Movements
Series KSI 100

PREFAG
PARTNER IN PRÄZISION

170°, 230° or 240° moving coil movements for 1” diameter cases – KSI 100

Fields of application

Aeronautical instrumentation and comparable applications with heavy duty requirements.

Technical characteristics

Moving coil movements for pointer deflection up to a max. of 170° and also 230° or 240° mechanical reserve (see back page).

Concept

- The system permits linear printed scales with good reproducability. Without adjusting the linearity ± 1,5.
- Samarium cobalt magnets guarantee stable magnetic values.
- Despite of a large air gap, high magnetic flux density (175 mT).
- Depending on the internal resistance, an adequate torque is still obtained with a sensitivity of 0.2 mA.
- The design produces good concentricity of the pole rings to the moving element.
- The movement is fitted with spring-loaded jewel bearings and tungsten carbide pivots, which results in conjunction with the rigid design, in a high level of reliability, also under shock and vibration.
- The jewel bearings are held, vibration proof, in a self-locking thread.
- Brass movement frames assure minimum influence of temperature and humidity.
- The self-centering pivots are riveted and clamped to the moving element for high reliability.
- Our modular system allows the movements to be adapted to special requirements with regard to sensitivity, damping etc..
- Mechanical adaptations are possible, since all volume determining components are manufactured on CNC machines.

PREFAG Carl Rivoir GmbH & Co. KG · Prefagstraße 4 · D-75045 Walzbachtal
phone +49 7203 87-0 · fax +49 7203 87-170 · info@prefag.de · www.prefag.de

Movements
Series KSI 150

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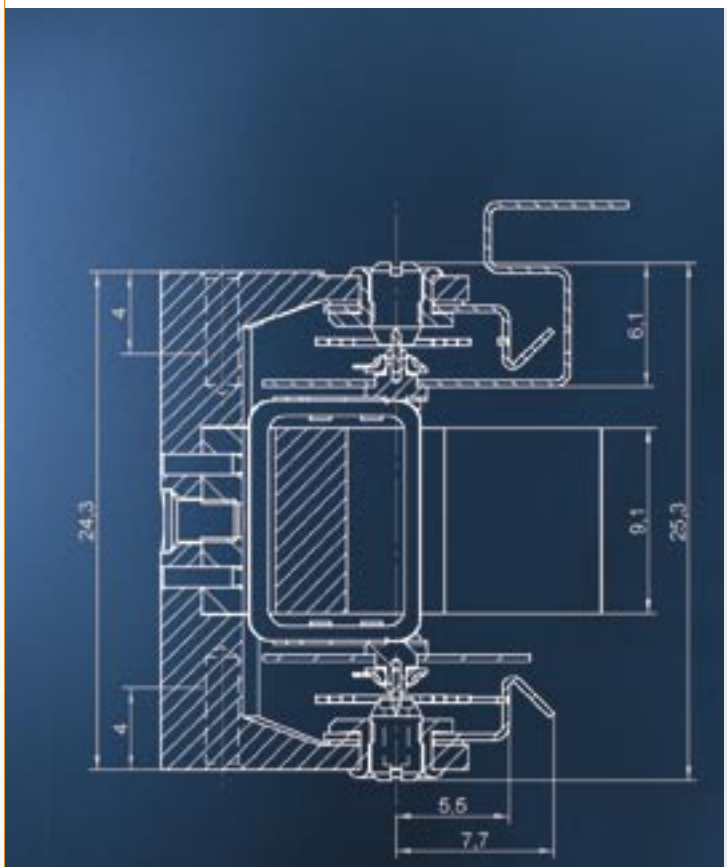

Technical values for movements series KSI 100

Type	Dimensions		Angle of deflection	
	ø	H	effective	mechanical
KSI 100	23 mm	25.3 mm	230° [1]	244°
KSI 101[4]	23 mm	25.3 mm	170° [1]	184°
KSI 103	23 mm	25.3 mm	240° [1]	254°

Type	Flux density in the air gap	Linearity error max.	Sensitivity (F.S.D.)	
			minim. value [2]	recomm. value [3]
KSI 100	168 mT	± 1.5 %	180 µA	500 µA
KSI 101[4]	189 mT	± 1.5 %	120 µA	350 µA
KSI 103	142 mT	± 1.5 %	220 µA	600 µA

[1] These effective angles of deflection are possible plus a reserve of 2 x 5° operating range + 2 x 2° mechanical.

[2] Values at max. number of turns Cu Ø 0.020 mm and minimum torque 200 µNcm/90°.

[3] Values at max. number of turns Cu Ø 0.025 mm and recommended torque 320 µNcm/90°.

[4] 2 KSI 101 movements can be combined to form a double instrument with a total diameter of 35 mm, at least 12.5 mm distance of pointer centres.

Assembly

In general, series KSI 100 are only supplied as assembled movements. PREFAG does not offer assembly fixtures.

Technical documentation

Comprehensive technical documentation is available on request. Take advantage of our wide-ranging experience and send us your specifications. We would be pleased to provide you with support in lay-out of your movement.

PREFAG meter movements are operated in very demanding applications. Our aim is to achieve maximum performance and safety, and for this we need our customers' contribution in setting up application relevant product specifications, performance criteria and testing parameters. PREFAG guarantees to deliver according to the agreed execution, whereas our customers assume responsibility for the testing and qualification process.

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