

Collimator mirror – Cabinets Electrical Interface

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| Interface Document: LN-MPIA-FDR-INT-007 | | Issue: 1.2 |
| Relevant Documents: LN-MPIA-FDR-ELEC-002 | | |
| Brief Description: This document describes the electrical connection between the collimator focus stages and the cabinets. | | |
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Interface Description

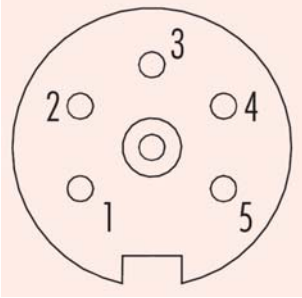
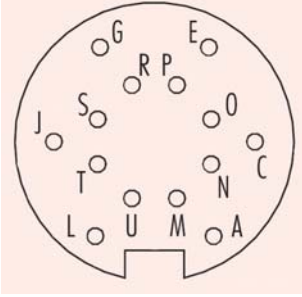
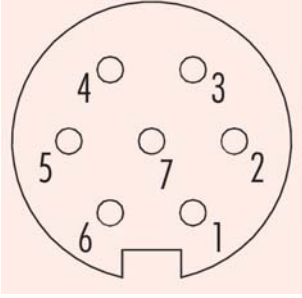
This document describes the electrical interface between the collimator focus stages and the cabinets. The patchbox represents the interface between the motor electronics (cabinet) and the motor unit (mounting stage).

Interface Specification

One motor unit (mounting stage) gets three connectors from the patchbox, one connector for motor signals, one connector for limits-/ref. switch and incremental encoder and one connector for absolute encoder. If the motor unit does not need an absolute encoder then the connector is unused. All cables from the patchbox to a motor unit should be shielded. The maximum cable length is three meters. The patchbox has to be in the near of single units.



The following table shows the pin configuration of each of the three connectors:

| Description | Connector type | Pin configuration |
|--|---|---|
| Motor signals |  <p data-bbox="676 674 979 741">Binder series 423 with 5 contacts - socket</p> | <p data-bbox="1018 367 1155 528">1: Phase A 2: Phase B 3: Phase C 4: Phase D</p> |
| Limit switch, reference switch and incremental encoder |  <p data-bbox="676 1077 979 1144">Binder series 423 with 14 contacts - socket</p> | <p data-bbox="1018 770 1299 1375">A: Positive limit sw. C: Negative limit sw. E: Reference switch G: 5V switches J: GND switches L: n.c. M: Encoder A- N: Encoder B+ O: Encoder B- P: Encoder I+ R: Encoder I- S: 5V encoder T: GND encoder U: Encoder A+</p> |
| Absolute encoder |  <p data-bbox="676 1713 979 1780">Binder series 423 with 7 contacts - socket</p> | <p data-bbox="1018 1406 1235 1697">1: GND encoder 2: Data+ 3: Data- 4: Clock+ 5: Clock- 6: n.c. 7: VCC encoder</p> |

Special Requirements

Two focus stages are used for each side. Therefore, two channels from the patchbox are needed for each side.