

GB Assembly Instructions

**G25
Incremental Encoder**

9-16



Danger
Warnings of possible danger.



General instructions
Information on appropriate product handling.



General remarks

Additional information

The installation instruction is supplementary to further documentation (catalog, data sheet and manual).



It is imperative to read the manual carefully prior to starting the device.

Appropriate use

- The encoder is a precision measuring device. It is explicitly designed for registration of angular positions and revolutions as well as evaluation and supply of measuring values as electric output signals for the subsequently connected device. The encoder must not be used for any other purpose.

Start up

- Installation and assembly of the encoder only by electrically skilled and qualified personnel.
- Consider also the operation manual of the machine manufacturer.



Safety instructions

- All electrical connections are to be revised prior to starting the system.
- Incorrect assembly and electrical connections or any other inappropriate work at encoder and system may lead to malfunction or failure of the encoder.
- Any risk of personal injury, damage of the system or company equipment due to failure or malfunction of the encoder has to be eliminated by corresponding safety measures.
- Do not operate encoder beyond the limit values stated in the data sheet.



Any disregard may lead to malfunctions, material damage and personal injury.

Disposal

Encoder components are to be disposed of according to the regulations prevailing in the respective country.



Transport and storing

- In original packing only.
- Do not drop or expose encoder to major shocks.



Assembly

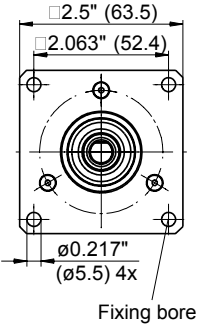
- Avoid punches or shocks on case and shaft.
- Avoid case distortion.
- Do not use any rigid links between encoder shaft and drive shaft.
- Do not open or modify encoder in any mechanical way.



Shaft, bearing, glass disc or electronic components might be damaged and a secure operation is no longer guaranteed.

Mechanical assembly

- Mount encoder using four screws using the three fixing bores of the flange. Consider the depth and diameter of the thread.
- Use appropriate coupling to link drive shaft and encoder shaft. For appropriate links please refer to accessories.



The ends of the shafts must not touch each other. Any displacements due to temperature or mechanical tolerances have to be equalized by the coupling. Mind the maximum permitted axial or radial shaft load. Tighten fixing screws firmly.

Electrical installation

- Do not modify encoder in any electrical way and carry out any wiring work under power supply.
- Any electrical connection and plugging-on whilst under power supply is not permitted.
- A separate encoder supply has to be provided with consumers with high interference emission.

- Encoder case and supply cable have to be completely screened.
- Installation of the whole system has to be according to EMC standards. Installation environment as well as wiring have an impact on the encoder's EMC. Encoder and supplying lines are to be in separated locations or remote from lines with high interference emission (frequency transformers, protections, etc.).
- Ground (PE) encoder by using screened cables. The braided shield has to be connected to cable gland or plug. Grounding (PE) on both sides is recommended. Ground the case by the mechanical assembly, if latter is electrically isolated a second connection has to be provided. Ground cable screen by the subsequently connected devices. In case of ground loop problems at least grounding on one side is imperative.



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Electrical connection

Any outputs not used must not be connected. Unused cable cores have to be isolated. Max. allowed bending radius of cable: 90 mm

Connection – MIL-Connector

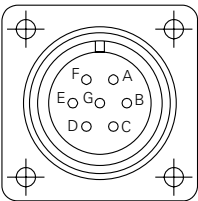
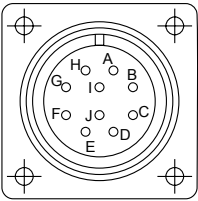
- Whilst not connected, the MIL-plug is always to be sealed by the plastic cover provided by the manufacturer upon delivery. Appropriate mating connectors available as spare part or with different cable length, please refer to accessories. In case of customer-specific length use only screened cable and connectors corresponding to EMC standards. Consider the wiring instructions of the respective supplier.
- Press mating connector softly onto the MIL-plug.
- Turn mating connector carefully until the code-mark is interlocking the corresponding space provided by the MIL-plug.
- Insert bushing completely and tighten the nut as far as possible.



An optimized connection between encoder case and the braided shield of the connection cable is only achieved by the braided shield being placed generously onto the connector and the nut being secured firmly.



Output driver
If the operating voltage is off, do not pulse the outputs (track) by voltage (danger of destruction). Provide a terminator at the end of the output connecting lines, otherwise the output driver might be subject to overload by line reflections



Terminal assignment / MIL-Connector

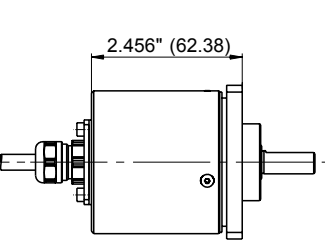
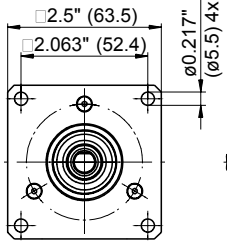
Plug	Assignment	7-pin connector
Pin A	Track A	Track A
Pin B	Track B	Track B
Pin C	Zero pulse Z	Zero pulse Z
Pin D	Vs	Vs
Pin E	n. c.	n.c
Pin F	GND	GND
Pin G	Screen	Screen
Pin H	Track A inv.	–
Pin I	Track B inv.	–
Pin J	Zero pulse Z inv.	–

Please use cores twisted in pairs for extension cables (for example track A/track A inv.). Screen: connected to housing.

Cable connection

Wire color	Assignment
green	Track A
gray	Track B
pink	Zero pulse Z
red	Vs
blue	GND
brown	Track A inv.
black	Track B inv.
white	Zero pulse Z inv.
Screen	

**Dimensions
with cable**



with MIL-connector

