ENGLISH

SICK-STEGMANN Motor Feedback Systems **Assembly Instructions**

A Safety Notes

- Observe the professional safety regulations and accident preventions
- tion regulations applicable to your country. Switch off the voltage for all devices/machines and systems affec-
- ted by the assembly
- mpacts and shocks to the shaft MUST be avoided, as this may lead to damage to the ball bearings.
- Never make or undo electrical connections to the motor feedback system when voltage is applied, otherwise this may result in defective devices.
- Never pull or press the motor feedback system housing. Do not bring rubber housings into contact with adhesive (e.g. Loctite 241, 243) since the dimethacrylate ester, which it contains, dissolves the surface

Tools/Parts Required

Mounting using the threaded flange holes requires M4 screws. The length as well as the screw head type will depend on the fitting conditions. Select the screw length according to the fitting conditions. For motor feedback systems with plug-in shaft, we recommend that a suitable pressing tool and removal tool, resp., be made

Preparation for Attachment

Remove protective foil (versions for integration), if present, on the back of the motor feedback system. Degrease the drive shaft and the shaft of the motor feedback

system. For motor feedback systems with plug-in shaft, use liquid thread locking compound, e.g. Loctite 243, to glue in place. Since the adhesive on the stainless encoder shaft only cures very slowly (typically 8 hours), we recommend that the activator Loctite 7649 be used.

Beware of damage!

Generally Applicable Notes

Using the torque support for the motor feedback system, the housing must be connectly seated in the customers flange arrangement.

The more precise the centring for the motor feedback system, the less the angle and shaft offset during assembly and the less load on the bearings of the motor feedback system.

EMC considerations make it mandatory to connect the housing and the encoder to earth. For motor feedback systems with spring mounting plate, this is provided by the torque support.

To ensure trouble-free operation, it is imperative to ensure a clean screen connection on both sides.

Motor Feedback System with Plugin Shaft and Rubber Support (Fig. 1)

Assembly

Block customer's drive shaft to prevent rotation. Screw pressing tool onto the B-side encoder shaft end (2). Spray activator onto the encoder shaft (1) and into the hole of the drive shaft.

Thinly apply adhesive onto the encoder shaft (1). Plug encoder shaft (1) in drive shaft (3) and continuously press, with the pressing tool, up to the stop (10); Do not hit with a hammer or similar tool!!!

Pressing force required = 250 N - 500 N

Remove pressing tool.

Press housing collar (6) into customer's housing groove (7). Press housing cover (9) into the rubber housing and fix with screws (11). If the cover can only be pressed in with difficulty, the housing collar (6) can be lightly greased (use high temperature grease 160 °C). Insert connector (4) volt-free and connect set of strands (volt-free), resp.

Make screen connection (5).

Only test encoder function after the adhesive is fully cured (8 hours approx.) and, at this time, do not make any mechanical adjustments such as commutation.

Disassembly

Block customer's drive shaft to prevent rotation.

Undo electrical connection (4+5), volt-free. Remove cover (9) by undoing the screws (11). Attach the removal tool to the B-side encoder shaft end on the B-side (2) and pull the encoder off.

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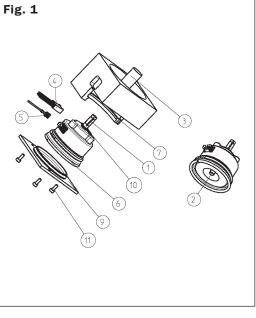
Motor Feedback Systems DiCoder[®]

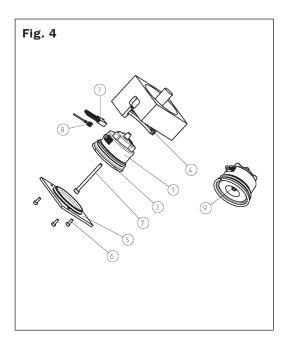
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Änderungen vorbehalten. Angegebene Produkteigenschaften und technische Daten stellen keine Garantieerklärung dar.





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Motor Feedback System with Tapered Shaft and Spring Mounting Support (Fig. 2)

Assembly

Block customer's drive shaft to prevent rotation. Carefully push encoder (1) onto the motor shaft. Ensure that the torque support (2) is not bent. Tighten screw (3).

Tightening torque: 3.1 Nm.

Should a screw other than the Tuf Lok coated screw (supplied) be used, apply liquid thread locking compound to the area where the screw thread starts. Fix the torque support (2) with washer (4) and M3 screws (5) to

the motor flange. Secure screws (5) against working loose. When tightening the screws (5) ensure that the torque support is not deformed. This also represents the screen connection of the motor feedback system. Insert the connector (6) volt-free and connect the set of strands

(volt-free), resp.

Disassembly

Block customer's drive shaft to prevent rotation. Undo electrical connection (6) volt-free. Undo and remove the screws (5) of the torque support (2). Undo and remove screw (3).

By turning the hexagonal part (7) of the encoder shaft (AF 6 and AF 5.5, resp.), the taper in the motor shaft can be loosened and the device removed.

Motor Feedback System with Tapered Shaft and Resolver Style Support (Fig. 3)

Assembly

Block customer's drive shaft to prevent rotation. Carefully push encoder (1) onto the motor shaft. Ensure that the torque support (2) is squarely placed in the centring of the motor. Tighten the screw (3)

Tightening torque: 3.1 Nm.

Should a screw other than the Tuf Lok coated screw (supplied) be used, apply liquid thread locking compound to the area where the screw thread starts Fix the torque support (2) to the motor, in at least 3 places. The

Fig. 2 3 Ð 0 5 (4)(1)(7

PIN and wire allocation CNS 50						
PIN	Signal	Cable coulours (Cable outlet)	Description			
1	GND	blue	Ground			
2	R	white/green	Commutation signal			
3	S	white/yellow	Commutation signal			
4	Т	white/grey	Commutation signal			
5	Z	purple	Reference signal			
6	В	pink	Incremental signal			
7	A	white	Incremental signal			
8	N. C.	-	Not connected			
9	Us	red	Supply voltage 5 V \pm 10%			
10	R	white/pink	Commutation signal inverted			
11	S	white/blue	Commutation signal inverted			
12	T	white/red	Commutation signal inverted			
13	Z	yellow	Reference signal inverted			
14	B	black	Incremental signal inverted			
15	Ā	brown	Incremental signal inverted			
16	N. C.	_	Not connected			
PINs and cable colours not listed, must not be connected. N. C. = not connected						

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fixing can, for instance, be effected via servo clamps (4) and screws (5) or with clamping claws and clamping ring, resp. Secure screws (5) against working loose. Insert connector (6) volt-free and connect set of strands (voltfree), resp.

Make screen connection (7).

Disassembly

Block customer's drive shaft to prevent rotation. Undo electrical connection (6+7) volt-free. Undo and remove fixing screws (5) of the torque support (2). Undo and remove screw (3).

By turning the hexagonal part (8) of the encoder shaft (AF 6 and AF 5.5, resp.) the taper in the motor shaft can be loosened and the device removed.

Motor Feedback System with Tapered Shaft and Rubber Support (Fig. 4)

Assembly

Block customer's drive shaft to prevent rotation. Carefully push encoder (1) onto the drive shaft. Tighten screw (2).

Tightening torque: 3.1 Nm.

Press housing collar (3) into the customer's housing groove (4). Should a screw other than the Tuf Lok coated screw (supplied) be used, apply liquid thread locking compound to the area where the screw thread starts.

Press housing cover (5) into the rubber housing and fix with screws (6).

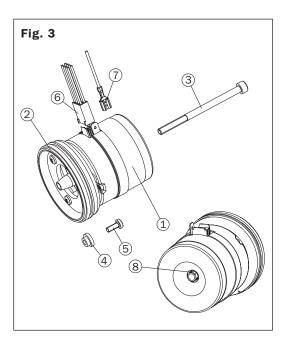
If the cover (5) can only be pressed in with difficulty, the housing collar (3) can be lightly greased (use high temperature grease 160 °C).

Insert connector (7) volt-free and connect set of strands (voltfree), resp.

Make screen connection (8).

Disassembly

Block customer's drive shaft to prevent rotation. Undo electrical connection (6+7) volt-free. Remove the cover (5) by undoing the screws (6). Undo and remove screw (2). By turning the hexagonal part (9) of the encoder shaft (AF 6 and AF 5.5, resp.), the taper in the motor shaft can be loosened and the device removed.



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