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TwinCAT Library for
PZT Mirrors

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| **Library** |
| Title | PZTMirror |
| Version | 1 |
| TwinCAT version | 2.11 |
| Name space | – |
| Author | Alexa Staley, Daniel Sigg |
| Description | Controls PZT mirrors.  |
| Error codes | None |
| Library dependencies | Error |

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| **Hardware Input Type**TYPE PZTMirrorInStruct :STRUCT HV10MonitorPZTX: INT;PositionSensorPZTX: INT; HV10MonitorPZTY: INT;PositionSensorPZTY: INT;END\_STRUCTEND\_TYPE |
| Type name | PZTMirrorInStruct |
| Description | Structure of the hardware input that are wired up for the PZT mirrors |
| Definition | STRUCT |
| Element | Name: HV10MonitorPZTXType: INTDescription: HV10 input monitor of PZT mirror X |
| Element | Name: PositionSensorPZTXType: INTDescription: Position sensor input of PZT mirror X |
| Element | Name: HV10MonitorPZTYType: INTDescription: HV10 input monitor of PZT mirror Y |
| Element | Name: PositionSensorPZTXType: INTDescription: Position sensor input of PZT mirror Y |

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| **User Interface Type**TYPE PZTMirrorStruct :STRUCTHV10MonitorPZTX: LREAL;PositionSensorPZTX: LREAL; HV10MonitorPZTY: LREAL;PositionSensorPZTY: LREAL;END\_STRUCTEND\_TYPE |
| Type name | PZTMirrorStruct |
| Description | Structure of the user interface tags that are used to control the PZT mirrors |
| Definition | STRUCT |
| Output Tag | Name: HV10MonitorPZTXType: LREALDescription:  |
| Output Tag | Name: PositionSensorPZTXType: LREALDescription:  |
| Output Tag | Name: HV10MonitorPZTYType: LREALDescription:  |
| Output Tag | Name: PositionSensorPZTYType: LREALDescription:  |

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| **Function Block**FUNCTION\_BLOCK PZTMirrorFBVAR\_INPUT Request: SaveRestoreEnum;PZTMirrorIn: PZTMirrorInStruct;END\_VARVAR\_OUTPUTEND\_VARVAR\_IN\_OUT PZTMirrorInit; PZTMirrorStruct; PZTMirror: PZTMirrorStruct;END\_VARVAREND\_VAR |
| Name | PZTMirrorFB |
| Description | Controls the PZT mirrors.  |
| Input argument | Name: RequestType: SaveRestoreEnumDescription: Request save/restore/safemode or noop |
| Input argument | Name: PZTMirrorInType: PZTMirrorInStructDescription: Input hardware structure |
| In/out argument | Name: PZTMirrorInitType: PZTMirrorStructDescription: Save/restore variable in persistent memory |
| In/out argument | Name: PZTMirrorType: PZTMirrorStructDescription: User Interface structure |

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| **Visual** |
| Name | PZTMirrorViz |
| Description | Displays monitors and sensors for the PZT mirrors |
| Placeholder | Name: PZTMirrorType: PZTMirrorStructDescription: PZT Mirror structure |