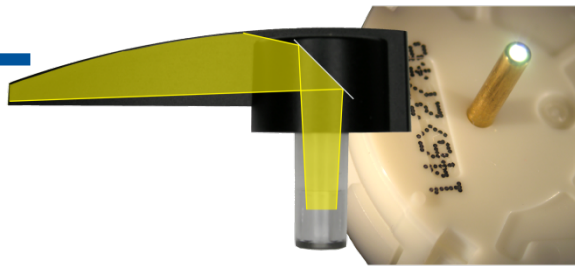
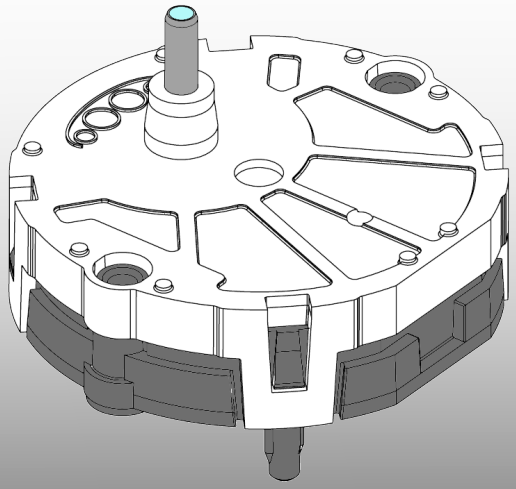
JUKEN Swiss Technology

X23





Automotive instrumentation
stepper motor

Hollow metallic shaft for optimum pointer illumination

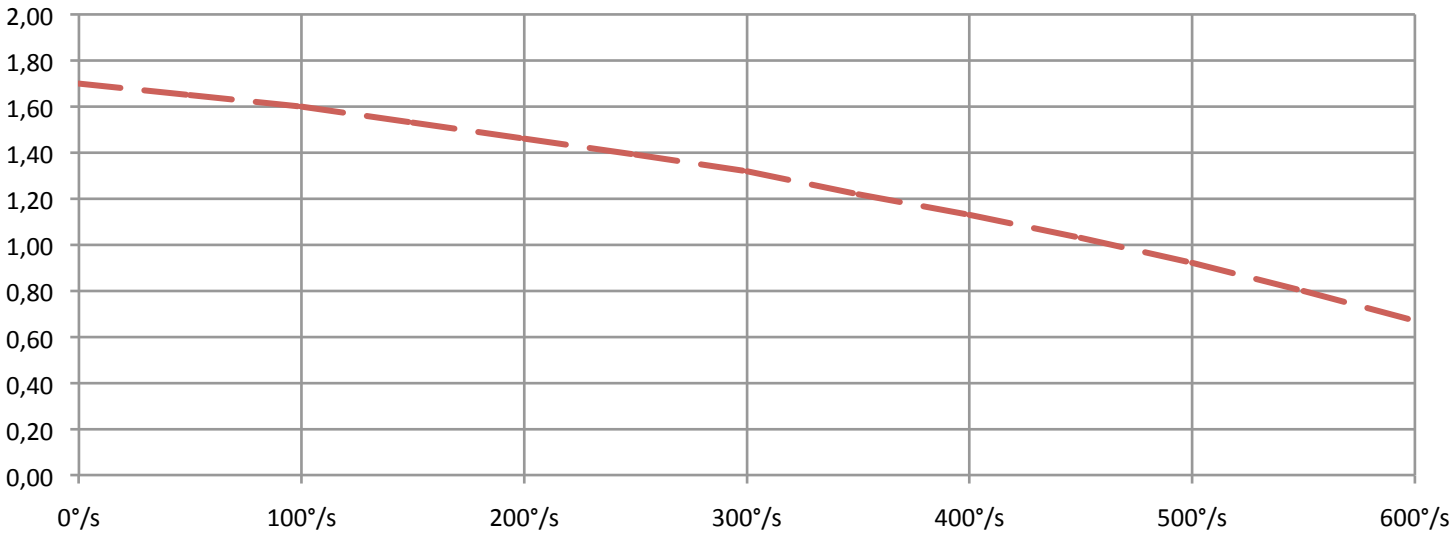
External light source (single LED)

No lateral light dispersion from the light guide

Multiple pointer insertion guaranteed by metal covered light guide

Rear contacts

Dynamic torque [mNm] on shaft



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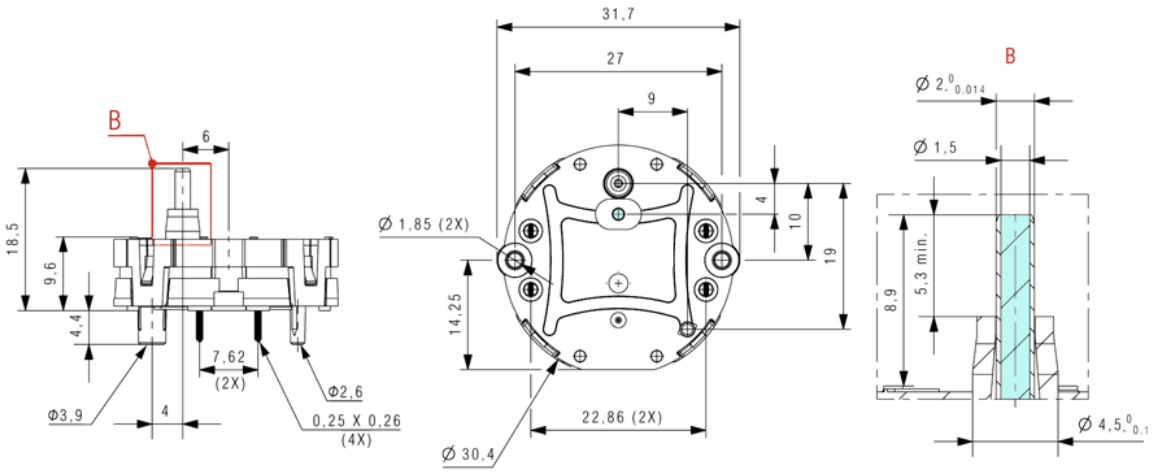
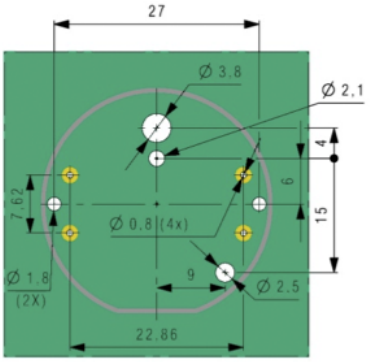
ISO/TS 16949
ISO 14000
ISO 9001

X23 – Technical data





Ex.: PCB bottom view

Ex.: PCB top view (Coils + LED)

OSRAM
Opto Semiconductors

LED model:
OSRAM PointLED LW P4SG

PRELIMINARY

T_{amb} =25°C

		Min.	Typ.	Max.	Unit
1	Dynamic torque on the pointer shaft at 200°/s and 5.0V_{DC} supply	1.0	1.45		mNm
2	Start-Stop frequency f_{ss} at pointer inertia load 0.2x10^{-6} kgm^2			200	°/s
3	Maximum operating speed f_{max} with an acceleration ramp			600	°/s
4	Angle of rotation with internal stop			315	Degree
5	Holding torque powered	3.5	4.0		mNm
6	Operating voltage		5.0	9.0	V_{DC}
7	Coil resistance per coil	230	260	290	ohm
8	Electrical phase shift between coils		60		Degree
9	Gear play on shaft		0.5	1	Degree
10	Maximum axial force on the pointer shaft Maximum radial force on the pointer shaft			150 12	N N
11	Noise level of the motor, measurement distance 4cm from top of shaft, not mounted, without load, angular speed 300°/s		40		dB(A)
12	Acceleration of sinus vibration test (5..250 Hz), 8h, all directions, at pointer inertia load 0.2x10^{-6} kgm^2		6g		m/s^2
13	Operating Temperature	-40		+105	°C
14	Soldering Temperature (10 sec)		260		°C