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TABLE OF STANDARD PROPERTIES OF USE AND MEASUREMENT

The properties defined in the table below, are set up according to the technical conditions of use and measurement. These properties are warranted within their variation range and in compliance with the standard technical conditions of use.

NON CONTRACTUAL PICTURE

PROPERTIES	STANDARD TECHNICAL CONDITIONS	UNIT	NOMINAL VALUES	MIN. VALUES	MAX. VALUES
> **Notes**		Preliminary data			
Sensor options	SG, ECS	-	-	-	-
Mastered motions	TZ, RX	-	-	-	-
TZ max. no load displacement	Quasistatic excitation, blocked-free	µm	50	45	58
RX Angular displacement		mrad (+/-)	11.30	10.17	11.70
Blocked force	Quasistatic excitation, blocked-free	N	110	88	132
Stifness	Quasistatic excitation, blocked-free	N/µm	2.00	1.60	2.20
Unloaded resonance frequency (in the actuation's direction)	Harmonic excitation, blocked-free, on the admittance curve	Hz	400	340	440
Response time	Quasistatic excitation, blocked-free	ms	1.25	1.13	1.44
Capacitance (per electrical port)	Quasistatic excitation, free-free, on the admittance curve	µF	1.55	1.40	2.02
Angular resolution		µrad	1	-	-
Vertical resolution		nm	0.50	-	-
Heigth (Z axis)		mm	35.00	34.95	35.05
Diameter		mm	Ø55mm	-	-
Mass		g	141.0	-	-
Standard mechanical interface (payload)	Flat surface Ø25.4mm (1»)				
Standard mechanical interface (frame)	4 M3 threaded holes on Ø48mm				
Standard electrical interface	Actuators connection: 1.5m wire with Lémo FGG.00.303.CLAD22 connector. SG option: 1.5m wire with Lémo FGG.00.304.CLAD22 connector. ECS option: 1m wire with Radiall R113081000W connector.				

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PROPERTIES STANDARD TECHNICAL CONDITIONS OF USE AND MEASUREMENT

Free-free :	The actuator is not fixed
Blocked-free :	The actuator is fixed to a mechanical support assumed infinitely stiff
Quasistatic excitation :	AC voltage between –20 and 150 V at 1 Hz
Harmonic excitation :	Voltage of 0.5 Vrms, sinusoidal mode from 0 to 100 kHz
Max. harmonic excitation :	Voltage defined by the measurement of max. displacement, sinus at resonance frequency
Displacement measurement :	Laser interferometer, capacitive displacement sensor
Admittance measurement :	HP 4194 A or Cypher C60 electrical impedance analyser
Environment :	Ambient temperature (15-25 °C) and dry air (Humidity < 50 % rH)

Any technical conditions of use, different from those defined above, can lead to temporary or definitive alterations of properties. Thank you to contact CEDRAT TECHNOLOGIES before using actuators under non standard technical conditions.

FACTORY TESTS CARRIED OUT

- **Test 1 : Electrical admittance vs. Frequency, free-free**
- **Test 2 : Displacement vs. input voltage**

OPTIONAL EXTRA FACTORY TESTS

- **Test 3 : Gain and linearity of the sensor**
- **Test 4 : Step response in closed loop**
- **Test 5 : Stability in closed loop**

AVAILABLE OPTIONS

- **[SG] Strain gauges**
- **[SV] Specific version / customization**
- **[SI] Specific interface**
- **[ECS] [ECS] Eddy current sensor)**
- **[VAC] Vacuum**
- **[NM] Non-magnetic**

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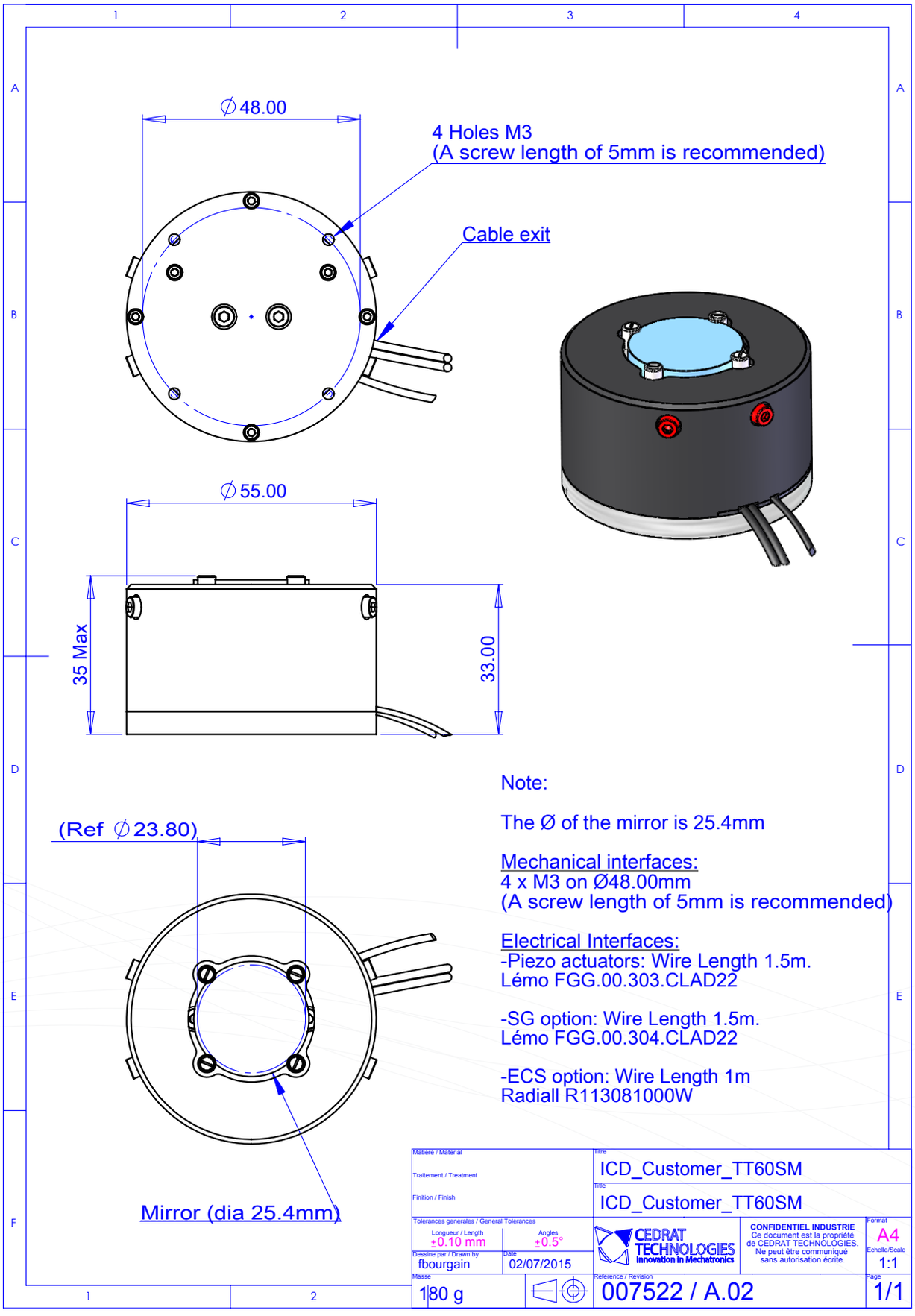
DRAWINGS



Note:

The Ø of the mirror is 25.4mm

Mechanical interfaces:
4 x M3 on Ø48.00mm
(A screw length of 5mm is recommended)

Electrical Interfaces:
-Piezo actuators: Wire Length 1.5m.
Lémo FGG.00.303.CLAD22

-SG option: Wire Length 1.5m.
Lémo FGG.00.304.CLAD22

-ECS option: Wire Length 1m
Radiall R113081000W

Matiere / Material	Titre: ICD_Customer_TT60SM
Traitement / Treatment	
Finition / Finish	Title: ICD_Customer_TT60SM
Tolerances generales / General Tolerances: Longueur / Length ±0.10 mm; Angles ±0.5°	CEDRAT TECHNOLOGIES Innovation in Mechatronics
Dessine par / Drawn by: fbourgain; Date: 02/07/2015	CONFIDENTIEL INDUSTRIE Ce document est la propriété de CEDRAT TECHNOLOGIES. Ne peut être communiqué sans autorisation écrite.
Masse: 180 g	Reference / Revision: 007522 / A.02
Format: A4; Echelle/Scale: 1:1; Page: 1/1	