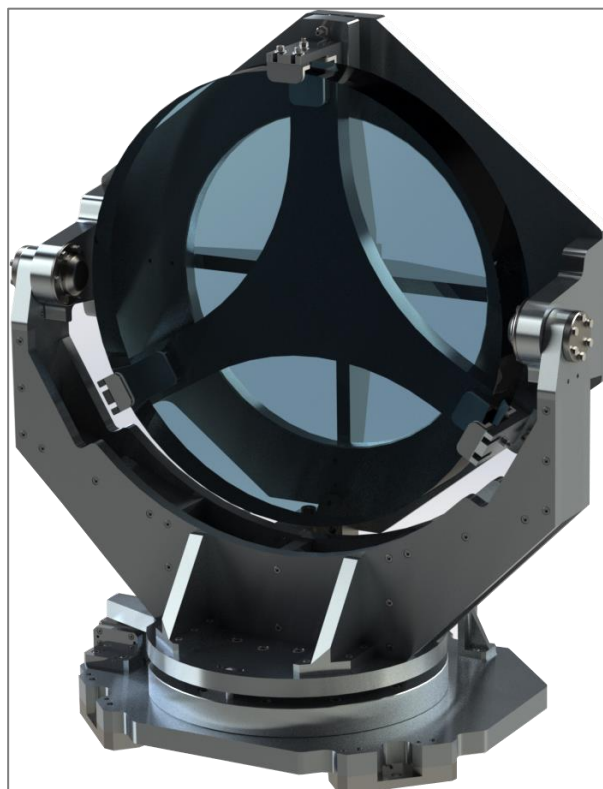


This motorized mount allows the adjustment of azimuth and elevation thanks to two TMP 29 actuators. It has a very high mechanical stability.

The design can be easily adapted to various optics sizes.



Non contractual Photo

The Gimbal mount generate a rotary movement along two motorized axes (Azimuth and Elevation).

The azimuth rotation is guided by a crossed roller bearing. It is driven by a TMP29 stage that pushes the frame through a cam roller. The backlash compensation is ensured by a spring.

The elevation rotation is guided by two pairs of pre-stressed ball bearings. It is driven by a TMP29 stage pushing the frame through a cam roller. The polarization is obtained thanks to gravity (offset between the center of gravity and rotation axis).

Both rotation axes cross themselves at the center of the optical surface:

The elevation axis is located on the optical surface for any azimuth/elevation position.

The azimuth axis pass through the center of optical surface for any azimuth/elevation angular position.

The optics is fixed on 3 points thanks to POM pads.

The mount has a lifting ring for the handling of the complete mount with assembled optics.



LARGE MOTORIZED MOUNT GIMBAL 605 mm

PRODUCT DESCRIPTION FILE ISP 17A889FPI0001-A

Update : 2017/04/11

Page 2/4

1 - Technical Data

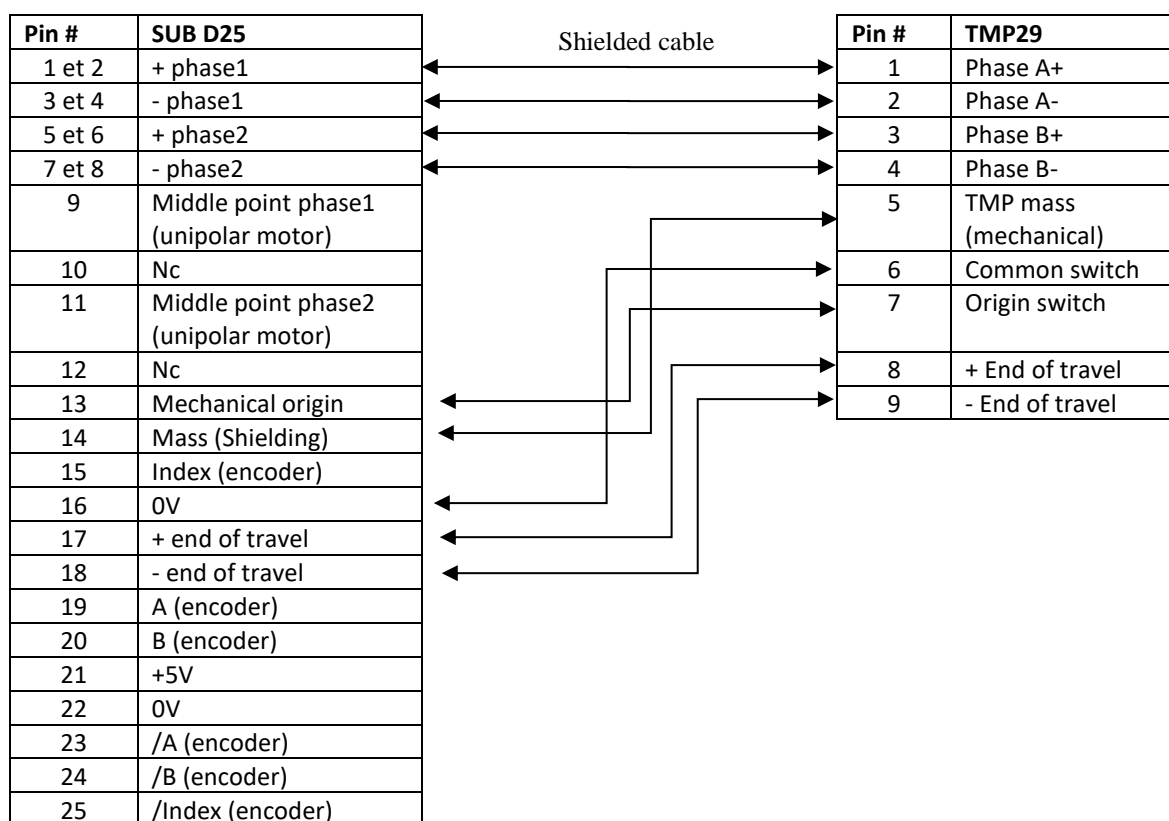
TMP29 STAGE DATA SHEET	VALUE
Supply voltage	24V
Current	0,5 A / phase
Resistance	3,5 Ω /phase
Inductance	1,2 mH/ Phase
Frequency	4000Hz max
Travel range	+/- 14,5 mm
Resolution	0,0333 μ m / motor steps
Minimum recommended increment	2 motor steps
Maximum axial, radial and transverse load	400 N
Accuracy	< 75nm + 5% of stroke
RMS error	\leq 75 nm
Hysteresis	< 5 μ m
Mass	1,7 Kg
Connector	SUBD male 9 pins

GIMBAL MOUNT DATA SHEET	VALUE
Optics diameter	605,5 mm +/- 5 mm
Optics thickness	80 mm +/- 5 mm
Payload	Until to 60 Kg
Locking device for transport	yes
L azimuth	264 mm
Teta azimuth resolution	0,20 μ rad (2 motor steps on actuator)
Teta azimuth angular range	+/- 3, $^{\circ}$
L Elevation	363 mm
Teta Elevation resolution	0,14 μ rad (2 motor steps on actuator)
Teta Elevation angular range	+/- 2,2 $^{\circ}$
Position stability unpowered :	Target value 50 Hz.
First eigen frequency of equipped mount	
Outgassing properties for a vacuum level from 1.10 ⁻⁵ to 1.10 ⁻⁷ mbars.	N.A. for this version
Theshold for a RGA analysis:	

ISP SYSTEM • SA au capital 1 000 000 € • ZI de la Herray - B.P. 10047 • 65501 Vic-en-Bigorre • FRANCE
Tél : 05 62 33 44 44 • Fax : 05 62 33 44 45 • e-mail : contact@isp-system.fr • <http://www.isp-system.fr>

This document belongs to ISP SYSTEM, it cannot be used, copied or communicated without a prior written agreement.
The mentioned information, herein, are subject to change. Thanks to consult ISP SYSTEM

- Further technical characteristics :
 - stepper motors : 0,5 A/ phase (value must be adjusted according to payload)
Please consult ISP for controller
 - Connectors type SUB D 25 pins male
 - Position stability unpowered



- Options :
 - Preparation for high vacuum
 - Preparation for resistance against radiations

2 - Applications

- Accurate positioning and orientation of optics such as mirrors, gratings, KDP, ... for beam transport, frequency conversion, optical compressor, ...
- Accurate and stable positioning of optics on machines (coating, metrology, optical test bench,...)

3 - Dimensions

