



Automation and Metrology International, LLC

1-888-354-2525 | sales@auto-met.com

8808 Tyler Blvd, Mentor, OH 44060 | Request a quote: auto-met.com

Encoder models

FSI 608



Mounting instructions

LEINE LINDE



1397859-01
1397858-00-A-03



Contact

Leine & Linde AB

Västerportsvägen 20, SE-645 42 Strängnäs

T +46-(0)152-265 000

info@leinelinde.se

For further contact information, please visit our website at
www.leinelinde.com



Leine Linde is a Swedish company dedicated to production of encoders for heavy duty applications. Some of the values offered by Leine Linde are local technical support and possibility of express delivery.

On our website **www.leinelinde.com** you can find data sheets and other product information.





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Specifications and content in this document are subject to change without prior notice due to our continuous strives to improve functionality and performance of our products.



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Before installation please read this manual carefully. Failure to follow the instructions and safety regulations can lead to serious injury, considerable damage or death. The English version is the original instruction.

The following models presented in the code keys are fully covered by the mounting instructions.



F S I

6

Enclosure

0 = Anodized aluminium

Resolution

81 = Multi turn 31 bit (19 + 12 bit)

Shaft size

10 = Solid shaft: Ø10 mm with key

12 = Solid shaft: Ø12 mm with key

21 = Solid shaft: Ø3/8" with key

30 = Blind hollow shaft: Ø10 mm with keyway

32 = Blind hollow shaft: Ø12 mm with keyway

42 = Blind hollow shaft: Ø1/2" with keyway

Flange

5 = Solid shaft: flange square, 65 type

6 = Solid shaft: synchro flange, 63 type

7 = Solid shaft: clamping flange, 61 type

8 = Hollow shaft: stator coupling flange

Electronics and Connection**Electronics**

21 = SIL3/PLc, cat. 4 PROFIsafe (PROFINET)

Connection

3xM12 connectors

Safety feature

2 = Power off safety (standard)

Extra codes

00 = No extra codes



Safety information

1.1 Intended use

The Leine Linde FSI 600 series provide a fail-safe and compact single- and multiturn rotary system for absolute position measurements. Safe position, safe speed and safe acceleration values are transferred over a safety communication protocol, to the control system.

Usage is primarily, but not limited to, applications requiring a safe system, where the FSI 600 encoder is an element in a complete safety chain. The safe communication protocol simplifies commissioning, configuration and operation at inaccessible operation sites requiring safe measurements.

The user must read and follow the interface specific manual for configuration and interface specific data.

1.2 Safety functions

The encoder can be configured for the following safety sub-functions defined in IEC 61800-5-3:

- SAP - Safe absolute position
- SSV - Safe speed value
- SAV - Safe acceleration value

By using the above functions, the system builder can create the following acceleration-, speed- and position-related safety functions defined in EN 61800-5-2:

STO – Safe torque off
SS1 – Safe stop 1
SS2 – Safe stop 2
SOS – Safe operating stop
SLA – Safely-limited acceleration
SAR – Safe acceleration range
SLS – Safely-limited speed
SSR – Safely speed range
SLP – Safely-limited position
SLI – Safely-limited increment
SDI – Safe direction
SBC – Safe brake control
SCA – Safe cam
SSM – Safe speed monitoring

1.3 Safety metric and targets

The encoders according to the code key are certified to the following:

IEC 61508

EN IEC 62061

EN 61800-5-2, IEC 61800-5-3

- SIL 3*
- PFH $\leq 1 \times 10^{-8}$ failures/hour
- Route 1H and 1S, systematic capability (SC3)

EN ISO 13849-1, EN ISO 13849-2

- MTTF_d: 2500 years
- PLe*, category 4

Safety values

- Device acknowledgement time (DAT): <11 ms (1 ms cycle time), <20 ms (4 ms cycle time)
- Worst case delay time (WCDDT): 2.5 ms
- Safety process time for speed: WCDDT + Derivation time (speed)
- Safety process time for acceleration: WCDDT + 2 x Derivation time (acceleration)
- Bearing service life: 1.18×10^{10} accumulated turns**
- Mission time: 20 years***
- Safe position accuracy: $\pm 0.89^\circ$
- Safe speed and safe acceleration accuracy:

Derivation time	Safe speed (at 1000 rpm)	Safe speed (at 12000 rpm)	Safe acceleration
1 ms	± 10 rpm	± 10 rpm	-
10 ms	± 1.0 rpm	± 1.6 rpm	-
100 ms	± 0.15 rpm	± 0.7 rpm	± 2 rpm/s
1000 ms	± 0.06 rpm	± 0.61 rpm	± 0.2 rpm/s

Table 1. Accuracy of safe speed (at maximum speed) and safe acceleration

The values and selection of time base for speed and acceleration is described in the interface manual for the selected interface.

Mounting instruction fulfils the requirements of IEC 61800-5-3. If mission time is above 20 years a unique manual need to



Safety information

be supplied with additional user responsibility for the actual application. It is required by the user to follow the conditions for use as described in both manuals.

- * To achieve SIL 3 and PLe additional measures need to be performed by turning the encoder 5.625° after start up. Until the additional measures are performed the encoder fulfils up to SIL 2 and PLd.
- ** Value presented at maximum load, horizontal mounting, 70°C bearing temperature and 3000 rpm. For bearing service life at other conditions see Figure 1.
- *** Depending on the application, the mission time may be limited by bearing service life in Figure 1 and is affected by the working temperature according to Figure 2.

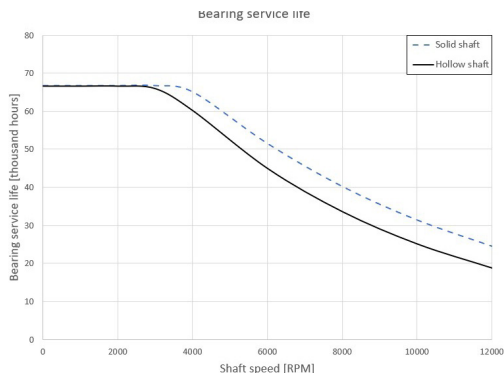


Figure 1. Bearing service life as a function of speed at maximum load and 70°C bearing temperature.

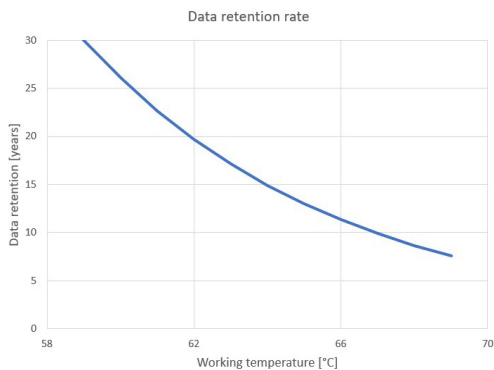


Figure 2. Data retention rate as a function of working temperature.



Safety information

1.4 Before installation

To avoid damage to persons and property, only qualified personnel is allowed to work with the encoder. The term qualified personnel refers to persons fully familiar with the application and relevant safety measures. The qualified person must have profound knowledge of the national accident prevention regulations. After installation and replacement, an acceptance test according to the manufacturer's information of the machine must be performed.

The user has full responsibility of the machine.

Commissioning is only permitted in strict compliance with the EMC directive.

The wiring, connection and functionality in chapter 7 "Electrical mounting" and chapter 8 "Check points for electrical mounting" must be strictly followed.

The implementation of the product must be coordinated with the demands of the responsible assessor. Do not install or operate damaged products. Report damages immediately to the responsible personnel/manager.

Do not clean the encoder with thinners, alcohol or benzene.

Encoders that have contributed to the failure of a safety function in the application must be returned to Leine & Linde AB in Sweden, together with the fasteners (screws) used for installation.

If the code on the product label is defined as FSI 69709xxxxxxx or FSI 69809xxxxxxx (where x represents any character 0-9, a-z or A-Z) there must be included a manual describing additional conditions for use in addition to the conditions described in this manual. If there is not an additional manual included with the product, please contact Leine Linde so that we may complete the missing information. It is required by the user to follow the conditions for use as described in both manuals.

The hardware version of the product is shown with the highlighted field in Figure 3 on the product label (HW: 01=version 1, HW: 02=version 2 etc). The operating conditions may vary between the hardware versions and it is the responsibility of the user to follow the conditions described in this manual for the hardware version in use.

FSI 6XXXXXX2XXXX											
Part no. 1234567-xx											
Ser. no. 123456789A											
MAC Id:AA:BB:CC:DD:EE:FF											
Output: PROFIsafe											
Prod. Date: yy/ww, HW: 01											
Supply: 10...30 Vdc											
	<table> <tr> <td>Pin</td><td>Pin</td></tr> <tr> <td>1</td><td>1</td></tr> <tr> <td>3</td><td>2</td></tr> <tr> <td></td><td>3</td></tr> <tr> <td></td><td>4</td></tr> </table>	Pin	Pin	1	1	3	2		3		4
Pin	Pin										
1	1										
3	2										
	3										
	4										
<table> <tr> <td>Supply</td><td>BUS</td></tr> <tr> <td>+ 5 Volt</td><td>Tx+</td></tr> <tr> <td>0 Volt</td><td>Rx+</td></tr> <tr> <td></td><td>Tx-</td></tr> <tr> <td></td><td>Rx-</td></tr> </table>	Supply	BUS	+ 5 Volt	Tx+	0 Volt	Rx+		Tx-		Rx-	
Supply	BUS										
+ 5 Volt	Tx+										
0 Volt	Rx+										
	Tx-										
	Rx-										
LEINE LINDE Phone +46 152 26500 www.leinelinde.com Olivehällsvägen 8, 645 21 Strängnäs, Sweden											

Figure 3. Hardware version on the product label

1.5 Operating and service

General data	
Storage temperature	-40°C...+85°C
Working temperature [IEC 61800-5-3]	-40°C...+67°C (HW: 01) (See Figure 2 above 60°C)
Power supply	10-30 Vdc
Max. current rating	650 mA
Shock [IEC 60068-2-27]	1000 m/s ² / 11 ms 2000 m/s ² / 6 ms
Vibration [IEC 60068-2-6]	20 g, 10-2000 Hz (Solid shaft) 10 g, 10-2000 Hz (Hollow shaft)
Ingress protection	IP66, IP67
Humidity	Max. 98% RH non-condensing
Altitude	Max. 3000 m
Weight	Approx. 500 g
Max. operating speed	12000 rpm
Max. breakaway torque (-40°C)	0.234 Nm (Solid shaft) 0.352 Nm (Hollow shaft)
Max breakaway torque (room temperature)	0.030 Nm (Solid shaft) 0.046 Nm (Hollow shaft)
Max. angular acc.	1000 rad/s ²
Shaft load (axial/radial)	100 N/125 N (Solid shaft), 85 N/140 N (Hollow shaft)
Start up delay	3 s
Max. cable length	100 m
Max. magnetic field	100 A/m

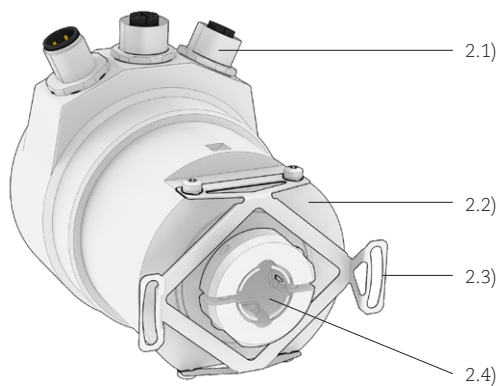
Table 2. General data

2

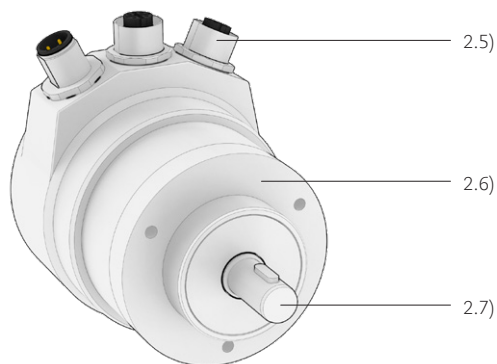


Parts of the product

FSI 608 Hollow shaft



FSI 608 Solid shaft





FSI 608 Hollow shaft

- 2.1 3xM12 connectors
- 2.2 Flange
- 2.3 Stator coupling
- 2.4 Blind hollow shaft with keyway (different types)

For mating flange and shaft, see chapter 9.

FSI 608 Solid shaft

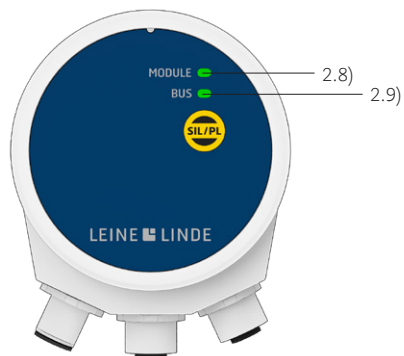
- 2.5 3xM12 connectors
- 2.6 Flange (different types)
- 2.7 Solid shaft with key (different types)

For mating flange and shaft, see chapter 9.

2



Parts of the product



2.8 Module LED

2.9 Bus LED

Information on the LED indicators is described in the interface manual for the relevant interface.

3



Risk of bodily injury

3.1)



3.2)





Important before mounting begins:

- 3.1 Switch off the power.
- 3.2 Make sure the machine is at a standstill. The product is to be mounted on a rotating part that can cause bodily injury when in motion.

4



Risk of damage to the product

4.1)



ESD

4.2)



4.3)



4.4)



4.5)



4.6)



4.7)





The product is a precision measuring instrument. It should be handled with care, by experienced personnel. The warnings below apply in the event of effects outside the limit values stated in chapter 1.5.

The product may be damaged

- 4.1 by ESD discharges if the electronics are touched
- 4.2 if the shaft is exposed to high mechanical forces
- 4.3 by moisture or chemical fluids (do not install cable pointing upwards)
- 4.4 if it is exposed to extreme temperatures
- 4.5 if it is exposed to powerful vibrations or shock
- 4.6 by short-circuits or an excessively high supply voltage. The power supply pins are overvoltage protected up to 60 V, although the unit will power off above 30 V.
- 4.7 by impacts or other physical damage.
- 4.8 by unauthorized access on the network. The user is responsible to secure their network.
- 4.9 failed software update. It is up to the user to verify that the correct version is uploaded and to only use files obtained directly from Leine & Linde AB.

Note:

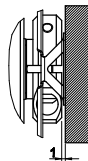
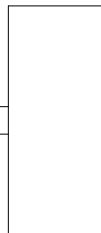
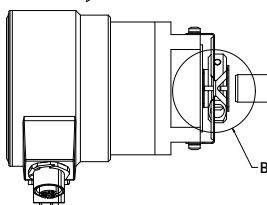
Do not use a damaged encoder, it is not considered safe.

5.1



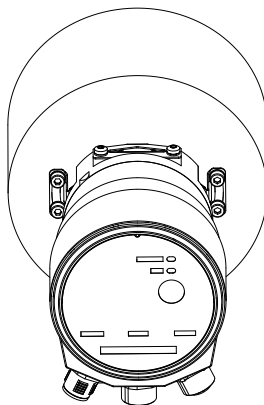
Mechanical mount hollow shaft

1. Slide encoder on to shaft



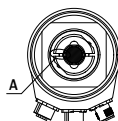
When mounted

B
2:1



2. Use 4 screws M3 DIN EN ISO 4762 - 8.8 - MKL with material bonding anti-rotation lock according to DIN 267-27 and plain washers according to DIN EN ISO 7092.

Note the curing time for the material bonding anti-rotation lock.
Tightening torque $1 \text{ N} \pm 0.06 \text{ Nm}$,
minimal length of engagement 6 mm.

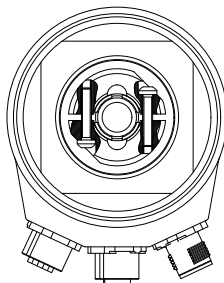


A



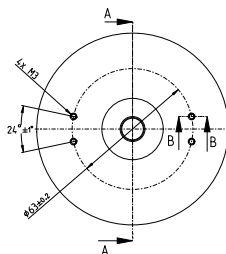
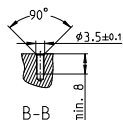
A
4:1

3. Align gap in clamping ring with slot in encoder shaft and tighten the two clamping ring screws loosely so they just bottoms out.

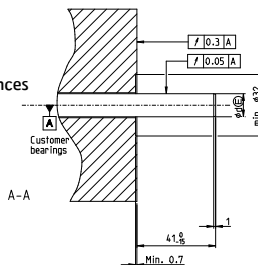


4. Tightening the two screws
Torque $0.7 \text{ Nm} \pm 0.07 \text{ Nm}$.

Chamfer is obligatory at start of thread
for materially bonding anti-rotation lock



Max. axial movement
including mounting tolerances
Not dynamic
 ± 1 mm



Tolerance customer shaft

ϕd	Tolerance
12 mm	g6
10 mm	g6
1/2 inch	g6

Tolerance encoder shaft

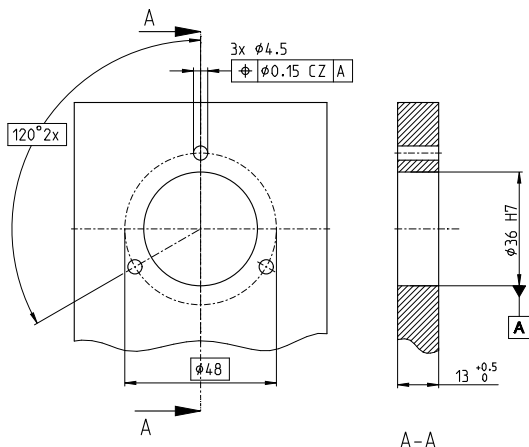
ϕLL shaft	Tolerance
12 mm	H7
10 mm	H7
1/2 inch	H7

	Customer shaft	Mating stator
Material	Steel	Aluminium
Tensile strength R_m [N/mm ²]	≥ 500	≥ 220
Shearing strength [N/mm ²]	N/A	≥ 120
Interface pressure P_G [N/mm ²]	≥ 300	≥ 200
Surface roughness R_z [μ m]	≤ 10	≤ 16
Coefficient of thermal expansion at 20°C [$\times 10^{-6} K^{-1}$]	10 - 16	≤ 25

5.2



Mechanical mount solid shaft (61-flange)



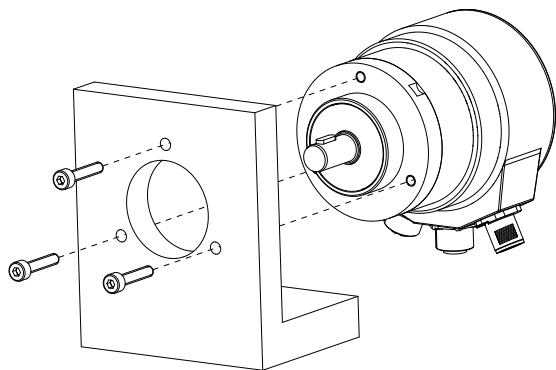
Material	Steel	Aluminium
Tensile strength R_m [N/mm ²]	≥600	≥220
Yield strength $R_{p0.2}$ [N/mm ²]	≥400	-
Shear strength [N/mm ²]	≥390	≥130
Young's modulus E [kN/mm ²]	200 - 215	70 - 75
Interface pressure P_G [N/mm ²]	≥660	≥250
Surface roughness R_z [μm]	≤16	≤16
Coefficient of thermal expansion at 20°C [$\times 10^{-6} K^{-1}$]	15 - 17	≤25

3 screws M4x20 - DIN EN ISO 4762:2004 - A4-80

Use suitable material bonding anti-rotation lock (min. medium strength)

Tightening torque 3.7 Nm, tool precision ±6%

Mounting surfaces are assumed to be clean and free of grease.



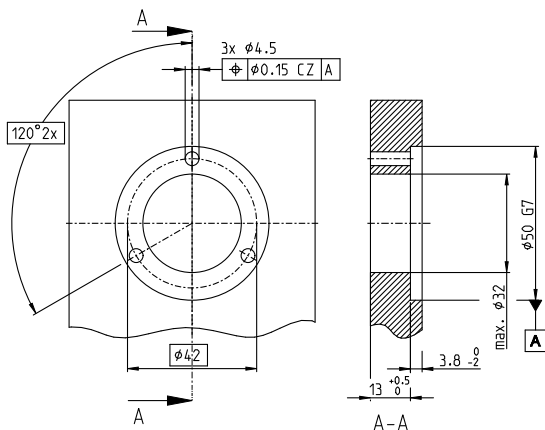
Tolerance encoder solid shaft

Ø LL shaft	Tolerance
10 mm	f6
12 mm	f6
3/8 inch	f6

5.3



Mechanical mount solid shaft (63-flange)

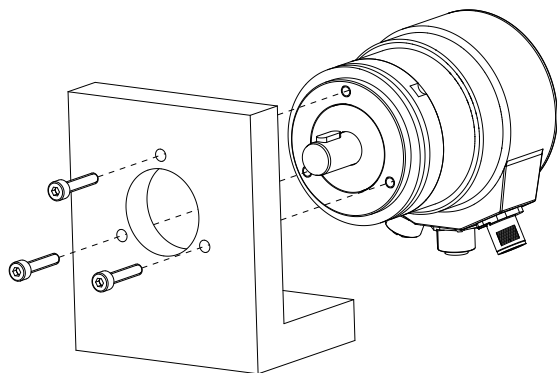


Material	Steel	Aluminium
Tensile strength R_m [N/mm ²]	≥600	≥220
Yield strength $R_{p0.2}$ [N/mm ²]	≥400	-
Shear strength [N/mm ²]	≥390	≥130
Young's modulus E [kN/mm ²]	200 - 215	70 - 75
Interface pressure P_G [N/mm ²]	≥660	≥250
Surface roughness R_z [μm]	≤16	≤16
Coefficient of thermal expansion at 20°C [$\times 10^{-6} K^{-1}$]	15 - 17	≤25

3 screws M4x20 - DIN EN ISO 4762:2004 - A4-80

Use suitable material bonding anti-rotation lock (min. medium strength)
Tightening torque 3.7 Nm, tool precision ±6%

Mounting surfaces are assumed to be clean and free of grease.



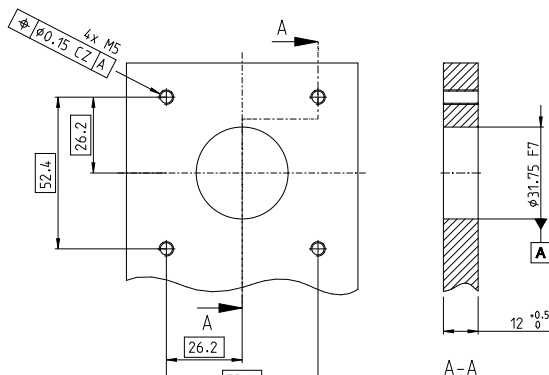
Tolerance encoder solid shaft

Ø LL shaft	Tolerance
10 mm	f6
12 mm	f6
3/8 inch	f6

5.4



Mechanical mount solid shaft (65-flange)



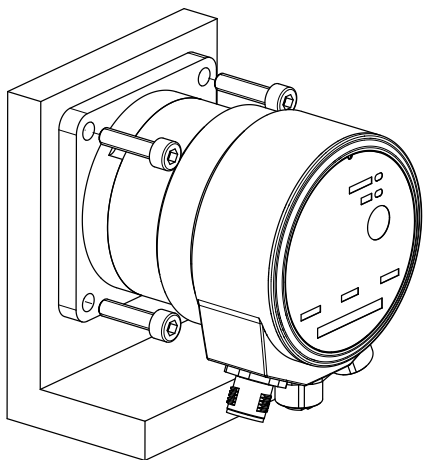
Material	Steel	Aluminium
Tensile strength R_m [N/mm ²]	≥600	≥220
Yield strength $R_{p0.2}$ [N/mm ²]	≥400	-
Shear strength [N/mm ²]	≥390	≥130
Young's modulus E [kN/mm ²]	200 - 215	70 - 75
Interface pressure P_G [N/mm ²]	≥660	≥250
Surface roughness R_z [μm]	≤10	≤16
Coefficient of thermal expansion at 20°C [$\times 10^{-6} K^{-1}$]	10 - 17	≤25

4 screws M5x20 - DIN EN ISO 4762:2004 - A4-70

Use suitable material bonding anti-rotation lock (min. medium strength)

Tightening torque 6.1 Nm, tool precision ±6%

Mounting surfaces are assumed to be clean and free of grease



Tolerance encoder solid shaft

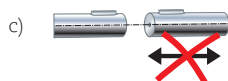
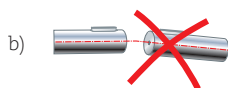
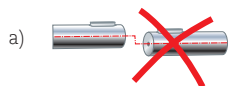
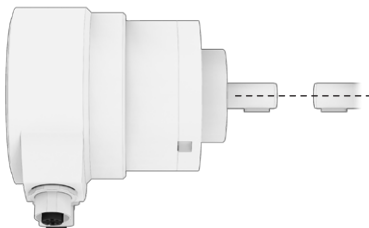
Ø LL shaft	Tolerance
10 mm	f6
12 mm	f6
3/8 inch	f6

6.1



Check points for mechanical mounting, solid shaft

6.1.1)





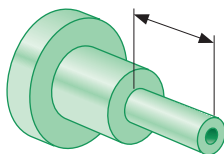
- 6.1.1 Minimise the displacement between the two mating shafts. Always try to avoid:
 - a) radial displacement
 - b) angle displacement
 - c) axial movement.
- 6.1.2 Ensure to follow recommendations by the supplier of the shaft coupling.

6.2

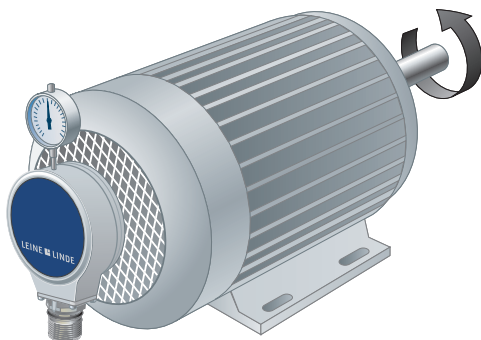


Check points for mechanical mounting, blind hollow shaft

6.2.1)



6.2.2)





- 6.2.1 Check that the dimensions of the mating shaft matches the specifications according to the drawing in chapter 5.
- 6.2.2 Check the encoder's radial runout with slow rotation of complete assembly. The runout should not exceed 0.1 mm, as this may shorten the encoder's service life or influence the system accuracy.

7



Electrical mounting





The FSI 600 must be powered by a PELV system according to EN 60204-1 supplying at least 6 W. Up to 10% ripple of the voltage is permissible.

The M12 connector used for power supply of the encoder is constituted by a 4-pin male shielded A-coded version.

Signal	Function	Pin
+E Volt	Power supply	1
Not connected	-	2
0 Volt	0 Volt	3
Not connected	-	4

Table 3. Signals for power supply

PROFIsafe over PROFINET

M12 connectors are used for PROFIsafe over PROFINET communication of the encoder, constituted by a 4-pin female shielded D-coded version.

Signal	Function	Pin
Tx+	Transmission data +	1
Tx-	Transmission data -	2
Rx+	Receiver data +	3
Rx-	Receiver data -	4

Table 4. Signals for PROFIsafe over PROFINET

Note: The encoder provides integrated switch functionality between the two M12 connectors used for PROFINET communication. It is important to distinguish between these ports when IRT-communication is being used.

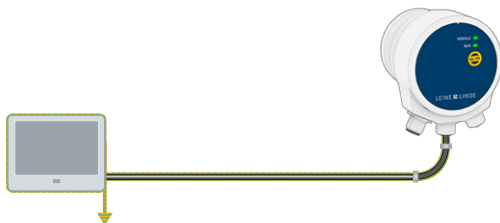
Note: It is not possible to use passive T-couplings in a PROFINET network. All devices must be connected through active network components.

8

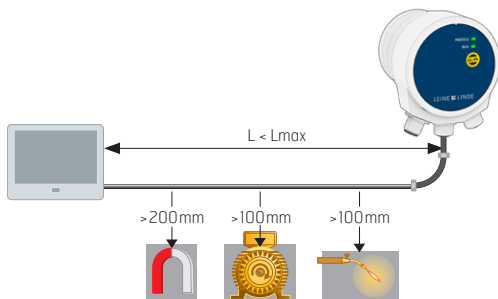


Check points for electrical mounting

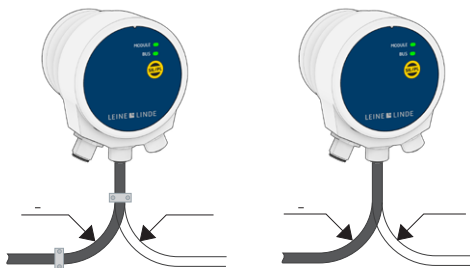
8.1)



8.2)



8.3)





- 8.1 Use shielded cables for power supply and communication. The shielding must be connected to the enclosure at both ends and be earthed in at least one point.. The encoder shall be powered by a PELV-system. Use communication cables relevant for the selected communication interface.
- 8.2 Keep potential sources of disturbance at the recommended distance from the cable. Make sure that the length of the cable does not exceed the value specified in chapter 1.5.
- 8.3 Ensure that the bending radius is within specified range from the cable specification. Fixed or moving cable installation affects the allowed bending radius of the cable.



Configuration F_Dest_Address

For a FSI 600 encoder with PROFIsafe interface an IP-address and F_Dest_Address need to be assigned during commissioning. The IP-address can be assigned with a PC, usually by a configuration tool such as PRONETA or TIA portal.

The safety related F_Dest_Address is assigned over the integrated LL Webserver. To connect to the LL webserver, start by open up a web browser and write the IP-address of the encoder, for example:

- <http://169.254.15.76>

To log in and access your device click on “Log in”. User name is “admin” and password is the serial number of the encoder, which can be found on the product label or Overview section on the side of the product.

Note: The PC must be on the same subnet as the encoder in order open the LL Webserver

Under the tab Settings, F_Dest_Address can be configured by entering the address and press “Update” as in below figure.

FSI Online

- Overview
- Settings
- Generate iParCRC
- Update
- Support

Settings

Network settings

Address	192.168.0.2
Mask	255.255.255.0
Gateway	192.168.0.2

F-Address settings

Current F-Address: 3

Change F-Address:

Factory reset

☐ Communication data
☐ Safe data
☐ Diagnostics data
☐ Configuration data

Figure 5. F_Dest_Address assignment on LL Webserver

Now the F_Dest_Address is assigned to the device. For more details about the PROFIsafe interface and LL Webserver read the PROFIsafe over PROFINET manual available at www.leineline.com.

10



Certificates and approvals

10.1)



10.2)



10.3)





LeineLinde products conform to several standards and approvals. Certificates and documentation may be provided upon request to your local LeineLinde representative.

10.1 UL/CSA standards, type approval

Most Leine Linde products have been type tested in accordance with IEC 61010. The product box label states if the product conforms to the standard. When the product is to be operated in accordance with IEC 61010-1, the power must be supplied from an isolated secondary circuit with current or energy or power limitation as per IEC 61010-1, EN 60204-1, or by a class 2 secondary circuit as specified in UL 1310.

10.2 CE marking and Declaration of conformity

The encoder conforms to the protection requirements of Council Directive 2014/30/EU related to EMC, RoHS Directive 2011/65/EU related and Machinery Directive 2006/42/EC. The product box label states conformity.

10.3 SIL3/PLe information

See chapter 1.3



Certificates and approvals

ZERTIFIKAT ♦ CERTIFICATE ♦ 認 証 証 書 ♦ CERTIFICADO ♦ CERTIFICAT



EC-Type Examination Certificate

No. M6A 038896 0026 Rev. 00

Holder of Certificate: Leine & Linde AB
Olivehällsvägen 3
645 42 Strängnäs
SWEDEN

Product: Safety components
Single- and multiturn rotary Encoder

Model(s): FSI 8xx

Parameters:

- Safety functions:
- SAP - Safe absolute position
 - SSP - Safe speed value
 - SAV - Safe acceleration value

up to PI e, Cat 4: EN ISO 13849-1:2023
up to SIL3: IEC 61508-1:2010
IEC 61508-2:2010
IEC 61508-3:2010
EN 61800-5-2:2017
IEC 61800-5-3:2021
EN IEC 62061:2021

The FSI 8xx is a single- and multiturn rotary system for absolute position measurements. Safe position, safe speed and safe acceleration values are transferred over PROFINET IO fieldbus interface with PROFIsafe protocol, a safety communication protocol, to the control system. Safety assessment of mechanics included. The certified components are listed in report LS105097C in the current valid version.

This EC Type Examination Certificate is issued according to Article 12(3) b) or 12(4) a) of Council Directive 2006/42/EC relating to machinery. It confirms that the listed Annex-IV equipment complies with the principal protection requirements of the directive. It refers only to the sample submitted to TÜV SUD Product Service GmbH for testing and certification. For details see: www.tuvsud.com/ps-cert

Test report no.: LS105097C

Valid until: 2030-06-16

Date, 2025-06-18

(Peter Weiß)

Page 1 of 1

TÜV SUD Product Service GmbH is Notified Body according to Council Directive 2006/42/EC relating to machinery, notified by publication in the Official Journal of the EC with identification No.0123.

TÜV SUD Product Service GmbH • Certification Body • Rüdtenstraße 65 • 80339 Munich • Germany

TÜV®



Declaration of conformity

These certificate documents can be downloaded from www.leinelinde.com.

LEINE ■ LINDE



EU - Declaration of Conformity

The manufacturer:

Leine & Linde AB
Oliveshällsvägen 8
SE-645 21 Strängnäs
SWEDEN
T +46-(0)52-265 00
info@leinelinde.se

declares under sole responsibility, that the product series:

FSI 6081xxy21200 Absolute Encoders

comply with the relevant harmonized legislations of the European Union:

EMC Directive 2014/53/EU
RoHS Directive 2011/65/EU
Machinery Directive 2006/42/EC

Compliance with the provisions of the above directives is demonstrated by compliance with the relevant harmonized standards:

EN 61000-6-2:2005, EN 61000-6-2:2005/AC:2005 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

EN 61000-6-4:2007, EN 61000-6-4:2007/A1:2011 Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments

EN 61326-3-1:2017 Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety)

EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

EN ISO 13849-1:2012 Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design

EN ISO 13849-2:2012 Safety of machinery - Safety-related parts of control systems - Part 2: Validation

IEC 61508 (Part 1-7):2010 Functional safety of electrical/electronic/programmable electronic safety related systems

EN 61800-5-2:2017 Adjustable speed electrical power drive systems - Part 5-2: Safety requirements - Functional

IEC 61800-5-3:2021 Adjustable speed electrical power drive systems - Part 5-3: Safety requirements - Functional, electrical and environmental requirements for encoders

EN IEC 62061:2021, EN IEC 62061:2021/A1:2024 Safety of machinery - Functional safety of safety-related control systems

EC-Type Examination Certificate No. M6A 038896 0026 Rev. 00

Strängnäs, 13 June 2024


Per Andréasson
CEO



Products from Leine Linde are usually components in larger systems. These applications require the system as a whole to be tested, and do not depend on the component specifications only.

Instructions in these mounting instructions apply to products from Leine Linde, not for the system as a whole. If products are used in a way for which they are not intended, this is at the user's own risk. Specifications in this document can be changed without prior notice.



This product is to be disposed of separately.

JUNE 2025



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