



**EUROPEAN
SPALLATION
SOURCE**



Motion Control & Automation (MCA)

System Acceptance Review DREAM

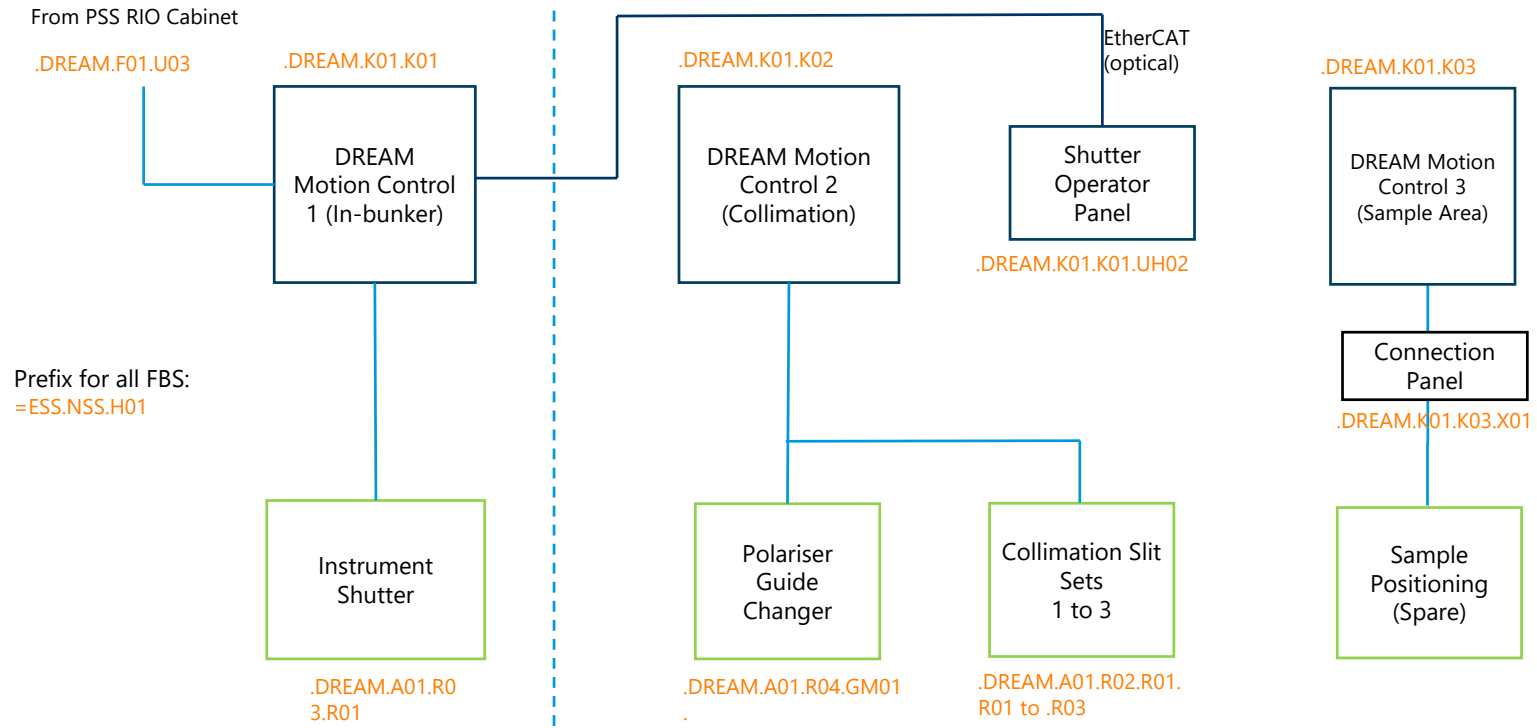
PRESENTED BY HUSSEIN AL-SALLAMI

2026-03-26

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DREAM Local Test (SAT 1)

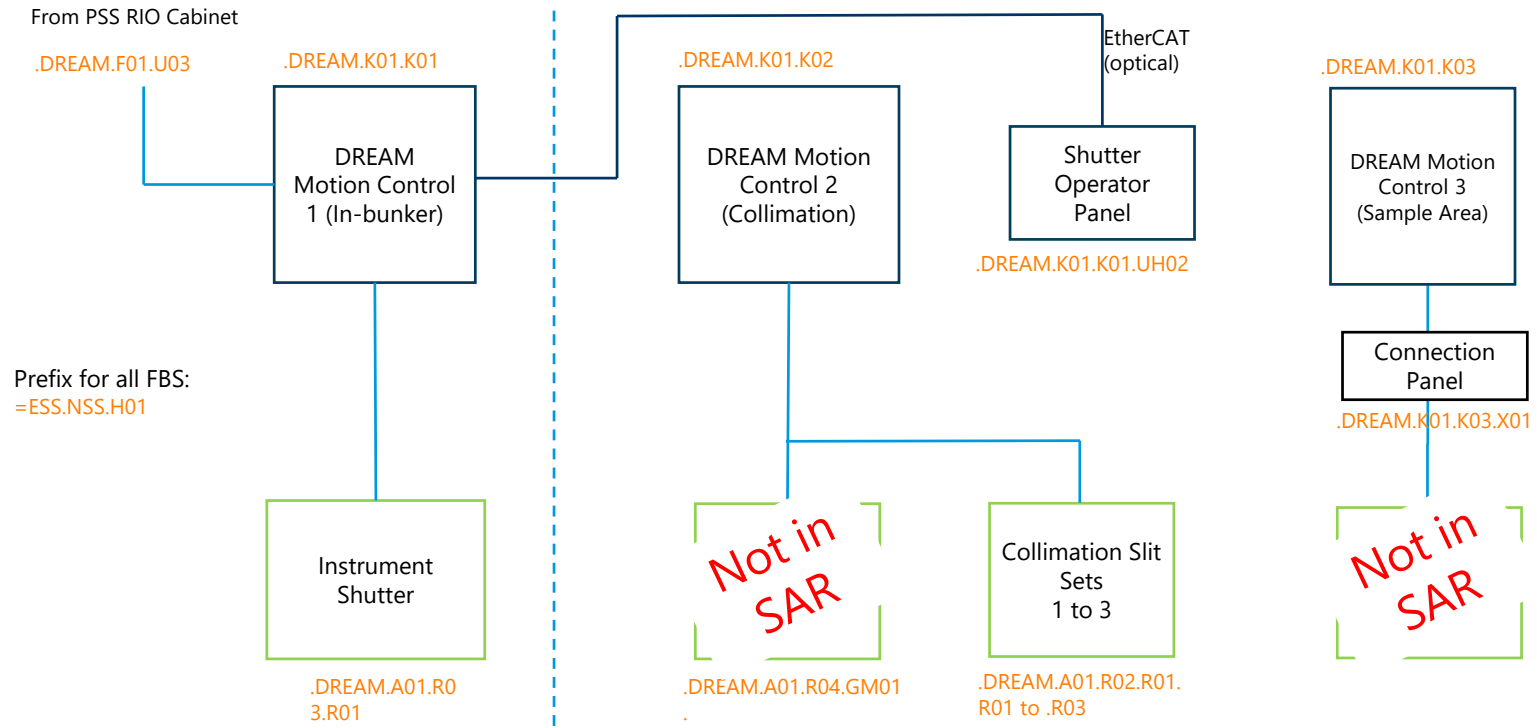


MCA Control System	Connected Instrument Subsystems	Test Reports	Status
MC1 Instrument Shutter	Instrument Shutter	ESS-5768931	Passed
MC2 Collimation	Polariser guide changer and collimation slits 1, 2, and 3	ESS-5996687	Passed with Issues
MC3 Sample Area	Ancillary axis 1- 8 and two spare pneumatic (subsystem has not been installed).	ESS-5768932	Passed



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DREAM Local Test (SAT 1) – Motion Control 1 (Instrument Shutter) Report ESS-5768931

System name	FBS	FAT/DAT Status	SAT1 Status	Issue Tracker	Issues	To be fixed before
DREAM Motion Control 1	DREAM.K01.K01	No issues	No issues	N/A	N/A	N/A
DREAM Instrument Shutter	DREAM.A01.R03.R01	No issues	No issues	N/A	N/A	N/A

- Test cases for motion control functionality passed.
- SAT 2 with PSS and CUP passed.
- Shutter Operation via Shutter Operator Panel works.

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DREAM Local Test (SAT 1) - Motion Control 2 (Collimation)- Report ESS-5996687

System name	FBS	SAT Status	SAT1 Status	Issue Tracker	Issues	To be fixed before
DREAM Motion Control 2	DREAM.K01.K02	No issues	No issues	N/A	N/A	N/A
Slit Set 1, 2 and 3	DREAM.A01.R02.R01.R01 to R03	Issue	Issues	NIT-698	All Kapton cables are sensitive, so they must be routed and secured carefully to prevent insulation damage.	ORR
Slit 3: Right Blade (PZ14)	DREAM.A01.R02.R01.R03	No issues	Issues	NIT-699	Piezo Actuator PZ14 cannot determine the reference point (not needed for commissioning but operation).	ORR
Slit Set 1, 2 and 3	DREAM.A01.R02.R01.R01 to R03	Not tested	Minor Issues	NIT-700	Converting user's setpoint from mm to steps in open-loop, the step size must be recalculated.	ORR
Slit Set 1, 2 and 3	DREAM.A01.R02.R01.R01 to R03	Not tested	Minor Issues	NIT-700	Perform a full open-loop test with "Sensor power mode: Disabled" to emulate full absence of sensor. Move to a certain distance and measure the distance manually (using e.g. callipers)	ORR

- Test cases for motion control functionality passed.
- The Piezo stages operate at 130V, so a specific procedure has been added to the subsystem's operation and maintenance manual (a temporary PE or PB is required).

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DREAM Local Test (SAT 1) – Motion Control 3 (Sample Area) Report ESS-5768932

System name	FBS	FAT/DAT Status	SAT1 Status	Issue Tracker	Issues	To be fixed before
DREAM Motion Control 3	DREAM.K01.K03	No issues	No issues	N/A	N/A	N/A

- Test cases for motion control functionality passed.
- Local testing of the motion control from cabinet to connection panel with dummy motion system passed.

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DREAM Local Test (SAT 1) – Next steps

- The motion control systems for DREAM are ready for operation in Hot Commissioning.
- NIT issues have an effect on the mid-term operation reliability of the instruments and needs to be solved before the start of the operation.
- MCA group is planning to support hot commissioning with these activities:
 - Support instrument team with motion related issues.
 - Technician support if requested.
 - Engineering support if requested.
- User and maintenance manuals for the cabinets are available:
 - ESS-5669197 - Operation Manual - MCU6001: Shutter Motion Control Cabinet.
 - ESS-5669200 - Operation Manual - MCU5003: Piezo Motion Control Cabinet.
 - ESS-5669198 - Operation Manual - MCU5001: 16Ax. Motion Control Cabinet.
 - ESS-5969231 - DREAM Systems Operation and Maintenance Manual
- No displaced working hours or on-call support planned.



Thank You!

2026-03-24