List of PVs for Matlab Apps

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PV Lists for LCLS Data Acquisition and Device Control

This is a list of the PVs that will be available to Matlab applications for data acquisition, and some device control. This list currently includes only devices in the injection area. See the page [Injection Area Device Names|IN20DeviceNames] to relate these EPICS PV names to the corresponding MAD name of a device, and its corresponding SLC name.

*Note: *This is a work in progress* *
The Controls group is currently developing the interfaces to these devices; PVs will be added, and the names, units, and ranges will change as the interfaces develop.

Magnet PVs

Klystron PVs

EPICS PV Name	Purpose	Units	Range
Klystron : Area : Position : Attribute			
KLYS_LLRF:IN20:801:G_L0B_P	RF Phase control	Deg.	
KLYS_LLRF:IN20:801:G_LOB_P_MON	Readback; actual value of phase	V	
KLYS_LLRF:LI21:101:G_L1S_A	RF Amplitude control	%	-5% to 5%
KLYS_LLRF:LI21:101:G_L1S_A_MON	Readback; actual value of ampl	V	
KLYS_LLRF:LI21:101:G_L1S_P	RF Phase control	Deg.	
KLYS_LLRF:LI21:101:G_L1S_P_MON	Readback; actual value of phase	Deg.	
Bunch Length Monitor : Area : Position : Attribute			
BLEN:LI21:265:WIDTH	Width of pulse (bunch length)	Fsec	100.0 to 300.0
BPM : Area : Position : Attribute			
BPMS:IN20:<position>:<attribute> position = 211, 235,371,425, 511,525, 581, 631, 651, 731, 771, 781, 925, 945, 981			
BPMS:LI21:<position>:<attribute> position = 131,161,201,233,278, 301,315,401, 501,601,701,801,901			
Most commonly used Attributes:			
BPMS:<area>:<position>X	beam position in X	Mm	-3.0 to 3.0
BPMS:<area>:<position>:Y	beam position in Y	Mm	-3.0 to 3.0
BPMS:<area><position>:TMIT	Electron count, charge?		1e10 to 3e10
BPMS:<area>:<position>:XHST	array of last 500 X measurements		
BPMS:<area>:<position>:YHST	array of last 500 Y measurements		
BPMS:<area>:<position>:TMITHST	array of last 500 TMIT measurements		
Toroid : Area : Position : Attribute			
TORO:IN20:215:TMIT position=215, 431, 791, 971	Electron count, charge?		1e10 to 3e10
TORO:LI21:205:TMIT position=205, 277	Electron count		1e10 to 3e10
WIRE : Area : Position : Attribute			
WIRE:IN20:531:<Attribute> Position=521, 561, 611, 741			
Most commonly used Attributes:			
WIRE:IN20:<Position>:YDATARAW	Array of y measured raw data	numeric	
WIRE:IN20:<Position>:XDATARAW	Array of x measured raw data	numeric	
WIRE:IN20:<Position>:UDATARAW	Array of u measured raw data	numeric	
WIRE:IN20:<Position>:<Y,X,U>DATA	Plane arrays of processed data	numeric	
WIRE:IN20:<Position>:<Y,X,U>SIGMA	Plane calculated beam width	numeric	

Bunch Length Monitor PVs	EPICS PV Name	Purpose	Units	Range

BPM PVs	EPICS PV Name	Purpose	Units	Range

Toroid PVs	EPICS PV Name	Purpose	Units	Range

Wire PVs	EPICS PV Name	Purpose	Units	Range

WIRE:IN20:<Position>:<Y,X,U>RMSERR	Plane RMS error	numeric								
WIRE:IN20:<Position>:<Y,X,U>FWHM	Plane full width at half maximum height	numeric								
WIRE:IN20:<Position>:<Y,X,U>MEAN	Plane mean	numeric								
WIRE:IN20:<Position>:<Y,X,U>ASYM	Plane asymmetry	numeric								
WIRE:IN20:<Position>:<Y,X,U>WIDTH	Plane width	numeric								
WIRE:IN20:<Position>:<Y,X,U>AREA	Plane area	numeric		**OTR PVs**	**EPICS PV Name**	**Purpose**	**Units**	**Range**		
OTR : Area : Position : Attribute										
OTRS:IN20:<position>:<attribute> position = 466, 471, 541, 571, 621, 711, 991										
OTRS:LI20:<position>:<attribute> position = 237, 291				**YAG PVs**	**EPICS PV Name**	**Purpose**	**Units**	**Range** YAG : Area : Position : Attribute		

YAGS:IN20:<position>:<attribute> position = 211, 241, 351, 471, 841, 921, 995 | | | || ^