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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\_SIGNAL  Type: LREAL  Description: 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\_SIGNAL  Type: LREAL  Description: 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: LTCOut  Type: LTCOutStruct  Description: Output structure |
| In/out Argument | Name: LTC  Type: LTCStruct  Description: User interface structure |