# Draft: Controls suffix naming guide CLARA/VELA

## Document history

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| --- | --- | --- | --- |
| Version | Author | Amendment | Date |
| 0.1 | RFC | Initial draft | 03/01/2016 |
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## Notes:

Get: to read a value from a PV

Set: to put a value to a PV.

Anything marked VM is for the simulation mode only.

## Magnets

|  |  |  |
| --- | --- | --- |
| SI | Double  Amps | Set Current |
| RI | Double  Amps | Get Current |
| Sta | Enum | Get status:   |  |  | | --- | --- | | 0 | OFF | | 1 | ON | | 2 | TIMING | | 3 | UNPLUGGED | | 4 | UNDEFINED | | 5 | ON\_FAULT | | 6 | OFFLINE | |

### Magnet PSU

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| On | Enum | Set: Turn on PSU   |  |  | | --- | --- | | 0 | OFF | | 1 | ON | |
| Off | Enum | Set: Turn off PSU   |  |  | | --- | --- | | 0 | OFF | | 1 | ON | |
| Rst | Enum | Set: Reset PLC   |  |  | | --- | --- | | 0 | RESET | | 1 | RESET | |
| RIRAN | Double  VM only | Set Rnd. For VM only. Percent to randomise the PSU. Default at 5% |
| Cmi | MMBI  DIRECT  VM set | Set: 16 flags. This is set from the PLC on VELA or by hand in the VM. In the VM the default is all interlocks are GOOD and equals 65535. Ilk<n> reads these flags |
| Ilk<n> | <n> 1- 16  BI ENUM | Get: Interlock status, see Cmi above   |  |  | | --- | --- | | 0 | BAD | | 1 | GOOD | |

### Magnet Polarity

|  |  |  |
| --- | --- | --- |
| PR<A,B>N:<On,Off> | Enum | Set:  Normal polarity “On”. Only changes when RI<0.5 amps  Reverse polarity “Sta” will be set to off. This is identical to reverse “Off”  Normal polarity “Off”. Only changes when RI<0.5 amps  Reverse polarity “Sta” will be set to off. This is identical to reverse “On” |
| PR<A,B>R:<On,Off> | Enum | Set:  Reverse polarity “On”. Only changes when RI<0.5 amps  Normal polarity Sta will be set to off. This is identical to Noraml “Off”  Reverse polarity “Off”. Only changes when RI<0.5 amps  Normal polarity Sta will be set to off. This is identical to Normal “On” |
| PR<A,B>N:Sta | Enum | Get:  Normal polarity on   |  |  | | --- | --- | | 0 | OFF | | 1 | ON | |
| PR<A,B>R:Sta | Enum | Get:  Reverse polarity on   |  |  | | --- | --- | | 0 | OFF | | 1 | ON | |

## BPMs

|  |  |  |
| --- | --- | --- |
| X | Waveform  Double  Size 4101  Units mm |  |
| Y | Waveform  Double  Size 4101  Units mm |  |
| DATA:BV2 | Subarray  Size 32773 |  |

LONGIN

Read:

RA1

RA2

RD1

RD2

LONGOUT

Write:

SA1

SA2

SD1

SD2

## Camera

Waveform, size 1447980, double

ArrayData

Waveform, size 1000, double

DistribX

DistribY

DOUBLE

X

Y

SigmaX

SigmaY

## YAG

### Simple

### INJ: 6,7,8,9 BA2:1

Sta

On

Off

Rst

### Complex Global

### INJ: 1,2

Setters:

STOP

V/H: MABS(out, Yag, slit, RF, 50u Slit)

Getters:

V/H: PROT01

V/H: PROT02

V/H: RPWRLOSS

V/H: RPOS (mm)

### Complex: Full Controls V/H

STA🡪 Seems to be directly connected to the PLC. Get info from EDM

RST🡪 Reset this axis

HOM🡪Home this axis

STP🡪 Stop this axis

## Scope

Double:

P1, P2, P3, P4

TIMEBASE

VRANGE

Waveform, size 2002, Double:

TR1, TR2, TR3, TR4