

LCLS-II Temperature Naming convention.

Names are broken down into the standard parts, DeviceType : Area : Position : Instance (Where needed) : Attribute.

RTD sensors placed on a device, will take the device name specified in the MAD deck.

Device Type

ACCL	Used for everything in the RF system that is part of the general physics and operations interface at the cavity level. Also used for penetration
GUN	Used for everything in the gun
COLL	Used for Collimators
WIRE	Used for Fast wire scanners
TORO	Used for ICT
BEND	Used for Magnet
BLMO	
FARC	Used for Faraday Cup
ROOM	Used for Air sensors in tunnel/building
LLRF	Used for phase reference line
WATR	Water system

Area, Subset of Accelerator With RF Devices

See <https://slacspace.slac.stanford.edu/sites/lcls/lcls-2/wd/dsg/Forms/AllItems.aspx>, Naming Convention section 6.1.2.2

All AREA field are taken from the document.

Position

See <https://slacspace.slac.stanford.edu/sites/lcls/lcls-2/wd/dsg/Forms/AllItems.aspx>, Naming Convention section 6.1.2.3.2

Here is a list of all the signals. PV Names can be found in column V

https://slacspace.slac.stanford.edu/sites/lcls/lcls-2/as/controls/CD2/FL_TM/Installation/RTD%20Pigtail%20Organizer%201_22_19.xlsx

Attribute

Attributes that comprise the physics interface. Scalar unless otherwise specified

	R/W	Name	Description
	R	TEMP	Measured temperature from PLC(degC)
	R	FLOW	Measured flow from PLC(GPM)
	R	PRLTEMP	Measured temperature from PLC for Phase reference Line(degC)
	R	PENTEMP	Measured temperature from PLC for cable penetration(degC)
	W	HLIMDES	High limit for interlock Sensor
	W	LLIMDES	Low limit for interlock Sensor
	W	BYP	Bypass request for interlock sensor
	R	BYPSTAT	Bypass readback for interlock sensor

	W	RESET	Rest interlock Fault
	R	ALARM	Interlock Alarm Status

Attributes highlighted in Bold will be only present for sensors interlocked for MPS. These attributes in bold will be appended to the temperature or flow signal. eg:

SOLN:GUNB:212:FLOWHLIMDES

SOLN:GUNB:212:TEMPHLIMDES

Some Non Mad sensors:

Room air , water and phase reference line sensor:

RTD Z location is co-related with https://slacspace.slac.stanford.edu/sites/lcls/lcls-2/as/controls/CD2/General/Naming/LCLS-II_Device_Names.xlsx (see AreaStartandEnd Tab for detail) to find the area name. The position field uses numbers ranging from 1 to 99 depending upon the instance of the sensor in the area. See <https://slacspace.slac.stanford.edu/sites/lcls/lcls-2/wd/dsg/Forms/AllItems.aspx>, Naming Convention section 6.1.1 for detail.

Penetration sensor.

penetration Z location is co-related with https://slacspace.slac.stanford.edu/sites/lcls/lcls-2/as/controls/CD2/General/Naming/LCLS-II_Device_Names.xlsx (see AreaStartandEnd Tab for detail) to find the area name. The position field uses numbers ranging from 1 to 99 depending upon the instance of the penetration in the area. (please note all though penetrations are names with sector names, we will only use that as a description, but use area names as defined in the document above for the PV.)

Instance field will be used for penetration sensors as each penetration will have qty 3-6 sensors installed.

Penetration Z location information can be found here:

https://slacspace.slac.stanford.edu/sites/lcls/lcls-2/as/controls/CD2/FI_TM/Reference/LCLS-II%20PENETRATIONS%20%20Z-LOCATION.xlsx