

LIGO Laboratory / LIGO Scientific Collaboration

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**TwinCAT Library for
Photodetector DC Monitors**

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| Library | |
|----------------------|--|
| Title | PhotodetectorDCMonitors |
| Version | 1 |
| TwinCAT version | 2.11 |
| Name space | – |
| Author | Alexa Staley, Daniel Sigg |
| Description | Controls the photodetector DC monitors |
| Error codes | None |
| Library dependencies | None |

| Hardware Input Type | |
|---|--|
| TYPE PhotodetectorsDCMonitorsInStruct : | |
| STRUCT | |
| PDMonitor1: INT; | |
| PDMonitor2: INT; | |
| PDMonitor3: INT; | |
| PDMonitor4: INT; | |
| PDMonitor5: INT; | |
| PDMonitor6: INT; | |
| PDMonitor7: INT; | |
| PDMonitor8: INT; | |
| END_STRUCT | |
| END_TYPE | |
| Type name | PhotodetectorDCMonitorsInStruct |
| Description | Structure of the hardware input that are wired up for the photodetectors DC monitors |
| Definition | STRUCT |
| Element | Name: PDMonitor1 Type: INT Description: PD monitor 1 |
| Element | Name: PDMonitor2 Type: INT Description: PD monitor 2 |
| Element | Name: PDMonitor3 Type: INT Description: PD monitor 3 |
| Element | Name: PDMonitor4 Type: INT Description: PD monitor 4 |
| Element | Name: PDMonitor5 Type: INT Description: PD monitor 5 |
| Element | Name: PDMonitor6 Type: INT Description: PD monitor 6 |
| Element | Name: PDMonitor7 Type: INT Description: PD monitor 7 |
| Element | Name: PDMonitor8 Type: INT |

| | |
|--|---------------------------|
| | Description: PD monitor 8 |
|--|---------------------------|

| User Interface Type | |
|--------------------------------------|---|
| TYPE PhotodetectorDCMonitorsStruct : | |
| STRUCT | |
| PDMonitor1: LREAL; | |
| PDMonitor2: LREAL; | |
| PDMonitor3: LREAL; | |
| PDMonitor4: LREAL; | |
| PDMonitor5: LREAL; | |
| PDMonitor6: LREAL; | |
| PDMonitor7: LREAL; | |
| PDMonitor8: LREAL; | |
| END_STRUCT | |
| END_TYPE | |
| Type name | PhotodetectorDCMonitorsStruct |
| Description | Structure of the user interface tags that are used to control the PD monitors |
| Definition | STRUCT |
| Output Tag | Name: PDMonitor1 Type: LREAL Description: PD monitor 1 |
| Output Tag | Name: PDMonitor2 Type: LREAL Description: PD monitor 2 |
| Output Tag | Name: PDMonitor3 Type: LREAL Description: PD monitor 3 |
| Output Tag | Name: PDMonitor4 Type: LREAL Description: PD monitor 4 |
| Output Tag | Name: PDMonitor5 Type: LREAL Description: PD monitor 5 |
| Output Tag | Name: PDMonitor6 Type: LREAL Description: PD monitor 6 |
| Output Tag | Name: PDMonitor7 Type: LREAL Description: PD monitor 7 |
| Output Tag | Name: PDMonitor8 Type: LREAL Description: PD monitor 8 |

| | |
|---|---|
| Function Block FUNCTION_BLOCK PhotodetectorDCMonitorFB VAR_INPUT PhotodetectorsDCMonitorsIn: PhotodetectorsDCMonitorsInStruct; END_VAR VAR_IN_OUT PhotodetectorsDCMonitors: PhotodetectorsDCMonitorsStruct; END_VAR VAR END_VAR VAR_IN_OUTPUT END_VAR | |
| Name | PhotodetectorDCMonitorFB |
| Description | Controls the photodetector DC monitors |
| Input argument | Name: PhotodetectorsDCMonitorsIn Type: PhotodetectorsDCMonitorsInStruct Description: Input hardware structure |
| In/out argument | Name: PhotodetectorsDCMonitors Type: PhotodetectorsDCMonitorsStruct Description: User Interface structure |