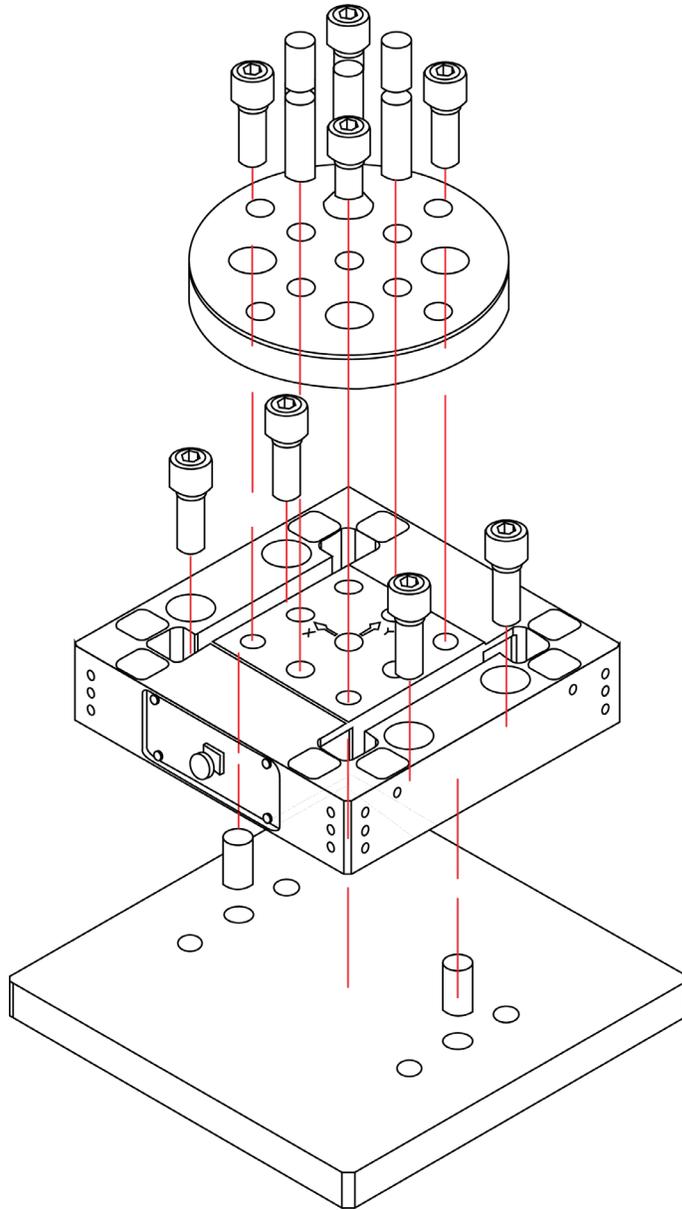


Interface

3A Mounting Instructions



General Information3

3A404

3A607

3A12010

3A16013

3A30016

3A40019

General Information

The following mounting instructions apply to all 3A40 through 3A400 3-axis sensors. For proper installation, the 3A sensor mounting plates must only make contact at the marked mounting surfaces.

The dowel pins serve two purposes:

- 1) Axis alignment
- 2) Fx & Fy load carrying. For the larger capacities and load ratings, the mounting screws alone are not sufficient to carry full Fx & Fy loads, particularly if reciprocating loads are applied.

Loctite 603 or similar may be used on the mating surfaces of higher capacity sensors. When used, Loctite can take the place of some or all of the dowel pins.

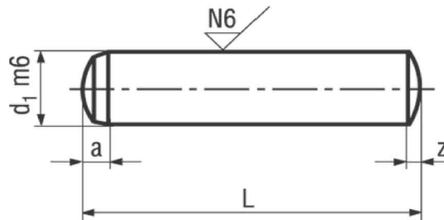
The dowel pin holes on the live end of 3A300 and 3A400 are through holes to allow push-out extraction.

Pull Dowel pins with threaded extraction holes can be used, and vented pins are available for use in blind holes.

It is important to follow the mounting torque and fastener grade specifications in the following pages. Torque should be applied in an alternating, criss-cross pattern.

Mounting plates should be of similar material to the load cell.

DIN 6325-M6 Dowel Pin



PULL DOWEL PINS WITH INTERNAL THREAD # 7979 D

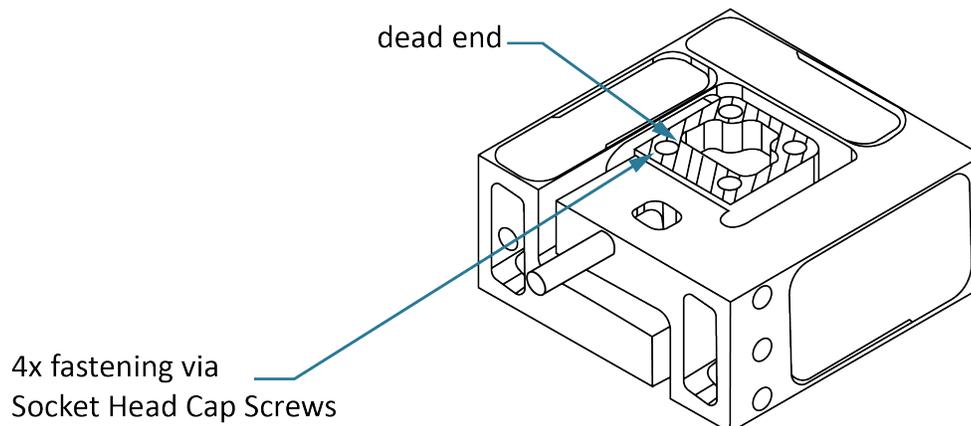
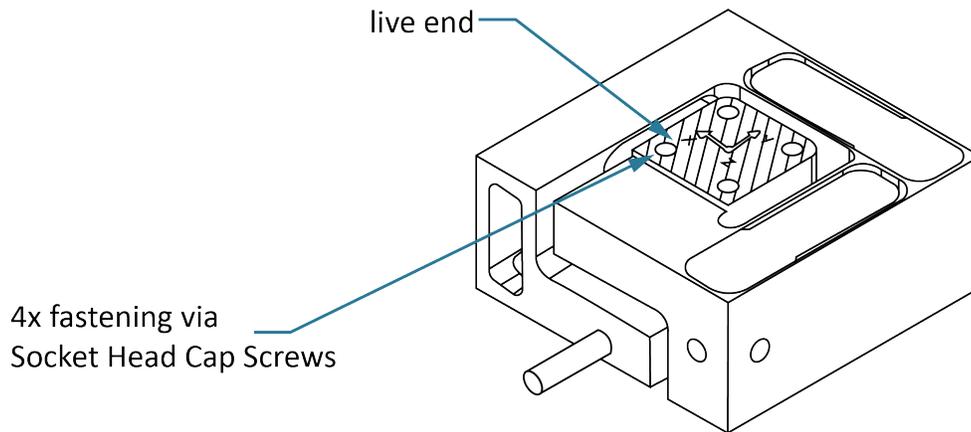
Ref: DIN 7979 D/ISO 8735A - Hardened Steel (HRC 52-58) - Ground Finish - m6 Oversized Diameter Tolerance



Vented pull dowel DIN 7979D



Mounting Surfaces:



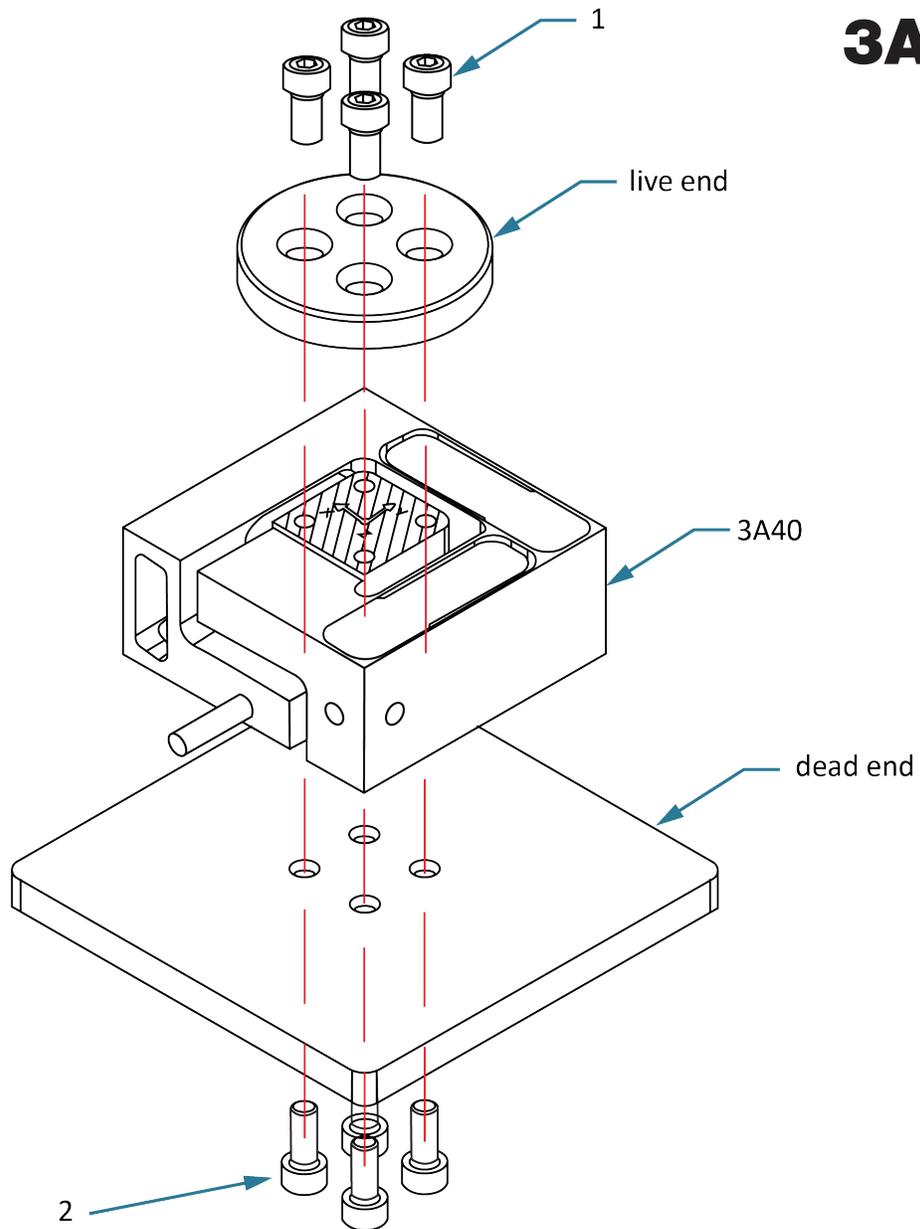
Mounting: Live and Dead End

The fastening of the mounting plates must be only to the live end and dead end mounting surfaces of the 3A sensor. For this, the screws and tightening torques specified in the table below must be used. The screw depth in the live end / dead end should be 5-7 mm.

Requirements for mounting surface:

- screw depth for thread min. 1.0 up to 1.5 x \varnothing
- high stiffness of the mounting surface, no deformation under load
- flatness of mounting surface 0.05 to 0.1mm
- quality of the mounting surface Rz6.3 \varnothing

3A40

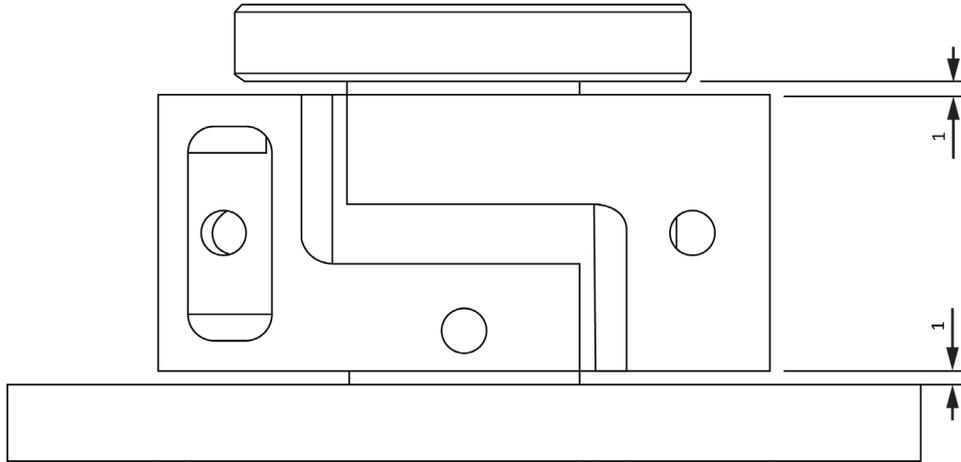


POS.	Quantity	Designation	Material	Nominal load	Tightening torque (Nm) live end	Tightening torque (Nm) dead end
1	4	Socket Head Cap Screws DIN EN ISO 4762 M3x0.5	Aluminum	± 2N ± 10N ± 20N ± 50N	1	1
1	4	Socket Head Cap Screws DIN EN ISO 4762 M3x0.5				

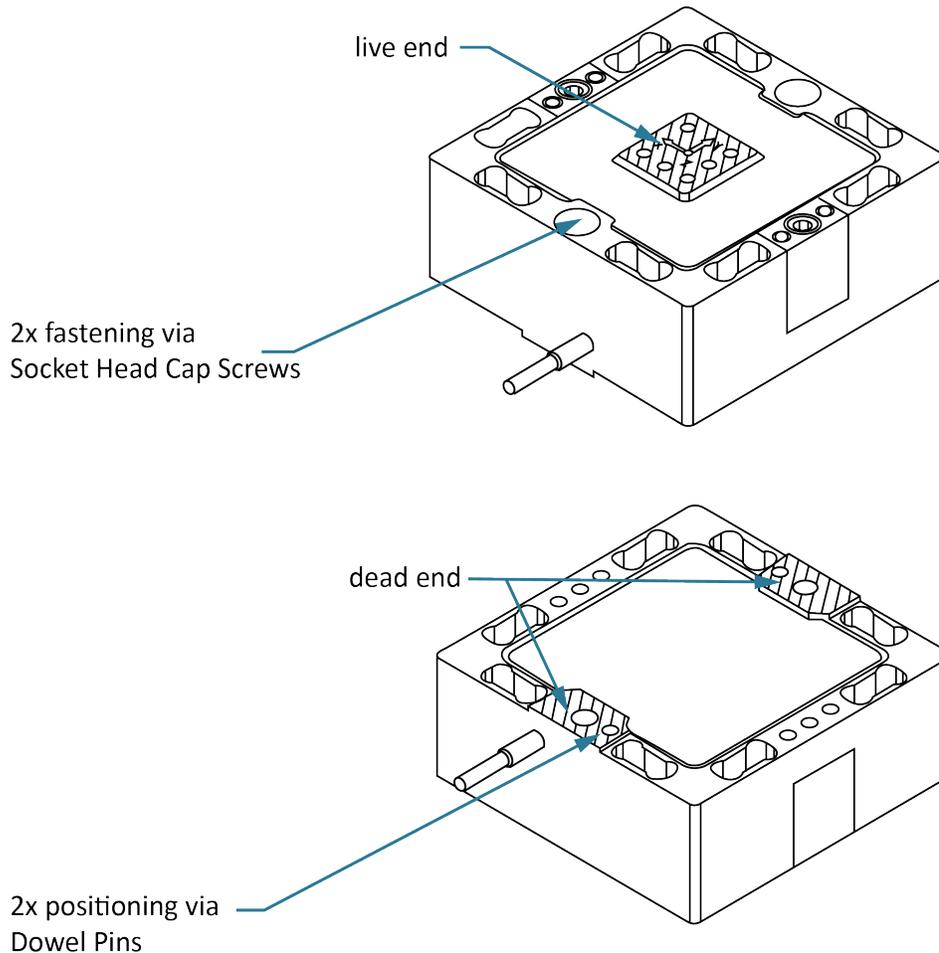
Note:

3A40

The distance between sensor body and mounting plates must be 1 mm.



Mounting Surfaces:



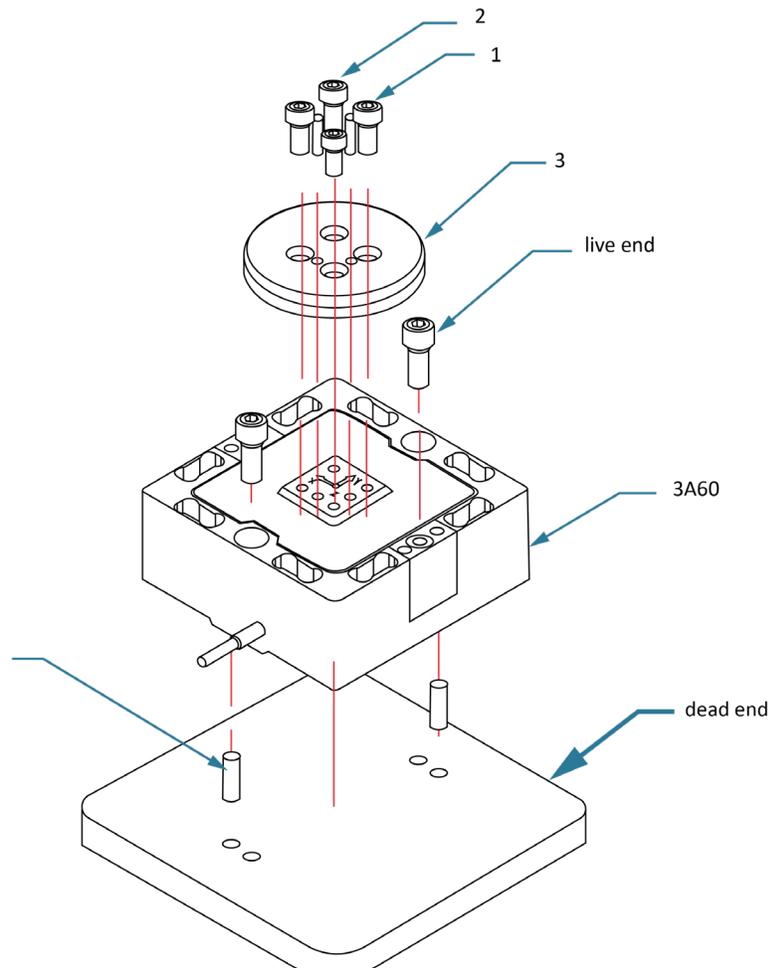
Mounting: Live and Dead End

The fastening of the mounting plates must be only to the live end and dead end mounting surfaces of the 3A sensor. For this, the screws, dowel pins and tightening torques specified in the table below must be used. The screw depth in the live end / dead end should be 6-10 mm.

Requirements for mounting surface:

- screw depth for thread min. 1.0 up to $1.5 \times \varnothing$
- high stiffness of the mounting surface, no deformation under load
- flatness of mounting surface 0.05 to 0.1mm
- quality of the mounting surface Rz6.3 \varnothing

3A60

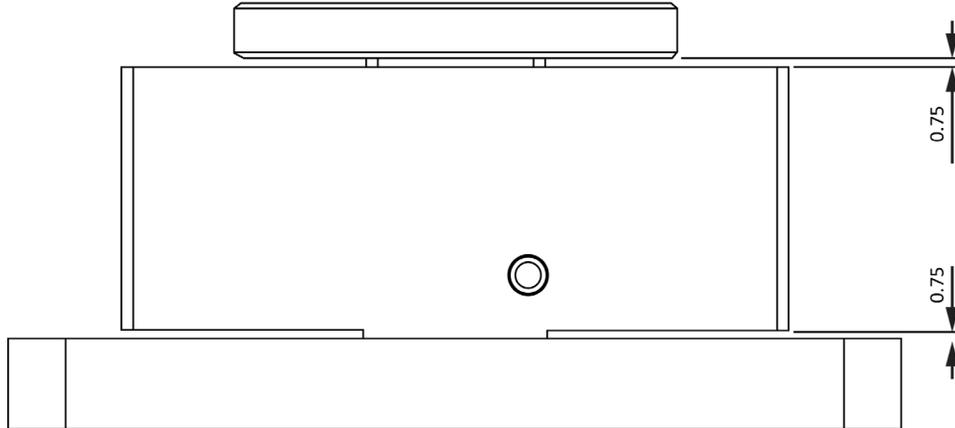


POS.	Quantity	Designation	Material	Nominal load	Tightening torque (Nm) live end	Tightening torque (Nm) dead end
1	2	Dowel pins DIN6325 Ø2m6	Aluminum Alloy	± 10N ± 20N ± 50N ± 100N	1	2
2	4	Socket Head Cap screws DIN EN ISO 4762 M3x0.5 6.8				
3	2	Socket Head Cap screws DIN EN ISO 4762 M4x0.7 6.8	Stainless Steel	± 200N ± 500N	1	2
4	2	Dowel pins DIN6325 Ø3m6				

Note:

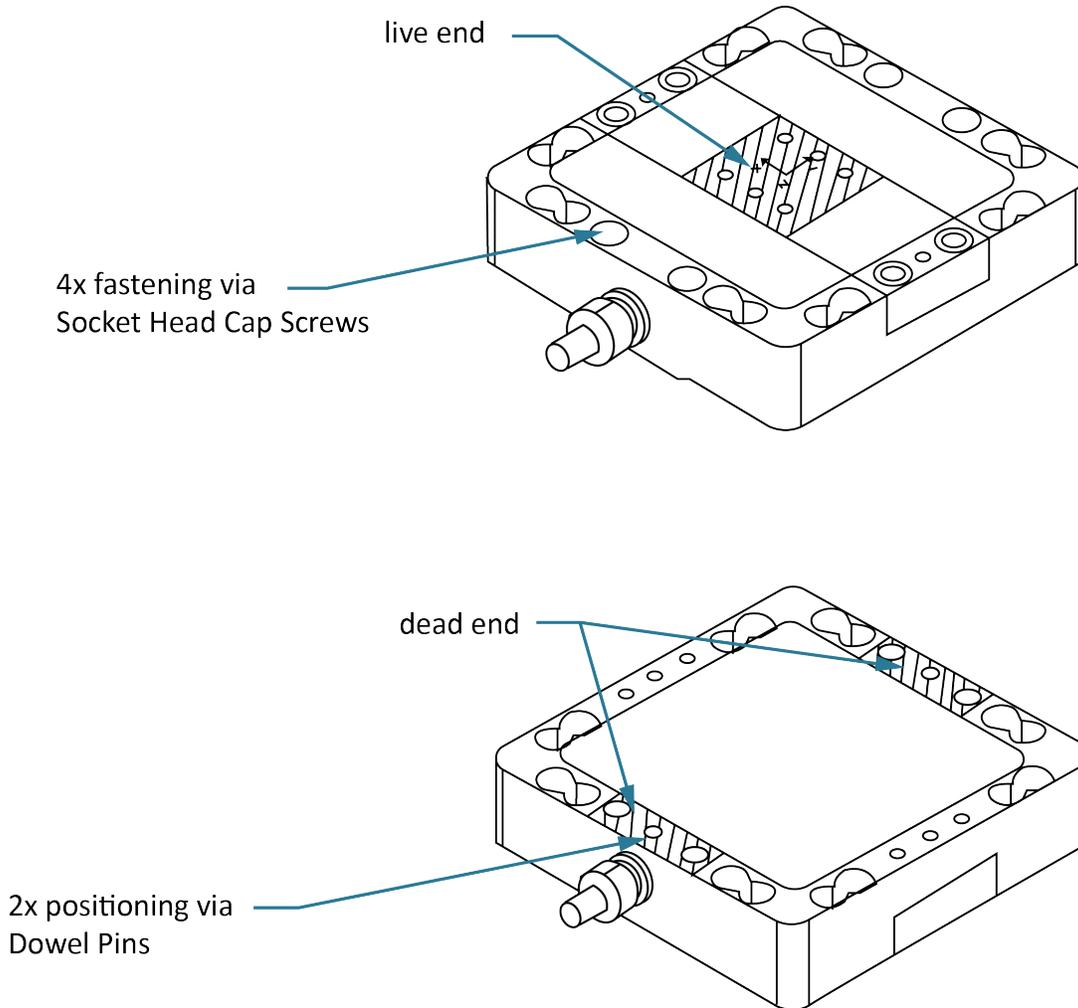
3A60

The distance between sensor body and mounting plates must be 0.75 mm.



Mounting Surfaces:

3A120



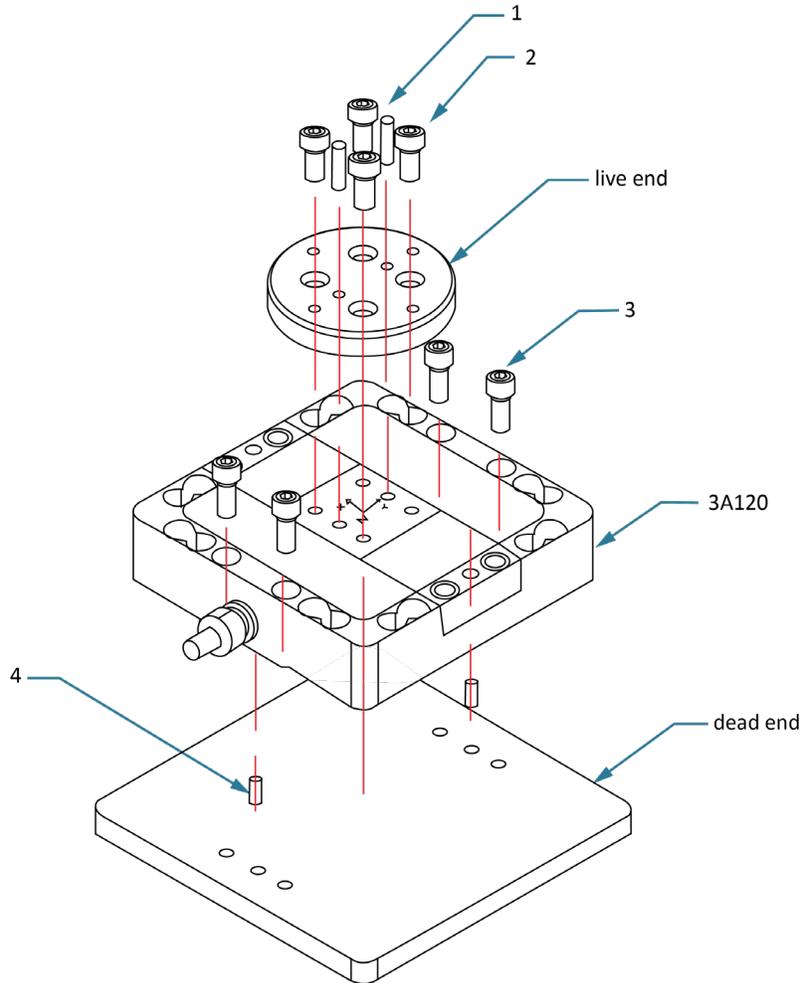
Mounting: Live and Dead End

The fastening of the mounting plates must be only to the live end and dead end mounting surfaces of the 3A sensor. For this, the screws, dowel pins and tightening torques specified in the table below must be used. The screw depth in the live end / dead end should be 6-10 mm.

Requirements for mounting surface:

- screw depth for thread min. 1.0 up to 1.5 x \varnothing
- high stiffness of the mounting surface, no deformation under load
- flatness of mounting surface 0.05 to 0.1mm
- quality of the mounting surface Rz6.3 \varnothing

3A120



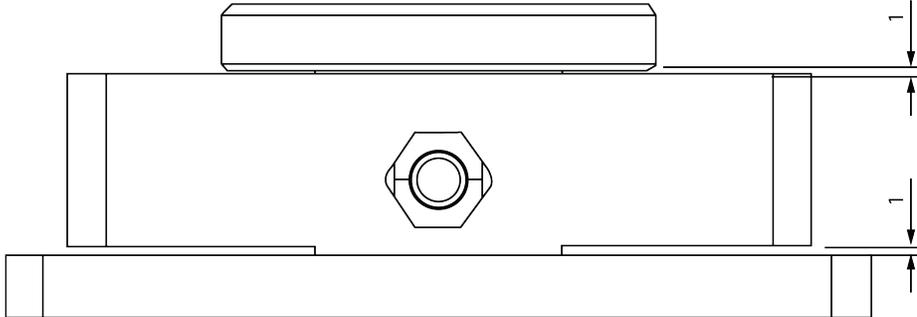
POS.	Quantity	Designation	Material	Nominal load	Tightening torque (Nm) live end	Tightening torque (Nm) dead end
1	2	Dowel pins DIN6325 Ø5m6	Aluminum Alloy	± 50N ± 100N ± 200N ± 500N ± 1kN	10	10
2	4	Socket Head Cap Screws DIN EN ISO 4762 M6x1 6.8				
3	4	Socket Head Cap Screws DIN EN ISO 4762 M6x1 10.9	Stainless Steel	± 1kN ± 2kN ± 5kN	15	15
4	2	Dowel pins DIN6325 Ø5m6				

*Note: Loctite 603 or similar may be used at the mating surfaces on the higher capacity units. When Loctite is used only a single dowel pin is required in the live end. Both pins should still be used in the dead end.

Note:

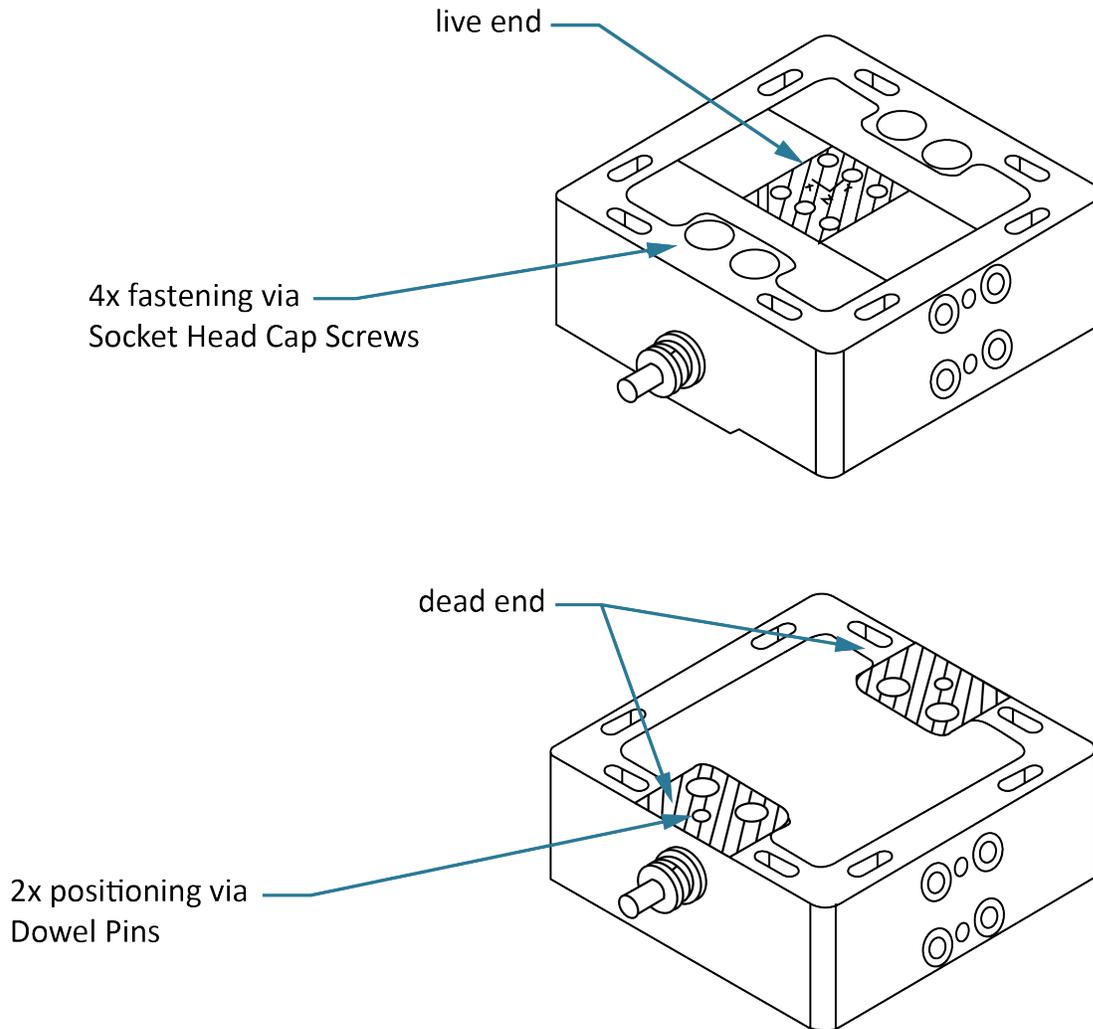
3A120

The distance between sensor body and mounting plates must be 1 mm.



Mounting Surfaces:

3A160



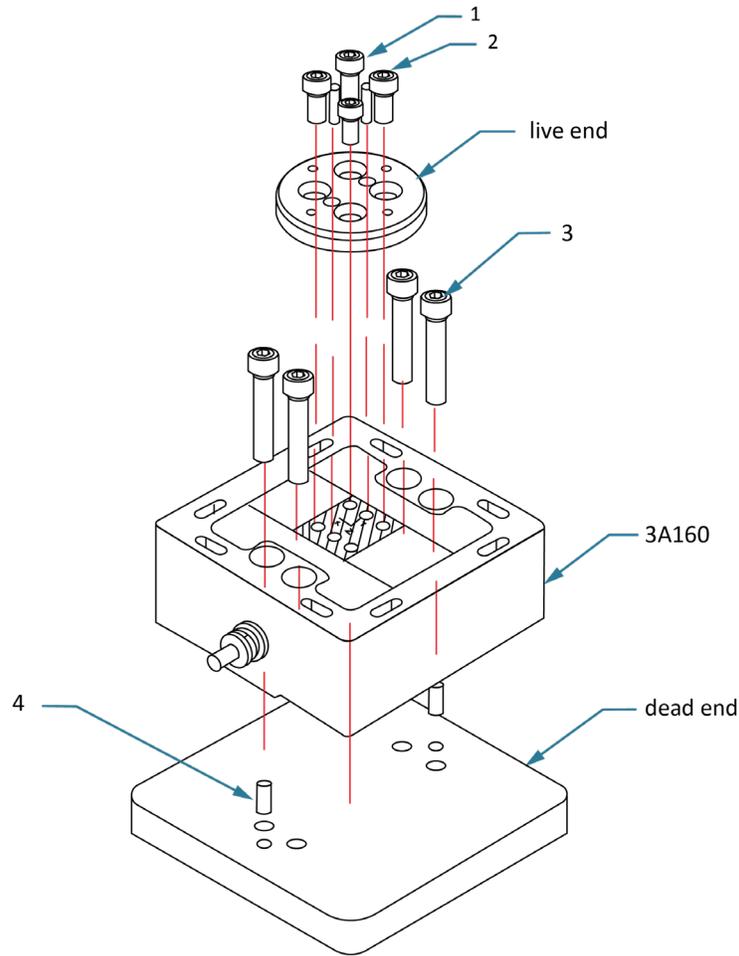
Mounting: Live and Dead End

The fastening of the mounting plates must be only to the live end and dead end mounting surfaces of the 3A sensor. For this, the screws, dowel pins and tightening torques specified in the table below must be used. The screw depth in the live end should be 12-15 mm and in the dead end 18-25 mm.

Requirements for mounting surface:

- screw depth for thread min. 1.0 up to 1.5 x \varnothing
- high stiffness of the mounting surface, no deformation under load
- flatness of mounting surface 0.05 to 0.1mm
- quality of the mounting surface Rz6.3 \varnothing

3A160



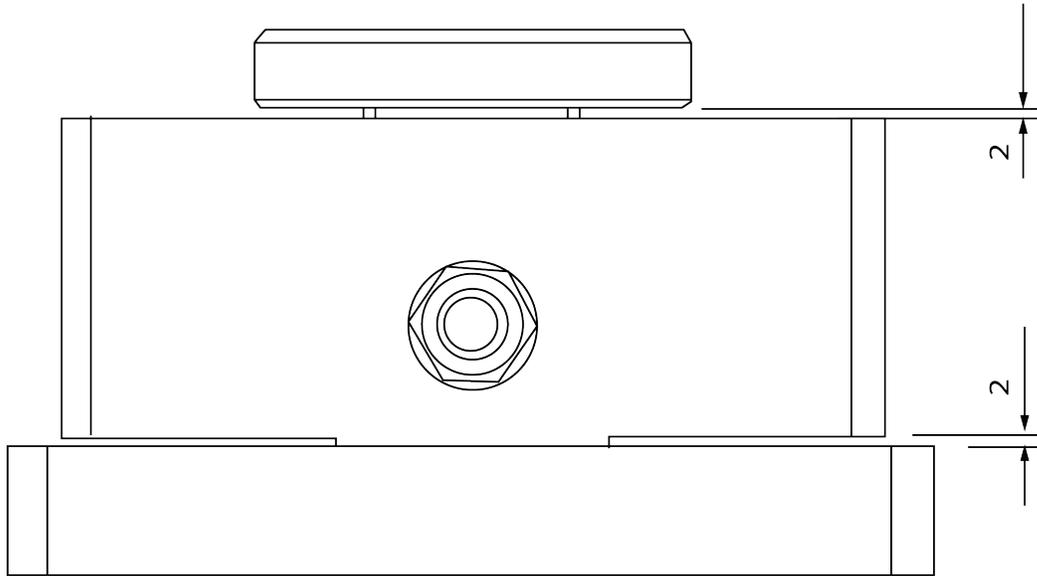
POS.	Quantity	Designation	Material	Nominal load	Tightening torque (Nm) live end	Tightening torque (Nm) dead end
1	2	Dowel pins DIN6325 Ø8m6	Tool Steel	± 2kN ± 5kN	50	80
2	4	Socket Head Cap screws DIN EN ISO 4762 M10x1.5 10.9				
3	4	Pocket Head Cap Screws DIN EN ISO 4762 M12x1.75 10.9		± 10kN ± 20kN ± 50kN	60	100
4	2	Dowel pins DIN6325 Ø8m6				

**Note: Loctite 603 or similar may be used at the mating surfaces on the higher capacity units. When Loctite is used only a single dowel pin is required in the live end. Both pins should still be used in the dead end.*

Note:

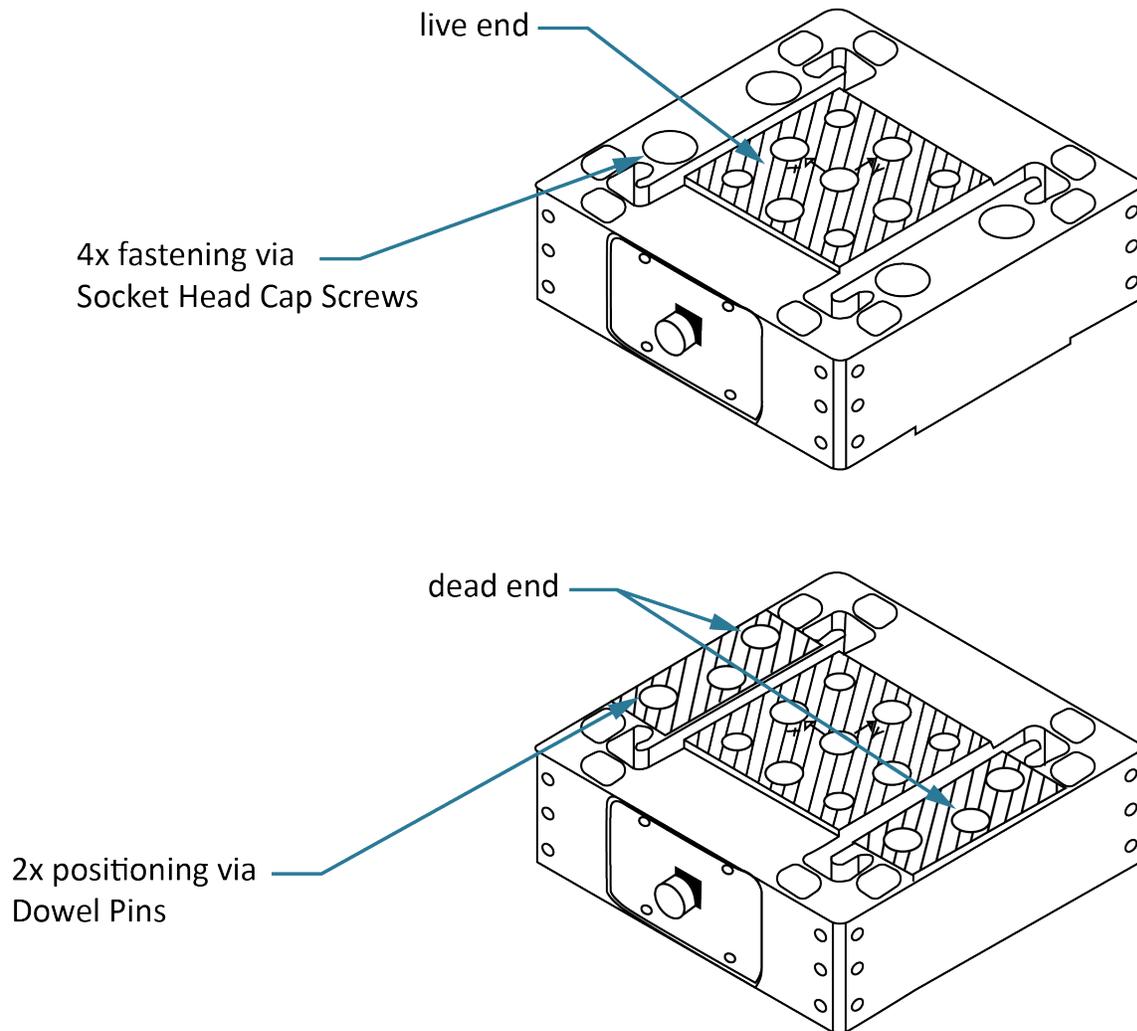
3A160

The distance between sensor body and mounting plates must be 2 mm.



Mounting Surfaces:

3A300



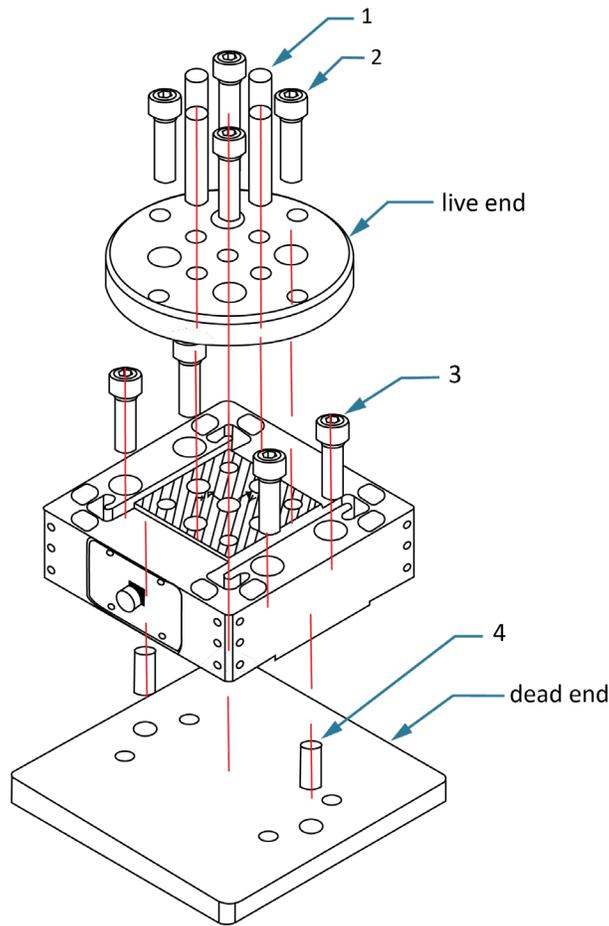
Mounting: Live and Dead End

The fastening of the mounting plates must be only to the live end and dead end mounting surfaces of the 3A sensor. For this, the screws, dowel pins and tightening torques specified in the table below must be used. The screw depth in the live end / dead end should be 30-40 mm.

Requirements for mounting surface:

- screw depth for thread min. 1.0 up to $1.5 \times \varnothing$
- high stiffness of the mounting surface, no deformation under load
- flatness of mounting surface 0.05 to 0.1mm
- quality of the mounting surface $Rz6.3\varnothing$

3A300



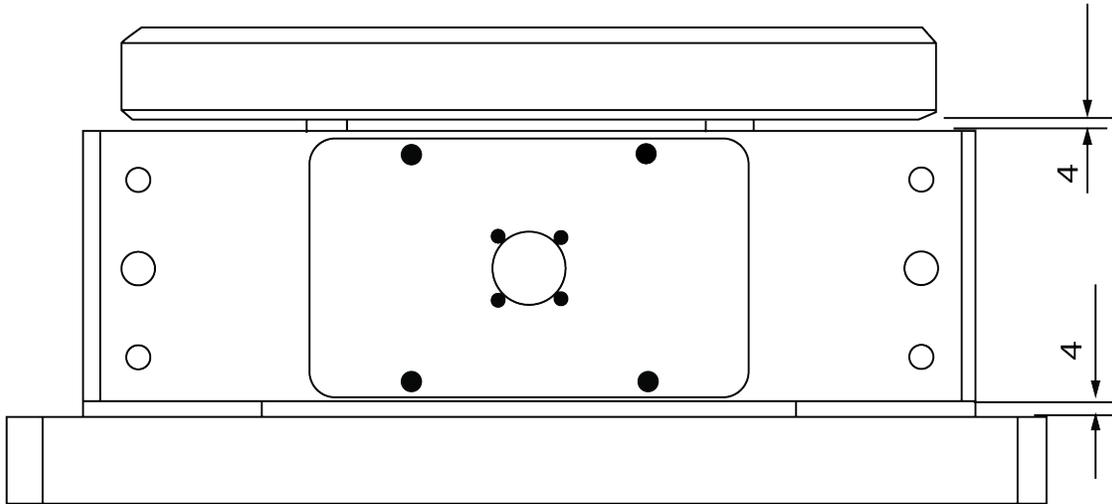
POS.	Quantity	Designation	Material	Nominal load	Tightening torque (Nm) live end	Tightening torque (Nm) dead end
1	5	Cylindrical pins DIN6325 Ø25m6	Tool Steel	± 50kN	500	500
2	4	Cylindrical head screws DIN EN ISO 4762 M24x3 10.9				
3	4	Cylindrical head screws DIN EN ISO 4762 M24x3 10.9		± 100kN ± 200kN	800	800
4	2	Cylindrical pins DIN6325 Ø25m6				

*Note: Loctite 603 or similar may be used at the mating surfaces. In this case, only the single center dowel pin is required in the live end. Both pins should still be used in the dead end.

Note:

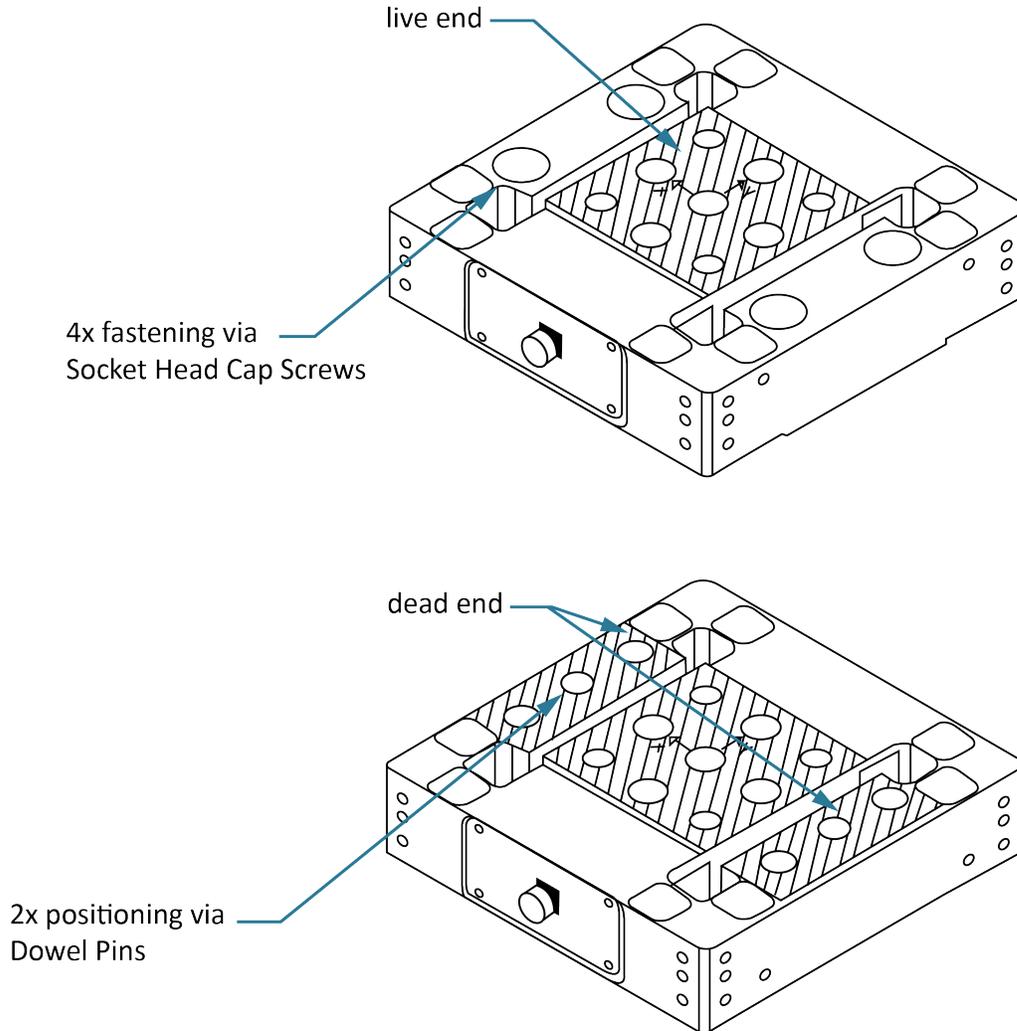
3A300

The distance between sensor body and mounting plates must be 4 mm.



Mounting Surfaces:

3A400



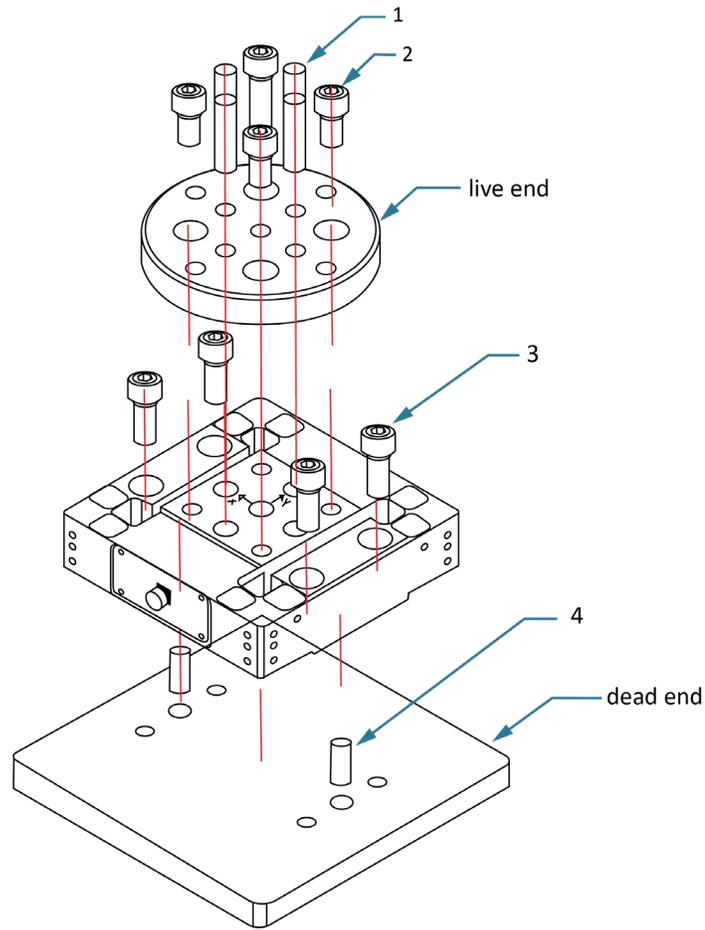
Mounting: Live and Dead End

The fastening of the mounting plates must be only to the live end and dead end mounting surfaces of the 3A sensor. For this, the screws, dowel pins and tightening torques specified in the table below must be used. The screw depth in the live end / dead end should be 40-60 mm.

Requirements for mounting surface:

- screw depth for thread min. 1.0 up to 1.5 x \varnothing
- high stiffness of the mounting surface, no deformation under load
- flatness of mounting surface 0.05 to 0.1mm
- quality of the mounting surface Rz6.3 \varnothing

3A400



POS.	Quantity	Designation	Material	Nominal load	Tightening torque (Nm) live end	Tightening torque (Nm) dead end
1	5	Cylindrical pins DIN6325 Ø30m6	Tool Steel	± 500kN	1800	1800
2	4	Cylindrical head screws DIN EN ISO 4762 M30x3.5 10.9				
3	4	Cylindrical head screws DIN EN ISO 4762 M30x3.5 10.9				
4	2	Cylindrical pins DIN6325 Ø30m6				

*Note: Loctite 603 or similar may be used at the mating surfaces. In this case, only the single center dowel pin is required in the live end. Both pins should still be used in the dead end.

Note:

3A400

The distance between sensor body and mounting plates must be 3 mm.

