor (86P0-20000H1)
<b>F1</b>	Bellows for piston rods <b>02, 05, 07, 10</b> in strokes <b>A, B, 2, 4</b> (82ZB-013-3)
<b>G1</b>	Bellows <b>F1</b> + Adaptor <b>H1</b> for piston rods <b>02, 05, 07, 10</b> in strokes <b>A, B, 2, 4</b>



Stroke	Description
	<b>Anti-Twist Device/Low Accuracy</b>
<b>B</b>	20 mm Stroke (8MF-071-1)
<b>A</b>	40 mm Stroke (8CE-231-1)
<b>C</b>	60 mm Stroke (8CE-231-1)
<b>F</b>	80 mm Stroke (8CE-231-1)
	<b>Anti-Twist Device</b>
<b>2</b>	20 mm Stroke (86P0-20000002)
<b>4</b>	40 mm Stroke (86P0-20000004)
<b>6</b>	60 mm Stroke (86P0-20000006)
<b>8</b>	80 mm Stroke (86P0-20000008)

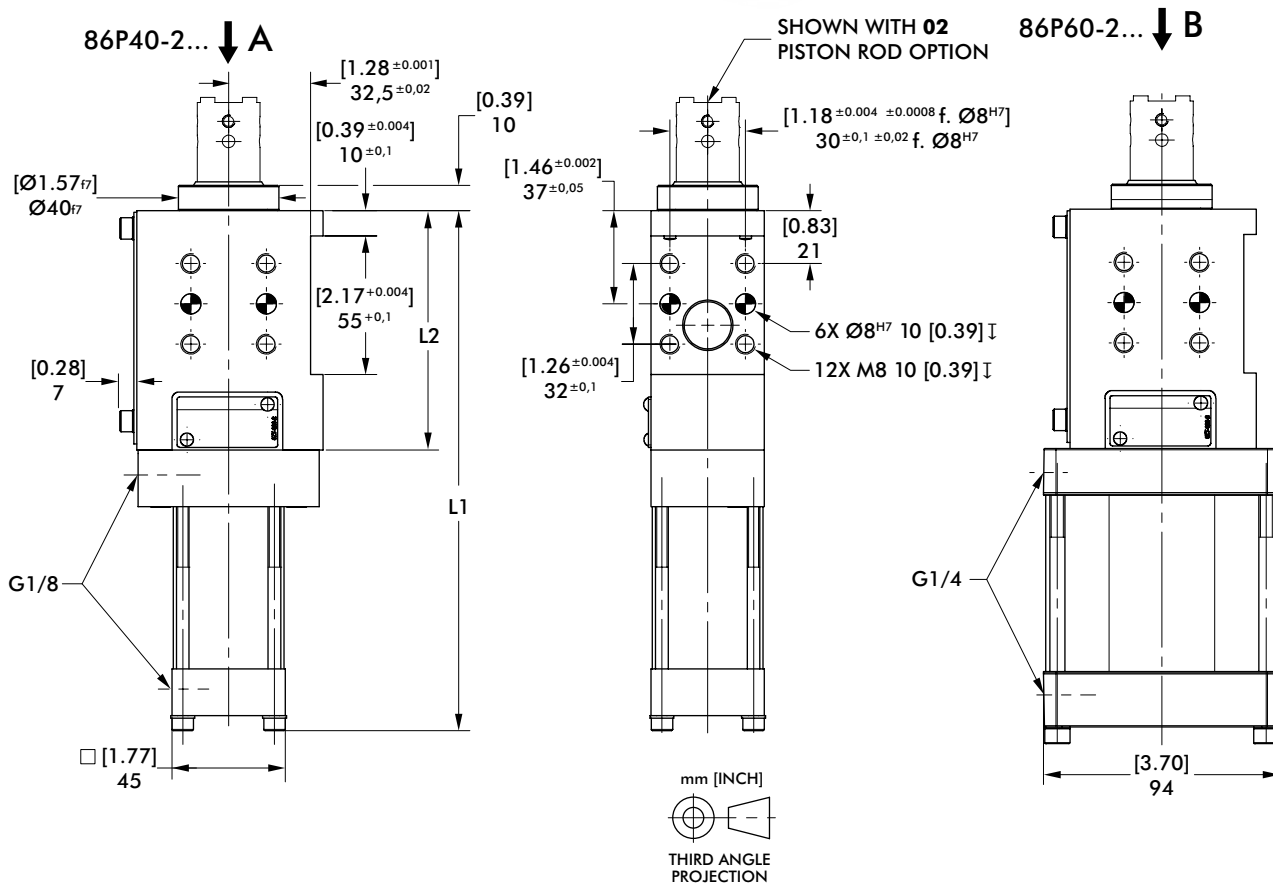


Sensor	Description
<b>L4</b>	Cover Plate for <b>A, B, 2, 4</b> (86P0-200L4)
<b>L6</b>	Cover Plate for <b>C, 6</b> (86P0-200L6)
<b>L8</b>	Cover Plate for <b>F, 8</b> (86P0-200L8)
<b>C8</b>	Inductive Sensing System with M12x1 Connector for <b>A, B, 2, 4</b> (86P0-200C8), for <b>C, 6</b> (86P0-200C8006), for <b>F, 8</b> (86P0-200C8008)
<b>D8</b>	Inductive Sensing System with 90° M12x1 Swivel Connector for <b>A, B, 2, 4</b> (86P0-200D8), for <b>C, 6</b> (86P0-200D8006), for <b>F, 8</b> (86P0-200D8008)



# 86P40-2/86P60-2

Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

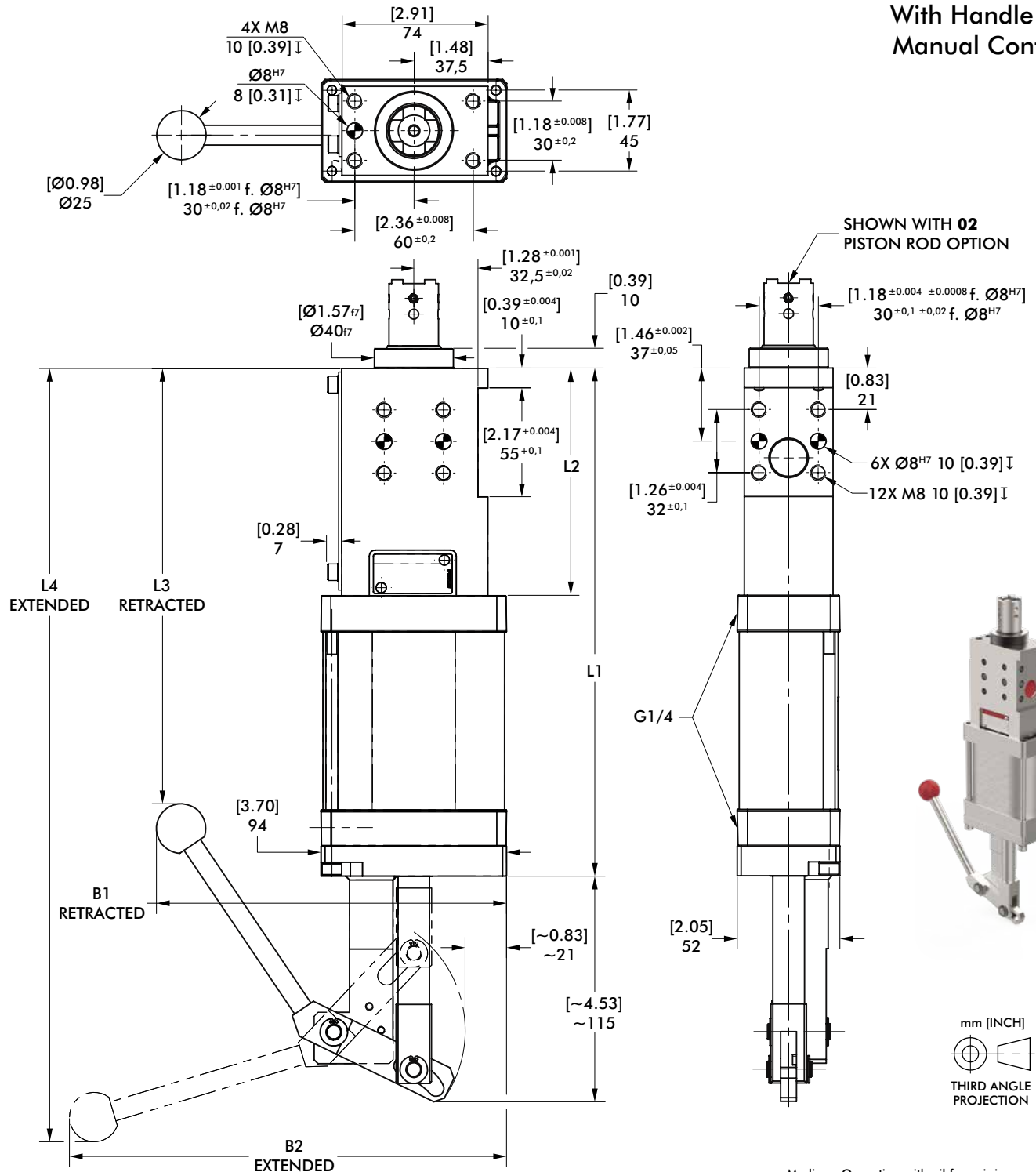


Medium: Operation with oil free air is permissible

Base Model	Stroke Option	Stroke +2 [0.08] mm [in]	L1 mm [in]	L2 mm [in]	Pushing force at 5 bar N [lbs]	Retraction force at 5 bar N [lbs]	Max. operating pressure bar [psi]	Piston Ø mm [in]	Weight Kg [lbs]	Air consumption per double stroke at 5 bar dm <sup>3</sup> [ft <sup>3</sup> ]	
86P40	B, 2	20 [0.79]	207 [8.15]	95 [3.74]	620 [139]	520 [117]	6 [87]	40 [1.57]	1,6 [3.52]	0,5 [0.017]	
	A, 4	40 [1.57]		0,7 [0.025]							
	C, 6	60 [2.36]		115 [4.53]					2,0 [4.40]	0,9 [0.032]	
	F, 8	80 [3.15]		287 [11.30]					135 [5.31]	2,4 [5.29]	1,0 [0.035]
86P60	B, 2	20 [0.79]	213 [8.39]	95 [3.74]	1550 [348]	1400 [315]		6 [87]	63 [2.48]	2,0 [4.40]	0,8 [0.028]
	A, 4	40 [1.57]		1,4 [0.049]							
	C, 6	60 [2.36]		115 [4.53]						2,5 [5.51]	2,0 [0.070]
	F, α8	80 [3.15]		293 [11.54]						135 [5.31]	2,8 [6.17]

## Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

With Handle for Manual Control



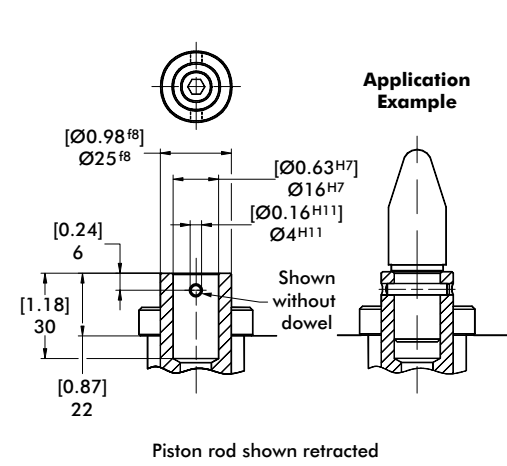
Base Model	Stroke Option	Stroke +2 [0.08] mm [in]	B1 (retracted) mm [in]	B2 (extended) mm [in]	L1 mm [in]	L2 mm [in]	L3 (retracted) mm [in]	L4 (extended) mm [in]	Weight Kg [lbs]
86P60H2	B, 2	20 [0.79]		216 [8.50]	217 [8.54]	95 [3.74]	179 [7.05]	253 [9.96]	2,3 [5.07]
	A, 4	40 [1.57]	177 [6.97]	229 [9.02]				306 [12.05]	
	C, 6	60 [2.36]		222 [8.74]	257 [10.12]	115 [4.53]	220 [8.66]	392 [15.43]	2,6 [5.73]



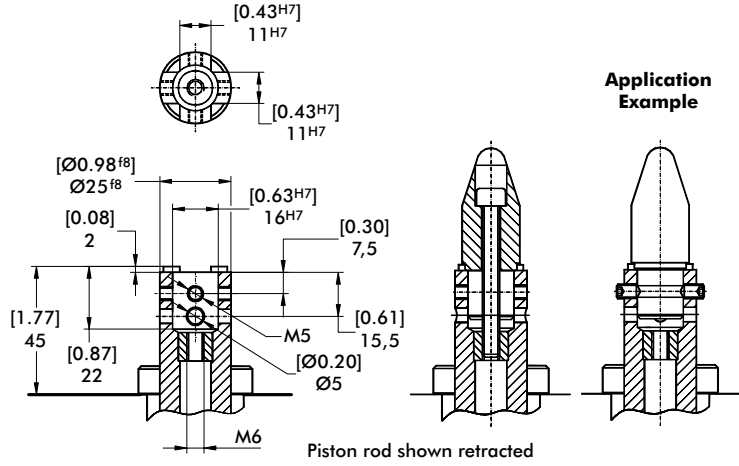
# 86P40/86P60 PISTON RODS

Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

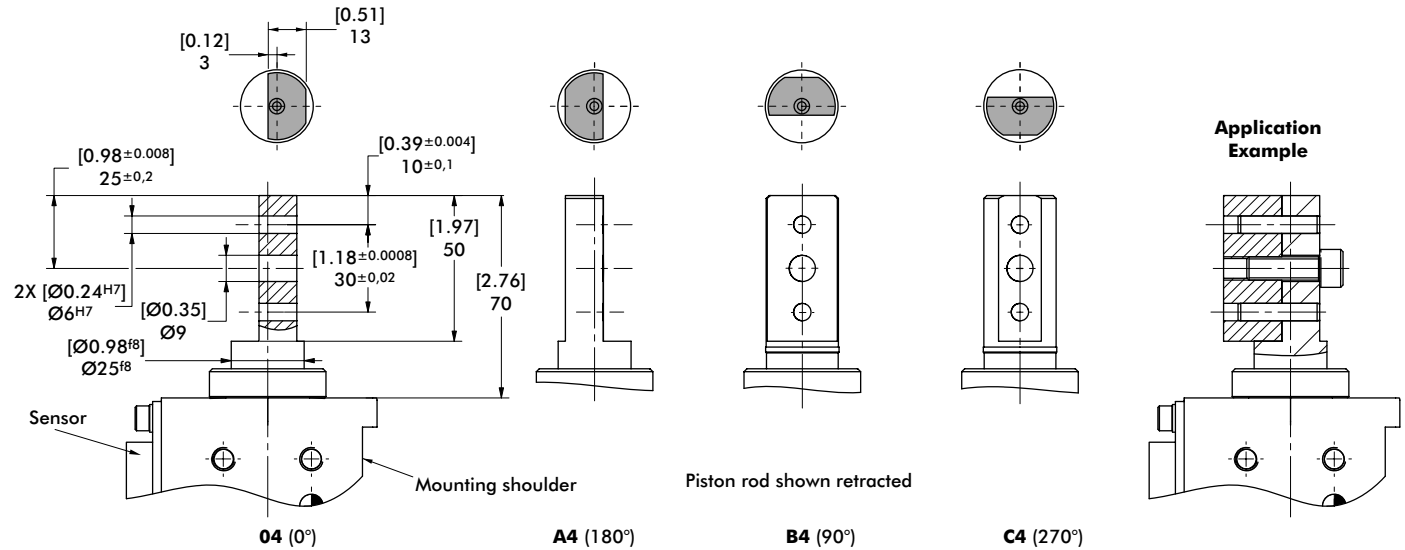
## 01 Ø16 mm Inside Hole



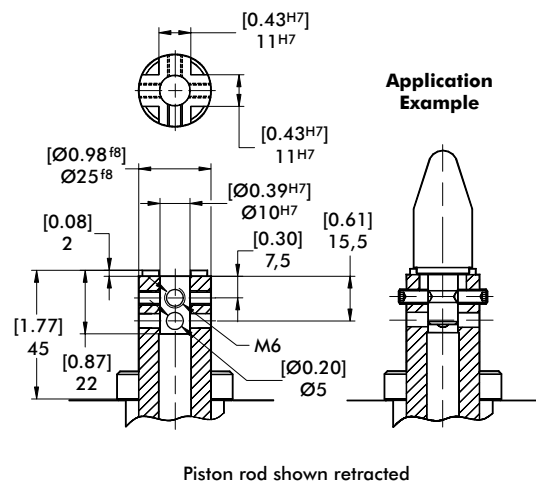
## 02 Ø16 mm M6 Threaded Inside Hole, Cross Groove



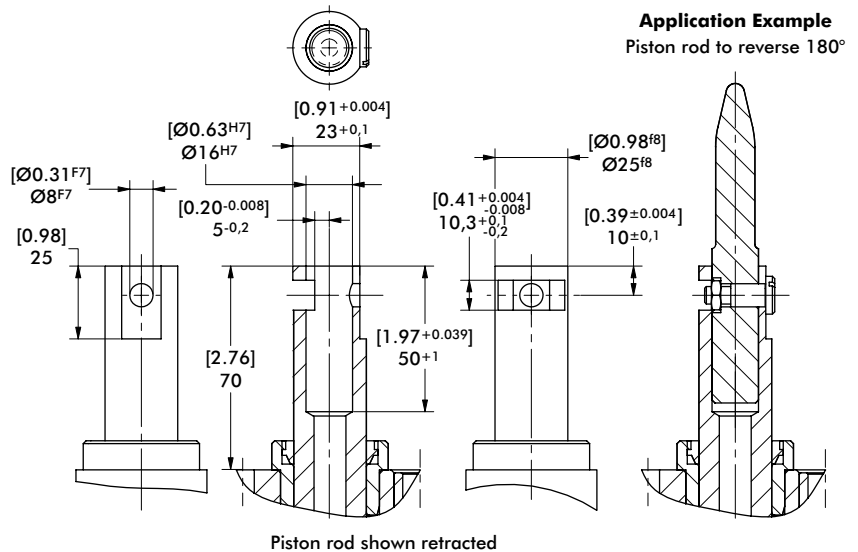
## 04, A4, B4, C4 NAAMS Standard



## 05 Ø10 mm Inside Hole, Cross Groove



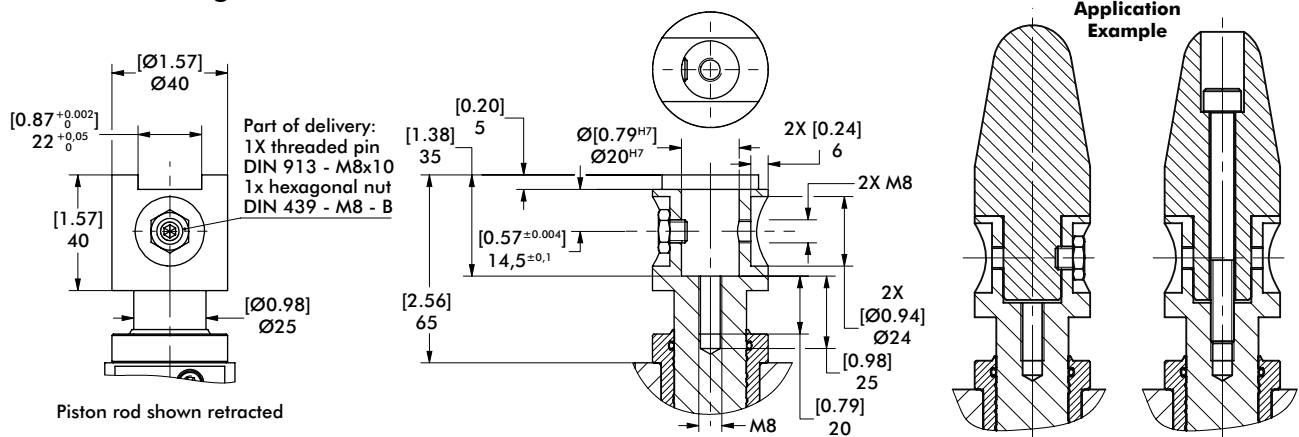
## 07 Ø16 mm Inside Hole, NAAMS



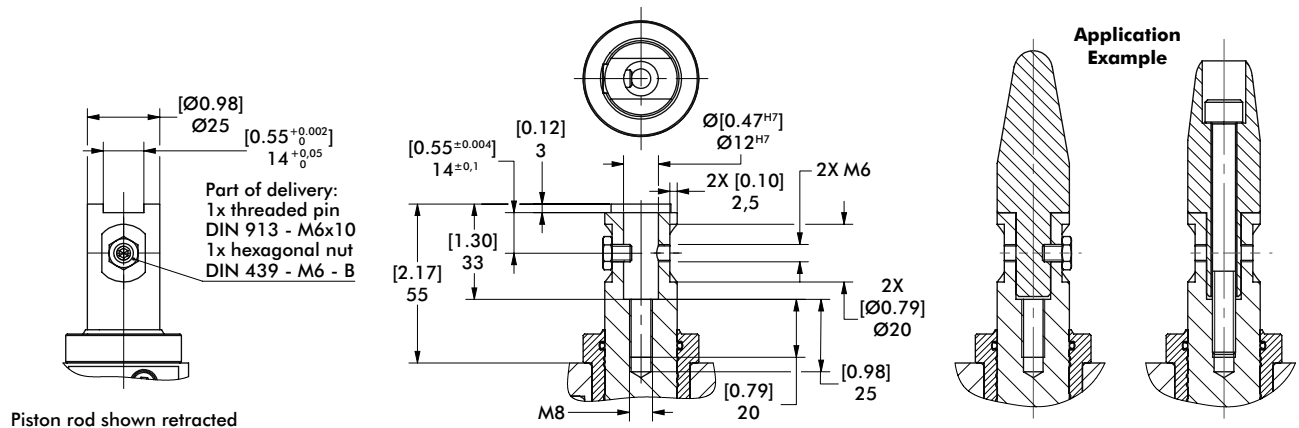
# 86P40/86P60 PISTON RODS

Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

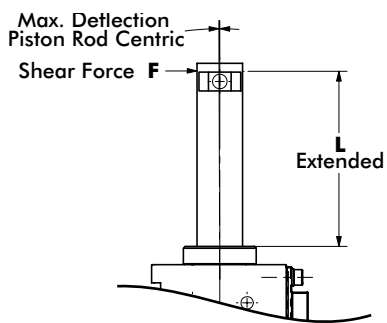
## 09 Ø20 mm Straight Groove



## 10 Ø12 mm Straight Groove



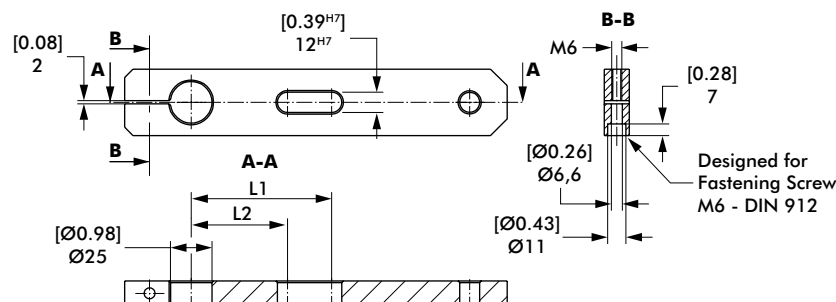
## Max Deflection for Centering Pin



Model no.	Shear force N [lbs]	L mm [in]	Stroke mm [in]	Deflection mm [in]
86P40 / 60-2...B / 2	200 [45]	52 [2.05]	20 [0.79]	0,06 [0.002]
86P40 / 60-2...A / 4		70 [2.76]	40 [1.58]	0,09 [0.004]
86P40 / 60-2...C / 6		90 [3.54]	60 [2.36]	0,12 [0.005]
86P40 / 60-2...F / 8		115 [4.53]	80 [3.15]	0,15 [0.006]

**Caution:** Generally we recommend using an external guide when the transverse force is more than 200 N [45 lbs]. Also independently of the stroke, less transverse forces, when the overall height L2 > 120 mm [4.7 in] (L2 = extended piston rod plus centering pin).

## Example application of an off-center centering pin (Example component shown below is to be made by the customer)



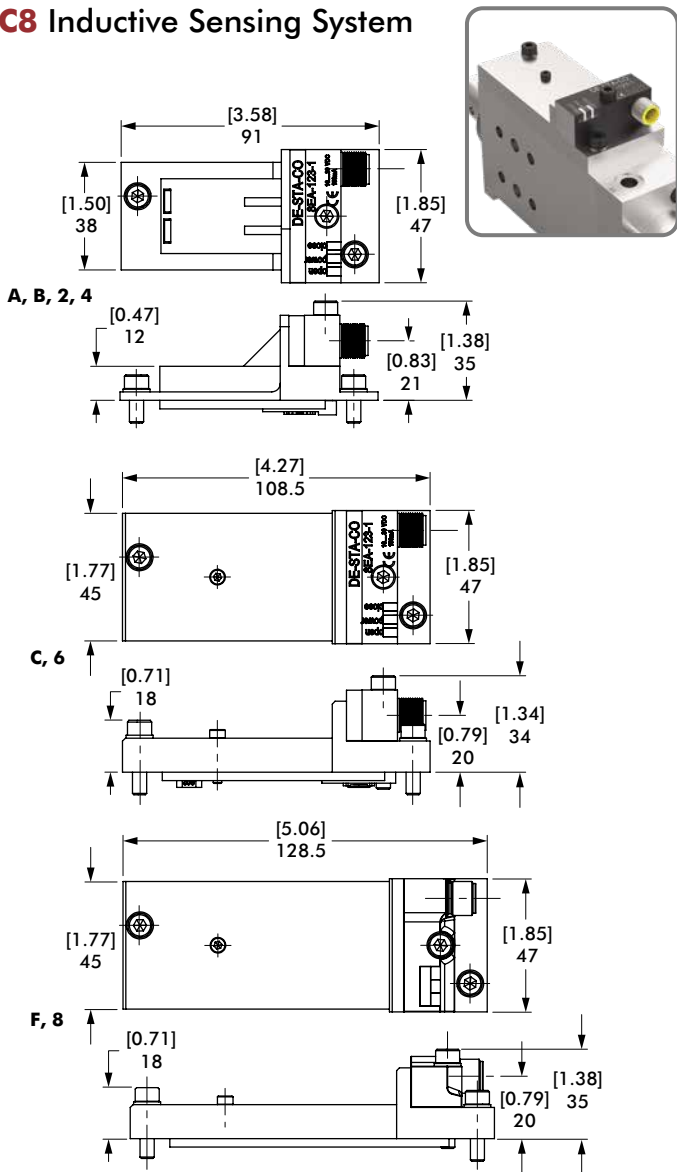
Model no.	L1 mm [in]	L2 mm [in]
86P40 / 60-2...E1	62 [2.44]	58 [2.28]
86P40 / 60-2...E2		
86P40 / 60-2...E4	84,5 [3.33]	80,5 [3.17]
86P40 / 60-2...J1*		

\*J1 is not available with 60 or 80 mm strokes.

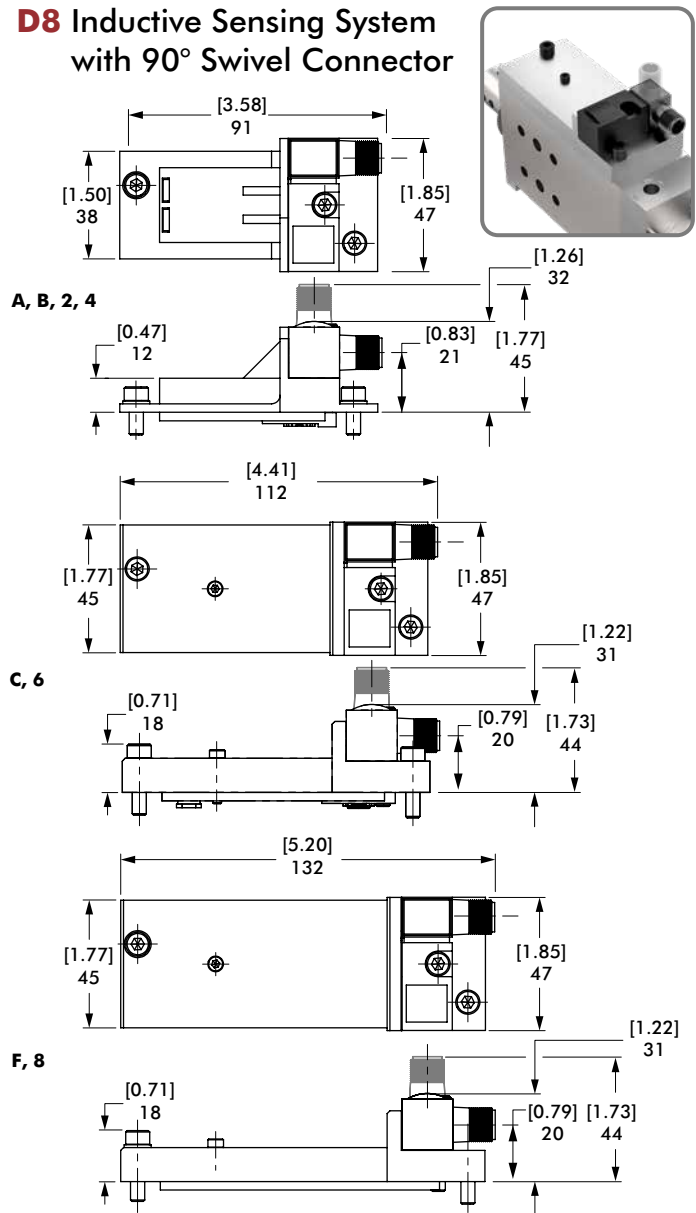
# 86P40/86P60 SENSORS

Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

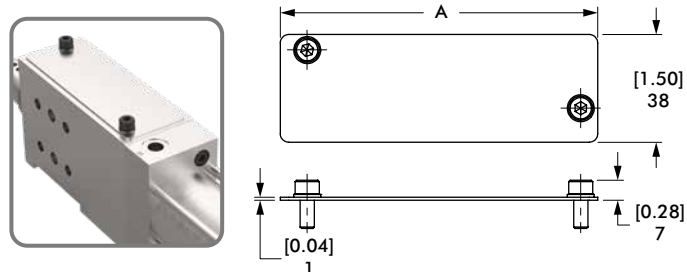
## C8 Inductive Sensing System



## D8 Inductive Sensing System with 90° Swivel Connector



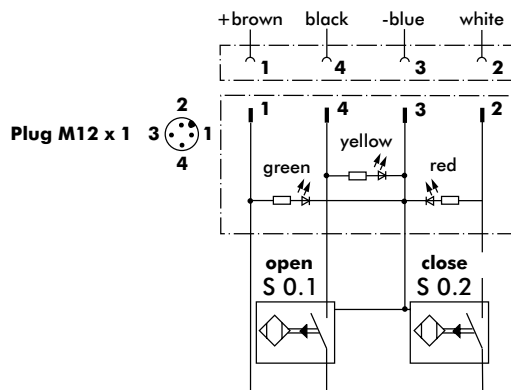
## L4, L6, L8 Sensor Cover Plate



Cover Plate Option	Stroke Option	A mm [in]
L4	A, B, 2, 4	92 [3.62]
L6	C, 6	112 [4.41]
L8	F, 8	132 [5.20]

## Inductive Sensor Wiring Diagram for C8, D8

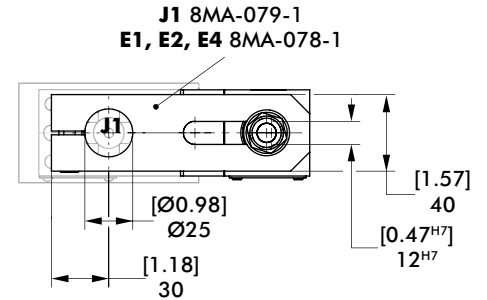
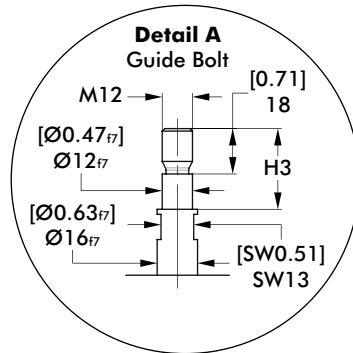
Sensing system immune to interference from AC / DC arc welding.



# 86P40/86P60 OPTIONS

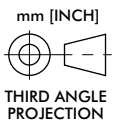
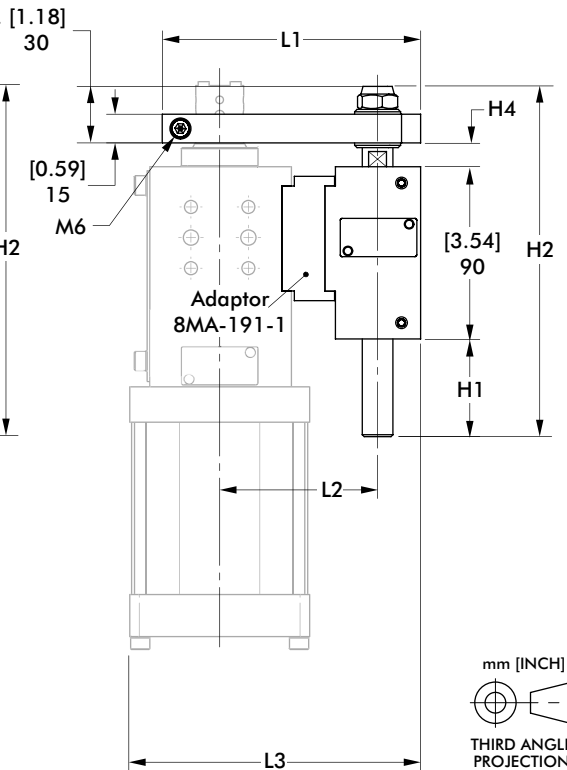
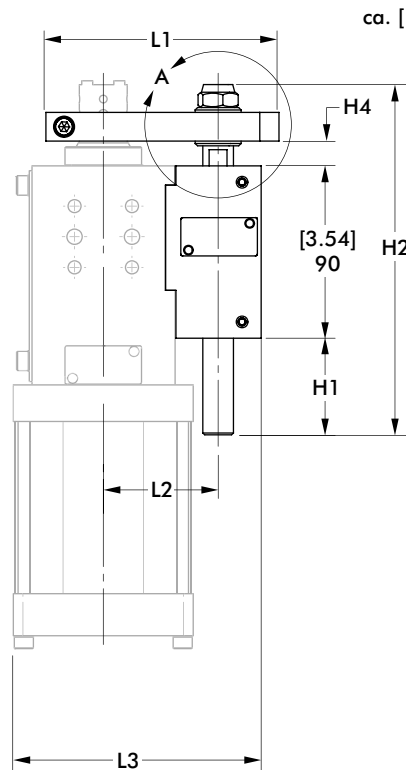
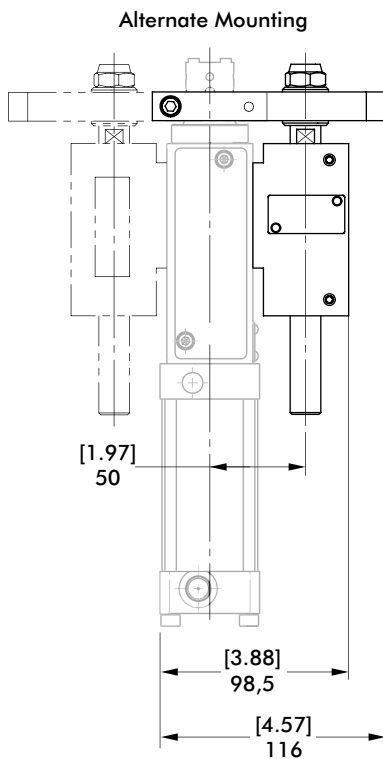
Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

## J1, E1, E2, E4 External Guide



E1 / E2 / E4

J1



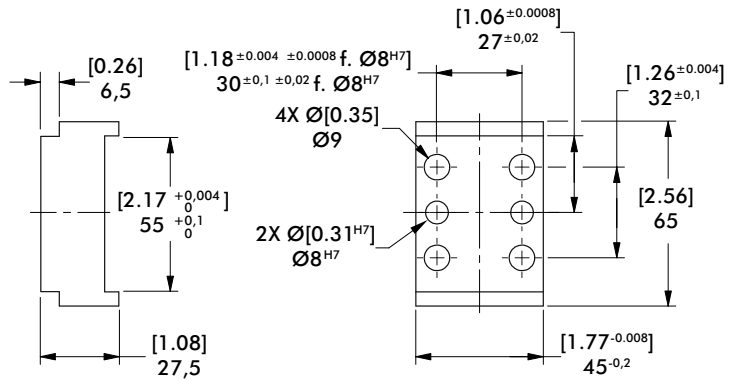
Base Model	External Guide Option	Stroke Option	L1 mm [in]	L2 mm [in]	L3 mm [in]	H1 (max.) mm [in]	H2 mm [in]	H3 mm [in]	H4 (min.) mm [in]
86P40 or 86P60	E1	A, B	120 [4.72]	60 [2.36]	130 [5.12]	47 [1.85]	183 [7.20]	32 [1.26]	16,5 [0.65]
	E1_-K*					55 [2.17]	195 [7.68]	35 [1.38]	17,5 [0.69]
	E2	C				67 [2.64]	203 [7.99]	32 [1.26]	16,5 [0.65]
	E2_-K*					109 [4.29]	250 [9.84]	35 [1.38]	18,5 [0.73]
	E4	F				131 [5.16]	270 [10.63]		16,5 [0.65]
	E4_-K*					133 [5.24]	273 [10.75]	17,5 [0.69]	
	J1	A, B				135 [5.31]	82,5 [3.25]	152 [5.98]	47 [1.85]
J1_-K*	55 [2.17]		195 [7.68]	35 [1.38]	17,5 [0.69]				

\*Ceramic Option

# 86P40/86P60 OPTIONS

Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

## H1 Adaptor



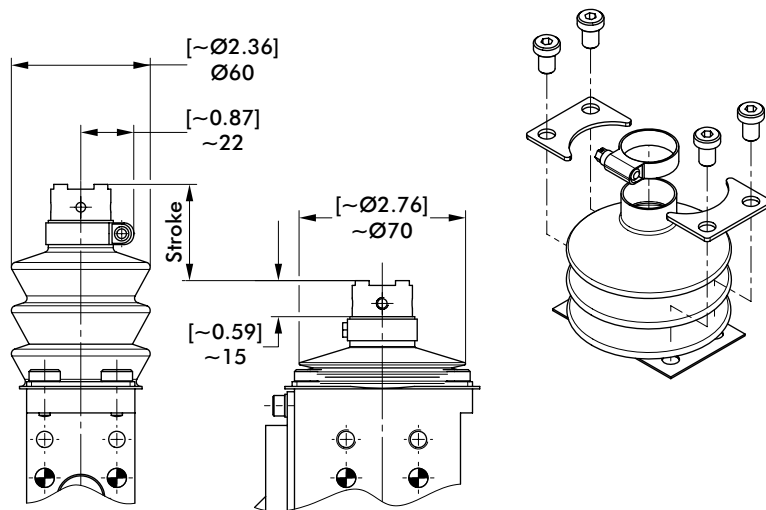
## F1 Bellows (Piston Rod Cover)



extended



retracted

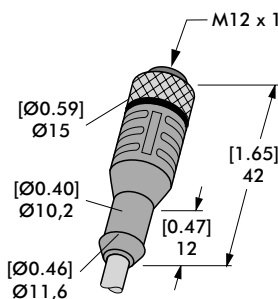


## G1 Adaptor + Bellows

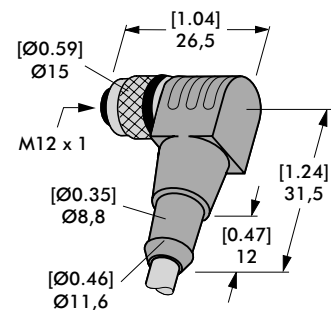
(See dimensions above)



## Sensor Cable Accessories



**Straight Cable**  
8EL-002-1



**Angular Cable**  
8EL-003-1

### Sensor Cables (1 connector & 5m cable)

Order no.

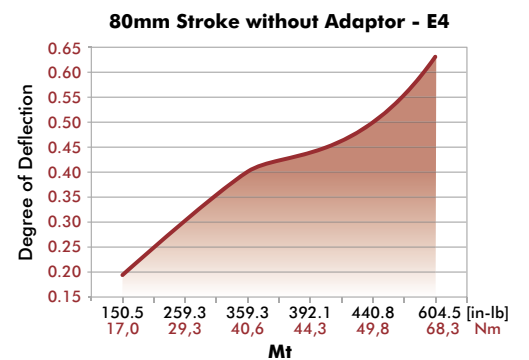
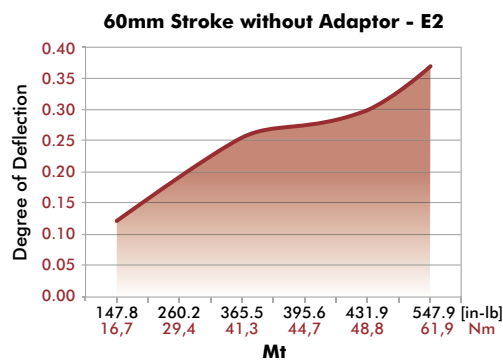
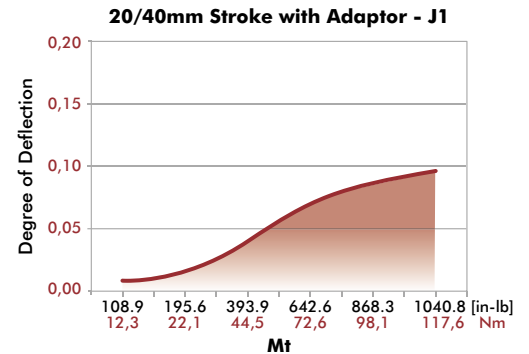
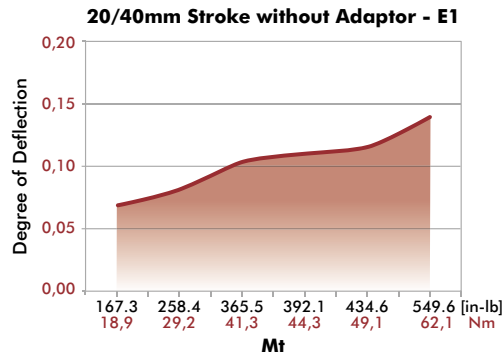
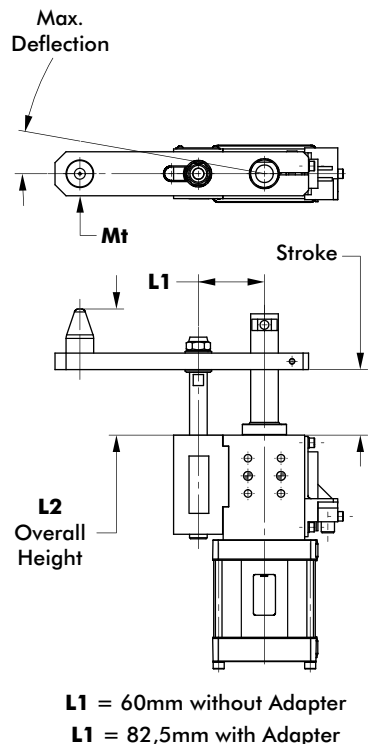
M12x1 connector, straight, 5-pin

**8EL-002-1**

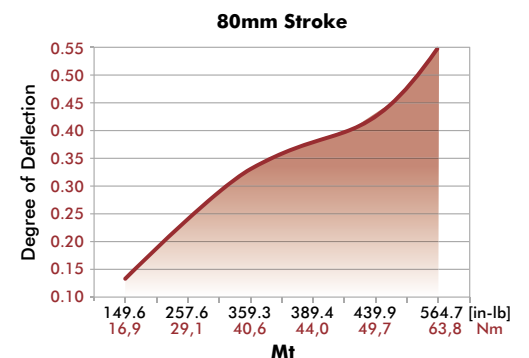
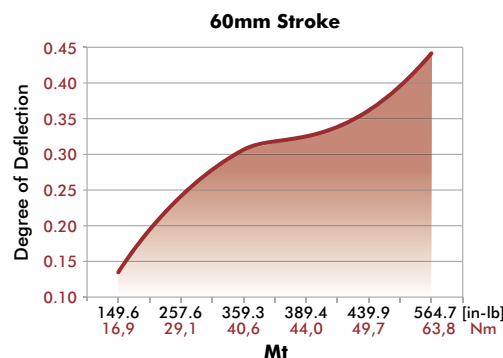
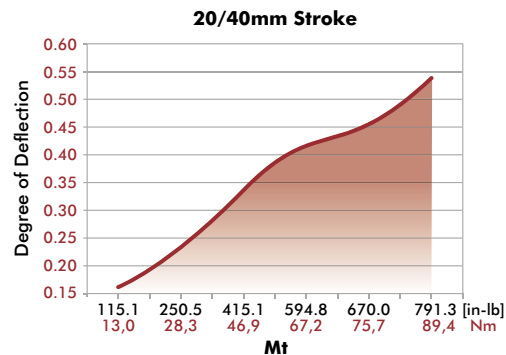
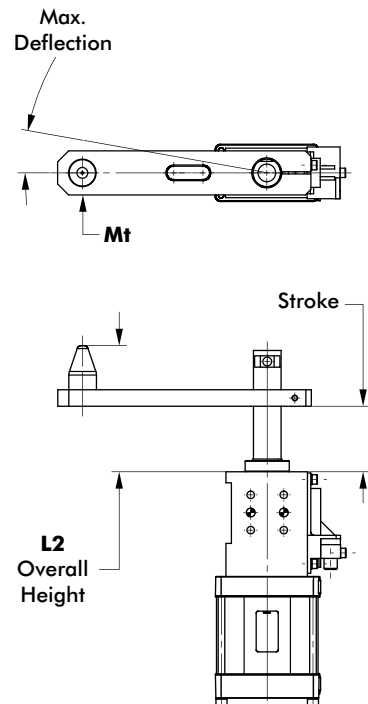
M12x1 connector, 90° angular, 4-pin

**8EL-003-1**

### Deflection with External Guide **E1, E2, E4, J1**



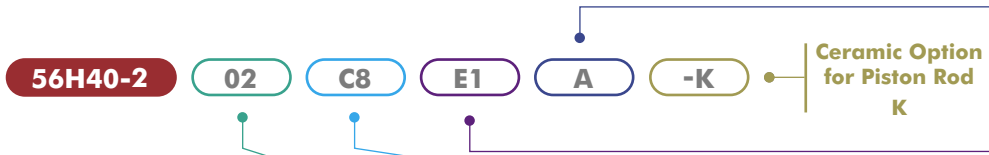
### Deflection without External Guide



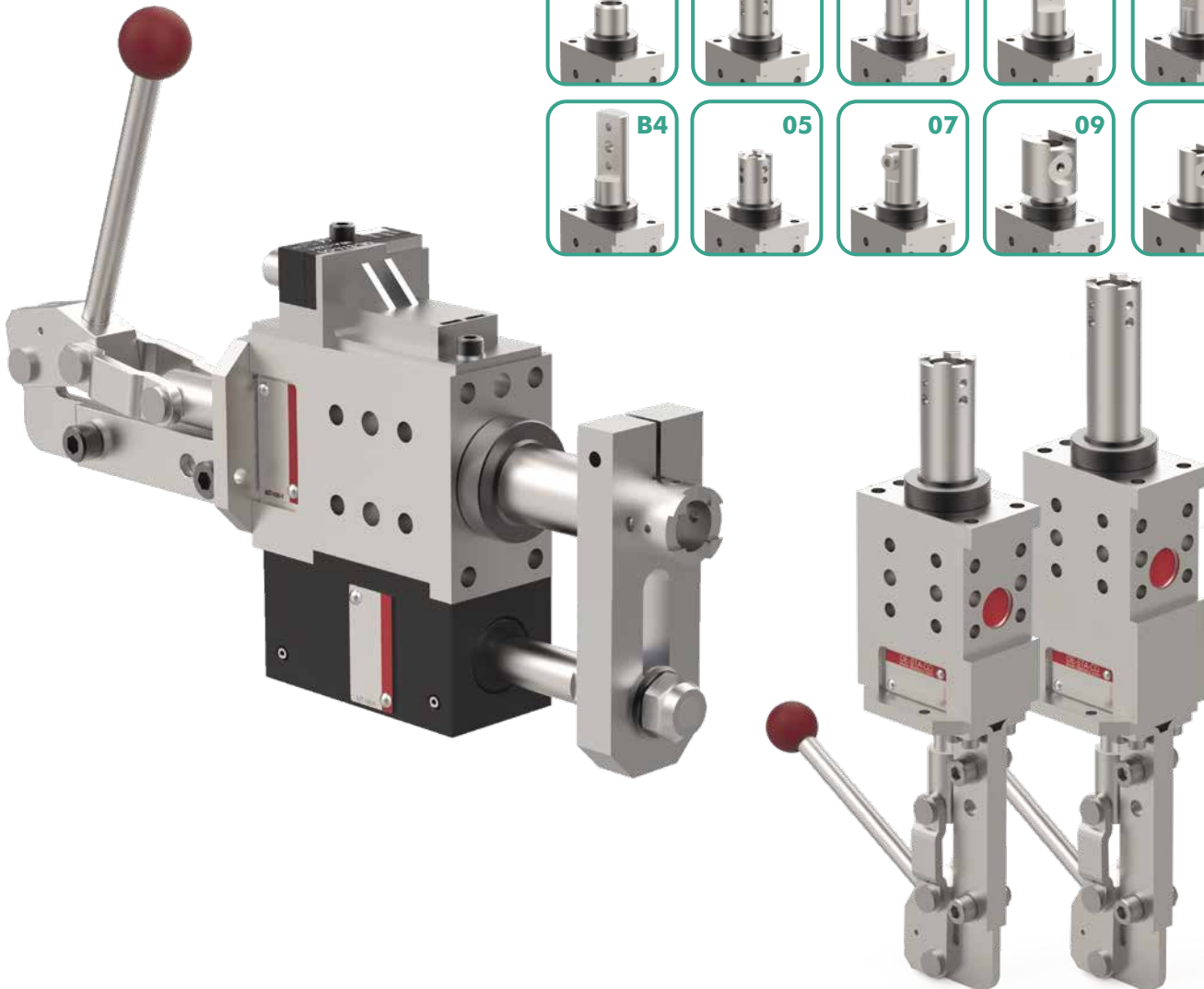
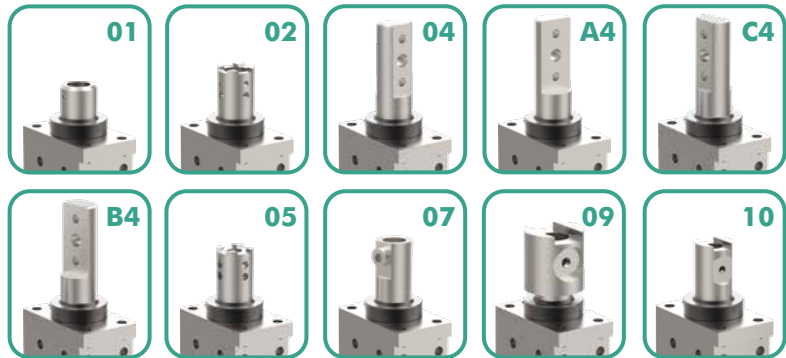
**Caution:** Generally we recommend using an external guide when the transverse force is more than 200 N [45 lbs]. Also independently of the stroke, less transverse forces, when the overall height L2 > 120 mm [4.7 in] ( L2 = extended piston rod plus centering pin ).

# 56H40-2

Manual Pin Package | Single Shaft | Ordering Information



Piston Rod	Description
01	Ø16 mm Inside Hole (Standard)
02	Ø16 mm M6 Threaded Inside Hole, Cross Groove
04	NAAMS Standard
A4	NAAMS Standard Rotated 180°
B4	NAAMS Standard Rotated 90°
C4	NAAMS Standard Rotated 270°
05	Ø10 mm Inside Hole, Cross Groove
07	Ø16 mm Inside Hole, NAAMS
09	Ø20 mm Straight Groove
10	Ø12 mm Straight Groove



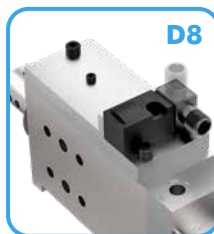
### Accessories

Accessories	Description
<b>00</b>	No Accessories
<b>E1</b>	External Guide for <b>A, B</b> (82ZB-009-2, Ceramic 82ZB-181-1)
<b>E2</b>	External Guide for <b>C</b> (82ZB-090-1, Ceramic 82ZB-105-1)
<b>F1</b>	Bellows for piston rods <b>02, 05, 07, 10</b> in strokes <b>A, B, 2, 4</b> (82ZB-013-3)



### Sensor

Sensor	Description
<b>L4</b>	Cover Plate for <b>A, B, 2, 4</b> (86P0-200L4)
<b>L6</b>	Cover Plate for <b>C, 6</b> (86P0-200L6)
<b>C8</b>	Inductive Sensing System with M12x1 Connector for <b>A, B, 2, 4</b> (86P0-200C8), for <b>C, 6</b> (86P0-200C8006)
<b>D8</b>	Inductive Sensing System with 90° M12x1 Swivel Connector for <b>A, B, 2, 4</b> (86P0-200D8), for <b>C, 6</b> (86P0-200D8006)



### Sensor Cables

Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft.] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable

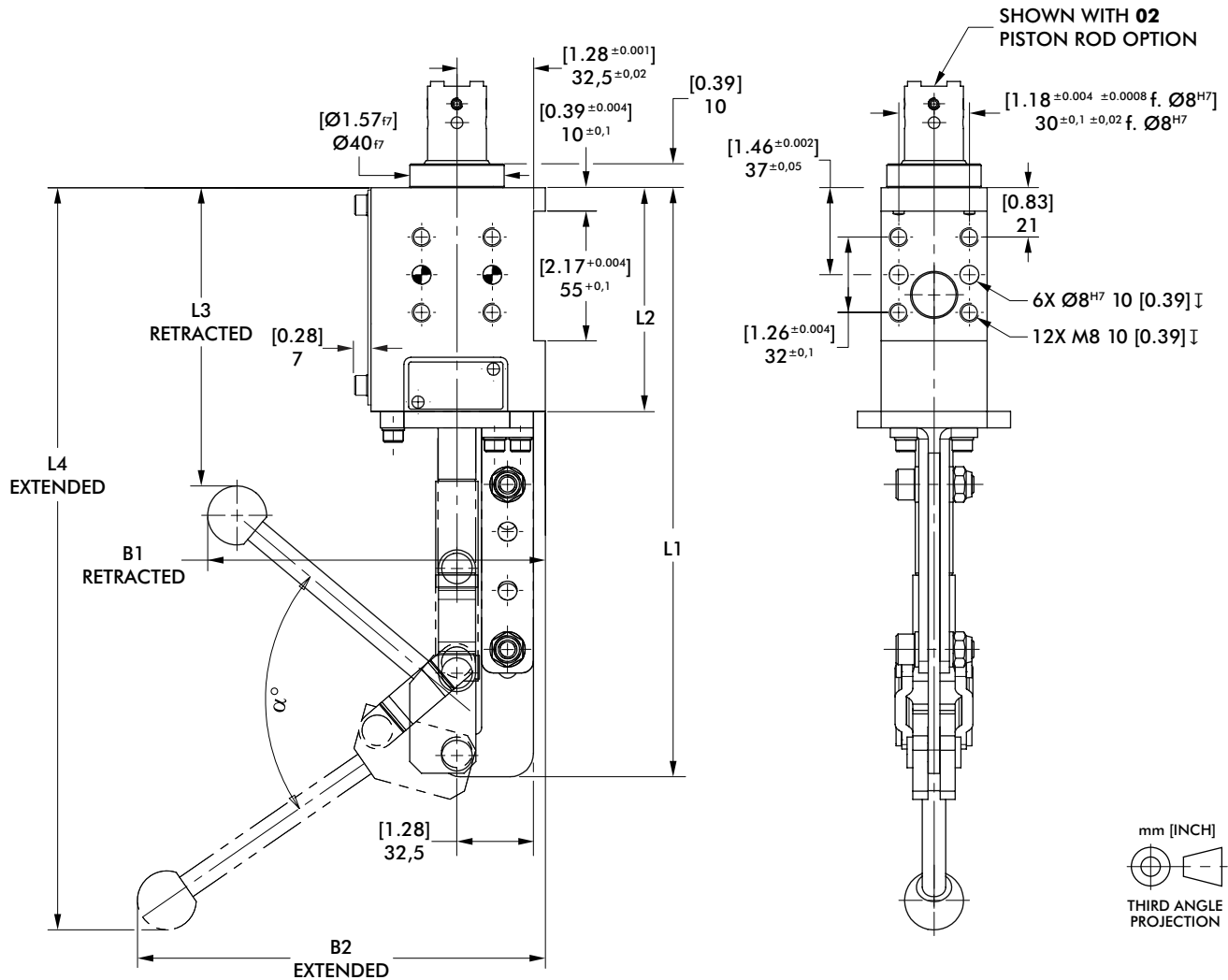
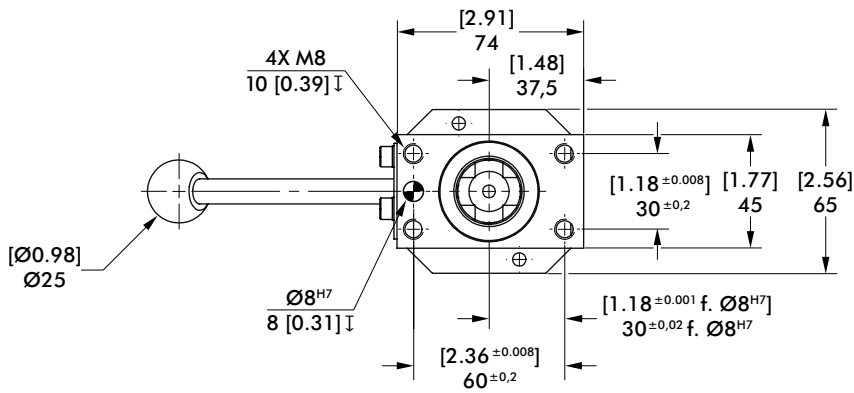
Stroke	Description
	Anti-Twist Device/Low Accuracy
<b>B</b>	20 mm Stroke (8MF-071-1)
<b>A</b>	40 mm Stroke (8CE-231-1)
<b>C</b>	60 mm Stroke (8CE-231-1)
	Anti-Twist Device
<b>2</b>	20 mm Stroke (86P0-20000002)
<b>4</b>	40 mm Stroke (86P0-20000004)
<b>6</b>	60 mm Stroke (86P0-20000006)





# 56H40-2

## Manual Pin Package | Single Shaft | Dimensions and Technical Specifications



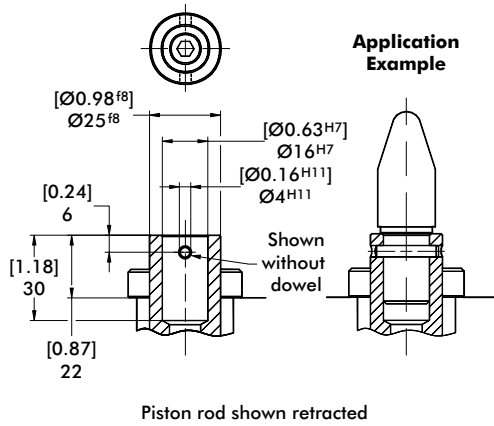
mm [INCH]  
THIRD ANGLE PROJECTION

Base Model	Stroke Option	Stroke +2 mm [in]	B1 (retracted) mm [in]	B2 (extended) mm [in]	L1 (max.) mm [in]	L2 mm [in]	L3 (retracted) mm [in]	L4 (extended) mm [in]	Opening Angle α	Weight Kg [lbs]
56H40-2	B, 2	20 [0.79]		188 [7.40]	270 [10.63]		277 [10.91]	146 [5.75]	50°	2,0 [4.41]
	A, 4	40 [1.57]	144 [5.67]	173 [6.81]	250 [9.84]	95 [3.74]	315 [12.40]	126 [4.96]	75°	
	C, 6	60 [2.36]		116 [4.57]	270 [10.63]	115 [4.53]	394 [15.51]	146 [5.75]	109°	

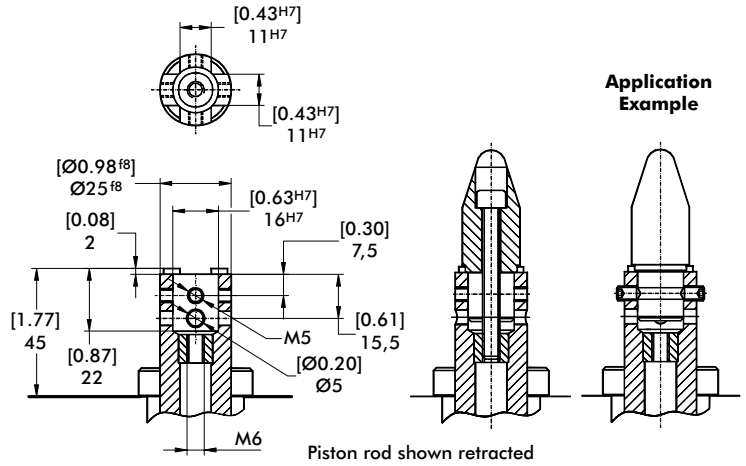
# 56H40-2 PISTON RODS

Manual Pin Package | Single Shaft | Dimensions and Technical Specifications

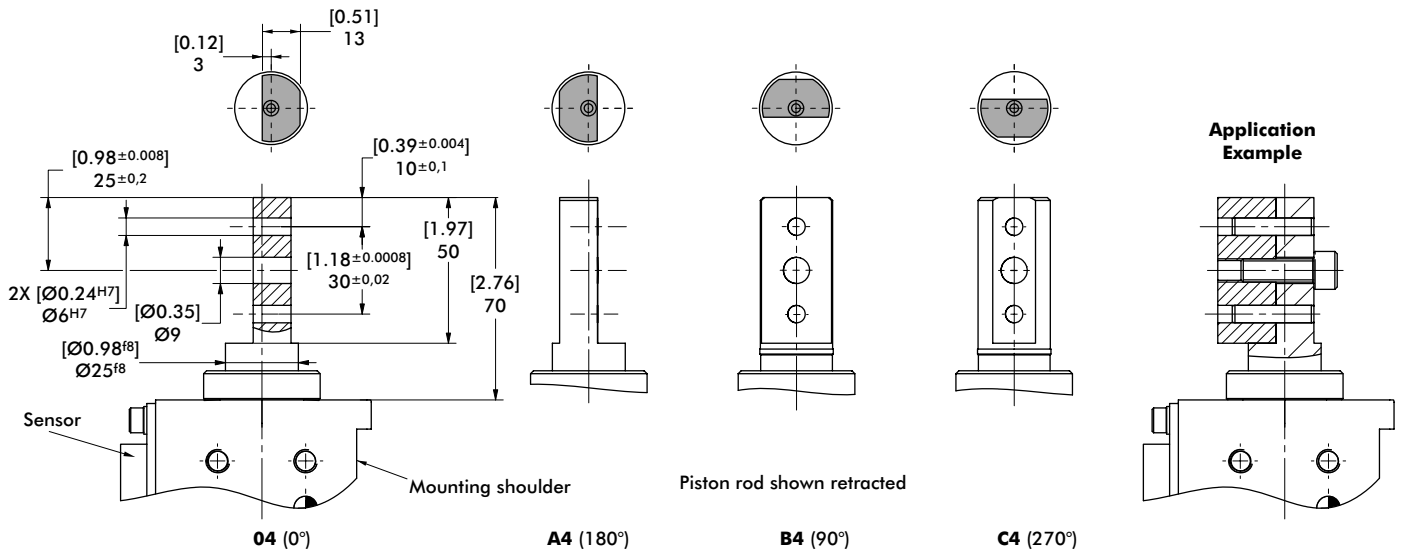
## 01 Ø16 mm Inside Hole



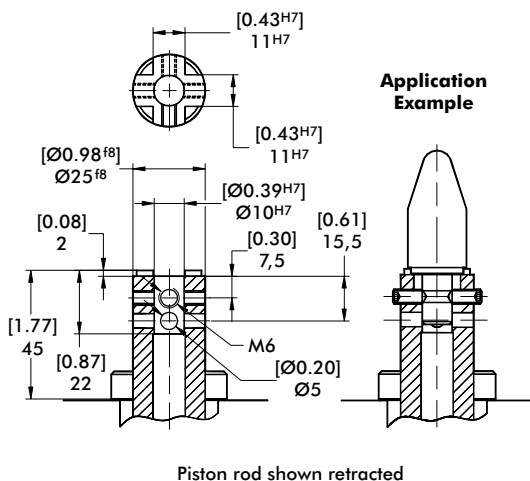
## 02 Ø16 mm M6 Threaded Inside Hole, Cross Groove



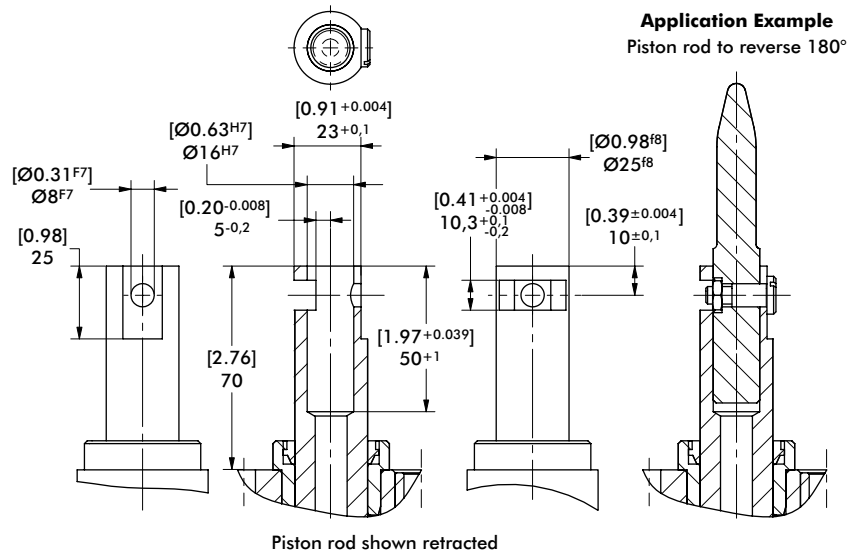
## 04, A4, B4, C4 NAAMS Standard



## 05 Ø10 mm Inside Hole, Cross Groove



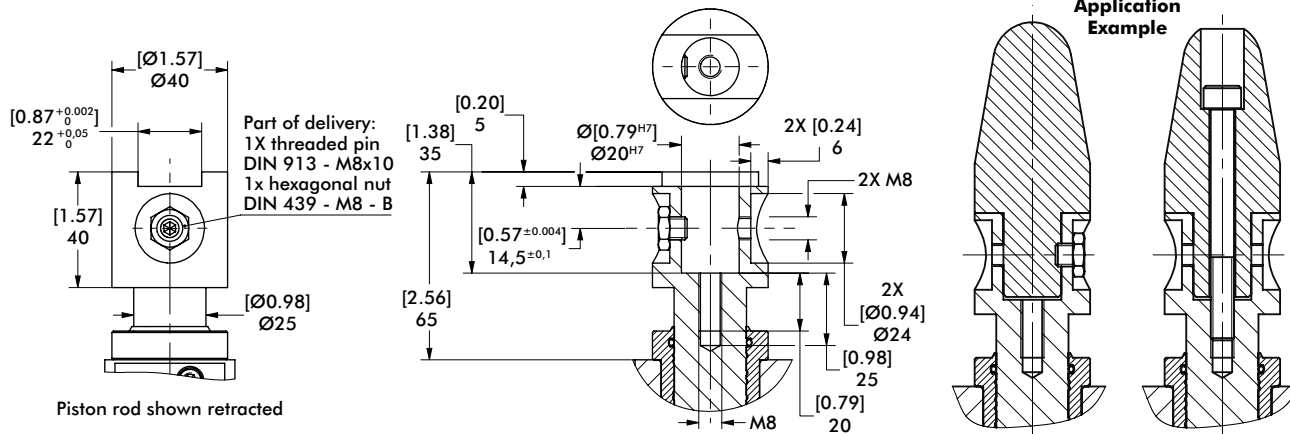
## 07 Ø16 mm Inside Hole, NAAMS



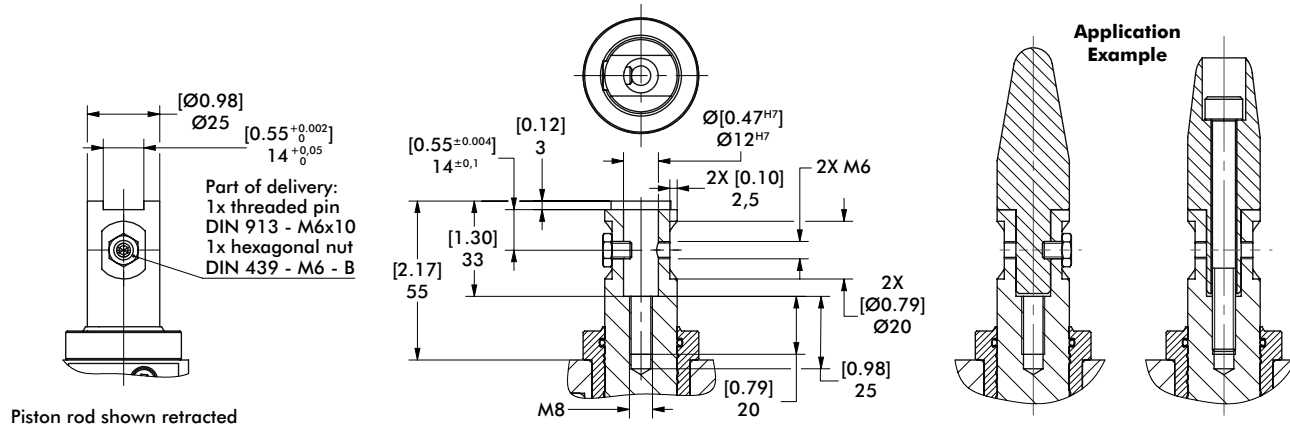
# 56H40-2 PISTON RODS

Manual Pin Package | Single Shaft | Dimensions and Technical Specifications

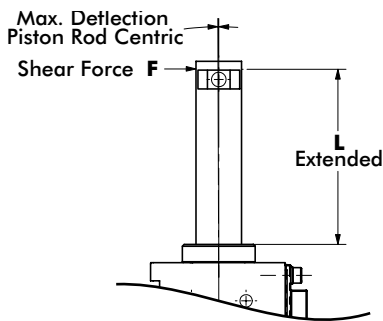
## 09 Ø20 mm Straight Groove



## 10 Ø12 mm Straight Groove



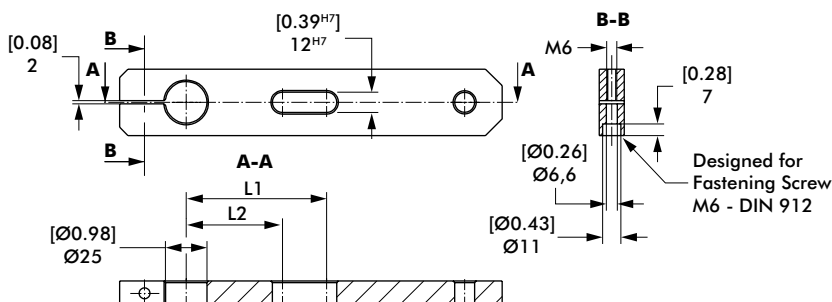
## Max Deflection for Centering Pin



Model no.	Shear force N [lbs]	L mm [in]	Stroke mm [in]	Deflection mm [in]
56H40-2...B / 2	52 [45]	52 [2.05]	20 [0.79]	0,06 [0.002]
56H40-2...A / 4	70 [45]	70 [2.76]	40 [1.58]	0,09 [0.004]
56H40-2...C / 6	90 [45]	90 [3.54]	60 [2.36]	0,12 [0.005]

**Caution:** Generally we recommend using an external guide when the transverse force is more than 200 N [45 lbs]. Also independently of the stroke, less transverse forces, when the overall height L2 > 120 mm [4.7 in] ( L2 = extended piston rod plus centering pin ).

## Example application of an off-center centering pin (Example component shown below is to be made by the customer)



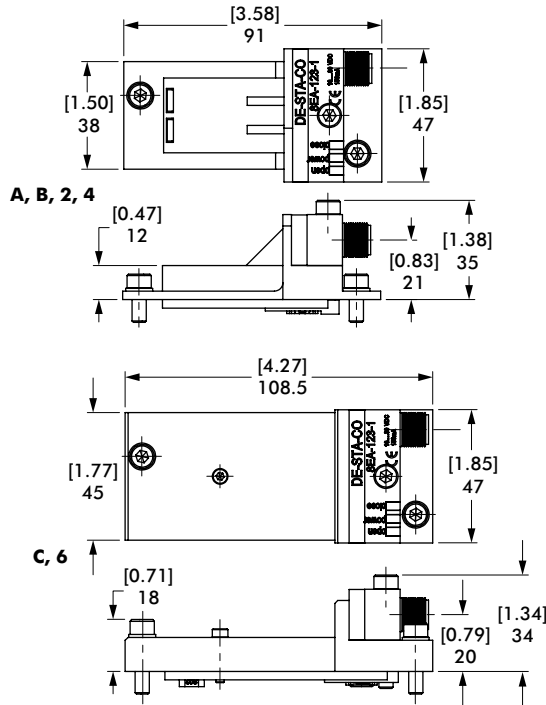
Model no.	L1 mm [in]	L2 mm [in]
56H40-2...E1	62 [2.44]	58 [2.28]
56H40-2...E2	62 [2.44]	58 [2.28]

\*J1 is not available with 60 or 80 mm strokes.

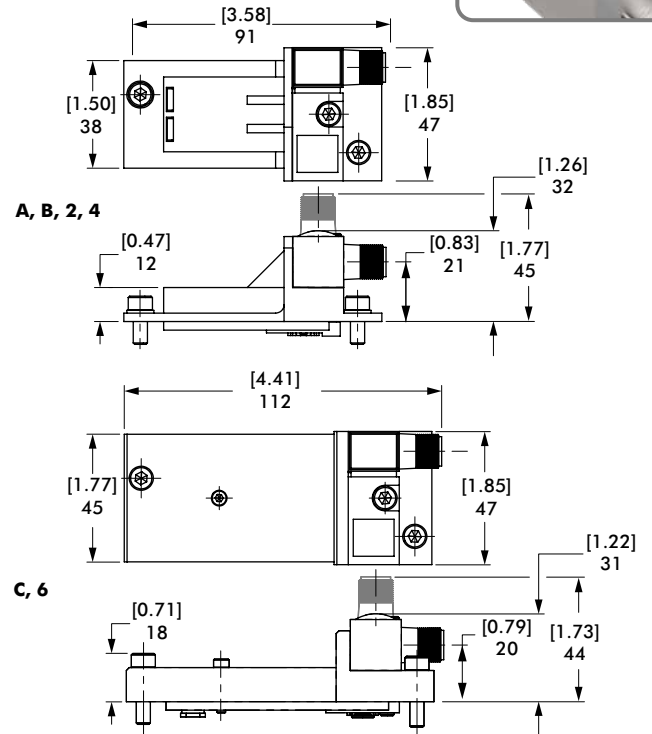
# 56H40-2 SENSORS

Manual Pin Package | Single Shaft | Dimensions and Technical Specifications

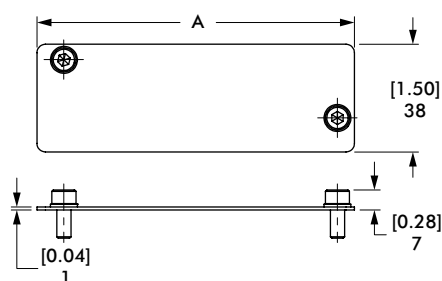
## C8 Inductive Sensing System



## D8 Inductive Sensing System with 90° Swivel Connector

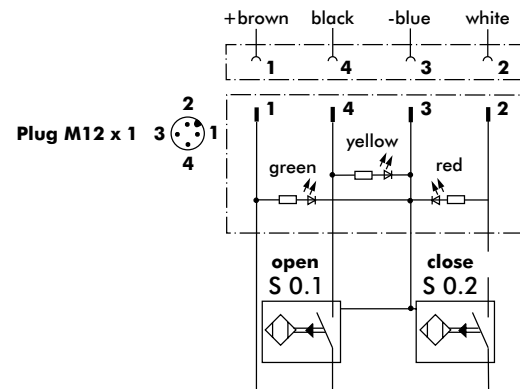


## L4, L6 Sensor Cover Plate



## Inductive Sensor Wiring Diagram for C8, D8

Sensing system immune to interference from AC / DC arc welding.

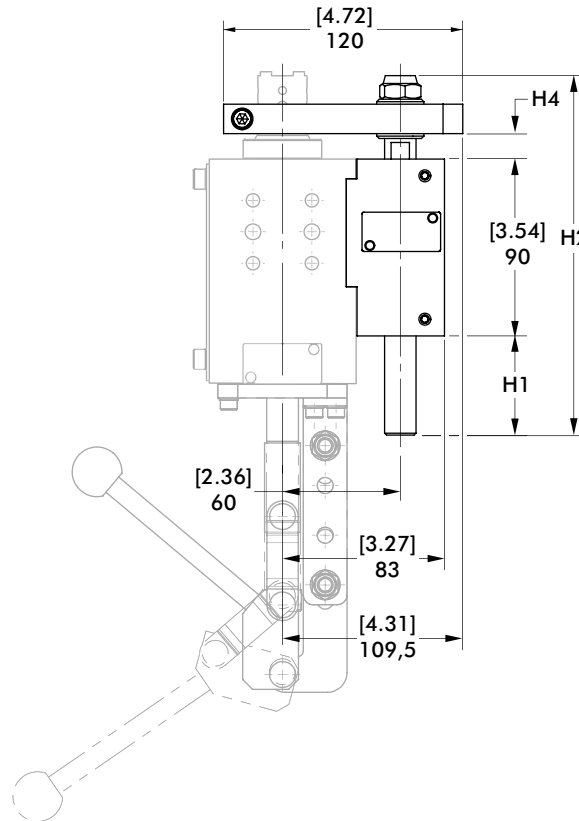
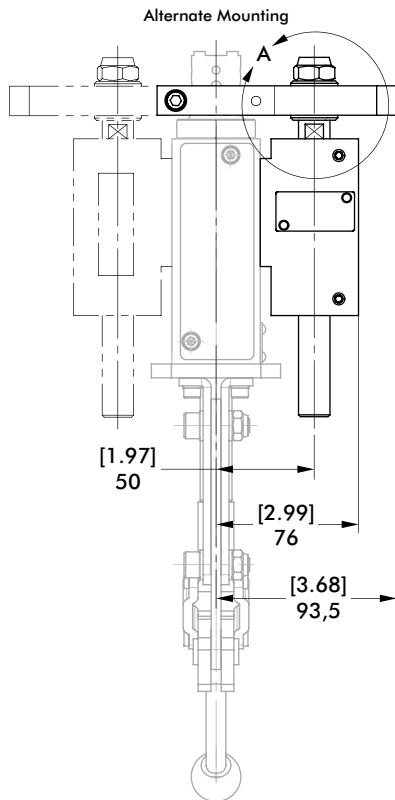
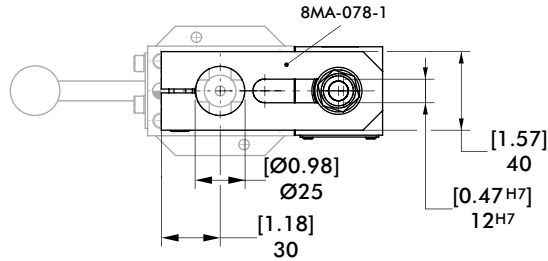
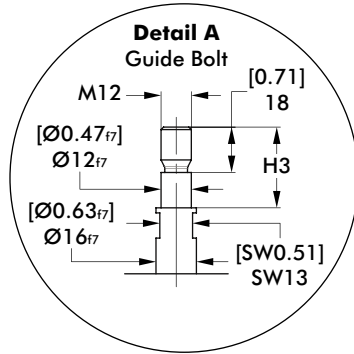


Cover Plate Option	Stroke Option	A mm [in]
L4	A, B, 2, 4	92 [3.62]
L6	C, 6	112 [4.41]

# 56H40-2 OPTIONS

Manual Pin Package | Single Shaft | Dimensions and Technical Specifications

## E1, E2 External Guide



mm [INCH]  
THIRD ANGLE PROJECTION

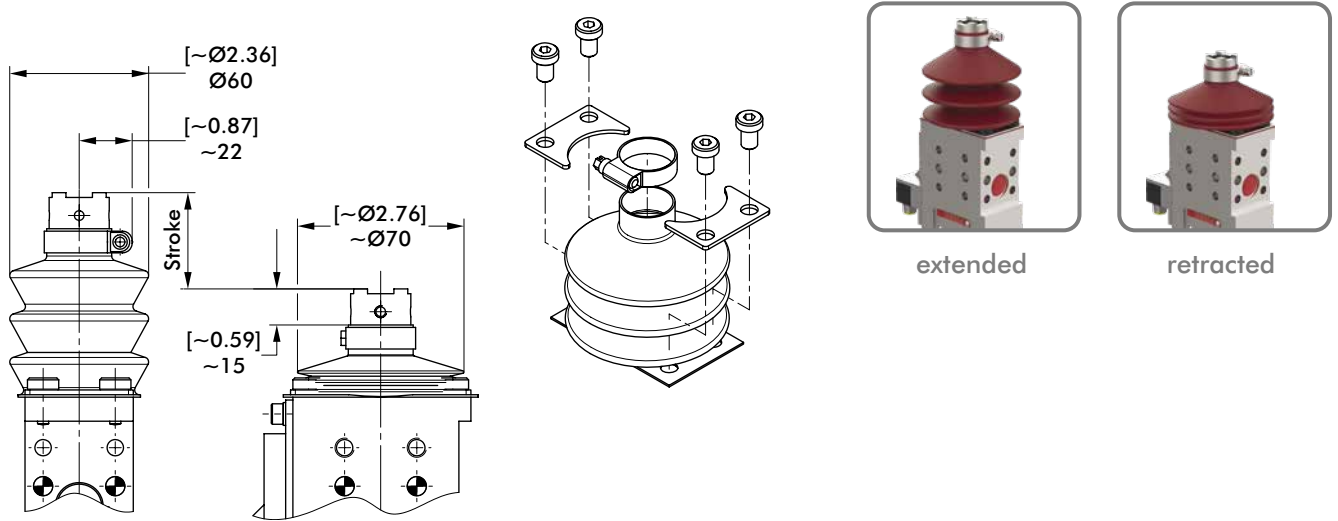
Base Model	External Guide Option	Stroke Option	H1 (max.) mm [in]	H2 mm [in]	H3 mm [in]	H4 (min.) mm [in]
56H40-2	E1	A, B	47 [1.85]	183 [7.20]	32 [1.26]	16,5 [0.65]
	E1_-K*		55 [2.17]	195 [7.68]	35 [1.38]	17,5 [0.69]
	E2	C	67 [2.64]	203 [7.99]	32 [1.26]	16,5 [0.65]
	E2_-K*		109 [4.29]	250 [9.84]	35 [1.38]	18,5 [0.73]

\*Ceramic Option

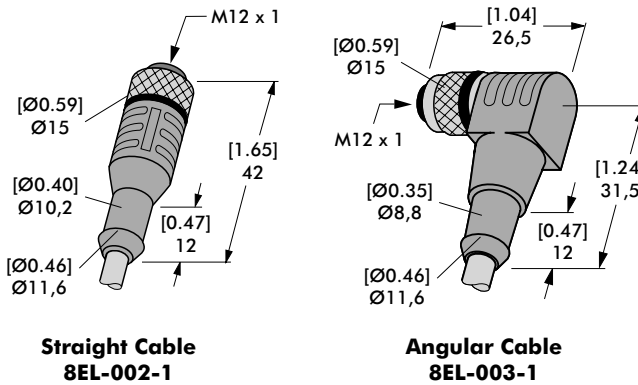
# 56H40-2 OPTIONS

Manual Pin Package | Single Shaft | Dimensions and Technical Specifications

## F1 Bellows (Piston Rod Cover)



## Sensor Cable Accessories

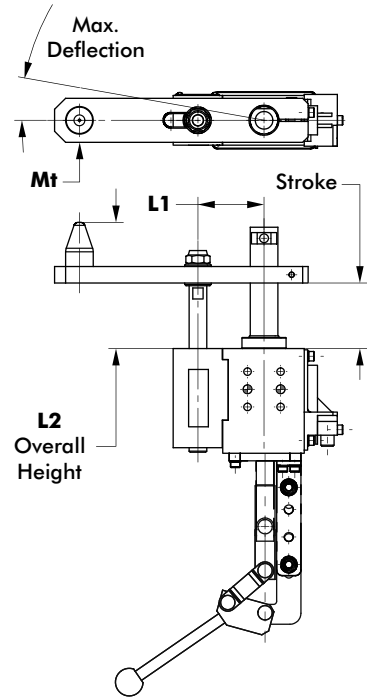


Sensor Cables (1 connector & 5m cable)	Order no.
M12x1 connector, straight, 5-pin	<b>8EL-002-1</b>
M12x1 connector, 90° angular, 4-pin	<b>8EL-003-1</b>

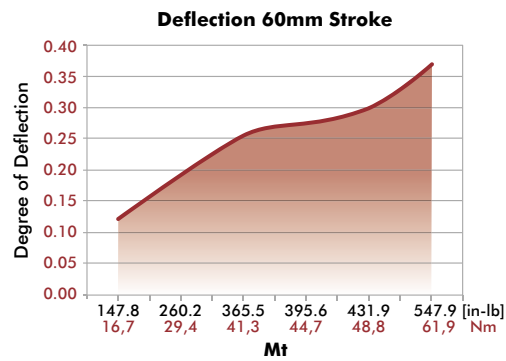
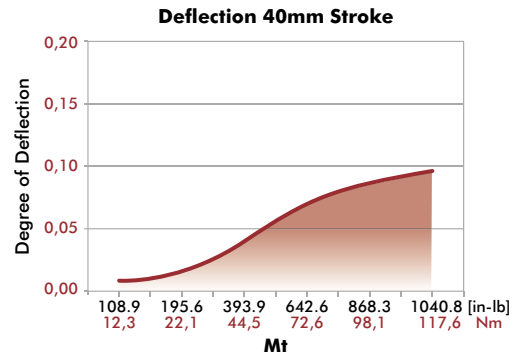
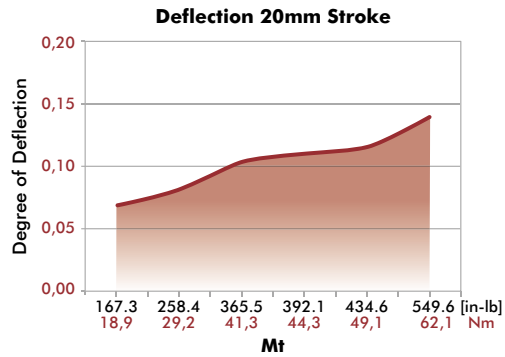
# 56H40-2

## Manual Pin Package | Single Shaft | Technical Specifications

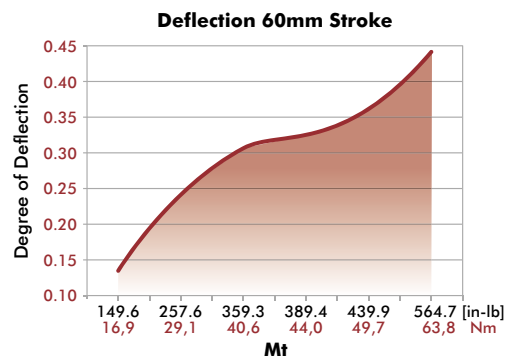
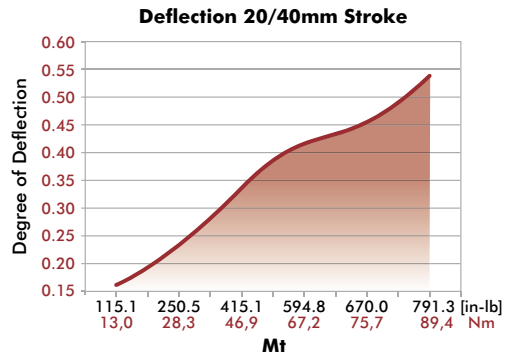
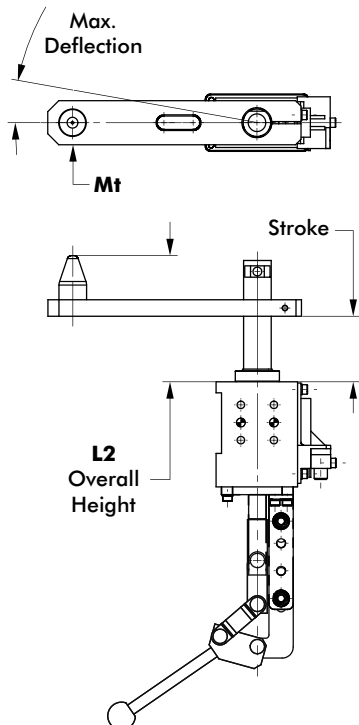
### Deflection with External Guide **E1, E2**



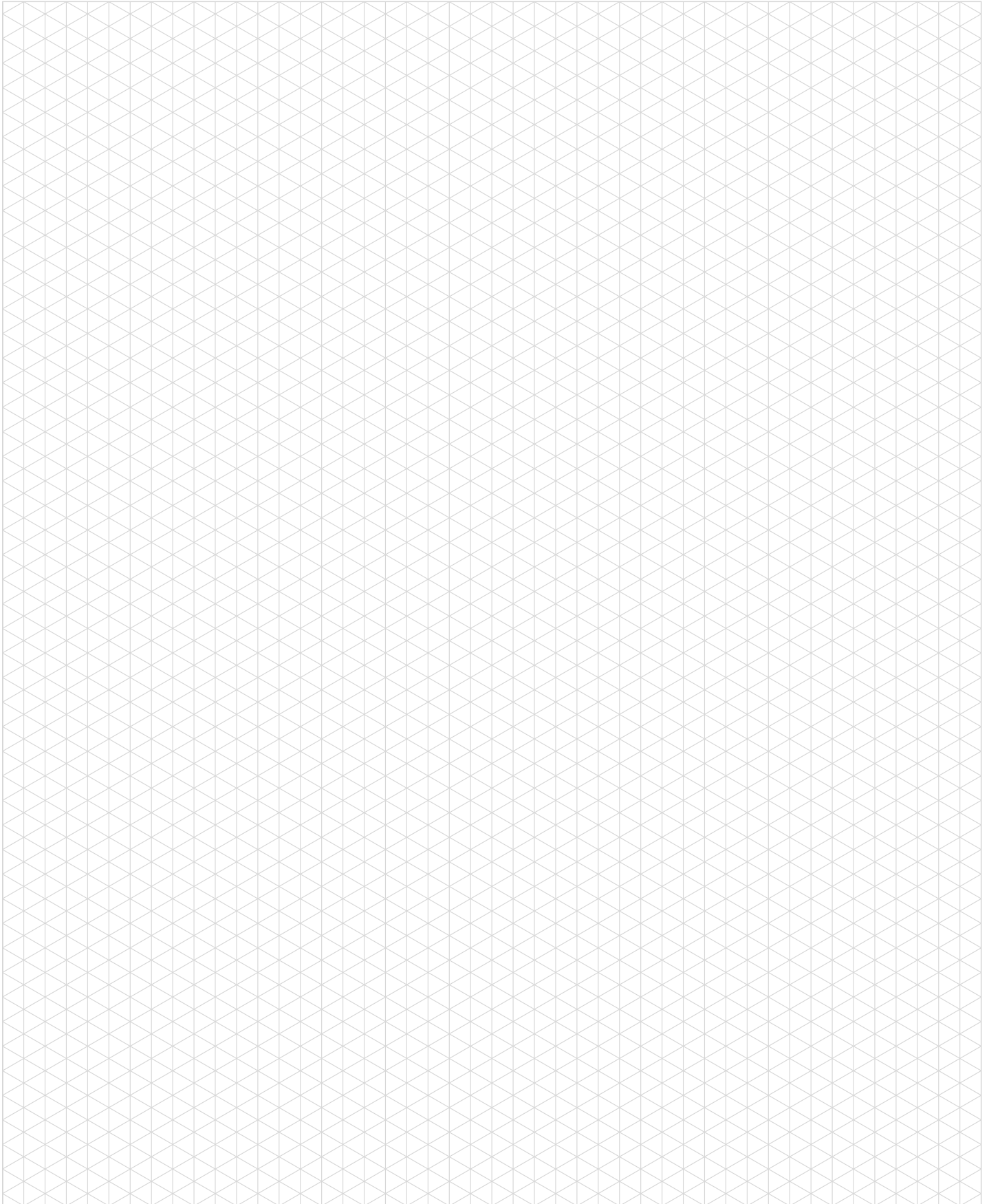
L1 = 60mm without Adapter  
L1 = 82,5mm with Adapter



### Deflection without External Guide



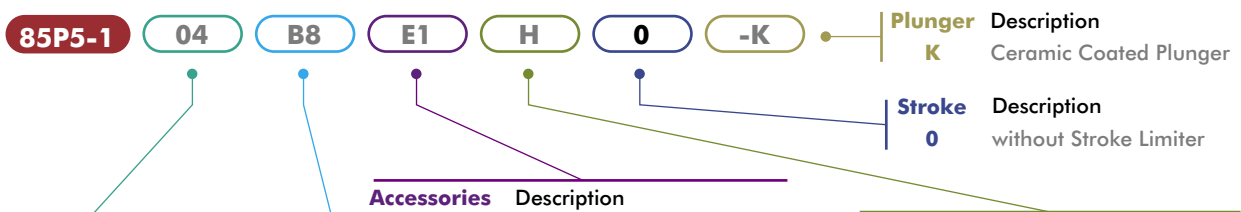
**Caution:** Generally we recommend using an external guide when the transverse force is more than 200 N [45 lbs]. Also independently of the stroke, less transverse forces, when the overall height L2 > 120 mm [4.7 in] ( L2 = extended piston rod plus centering pin ).





# 85P5-1

## Pneumatic Pin Package | Single Shaft | Ordering Information



Piston Rod	Description
02	Ø16 mm M6 Threaded Inside Hole, Cross Groove
04	NAAMS Standard
A4	NAAMS Standard Rotated 180°
05	Ø10 mm Inside Hole, Cross Groove



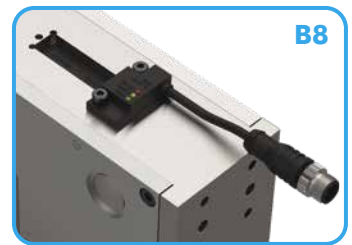
Accessories	Description
00	No Accessories
E1*	External Guide (82ZB-010-2) *External Guide can be mounted to front or sides of unit by customer.



Hand Lever	Description
0	No Hand Lever
H	Hand Lever *Hand Lever can be attached on either side of unit.



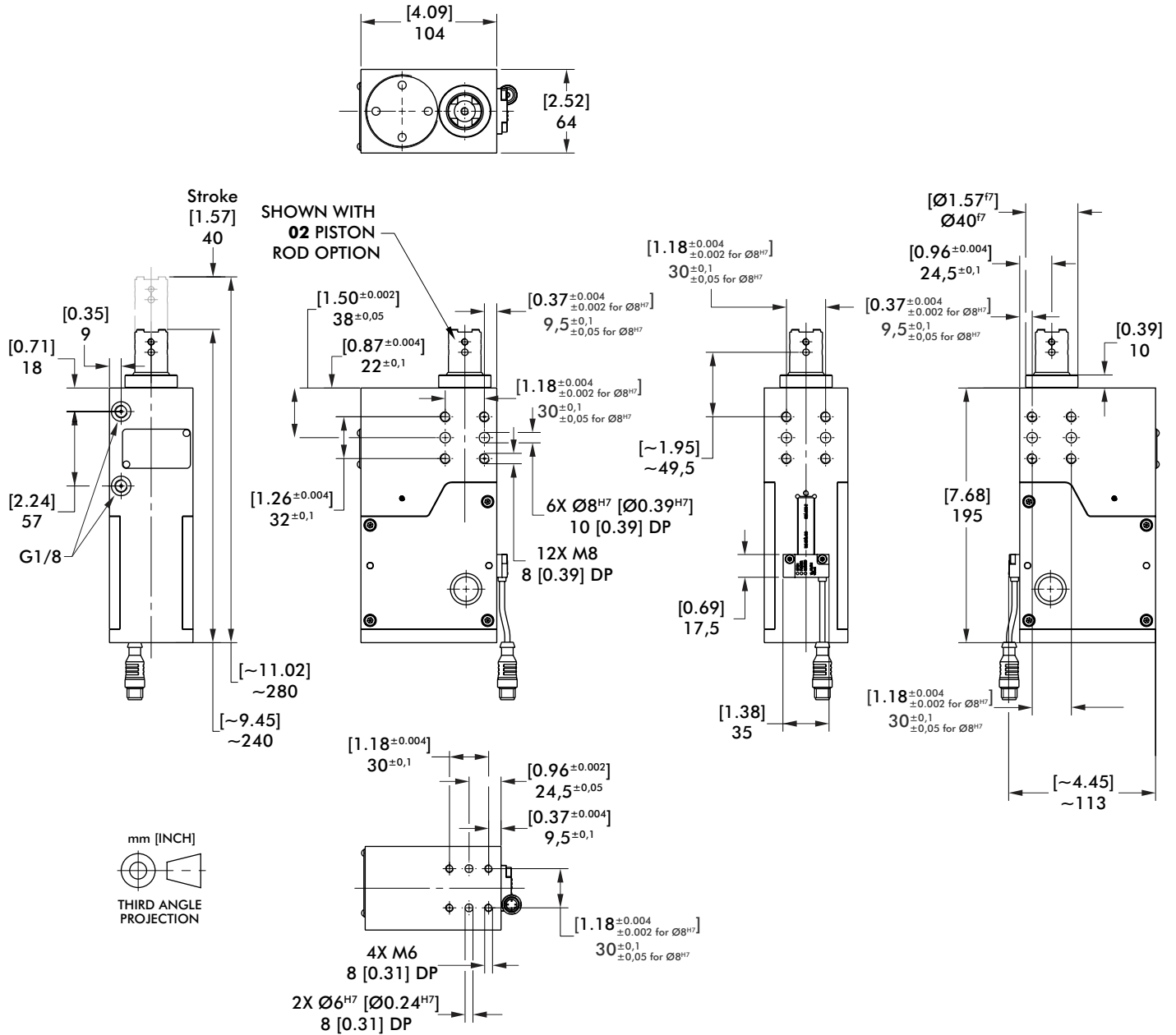
Sensor	Description
00	Without Sensing System
B8	Inductive Sensing System with M12x1 Cable Connector (8EA-033-2)



Shown with Hand Lever H Option. Hand Lever can be attached on either side of unit.

External Guide E1 option shown. Can be mounted to front or sides of unit by customer.

## Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications



Medium: Operation with oil free air is permissible

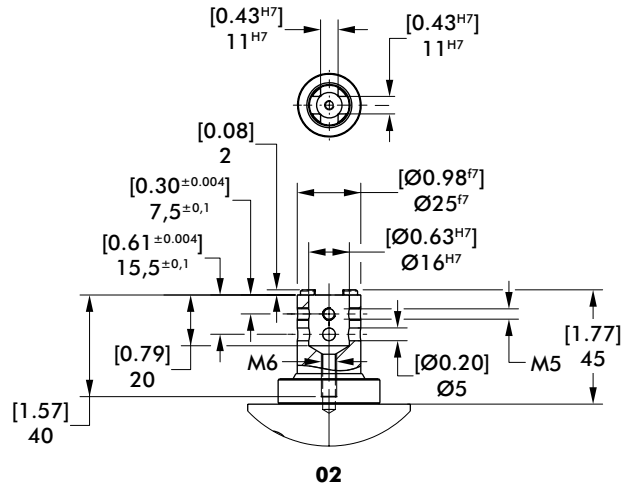
**Note:** Extracting force and retracting force shown in this chart are only available with the last 2 mm stroke at extracted position. In the other range of the stroke the forces will be approximately 30% of value in the chart.

Base Model	Stroke mm [in]	Pushing Force at 6 bar N [lbf]	Retraction Force at 6 bar N [lbf]	Holding Force at 6 bar N [lbf]	Max. Operating Pressure bar [psi]	Piston Ø mm [in]	Weight Kg [lbs]	Air consumption per double stroke at 5 bar dm <sup>3</sup> [ft <sup>3</sup> ]
85P5-1	40 [1.57]	2000 [449]	1000 [225]	5000 [1124]	6 [87]	50 [1.97]	3,8 [8.36]	1,1 [0.04]

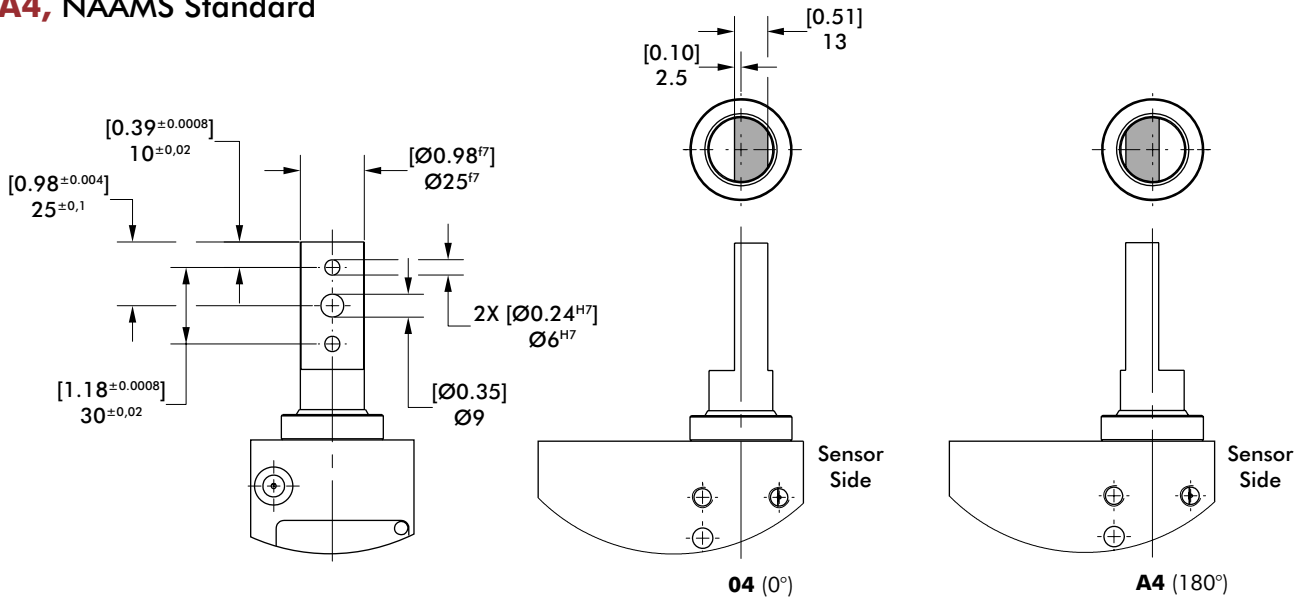
# 85P5-1 PISTON RODS

Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

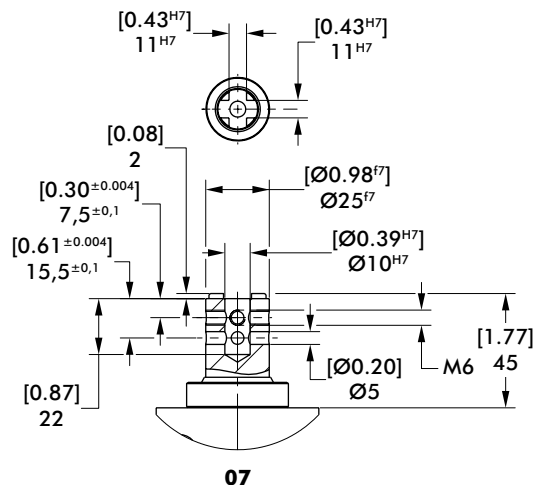
## 02 Ø16 mm M6 Threaded Inside Hole, Cross Groove



## 04, A4, NAAMS Standard



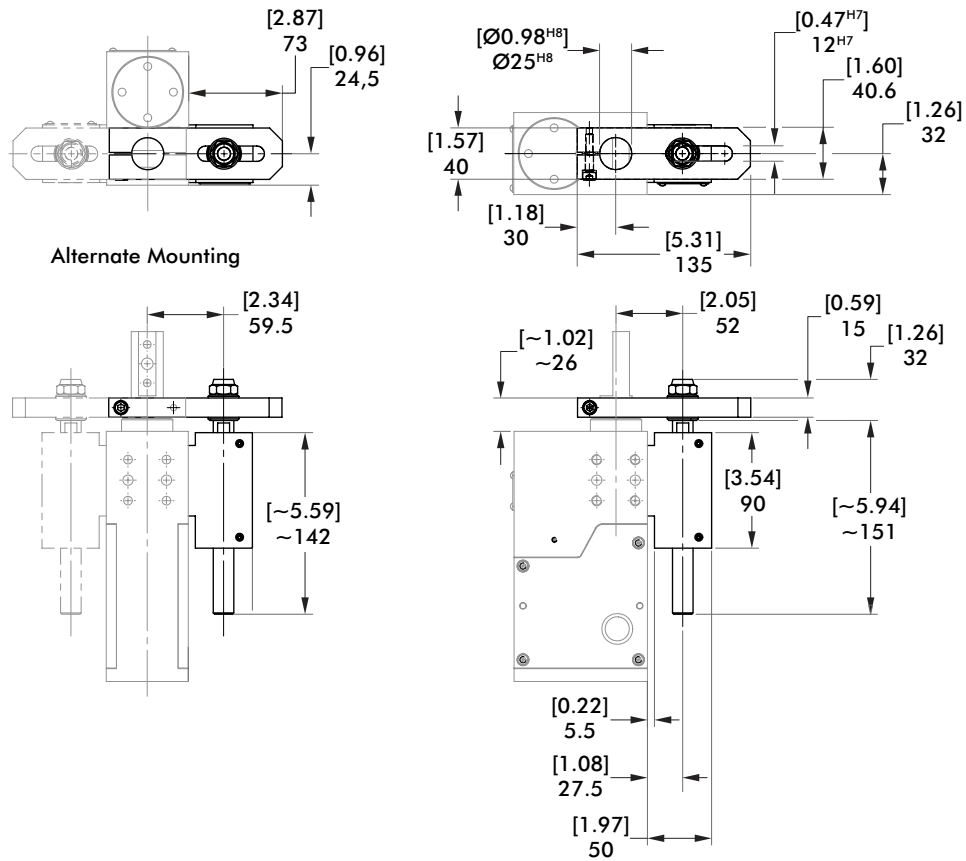
## 07 Ø16 mm Inside Hole, NAAMS



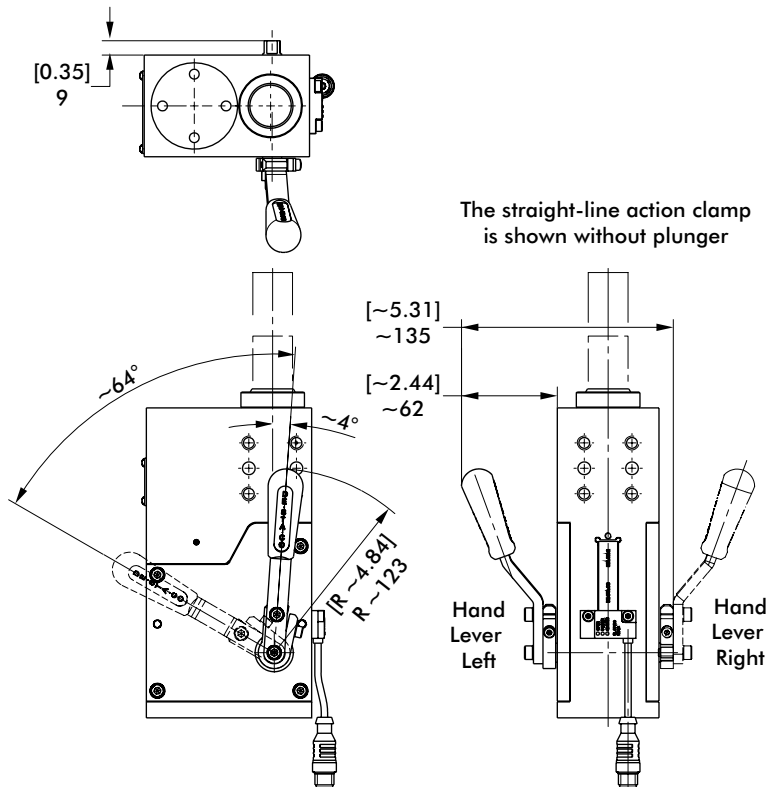
# 85P5-1 OPTIONS

## Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

### E1 External Guide



### H Hand Lever



Model no.

Weight  
kg [lb]

85P5-1\*\*\*\*00H0

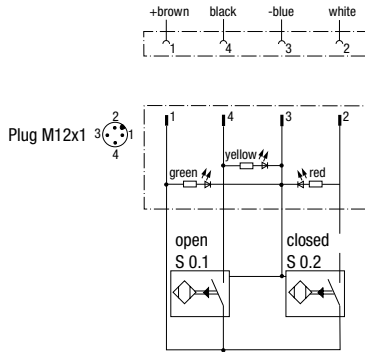
4 [8.82]

# 85P5-1

## Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

### Inductive Sensor Wiring Diagram

Sensing system immune to interference from A.C./D.C. arc welding.

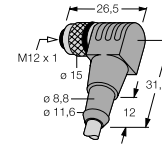


### Sensor Accessories and Spare Parts

Description	Order no.
<b>Sensor Cables (1 connector &amp; 5 m cable)</b>	
M12x1 connector, straight, 5-pin	<b>8EL-002-1</b>
M12x1 connector, 90° angular, 4-pin	<b>8EL-003-1</b>
<b>Spare Parts</b>	
<b>Cylinder</b>	<b>8PW-105-1</b>
<b>Cylinder Seal Kit</b>	<b>8PW-105-1-00</b>



**Straight Cable**



**Angular Cable**

