



## Proposal for controllers for tip-tilt mounts

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## Proposal for controllers for L3 laser mounts

### 1 References

Customer : ELI Beamlines

Project : cables for vertical mounts type BIII - L3 laser controlled with ISP's controller

ISP SYSTEM project number: ..... 18A0974

Proposal ref: ..... ISP18A0974PSI0007-A dated 26.03.2019

### 2 Object

This document is the proposal of ISP SYSTEM for the supply of 3 cables in order to be able to connect the tip-tilt mounts such as the B3-laser mounts to the controller manufactured by ISP SYSTEM (offer ISP18A0974PSI0006-A).

### 3 Definition of cables

The cables will have following characteristics:

- Length: 5m
- Environment: air
- Twisted pairs with global shield by copper braid
- Connectors: compatible with the L3 mount on one side and ISP SYSTEM's controller on other side
- Polyurethane sleeve
- Quantity = 3 cables
- Pinout: see below for pinout on controller side, pinout on mount side according to ELI definition



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### 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

## 4 Delivery time

- Delivery of 3 cables: 4 weeks after order

## 5 Price

Total price for 3 cables including shipping costs: **2 400** euros/unit excluding VAT

Payment terms :

21 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