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TwinCAT Library for LTC

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LIGO Scientific Collaboration

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of the LIGO Laboratory.

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| **Library** |
| Title | LTC |
| Version | 1 |
| TwinCAT version | V2.11.0 |
| Name space |  |
| Author | Daniel Sigg |
| Description | ALS laser temperature controller |
| Error Code | None |
| Library Dependencies | None |

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| **User Interface Type**TYPE LTCInStruct :STRUCT INPUT\_SIGNAL: LREAL;END\_STRUCT;END\_TYPE; |
| Type Name | LaserPowerInStruct |
| Description | Structure used in the user interface |
| Definition | STRUCT |
| Output Tag | Name: INPUT\_SIGNALType: LREALDescription: Input structure |

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| **User Interface Type**TYPE LTCOutStruct :STRUCT OUTPUT\_SIGNAL: LREAL;END\_STRUCT;END\_TYPE; |
| Type Name | LTCOutStruct |
| Description | Structure used in the user interface |
| Definition | STRUCT |
| Output Tag | Name: OUTPUT\_SIGNALType: LREALDescription: Output structure |

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| **User Interface Type**TYPE LTCStruct :STRUCT IN\_MON: LREAL; INPUT\_SIGNAL: LREAL; S1\_MON: LREAL; S2\_MON: LREAL; SLIDER\_SUM: LREAL; ENAGE\_LOOP: BOOL; CTRL\_ADD: BOOL; ENGAGE\_FILTER\_1: BOOL; ENGAGE\_INT\_1: BOOL; ENGAGE\_FILTER\_2: BOOL; ENGAGE\_INT\_2: BOOL; POLARITY: BOOL; ENGAGE\_1: BOOL; ENGAGE\_2: BOOL; OVERRIDE: BOOL; RESET: BOOL; INPUT\_GAIN: LREAL; FILTER\_CONST\_1: LREAL; FILTER\_CONST\_2: LREAL; INT\_CONST\_1: LREAL; INT\_CONST\_2: LREAL; MIX\_RATIO\_1: LREAL; MIX\_RATIO\_2: LREAL; SLIDER\_1G: INT; SLIDER\_100M: INT; SLIDER\_10M: INT; SLIDER\_1M: INT; SLIDER\_100K: INT;END\_STRUCT;END\_TYPE; |
| Type Name | LTCStruct |
| Description | Structure used in the user interface |
| Definition | STRUCT |

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| **Function Block**TYPE LTCFB:VAR\_OUTPUT LTCOut: LTCOutStruct;END\_VAR;VAR\_IN\_OUT LTC: LTCStruct;END\_VAR:END\_TYPE; |
| Type Name | LTCFB |
| Description | Function block used to monitor the laser power  |
| Definition | Function Block |
| Output Argument | Name: LTCOutType: LTCOutStructDescription: Output structure |
| In/out Argument | Name: LTCType: LTCStructDescription: User interface structure |