

LCLS: Injector and Sector-21 - Magnet Power Supply Commissioning Plan

#	Task	LCLS	PCD	Notes
1	Lock and tag			
1.1	Master circuit breakers to the PS in the rack(s) under test	x	x	
1.2	Other sources of hazards	x	x	Such as RF, modulators, vacuum
2	Inspection of the magnets			
2.1	Check tightness of magnet core ground connection	x		
2.2	Check tightness of magnet LCW connections	x		
2.3	Check for water leaks			If LCW is available
3	Secure the area with caution tape			
3.1	PS racks back and front		x	
3.2	Magnets under test	x	x	
4	Remove magnet terminal covers	x		
5	Check cable tags			
5.1	Check power cable tags - magnet side		x	
5.2	Check power cable tags - PS side		x	
5.3	Check klixon cable tags - magnet side		x	
5.4	Check klixon cable tags - PS side		x	
6	Verify the magnet/PS are one circuit			With a low power PS: < 50 V, < 10 A
6.1	Connect a lab PS in parallel to output of existing magnet PS		x	One PS system at a time
6.2	Check DCCTs polarity indications on local control board		x	
6.3	Check cable polarity at magnet's terminals		x	
6.4	Check magnet polarity	x		
7	Check tightness of cable connections to magnet			
7.1	Power cables		x	
7.2	Klixon cables		x	
8	Put covers back on the magnets	x		
9	Hi pot cables			Follow the EWP procedures for hi pot
9.1	Disconnect cables from output of PS		x	One PS system at a time
9.2	Power cables		x	
9.3	Klixon cables		x	
9.4	Sign off PS system check list		x	
10	Reconnect cables			
10.1	Reconnect power cables to PS output terminals		x	
10.2	Reconnect klixon cable connectors to EPSC		x	
10.3	Sign off PS system configuration control list		x	
11	Energize PS			If all the PS in the rack have been checked
11.1	Remove locks and tags from circuit breakers to the PS	x	x	
11.2	Test PS system in the local mode		x	
12	Validate the ELPs		x	Follow the steps from the ELP
13	Install magnet stickers	x		
14	Check the ground fault detection			Follow procedures
14.1	Connect a 10-ohm 10-W resistor from PS + output to ground		x	
14.2	Turn the PS ON on local control mode		x	
14.3	Slowly increase the PS output voltage until PS trips on GND FLT		x	
15	Tune the PS system		x	Follow procedures for tuning the PS system
16	Test the PS system in remote mode			When SCP/EPICS becomes available
16.1	Verify that addressing is correct	x	x	
16.2	Verify voltage and current compliance	x	x	
16.3	Check that all readbacks are functional	x	x	
16.4	Check klixon, water flow, GND FLT interlocks and display statuts	x	x	