



Proposal for controllers for tip-tilt mounts

Doc : ISP18A0974PSI0006
Indice : A
Date : 06/03/2019
Page : 1/3

Proposal for controllers for L3 laser mounts

1 References

Customer : ELI Beamlines

Project : 2 axes controllers for vertical mounts type BIII - L3 laser

ISP SYSTEM project number: 18A0974

Proposal ref: ISP18A0974PSI0006-A dated 06.03.2019

2 Object

This document is the proposal of ISP SYSTEM for the supply of 2-axes controllers in order to be able to control locally some tip-tilt mounts such as the B3-laser mounts.



Figure 1: Example of controller for 2-axes mount (rack)

3 Definition of controllers

Each controller will be able to control 2 axes (stepper motors, 24V, 1,5A max) with 2 limit switches per axis.

- 2 connectors SUB D9
- Connection with computer (Windows) through USB
- Limit switches will be powered in 24V in order to secure the signal even with long cables (standard is 5V)



Proposal for controllers for tip-tilt mounts

Doc : ISP18A0974PSI0006
Indice : A
Date : 06/03/2019
Page : 2/3

- Pin out is adapted to L3 mounts (see Table 1)
- Controllers will be calibrated (current, travel...) with L3 beam mounts manufactured at ISP SYSTEM
- Basic man-machine interface delivered by ISP SYSTEM
- DLL files supplied by ISP SYSTEM
- No cable included

Tip Tilt DSUB pinout for one axis

Pin	Pin name	Description	Pair	Wire
1	A+	Positive motor phase A	1	A
2	B+	Positive motor phase B	2	A
3	-	-	-	-
4	COM_LS-	Common for negative limit switch	3	A
5	COM_LS+	Common for negative limit switch	4	A
6	A-	Negative motor phase A	1	B
7	B-	Negative motor phase B	2	B
8	LS-	Negative limit switch	3	B
9	LS+	Positive limit switch	4	B

Note : It's strongly recommended to use cable with twisted pairs with global shield by copper braid in respect with the pinout and pairs assignment above.

Table 1: proposal for pin out

An example of user manual of such tip-tilt (ISP16A838NUI0005-B) is attached to this proposal (it corresponds to the tip-tilt mounts for deformable mirrors used on L4 beam at ELI). Even if the communication and the configuration a different (connectors for instance), it gives you a good idea of the product, the functions, MMI and the DLL files.

4 Delivery time

- Delivery of 1 or 2 controllers: 4 weeks after order
- Delivery of 3rd controller: 5 weeks after order



Proposal for controllers for tip-tilt mounts

Doc : ISP18A0974PSI0006

Indice : A

Date : 06/03/2019

Page : 3/3

5 Price

- **2 340** euros/unit excluding VAT (for Quantity = 2 or 3 units).

Payment terms :

30 days net after delivery, DDP ELI-Beamlines

6 Other conditions

Warranty: 1 year.

See our global sales conditions (<http://www.isp-system.fr/?s=cgv>)

7 Customer agreement

Work will start after written agreement of customer

Laurent ROPERT