

code **ST02** | project **A55-A** | release **D****FANUC****GENERAL FEATURES**

- Absolute optical scale with glass measuring support.
- FANUC α-αi serial interface.
- Resolutions up to 10 nm. Accuracy grade up to $\pm 2 \mu\text{m}$.
- Innovative device inside the scale for the disposal of liquids coming from inefficient filtering systems.
- Adjustable connecting cable output.
- Connector incorporated into the transducer.
- Direct reading of absolute measure.
- Small size, to allow installation in narrow spaces.

Cod. GVS 608**F**

Measuring support	glass scale	
- Grating pitch	20 μm	
- Linear thermal expansion coefficient	$8 \times 10^{-6} \text{ } ^\circ\text{C}^{-1}$	
Serial interface	FANUC α-αi	
Resolution absolute measure	1 - 0.1 - 0.05 - 0.01 μm	
Accuracy grade	$\pm 5 \mu\text{m}$ * standard version $\pm 3 \mu\text{m}$ * high-accuracy version ($\pm 2 \mu\text{m}$ for ML up to 720 mm)	
Measuring length ML in mm	70, 120, 170, 220, 270, 320, 370, 420, 470, 520, 570, 620, 720, 770, 820, 920, 1020, 1140, 1240, 1340, 1440, 1540, 1640, 1740, 1840, 2040, 2240, 2440, 2640, 2840, 3040, 3240 _{MAX}	
Max. traversing speed	120 m/min	
Max. acceleration	30 m/s ²	
Required moving force	$\leq 2.5 \text{ N}$	
Vibration resistance (EN 60068-2-6)	100 m/s ² [55 ÷ 2000 Hz]	
Shock resistance (EN 60068-2-27)	150 m/s ² [11 ms]	
Protection class (EN 60529)	IP 54 standard IP 64 pressurized	
Operating temperature	0 °C ÷ 50 °C	
Storage temperature	-20 °C ÷ 70 °C	
Relative humidity	20% ÷ 80% (not condensed)	
Reading block sliding	by ball bearings	
Power supply	5 Vdc $\pm 5\%$	
Current consumption	300 mA _{MAX} (with R = 120 Ω)	
Max. cable length	30 m	
Connector	inside the transducer	
Electrical protections	inversion of polarity and short circuits	
Weight	435 g + 1290 g/m	

* The declared accuracy grade of $\pm X \mu\text{m}$ is referred to a measuring length of 1 m.**MECHANICAL CHARACTERISTICS**

- Rugged and heavy **PROFILE** made of anodized aluminum. Dimensions 40x24 mm.
- Elastic **COUPLING** for misalignment compensation and self-correction of mechanical hysteresis.
- Non-extendible **SEALING LIPS** along the sliding side of the reader head, fixed at the lateral ends.
- **READER HEAD**, consisting of tie rod and reading block, with fully-protected place for electronic boards.
- **READING BLOCK** sliding through ball bearings.
- Die-cast **TIE ROD**, with nickel surface treatment.
- Absolute glass **GRATING** placed in the scale housing.
- Elastomeric **GASKETS** which allow to reproduce the full protection in mechanical joints (in case of disassembling).
- **FULL POSSIBILITY** to disassemble and reassemble it.
- Possibility of direct **SERVICE**.

ELECTRICAL CHARACTERISTICS

- Reading device with an infra-red light emitter and receiving photodiodes.
- Serial interface FANUC α-αi.
- Electrical protection against polarity inversion and short circuits on output ports.
- PUR cable with low friction coefficient, resistant to oil and suitable for continuous movements.

SERIAL INTERFACE FANUC αi

- 7-wire shielded cable $\phi = 7.4 \text{ mm}$, PUR external sheath, CU1 PCR 15-Pin connector.

- Conductors section: power supply 0.50 mm²; signals 0.18 mm².

The cable's bending radius should not be lower than 80 mm.**SERIAL INTERFACE FANUC α**

- 8-wire shielded cable $\phi = 7.4 \text{ mm}$, PUR external sheath, CY8 PCR 20-Pin connector.

- Conductors section: power supply 0.50 mm²; signals 0.18 mm².

The cable's bending radius should not be lower than 80 mm.

