

(\* DECLARATION \*)

+-----+

| LIMITS\_ |

| ALARM |

REAL--|H QH|--BOOL

REAL--|X Q|--BOOL

REAL--|L QL|--BOOL

REAL--|EPS |

+-----+

FUNCTION\_BLOCK LIMITS\_ALARM

VAR\_INPUT

H : REAL; (\* High limit \*)

X : REAL; (\* Variable value \*)

L : REAL; (\* Lower limit \*)

EPS : REAL; (\* Hysteresis \*)

END\_VAR

VAR\_OUTPUT

QH : BOOL; (\* High flag \*)

Q : BOOL; (\* Alarm output \*)

QL : BOOL; (\* Low flag \*)

END\_VAR

END\_FUNCTION\_BLOCK

(\* Function block body in FBD language \*)

HIGH\_ALARM

+-----+

| HYSTERESIS |

X-----+-----|XIN1 Q|-----QH

+---+ w2 | |

H-----| - |-----|XIN2 |

+---| | | |

| +---+ | |

+-----|EPS | +-----+

+---+w1 | | +-----+ +---| >=1 |

EPS --| / |--| | | |

2.0 --| | | | LOW\_ALARM +---| |

+---+ | | +-----+ | +-----+

| +---+ w3 | | HYSTERESIS |

L -----| + |-----|XIN1 Q|-----QL

| | | |

+---| | +---|XIN2 |

| +---+ |

+-----|EPS |

+-----+