*LIGO Laboratory / LIGO Scientific Collaboration*

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TwinCAT Library for PSL Environment

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LIGO Scientific Collaboration

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of the LIGO Laboratory.

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| **Library** |
| Title | PSLEnv |
| Version | 1 |
| TwinCAT version | V2.11.0 |
| Name space |  |
| Author | Daniel Sigg |
| Description | Information about PSL Environment |
| Error Code | None |
| Library Dependencies | Error, ReadADC, Omega |

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| **User Interface Type**TYPE PSLEnvInStruct : STRUCT LaserRm\_AcS\_Temp: INT; LaserRm\_AcN\_Temp: INT; LaserRm\_Tb1N\_Temp: INT; LaserRm\_Tb1S\_Temp: INT; AnteRm\_Temp: INT; LVEA\_Temp: INT: DiodeRm\_Temp: INT: ChillerRm\_Temp: INT; LaserRm\_RH: INT; AnteRm\_RH: INT; DiodeRm\_RH: INT; ChillerRm\_RH: INT; LaserRmToAnteRm: INT; AnteRmtoLVEA\_Dpress: INT; DiodeRmToChillerRm\_Dpress: INT;END\_STRUCT;END\_TYPE; |
| Type Name | PSLEnvStruct |
| Description | Environment status about the PSL |
| Definition | Struct |

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| **User Interface Type**TYPE PSLEnvStruct :STRUCT LaserRm\_AcS\_Temp\_DegF: LREAL; LaserRm\_AcN\_Temp\_DegF: LREAL; LaserRm\_Tb1N\_Temp\_DegF: LREAL; LaserRm\_Tb1S\_Temp\_DegF: LREAL; LaserRm\_AcS\_Temp\_DegC: LREAL; LaserRm\_AcN\_Temp\_DegC: LREAL; LaserRm\_Tb1N\_Temp\_DegC: LREAL; LaserRm\_Tb1S\_Temp:\_DegC: LREAL; AnteRm\_Temp\_DegF: LREAL; LVEA\_Temp\_DegF: LREAL: DiodeRm\_Temp\_DegF: LREAL: ChillerRm\_Temp\_DegF: LREAL; AnteRm\_Temp\_DegC: LREAL; LVEA\_Temp\_DegC: LREAL: DiodeRm\_Temp\_DegC: LREAL: ChillerRm\_Temp\_DegC: LREAL; LaserRm\_RH: LREAL; AnteRm\_RH: LREAL; DiodeRm\_RH: LREAL; ChillerRm\_RH: LREAL; LaserRmToAnteRm: LREAL; AnteRmtoLVEA\_Dpress: LREAL; DiodeRmToChillerRm\_Dpress: LREAL;END\_STRUCT;END\_TYPE; |
| Type Name | PSLEnvStruct |
| Description | Structure used in the user interface |
| Definition | STRUCT |

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| **Function Block**TYPE PSLEnvFB:VAR\_INPUT PSLEnvIn: PSLEnvInStruct;END\_VAR;VAR\_OUTPUT PSLEnvOut: PSLEnvOutStruct;END\_VAR;VAR\_IN\_OUT PSLEnv: PSLEnvStruct;END\_VAR:END\_TYPE; |
| Type Name | PSLEnvFB |
| Description | Function block used to monitor the PSL environment  |
| Definition | Function Block |
| Input Argument | Name: PSLEnvInType: PSLEnvInStructDescription: Input structure |
| Output Argument | Name: PSLEnvOutType: PSLEnvOutStructDescription: Output Structure |
| In/out Argument | Name: PSLEnvType: PSLEnvStructDescription: User interface structure |