PLCopen - Technical Committee 5

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Safety Software

Technical Specification

Part 1: Concepts and Function Blocks

Version 1.0 – Official Release
Compliance Statement Only

Date: April 20, 2006.

Appendix 1. <u>Compliance Procedure and Compliance List</u>

Listed in this Appendix are the requirements for the compliance statement from the supplier of the safety specification. The compliance statement consists of two main groups:

1. Reduction in programming languages and functionality (see "Appendix 1.2 Reduction in the Development Environment").
2. The definition of a set of function blocks with safety-related functionality (see "Appendix 1.3 Overview of the Function Blocks").

The supplier must fill out the tables for their implementation, according to their product, committing their support to the specification itself.

By submitting these tables to PLCopen, and following approval by PLCopen, the list will be published on the PLCopen website (http://www.plcopen.org) as specified in "Appendix 2 The PLCopen Safety Logo and Its Use" below.

In addition to this approval, the supplier is provided with access and usage rights for the PLCopen Safety logo, as described in Appendix 2 The PLCopen Safety Logo and Its Use.

Appendix 1.1.   Supplier Statement

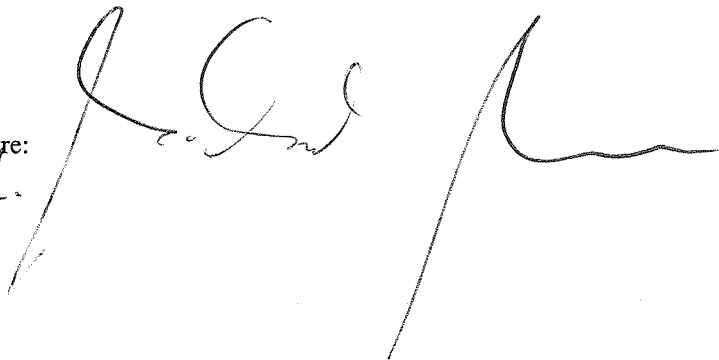|	
Supplier name	LEUZE ELECTRONIC GMBH + CO.KG
Supplier address	LIEBIGSTR. 4
City	82256 FUERSTENFELDBRUCK
Country	DEUTSCHLAND
Phone	+49(0)8141-5350-185
Fax	+49(0)8141-5350-190
Website	www.leuze.de
Product name	MSIsafesoft (Labelprodukt von SAFECONF by Phoenix Contact)
Product version	2.7
Release date	Dez. 2010
Certified by	TÜV-Rheinland

I hereby state that the following tables as filled out and submitted correspond to our product and the accompanying user manual, as stated above.

Name of representative: MICHAEL MAYR

Date of signature (dd/mm/yyyy):05.11.2010

Signature:

Appendix 1.2. Applicable reductions in the Development Environment

Supported User Levels (See Section 4)	Supported	Comments (< 48 Characters)
Basic level	x	
Extended level	x	
System level	-	How is it supported?

Table 1: Supported user levels

Supported Programming Languages	Supported	Comments (< 48 Characters)
Function Block Diagram, FBD	x	
Ladder Diagram, LD	-	

Table 2: Supported programming languages

Supported Data Types	Supported	Comments (< 48 Characters)
SAFEBOOL	x	
BOOL	x	
INT	-	
DINT	-	
REAL	-	
WORD	-	
TIME	-	
Other ANY_BIT	-	Specifiy which
Other ANY_INT	-	Specifiy which
Other ANY_REAL	-	Specifiy which
ANY_DATE	-	Specifiy which
STRING	-	Specifiy which

Table 3: Supported data types

Supported Functions and FBs – Basic Level	Supported	Comments (< 48 Words)
AND	x	
OR	x	Operation of only SAFEBOOL permitted - see Ch. 4.4
Type Conversion functions	x	Specifiy which - implizit
TON	x	
TOF	x	
TP	x	
CTU	x	
CTD	x	
CTUD	x	
Others?	-	Specifiy which

Table 4: Supported Functions and Function Blocks at Basic Level

Supported Functions and FBs – Extended Level	Supported	Comments (< 48 Words)
AND	x	
OR	x	
XOR	x	
NOT	x	
ADD	-	
MUL	-	
SUB	-	
DIV	-	
GT, GE, EQ, LE, LT, NE	-	Specify which
Selection functions	-	Specify which
Type conversion functions	x	Specify which - implizit
Time functions		Specify which
TON	x	
TOF	x	
TP	x	
CTU	x	
CTD	x	
CTUD	x	
Bistable FBs	x	Specify which - implizit
Edge detection	x	Specify which - implizit
Others?		Specify which

Table 5: Supported Functions and Function Blocks at Extended Level

Appendix 1.3.   Overview of the supported Function Blocks

Function Blocks	Supported	Comments (<= 48 Characters)
SF_Equivalent	x	
SF_Antivalent	x	
SF_ModeSelector	x	
SF_EmergencyStop	x	
SF_ESPE	x	
SF_SafeStop1	-	
SF_SafeStop2	-	
SF_SafetyGuardMonitoring	x	
SF_SafelyLimitedSpeed	-	
SF_TwoHandControlTypeII	x	
SF_TwoHandControlTypeIII	x	
SF_GuardLocking	x	
SF_TestableSafetySensor	x	
SF_MutingSeq	x	
SF_MutingPar	x	
SF_MutingPar_2Sensors	x	
SF_EnableSwitch	x	
SF_SafetyRequest	-	
SF_OutControl	x	
SF_EDM	x	

Table 6: Overview of the function blocks