STRATON Compliance list to IEC 61131-3 ed3

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IEC 61131-3 "PLC	Programming	Languages"
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STRATON AUTOMATION STRATON Version 12.0 March 2023 Implementer: Product:

Date:

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 1 – Character set					
1	ISO/IEC 10646 2011	✓	✓	✓	✓	
2a	Lower case characters	✓	✓	✓	✓	
2b	Number sign	✓	✓	✓	✓	
2c	Dollar sign	✓	✓	✓	✓	

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 2 - Identifiers					
1	Upper case letters and numbers	✓	✓	✓	✓	
2	Upper and lower case letters, numbers, embedded underscore	✓	✓	✓	✓	
3	Upper and lower case, numbers, leading or embedded underscore	✓	✓	✓	✓	

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 3 – Comments					
1	Single-line comment with //			✓	✓	
2a	Multi-line comment with (* *)			✓	✓	
2b	Multi-line comment with /* */					
3a	Nested comment with (* (* *)*)					
3b	Nested comment with /* /* */ */					

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 4 - Pragma					
1	Pragma with { } curly brackets	✓	✓	✓	✓	Non IEC
						names

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 5 – Numeric Literals					
1	Integer literal	✓	✓	✓	✓	
2	Real literal	✓	✓	✓	✓	
3	Real literals with exponent	✓	✓	✓	✓	
4	Binary literal	✓	✓	✓	✓	
5	Octal literals				✓	
6	Hexadecimal literal	✓	√	✓	✓	
7	Boolean zero and one	✓	✓	✓	✓	
8	Boolean FALSE and TRUE	✓	✓	√	✓	
9	Typed literal	√	✓	√	√	

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 6 – Character string literals					
	Single-byte characters or character strings with ' '					
1a	Empty string (length zero)	✓	✓	✓	✓	
1b	String of length one or character CHAR containing a single	✓	✓	✓	✓	
	character					

1c	String of length one or character CHAR containing the "space" character	√	✓	✓	√	
1d	String of length one or character CHAR containing the "single quote" character	✓	✓	✓	✓	
1e	String of length one or character CHAR containing the "double quote" character	✓	✓	✓	✓	
1f	Support of two character combinations of Table 7	✓	✓	✓	✓	
1g	Support of a character representation with '\$' and two hexadecimal characters	✓	✓	✓	√	
	Double-byte characters or character strings with "					
2a	Empty string (length zero)	✓	✓	✓	✓	
2b	String of length one or character WCHAR containing a single character	✓	√	✓	✓	
2c	String of length one or character WCHAR containing the "space" character	✓	✓	✓	√	
2d	String of length one or character WCHAR containing the "single quote" character	✓	✓	✓	✓	
2e	String of length one or character WCHAR containing the "double quote" character	✓	✓	✓	✓	
2f	Support of two character combinations of Table 7					
2h	Support of a character representation with '\$' and four hexadecimal characters	✓	✓	✓	✓	
	Single-byte typed characters or string literals with #					
3a	Typed string					
3b	Typed character					
	Double-byte typed string literals with					
4a	Typed double-byte string (using "double quote" character)	✓	√	✓	✓	
4b	Typed double-byte character (using "double quote" character)	✓	✓	✓	✓	
4c	Typed double-byte string (using "single quote" character)					
4d	Typed double-byte character (using "single quote" character)					

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 7 - Two-character combinations in character					
	strings					
1	Dollar sign	✓	✓	>	✓	
2	Single quote	✓	✓	√	✓	
3	Line feed	✓	✓	>	✓	
4	Newline	✓	✓	>	✓	
5	Form feed (page)	✓	✓	>	✓	
6	Carriage return	✓	✓	>	✓	
7	Tabulator	✓	√	√	✓	
8	Double quote					

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 8 – Duration literals					
1a	d	✓	✓	✓	✓	
1b	h	✓	✓	✓	✓	
1c	m	✓	✓	✓	✓	
1d	S	✓	✓	✓	✓	
1e	ms	✓	✓	✓	✓	
1f	us					

1g	ns					
2a	short prefix without underscore	✓	\	✓	✓	
2b	long prefix without underscore	✓	✓	✓	✓	
3a	short prefix with underscore	✓	✓	✓	✓	
3b	long prefix with underscore	✓	✓	✓	✓	

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 9 - Date and time of day literals					
1a	Date literal (long prefix)					
1b	Date literal (short prefix)					
2a	Long date literal (long prefix)					
2b	Long date literal (short prefix)					
3a	Time of day literal (long prefix)					
3b	Time of day literal (short prefix)					
4a	Long time of day literal (short prefix)					
4d	Long time of day literal (long prefix)					
5a	Date and time literal (long prefix)					
5b	Date and time literal (short prefix)					
6a	Long date and time literal (long prefix)					
6b	Long date and time literal (short prefix)					

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 10 - Elementary data types					
1	Boolean BOOL	✓	✓	✓	✓	
2	Short integer SINT	✓	✓	✓	✓	
3	Integer INT	✓	✓	✓	✓	
4	Double integer DINT	✓	✓	✓	✓	
5	Long integer LINT	✓	✓	✓	✓	
6	Unsigned short integer USINT	✓	✓	✓	✓	
7	Unsigned integer UINT	✓	✓	✓	✓	
8	Unsigned double integer UDINT	✓	✓	✓	✓	
9	Unsigned long integer ULINT	✓	✓	✓	✓	
10	Real numbers REAL	✓	✓	✓	✓	
11	Long reals LREAL	✓	✓	✓	✓	
12a	Duration TIME	✓	✓	✓	✓	
12b	Duration LTIME					
13a	Date DATE					
13b	Long date LDATE					
14a	Time of day TOD					
14b	Time of day LTOD					
15a	Date and time of day DT					
15b	Date and time of day LDT					
16a	Variable-length single-byte character string STRING	✓	✓	✓	✓	
16b	Variable-length double-byte character string WSTRING	✓	✓	✓	✓	
17a	Single-byte character CHAR					
17b	Double-byte character WCHAR					
18	Bit string 8 BYTE	✓	✓	✓	✓	
19	Bit string 16 WORD	✓	✓	✓	✓	
20	Bit string 32 DWORD	✓	✓	✓	✓	
21	Bit string 64 LWORD	✓	✓	✓	✓	

	Table 11 - Declaration of user-defined data types and					
1 a b	initialization		,	,	,	
1a,b	Enumerated data types	√	√	✓	✓	
2a,b	Data types with named values					
3a,b	Subrange data types		,	,	,	
4a,b	Array data types	√	√	√	√	
5a,b	FB types and classes as array elements	√	√	√	√	
6a,b	Structured data type	✓	✓	✓	√	
7a,b	FB types and classes as structure elements					
8a,b	Structured data type with relative addressing					
9a,b	Structured data type with relative addressing and overlap					
10a,b	Directly represented elements of a structure – partly specified					
11a,b	Directly derived data types					
12	Initialization using constant expressions	✓	✓	✓	✓	
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 12 - Reference operations					
1	Declaration of a reference type					
2a	Assignment reference to reference					
2b	Assignment reference to parameter of function, function block and method					
2c	Comparison with NULL					
3a	REF(<variable>)</variable>					
3b	REF(<function block="" instance="">)</function>					
4	<reference>^</reference>					
l			1		1	
Feat	Table / Description	ID	FBD	II.	ST	Notes
Feat	Table / Description Table 13 - Declaration of variables	LD	FBD	IL	ST	Notes
	Table 13 - Declaration of variables					Notes
1	Table 13 - Declaration of variables Variable with elementary data type	√	√	√	√	Notes
1	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type	√ √	√ √	√ √	√ √	Notes
1 2 3	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array	√	√	√	√	Notes
1 2 3	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type	√ √	√ √	√ √	√ √	Notes
1 2 3 4	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference	\frac{1}{}	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	\frac{1}{}	
1 2 3 4	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description	√ √	√ √	√ √	√ √	Notes
1 2 3 4 Feat	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description Table 14 - Initialization of variables	\frac{}{}	√ √ √ FBD	\frac{1}{\sqrt{1}}	√ √ √ ST	
1 2 3 4 <i>Feat</i>	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description Table 14 - Initialization of variables Initialization of a variable with elementary data type	\frac{\frac{1}{\finn}}}}}}}}{\frac{\frac{1}{\finn}}}}}}}}}{\frac{\frac{1}{\fit}}}}}}{\f	√ √ √ √ √ √ √ √ √ √ √ √ √ √ √ √ √ √ √	/ / / / / / / / /	\frac{\sqrt{1}}{\sqrt{2}}	
1 2 3 4 Feat	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description Table 14 - Initialization of variables Initialization of a variable with elementary data type Initialization of a variable with user-defined data type	\(\) \(\)	√ √ √ √	\(\) \(\	\(\) \(\)	
1 2 3 4 Feat 1 2	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description Table 14 - Initialization of variables Initialization of a variable with elementary data type Initialization of a variable with user-defined data typ Array	\frac{\frac{1}{\finn}}}}}}}}{\frac{\frac{1}{\finn}}}}}}}}}{\frac{\frac{1}{\fit}}}}}}{\f	√ √ √ √ √ √ √ √ √ √ √ √ √ √ √ √ √ √ √	/ / / / / / / / /	\frac{\sqrt{1}}{\sqrt{2}}	
1 2 3 4 Feat 1 2 3 4 4	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description Table 14 - Initialization of variables Initialization of a variable with elementary data type Initialization of a variable with user-defined data typ Array Declaration and initialization of constants		\(\) \(\)		\frac{1}{\sqrt{1}} 1	
1 2 3 4 Feat 3 4 5 5	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description Table 14 - Initialization of variables Initialization of a variable with elementary data type Initialization of a variable with user-defined data typ Array Declaration and initialization of constants Initialization using constant expressions	\(\) \(\)	√ √ √ √	\(\) \(\	\(\) \(\)	
1 2 3 4 Feat 1 2 3 4 5 5	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description Table 14 - Initialization of variables Initialization of a variable with elementary data type Initialization of a variable with user-defined data typ Array Declaration and initialization of constants		\(\) \(\)		\frac{1}{\sqrt{1}} 1	
1 2 3 4 Feat 1 2 3 4 5 6	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description Table 14 - Initialization of variables Initialization of a variable with elementary data type Initialization of a variable with user-defined data typ Array Declaration and initialization of constants Initialization of a reference Table / Description		\(\) \(\)		\frac{1}{\sqrt{1}} 1	
1 2 3 4 5 6 Feat	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description Table 14 - Initialization of variables Initialization of a variable with elementary data type Initialization of a variable with user-defined data typ Array Declaration and initialization of constants Initialization of a reference Table / Description Table 15 - Variable-length ARRAY variables	LD V V V V V V V V V	\(\) \(\)		\(\string \) \(\string \	Notes
1 2 3 4 5 6 Feat 1	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description Table 14 - Initialization of variables Initialization of a variable with elementary data type Initialization of a variable with user-defined data typ Array Declaration and initialization of constants Initialization using constant expressions Initialization of a reference Table / Description Table 15 - Variable-length ARRAY variables Declaration using *	LD V V V V V V V V V	\(\) \(\)		\(\string \) \(\string \	Notes
1 2 3 4 5 6 Feat 1 2 2 3	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description Table 14 - Initialization of variables Initialization of a variable with elementary data type Initialization of a variable with user-defined data typ Array Declaration and initialization of constants Initialization using constant expressions Initialization of a reference Table / Description Table 15 - Variable-length ARRAY variables Declaration using * Graphical representation	LD V V V V V V V V V	\(\) \(\)		\(\string \) \(\string \	Notes
1 2 3 4 5 6 Feat 1 2 2 1 1 2 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description Table 14 - Initialization of variables Initialization of a variable with elementary data type Initialization of a variable with user-defined data typ Array Declaration and initialization of constants Initialization using constant expressions Initialization of a reference Table / Description Table 15 - Variable-length ARRAY variables Declaration using *	LD V V V V V V V V V	\(\) \(\)		\(\string \) \(\string \	Notes
1 2 3 4 5 6 Feat 1 2 2 a 2 b	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description Table 14 - Initialization of variables Initialization of a variable with elementary data type Initialization of a variable with user-defined data typ Array Declaration and initialization of constants Initialization using constant expressions Initialization of a reference Table / Description Table 15 - Variable-length ARRAY variables Declaration using * Graphical representation Graphical representation		FBD FBD FBD		\(\string \) \(\string \	Notes
1 2 3 4 5 6 Feat	Table 13 - Declaration of variables Variable with elementary data type Variable with user-defined data type Array Reference Table / Description Table 14 - Initialization of variables Initialization of a variable with elementary data type Initialization of a variable with user-defined data typ Array Declaration and initialization of constants Initialization using constant expressions Initialization of a reference Table / Description Table 15 - Variable-length ARRAY variables Declaration using * Graphical representation	LD V V V V V V V V V	\(\) \(\)		\(\string \) \(\string \	Notes

	✓	√	/	,	
			✓	✓	
	✓	✓	✓	√	
	✓	✓	√	✓	
	✓	✓	✓	✓	
	✓	✓	✓	√	
ng using "."	✓	✓	✓	✓	
oles using asterisk "*"					
	LD	FBD	IL	ST	Notes
cess of ANY_BIT variables					
ł	ing using "." bles using asterisk "*" ccess of ANY_BIT variables	ing using "." bles using asterisk "*"	Ing using "." LD FBD	Ing using "." LD FBD IL	

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 17 - Partial access of ANY_BIT variables					
1a	BYTE – bit					
1b	WORD – bit					
1c	DWORD – bit					
1d	LWORD – bit					
2a	WORD – byte					
2b	DWORD – byte					
2c	LWORD – byte					
3a	DWORD – word					
3b	LWORD – word					
4	LWORD - dword					

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 18 – Execution control graphically using EN and					
	ENO					
1	Usage without EN and ENO	✓	✓			
2	Usage of EN only					
3	Usage of ENO only					
4	Usage of EN and ENO	✓	✓			

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 19 – Function declaration					
1a	Without result	✓	✓	✓	✓	
1b	With result	✓	✓	✓	✓	
2a	Inputs	✓	✓	√	✓	
2b	Outputs	✓	✓	✓	✓	
2c	In-outs	✓	✓	√	√	
2d,e	Temp variables	✓	✓	√	✓	
2f	External variables	✓	✓	√	√	Implicit
2g	External constants	✓	✓	√	✓	Implicit
3a	Initialization of inputs					
3b	Initialization of outputs					
3c	Initialization of temp variables	✓	>	\	✓	
	EN/ENO input and output					

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 20 – Function call					
1a	Complete formal call (textual only)	✓	✓	✓	✓	
1b	Incomplete formal call (textual only)					

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	New formed cell (textual entry)		1 ,			
2	Non-formal call (textual only)	√	√	√	√	
3	Function without function result	✓	✓	✓	✓	
4	Graphical representation	✓	✓			
5	Usage of negated boolean input and output in graphical		✓			Input only
	representation					
6	Graphical usage of VAR_IN_OUT					
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 21 – Typed and overloaded functions					
1a	Overloaded function	✓	✓	✓	✓	
1b	Conversion of inputs	✓	✓	✓	✓	
2a	Typed functions					
2b	Conversion	✓	✓	✓	✓	ANY_TO
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 22 – Data type conversion function					
1a	Typed conversion	√	√	√	√	ANY_TO
1b	Overloaded conversion	√	√	√	√	ANY_TO
2a	"Old" overloaded truncation	√	√	<u>√</u>	√	
2b	Typed truncation input_TRUNC_output			-		
2c	Overloaded truncation TRUNC output					
3a	Typed input_BCD_TO_output					
3b	Overloaded BCD_TO_output	√	√	√	√	DINT
4a	Typed input_TO_BCD_output	1	•	•	1	
4b	Overloaded input_TO_BCD_output	√	√	√	√	DINT
			,] 2
Feat	Table / Description	LD	FBD	IL	ST	Notes
Геаг	Table 23 – Data type conversion of numeric data types	LD	ГБО	IL	31	NOTES
190	TO	√	√	√	√	ANY_TO_
190	10		V	V	V	ANT_TO_
		1	1	1	1	1
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 24 – Data type conversion of bit data types					
121	_TO_ (bit data)	✓	✓	✓	✓	ANY_TO_
2228	_TO_ (CHAR/WCHAR)					
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 25 – Data type conversion of bit and numeric					
	types					
176	_TO_	✓	✓	✓	✓	ANY_TO_
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 26 - Data type conversion of date and time types					
4 40	TO					
112	1O_					· · · · · · · · · · · · · · · · · · ·
112	_10_	1	•			
		LD	FBD	IL	ST	Notes
Feat	Table / Description	LD	FBD	IL	ST	Notes
Feat	Table / Description Table 27 - Data type conversion of character types	LD	FBD	IL	ST	Notes
	Table / Description	LD	FBD	IL	ST	Notes
Feat	Table / Description Table 27 - Data type conversion of character types _TO_					
Feat	Table / Description Table 27 - Data type conversion of character types	LD LD	FBD	IL IL	ST	Notes

1	ABS	✓	✓	✓	✓	
2	SQRT	✓	✓	✓	✓	
3	LN	✓	✓	✓	✓	
4	LOG	✓	✓	√	✓	
5	EXP	✓	✓	√	✓	
6	SIN	✓	✓	√	✓	
7	COS	✓	\	\	✓	
8	TAN	✓	✓	√	✓	
9	ASIN	✓	✓	✓	✓	
10	ACOS	✓	✓	✓	✓	
11	ATAN	✓	✓	✓	✓	
12	ATAN2	✓	✓	✓	✓	

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 29 – Arithmetic functions					
1	ADD	✓	✓	✓	✓	
2	MUL	✓	✓	✓	✓	
3	SUB	✓	✓	✓	✓	
4	DIV	✓	✓	✓	✓	
5	MOD	✓	✓	✓	✓	
6	EXPT	✓	✓	✓	✓	
7	MOVE	✓	✓	✓	✓	

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 30 – Bit shift functions					
1	SHL	✓	✓	✓	✓	
2	SHR	✓	✓	✓	✓	
3	ROL	✓	✓	✓	✓	
4	ROR	✓	✓	✓	✓	

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 31 – Bitwise Boolean functions					
1	AND	✓	✓	✓	✓	
2	OR	✓	✓	✓	✓	
3	XOR	✓	✓	✓	✓	
4	NOT	✓	✓	✓	✓	

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 32 – Selection functions					
1	MOVE	✓	✓	√	✓	
2	SEL	✓	✓	✓	✓	
3	MAX	✓	✓	✓	✓	
4	MIN	✓	✓	✓	✓	
5	LIMIT	✓	✓	√	✓	
6	MUX	✓	✓	\	✓	

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 33 – Comparison functions					
1	GT	✓	✓	✓	✓	
2	GE	✓	✓	✓	✓	
3	EQ	✓	✓	✓	✓	
4	LE	✓	✓	✓	✓	

5	LT	✓	✓	✓	✓	
6	NE	✓	✓	√	✓	
		•			•	
Feat	Table / Description	LD	FBD	IL	ST	Notes
7 001	Table 34 – Character string functions		, 55		0,	710100
1	LEN	√	√	√	√	
2	LEFT	<i>\</i>	√	√	√	
3	RIGHT	√	√	√	√	
4	MID	√	√	√	√	
5	CONCAT	√	√	√	√	
6	INSERT	√	√	√	√	
7	DELETE	\ \	√	√	√	
8	REPLACE	√	√	√	√	
9	FIND	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\ \	√	√ √	
	TIND		_ v	_ v		
Feat	Table / Description	LD	FBD	IL	ST	Notes
геаг	Table / Description Table 35 – Numerical functions of time and duration	LD	רפט	IL	31	NOLES
	data types					
13	ADD	√	√	√	√	1a only
49	SUB	√	√ √	√ √	√ √	4a only
10	MUL	√	✓ ✓	✓ ✓	√ √	10b only
11	DIV	√	√ √	✓ ✓	√ √	11b only
	DIV	V	V	V	V	1 1D Offig
	T 11 / 12	1.5	L 500	.,		T
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 36 – Additional functions of time data types CONCAT and SPLIT					
18	CONCAT and SPLIT					
10						
	T // /D / //	1.5				T A
Feat	Table / Description	LD	FBD	IL	ST	Notes
4	Table 37 – Function for endianess conversion					
1	TO_BIG_ENDIAN					
2	TO_LITTLE_ENDIAN BIG_ENDIAN_TO		-			
3	LITTLE_ENDIAN_TO					
4	LITTLE_ENDIAN_TO					
	T 11 / 12	1.5	L 500	.,		T
Feat	Table / Description	LD	FBD	IL	ST	Notes
1	Table 38 – Functions of enumerated data types	-	,	,	,	
2	SEL MUX	√	√	√	√	
		√	√	√	√	
3	EQ NE	√	√	√	√ /	
4	INC	✓	✓	✓	✓	<u> </u>
	T = / =				T ===	
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 39 – Validate functions					
1	IS_VALID					
2	IS_VALID_BCD					
	Ţ	_		ı	1	T
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 40 – Function block type declaration					
1	Declaration of function block type	✓	✓	✓	✓	
2a	Declaration of inputs	✓	✓	✓	✓	
2b	Declaration of outputs	✓	✓	✓	✓	

Declaration of in-outs							
Declaration of temporary variables	20	Declaration of in outs	T /			T /	1
Declaration of static variables			_			+	
2f.g							1 11 14
Sa., D Initialization V							<u> </u>
4 Carphical call with negated bolean input and output Sa,b Graphical call with separate assignment of input Sa,b Cardial with function block instance name as input Sa,b Carphical call with function block instance name as external variable Sa (Sa, R, Q1) Sa (Sa, R, R, Q1) Sa (Sa, R, R, Q1)			✓			+	Implicit
Ga.b. Textual declaration of edge inputs			✓	✓	✓	✓	
Feat Table / Description LD FBD IL ST Notes	4,5	RETAIN, NON_RETAIN					
Feat Table / Description LD FBD IL ST Notes	6a,b	Textual declaration of edge inputs					
Table 41 - Function block instance declaration Declaration of FB instance(s) Declaration of FB instance with initialization of its variables Feat Table / Description Table 42 - Function block call Complete formal call (textual only) Incomplete formal call	7	Graphical declaration of edge input					
Table 41 - Function block instance declaration Declaration of FB instance(s) Declaration of FB instance with initialization of its variables Feat Table / Description Table 42 - Function block call Complete formal call (textual only) Incomplete formal call							
Table 41 - Function block instance declaration Declaration of FB instance(s) Declaration of FB instance with initialization of its variables Feat Table / Description Table 42 - Function block call Complete formal call (textual only) Incomplete formal call	Feat	Table / Description	ID	FRD	11	ST	Notes
Declaration of FB instance(s)	7 001			1 00	12	0,	710100
Declaration of FB instance with initialization of its variables	1		./	./	./	./	
Feat Table / Description LD FBD IL ST Notes			V	V	V	V	
Table 42 – Function block call 1 Complete formal call (textual only) 2 Incomplete formal call (textual only) 3 Graphical call 4 Graphical call with negated boolean input and output 5 Graphical call with usage of VAR_IN_OUT 6 Textual call with separate assignment of input 7 Fextual call with separate assignment of input 8 Graphical call with separate assignment of input 7 Textual output read after FB call 8 Graphical call with function block instance name as input 9 Graphical call with function block instance name as input 9 Graphical call with function block instance name as input 9 Graphical call with function block instance name as variable 10 Graphical call with function block instance name as variable 11 Textual call with function block instance name as variable 12 Graphical call with function block instance name as variable 13 Textual call with function block instance name as variable 14 Table / Description 15 Graphical call with function block instance name as variable 16 Table 43 – Standard bistable function blocks 17 Table 43 – Standard bistable function blocks 18 SR (SI,R,Q1) 29 RS(SET,RESET,Q1) 20 RS(SET,RESET,Q1) 21 CD FBD IL ST Notes 21 Table / Description 22 F_RIG 23 Variable 45 – Standard counter function blocks 24 Table / Description 25 Feat Table / Description 26 Table 45 – Standard counter function blocks 27 Table 45 – Standard counter function blocks 28 Table 45 – Standard counter function blocks 38 Table 45 – Standard counter function blocks 39 Table 45 – Standard counter function blocks 40 Table 45 – Standard counter function blocks 41 Table / Description 42 Variable 45 – Standard counter function blocks 43 Table 45 – Standard counter function blocks 44 Table / Description 45 Variable 45 – Standard counter function blocks 45 Table 45 – Standard counter function blocks 46 Table 45 – Standard counter function blocks		Decidration of FB instance with initialization of its variables					
Table 42 – Function block call 1 Complete formal call (textual only) 2 Incomplete formal call (textual only) 3 Graphical call 4 Graphical call with negated boolean input and output 5 Graphical call with usage of VAR_IN_OUT 6 Textual call with separate assignment of input 7 Fextual call with separate assignment of input 8 Graphical call with separate assignment of input 7 Textual output read after FB call 8 Graphical call with function block instance name as input 9 Graphical call with function block instance name as input 9 Graphical call with function block instance name as input 9 Graphical call with function block instance name as variable 10 Graphical call with function block instance name as variable 11 Textual call with function block instance name as variable 12 Graphical call with function block instance name as variable 13 Textual call with function block instance name as variable 14 Table / Description 15 Graphical call with function block instance name as variable 16 Table 43 – Standard bistable function blocks 17 Table 43 – Standard bistable function blocks 18 SR (SI,R,Q1) 29 RS(SET,RESET,Q1) 20 RS(SET,RESET,Q1) 21 CD FBD IL ST Notes 21 Table / Description 22 F_RIG 23 Variable 45 – Standard counter function blocks 24 Table / Description 25 Feat Table / Description 26 Table 45 – Standard counter function blocks 27 Table 45 – Standard counter function blocks 28 Table 45 – Standard counter function blocks 38 Table 45 – Standard counter function blocks 39 Table 45 – Standard counter function blocks 40 Table 45 – Standard counter function blocks 41 Table / Description 42 Variable 45 – Standard counter function blocks 43 Table 45 – Standard counter function blocks 44 Table / Description 45 Variable 45 – Standard counter function blocks 45 Table 45 – Standard counter function blocks 46 Table 45 – Standard counter function blocks			T	ı	1	1	1
1 Complete formal call (textual only)	Feat		LD	FBD	IL	ST	Notes
2							
3 Graphical call					✓	✓	
4 Graphical call with negated boolean input and output 5a,b Graphical call with usage of VAR_IN_OUT 6a Textual call with separate assignment of input 6b Graphical call with separate assignment of input 7 Textual output read after FB call 8a,b Textual output assigned in FB call 9a Textual call with function block instance name as input 9b Graphical call with function block instance name as input 10a Textual call with function block instance name as input 10b Graphical call with function block instance name as VAR_IN_OUT 11b Graphical call with function block instance name as external variable 11b Graphical call with function block instance name as external variable 11b Graphical call with function block instance name as external variable Feat Table / Description 1 Table 43 - Standard bistable function blocks 1 a SR (S1R,Q1) 2 b RS(SET,RESET,Q1) 2 c RS(S,R1,Q1) 2 b RS(SET,RESET,Q1) 2 f Table 44 - Standard edge detection function blocks 1 R_TRIG		Incomplete formal call (textual only)			✓	✓	
Sa,b Graphical call with usage of VAR_IN_OUT	3	Graphical call	✓	✓			
6a Textual call with separate assignment of input 6b Graphical call with separate assignment of input 7 Textual output read after FB call 8a,b Textual output assigned in FB call 9a Textual call with function block instance name as input 9b Graphical call with function block instance name as input 10a Textual call with function block instance name as vAR_IN_OUT 10b Graphical call with function block instance name as 10c VAR_IN_OUT 11a Textual call with function block instance name as 10c VAR_IN_OUT 11b Graphical call with function block instance name as external variable 11b Graphical call with function block instance name as 10c VAR_IN_OUT 11a Textual call with function block instance name as external variable 11b Graphical call with function block instance name as 11c VAR_IN_OUT 11a Textual call with function block instance name as external variable 11b Graphical call with function block instance name as 11c VAR_IN_OUT 11a Textual call with function block instance name as external variable 11b Graphical call with function block instance name as 11c VAR_IN_OUT 11a Textual call with function block instance name as external variable 11b Graphical call with function block instance name as external variable 11b Graphical call with function block instance name as external variable 11c VAR_IN_OUT 11a Textual call with function block instance name as external variable 11b Graphical call with function block instance name as external variable 11c VAR_IN_OUT 11a Textual call with function block instance name as external variable 11b Graphical call with function block instance name as external variable 11c VAR_IN_OUT 11a Textual call with function block instance name as external variable 11c VAR_IN_OUT 11c VAR_IN	4	Graphical call with negated boolean input and output		✓			Input only
6b Graphical call with separate assignment of input 7 Textual output read after FB call 8a,b Textual output assigned in FB call 9a Textual call with function block instance name as input 9b Graphical call with function block instance name as input 10a Textual call with function block instance name as input 10b Graphical call with function block instance name as VAR IN_OUT 10b Graphical call with function block instance name as VAR IN_OUT 11a Textual call with function block instance name as VAR IN_OUT 11a Textual call with function block instance name as external variable 11b Graphical call with function block instance name as external variable 11b Graphical call with function block instance name as external variable Feat Table / Description 12a SR (S1,R,Q1) 15b SR (SET1, RESET, Q1) 26 RS(SET,RESET1, Q1) 27 V V V V V V V V V V V V V V V V V V V	5a,b	Graphical call with usage of VAR_IN_OUT					
6b Graphical call with separate assignment of input 7 Textual output read after FB call 8a,b Textual output assigned in FB call 9a Textual call with function block instance name as input 9b Graphical call with function block instance name as input 10a Textual call with function block instance name as input 10b Graphical call with function block instance name as VAR IN_OUT 10b Graphical call with function block instance name as VAR IN_OUT 11a Textual call with function block instance name as VAR IN_OUT 11a Textual call with function block instance name as external variable 11b Graphical call with function block instance name as external variable 11b Graphical call with function block instance name as external variable Feat Table / Description 12a SR (S1,R,Q1) 15b SR (SET1, RESET, Q1) 26 RS(SET,RESET1, Q1) 27 V V V V V V V V V V V V V V V V V V V	6a	Textual call with separate assignment of input				✓	
Textual output read after FB call 8a,b Textual output assigned in FB call 9a Textual call with function block instance name as input 10a Textual call with function block instance name as input 10a Textual call with function block instance name as input 10b Graphical call with function block instance name as VAR_IN_OUT 10c Graphical call with function block instance name as VAR_IN_OUT 11d Textual call with function block instance name as VAR_IN_OUT 11d Textual call with function block instance name as external variable 11d Graphical call with function block instance name as external variable Feat Table / Description Table 43 - Standard bistable function blocks 1a SR (S1,R,Q1) 1b SR (SET1, RESET, Q1) 2a RS(S, R1, Q1) 2b RS(SET,RESET1, Q1) Feat Table / Description Table 44 - Standard edge detection function blocks 1 R_TRIG Feat Table / Description Table 45 - Standard counter function blocks 1 CTU J J J J J J J J J J J J J J J J J J J	6b	· · ·	/	√			
8a,b Textual output assigned in FB call 9a Textual call with function block instance name as input 9b Graphical call with function block instance name as input 10a Textual call with function block instance name as input 10b Graphical call with function block instance name as VAR_IN_OUT 10b Graphical call with function block instance name as VAR_IN_OUT 11a Textual call with function block instance name as external variable 11b Graphical call with function block instance name as external variable 11b Graphical call with function block instance name as external variable Feat Table / Description 15 SR (S1,R,Q1) 16 SR (SET1, RESET, Q1) 17 SR (SET1, RESET, Q1) 18 SR (SET1, RESET1, Q1) 19 RS(SET, RESET1, Q1) 10 RS(SET, RESET1, Q1) 11 R_TRIG 11 R_TRIG 12 F_TRIG 13 Table 44 - Standard edge detection function blocks 14 Table / Description 15 Table 44 - Standard edge detection function blocks 16 Table 45 - Standard counter function blocks 17 Table 45 - Standard counter function blocks 18 Table 45 - Standard counter function blocks 19 Table 45 - Standard counter function blocks 10 CTU		· · · · · · · · · · · · · · · · · · ·	<u> </u>		./	1	
9a Textual call with function block instance name as input 9b Graphical call with function block instance name as input 10a Textual call with function block instance name as VAR_IN_OUT 10b Graphical call with function block instance name as VAR_IN_OUT 11b Graphical call with function block instance name as VAR_IN_OUT 11a Textual call with function block instance name as external variable 11b Graphical call with function block instance name as external variable 11b Graphical call with function block instance name as external variable Feat Table / Description		,	1		· ·	,	
9b Graphical call with function block instance name as input 7 7					./	./	
Textual call with function block instance name as VAR_IN_OUT			,	,	V	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
VAR_IN_OUT		·	V	V	,	,	
10b Graphical call with function block instance name as VAR_IN_OUT 11a Textual call with function block instance name as external variable 11b Graphical call with function block instance name as external variable 11b Graphical call with function block instance name as V 11b Graphical call with function block instance name as V V 10 External variable	Tua				V	V	
VAR_IN_OUT	10h		/	/			
Textual call with function block instance name as external variable John John John John John John John John	100		V	V			
variable	112		1		/	/	
Table Description LD FBD IL ST Notes	IIa				V	V	
External variable	11h		,	,			
Feat Table / Description LD FBD IL ST Notes	110		V	V			
Table 43 – Standard bistable function blocks 1a SR (S1,R,Q1) SR (S1,R,Q1) SR (SET1, RESET, Q1) ✓ <td< td=""><td></td><td>external variable</td><td>1</td><td></td><td></td><td></td><td></td></td<>		external variable	1				
Table 43 – Standard bistable function blocks 1a SR (S1,R,Q1) SR (S1,R,Q1) SR (SET1, RESET, Q1) ✓ <td< td=""><td></td><td></td><td>T</td><td></td><td></td><td></td><td>T</td></td<>			T				T
1a SR (S1,R,Q1)	Feat		LD	FBD	IL	SI	Notes
1b SR (SET1, RESET, Q1) ✓			1				
2a RS(S, R1, Q1)							
Zb RS(SET,RESET1, Q1) ✓			√	✓	✓	✓	
Feat Table / Description LD FBD IL ST Notes 1 R_TRIG ✓							
Table 44 − Standard edge detection function blocks Image: Control of the control of t	2b	RS(SET,RESET1, Q1)	✓	✓	✓	✓	
Table 44 − Standard edge detection function blocks Image: Control of the control of t							
Table 44 − Standard edge detection function blocks Image: Control of the control of t	Feat	Table / Description	LD	FBD	IL	ST	Notes
1 R_TRIG ✓ </td <td>7 0 0.10</td> <td></td> <td></td> <td></td> <td></td> <td> -</td> <td>110100</td>	7 0 0.10					-	110100
2 F_TRIG ✓ </td <td>1</td> <td></td> <td>_/</td> <td>1</td> <td>_/</td> <td>1</td> <td></td>	1		_/	1	_/	1	
Feat Table / Description LD FBD IL ST Notes Table 45 − Standard counter function blocks ✓ ✓ ✓ ✓ ✓ ✓ DINT			-		./		
Table 45 – Standard counter function blocks 1 CTU √ √ √ √ √ √ √ √ ✓ ✓ <td><u> </u></td> <td>1.=</td> <td></td> <td></td> <td></td> <td>_ v</td> <td>1</td>	<u> </u>	1.=				_ v	1
Table 45 – Standard counter function blocks 1 CTU √ √ √ √ √ √ √ √ ✓ ✓ <td></td> <td>Tille (Breeded)</td> <td>1.5</td> <td></td> <td></td> <td>T 0=</td> <td>N</td>		Tille (Breeded)	1.5			T 0=	N
1 CTU	reat		LD	LRD	IL	51	ivotes
	<u> </u>		1			<u> </u>	DINT
[2 CID √ √ √ DINT						+	
	2	עוט	✓ ✓	✓	✓	✓	ואוטן

3	CTUD	√	√	√	/	DINT
		1	1 -			
Feat	Table / Description	LD	FBD	IL	ST	Notes
7 00.0	Table 46 – Standard timer function blocks				<u> </u>	110100
1a,b	TP	√	✓	√	√	TIME
1c	TP (LTIME)					
1a,b	TON	√	✓	✓	✓	TIME
1c	TON (LTIME)					
1a,b	TOF	✓	✓	✓	✓	TIME
1c	TOF (LTIME)					
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 47 – Program declaration					
1	Declaration of a program	✓	✓	✓	✓	
2a	Declaration of inputs					
2b	Declaration of outputs					
2c	Declaration of in-outs					
2d	Declaration of temporary variables	✓	✓	✓	✓	
2e	Declaration of static variables	✓	✓	✓	✓	Implicit
2f	Declaration of external variables	✓	✓	√	✓	
2g	Declaration of external variables	✓	✓	✓	✓	
3a	Initialization of inputs					
3b	Initialization of outputs					
3c	Initialization of static variables	√	✓	✓	√	
3d	Initialization of temporary variables	√	✓	✓	√	
4a	Declaration of RETAIN qualifier on input variables					
4b	Declaration of RETAIN qualifier on output variables					
4c	Declaration of NON_RETAIN qualifier on input variables					
4d	Declaration of NON_RETAIN qualifier on output variables					
4e	Declaration of RETAIN qualifier on static variables	√	√	√	/	
4f	Declaration of NON_RETAIN qualifier on static	√	√	✓	√	
''	variables					
5a	Declaration of RETAIN qualifier on local FB instances					
5b	Declaration of NON_RETAIN qualifier on local FB					
	instances					
6a	Textual declaration of - rising edge inputs					
6b	Textual declaration of - falling edge inputs					
7a	Graphical declaration of - rising edge inputs					
7b	Graphical declaration of - falling edge inputs					
8a	VAR_GLOBALEND_VAR declaration within a					
	PROGRAM					
8b	VAR GLOBAL CONSTANT declarations within					
	PROGRAM					
9	VAR_ACCESSEND_VAR declaration within a					
	PROGRAM					

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 48 – Class					

111						
		•			•	
Feat	Table / Description	LD	FBD	IL	ST	Notes
7 001	Table 49 – Class instance declaration		1 00		- 0,	770100
12						
12						
Feat	Table / Description	LD	FBD	IL	ST	Notes
1 Gai	Table 50 - Textual call of methods – Formal and non-	LD	טטו	'L	31	110163
	formal parameter list					
12						
12			1			
Foot	Toble / Description	LD	FBD	IL	ST	Notos
Feat	Table / Description Table 51 – Interface	LD	ГБО	IL	31	Notes
14	Table 31 - Interface					
14						
Fa - 1	Table / Description	115		''	- C-	Notos
Feat	Table / Description	LD	FBD	IL	ST	Notes
1.2	Table 52 – Assignment attempt		1			
12			1	l		
	T. (, () . ()	1,5	T ====			L A L .
Feat	Table / Description	LD	FBD	IL	ST	Notes
4 40	Table 53 – Object oriented function block					
112						
Feat	Table / Description				SFC	Notes
	Table 54 – SFC step					
1a	Step – graphical form with directed links				✓	
1b	Initial step – graphical form with directed link				✓	
2a	Step – textual form without directed links					
2b	Initial step – textual form without directed links					
3a	Step flag – general form ***.X				✓	
3b	Step flag – direct connection of Boolean variable				✓	
4	Step elapsed time – general form ***.T				√	
	<u> </u>		ı		I	
Feat	Table / Description				SEC	Notes
, oat	Table 75 – SFC transition and transition condition				10,0	740100
1	Transition condition physically or logically adjacent to the				√	
	transition using ST language					
2	Transition condition physically or logically adjacent to the				√	
	transition using LD language					
3	Transition condition physically or logically adjacent to the					
1	transition using FBD language					
4	Use of connector					
5	Use of connector Transition condition: Using LD language				√	
5 6	Use of connector Transition condition: Using LD language Transition condition: Using FBD language				√	
5 6 7,8	Use of connector Transition condition: Using LD language Transition condition: Using FBD language Textual equivalent of feature 1 using ST or IL language				√	
5 6	Use of connector Transition condition: Using LD language Transition condition: Using FBD language Textual equivalent of feature 1 using ST or IL language Use of transition name				√ 	
5 6 7,8 9 10	Use of connector Transition condition: Using LD language Transition condition: Using FBD language Textual equivalent of feature 1 using ST or IL language				√	
5 6 7,8 9 10 11	Use of connector Transition condition: Using LD language Transition condition: Using FBD language Textual equivalent of feature 1 using ST or IL language Use of transition name Transition condition using LD language Transition condition using FBD language					
5 6 7,8 9 10	Use of connector Transition condition: Using LD language Transition condition: Using FBD language Textual equivalent of feature 1 using ST or IL language Use of transition name Transition condition using LD language					

Feat	Table / Description	SFC	Notes
	Table 56 – SFC declaration of actions		
	Any Boolean variable declare		
21	Graphical declaration in LD language	√	
2s	Inclusion of SFC elements in action	√	
2f	Graphical declaration in FBD language	√	
3s	Textual declaration in ST language	✓	
3i	Textual declaration in IL language		
	<u> </u>		l
Feat	Table / Description	SFC	Notes
, out	Table 57 – Step/action association	0, 0	710100
1	Action block physically or logically adjacent to the step	✓	
2	Concatenated action blocks physically or logically adjacent	√	
_	to the step	*	
3	Textual step body		
5 4	Action block "d" field		
		<u> </u>	1
Feat	Table / Description	SFC	Notes
. Jui	Table 58 – Action block	0,0	710100
1	"a": Qualifier as per 6.7.4.5	√	
2	"b": Action name	√	
<u>2 </u>	"c": Boolean "indicator" variables (deprecated)	V	
<u>3</u> 4i			
	IL language	√	
4s	ST language	√	
41	LD language	✓	
4f	FBD language	√	
5l	Use of action blocks LD		
5f	Use of action blocks in FBD		
Feat	Table / Description	SFC	Notes
	Table 59 – Action qualifiers		
1	None	✓	
2	N		
3	R	✓	
4	S	√	
5	L		
6	D		
7	P	✓	
8	SD		
9	DS		
10	SL		
11	P1	✓	
12	P0	✓	
Feat	Table / Description	SFC	Notes
	Table 60 – Action control features		
1	With final scan	✓	
2	Without final scan	<u> </u>	
		<u> </u>	1
Feat	Table / Description	SFC	Notes
ı cai	า สมาธิ / เมื่องเามูแบบ	l Joru	MOLES

1	Single sequence				√	
2a	Divergence of sequence with left to right priority				√	
2b	Divergence of sequence with numbered branches					
2c	Divergence of sequence with mutual exclusion				√	
3	Convergence of sequence					
4a	Simultaneous divergence after a single transition				√ √	
4b	Simultaneous divergence after a single transition Simultaneous divergence after conversion					
	Simultaneous divergence after conversion				√	
4c	Simultaneous convergence before one transition				√	
4d	Simultaneous convergence before a sequence selection				√	
5	Sequence skip				√	
6	Sequence loop				√	(6. 6.)
7	Directional arrows				✓	(free form)
				,		
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 62 – Configuration and resource declaration					
113						GUI only
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 63 - Task					
15						GUI only
		1			I.	
Feat	Table / Description	LD	FBD	IL	ST	Notes
7 001	Table 64 - Namespace		100	12	0,	710100
15	Tubio 04 Numbopuo					
10	<u> </u>				l .	
	Table / Description	LD	FBD	IL	CT	Notes
Feat	Table / Description Table 65 – Nested namespace declaration options	LD	ΓDU	IL	ST	Notes
13	Table 05 - Nesteu flamespace declaration options					
13						
	T. () D. () ()	1.5				1 A
Feat	Table / Description	LD	FBD	IL	ST	Notes
4.0	Table 66 - Namespace directive USING					
13						
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 67 – Parenthesized expression for IL language					
1	Parenthesized expression beginning with explicit operator:					
2	Parenthesized expression (short form)			✓		
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 68 – Instruction list operators					
1	LD			✓		
2	ST			✓		
3	S, R			✓		
4	AND			✓		
5	&			✓		
6	OR			√		
7	XOR			√		
8	NOT			√		
9	ADD			√		
10	SUB		1	√		
11	MUL	1		√		
	ı	1	1		1	I

12	DIV			✓	
13	MOD			√	
14	GT			√	
15	GE			√	
16	EQ			✓	
17	NE			√	
18	LE			✓	
19	LT			✓	
20	JMP			✓	
21	CAL			✓	
22	RET			✓	
23		·	·	√	
24	ST?	·	·		

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 69 – Calls for IL language					
1a	Function block call with non-formal parameter list			✓		
1b	Function block call with formal parameter list					
2	Function block call with load/store of standard input			✓		
	parameters					
3a	Function call with formal parameter list					
3b	Function call with non-formal parameter list			>		
4a	Method call with formal parameter list					
4b	Method call with non-formal parameter list					

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 70 – Standard function block operators for IL					
	language					
1	SR			\		
2	RS			✓		
3	F/R_TRIG			\		
4	CTU			✓		
5	CTD			✓		
6	CTUD			\		
7	TP			>		
8	TON			\		
9	TOF			>		

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 71 – Operators of the ST language					
1	Parentheses (expression)				√	
2	Evaluation of result of function				√	
3	Dereference				√	
4	Negation				√	
5	Unary plus				√	
6	Complement				√	
7	Exponentiation				√	
8	Multiply				✓	
9	Divide				✓	
10	Modulo				✓	
11	Add				✓	

12	Subtract				✓	
13	Comparison				✓	
14	Equality				✓	
15	Inequality				✓	
16a	Boolean AND				✓	
16b	Boolean AND				✓	
17	Boolean Exclusive OR				✓	
18	Boolean OR OR				✓	
Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 72 – ST language statements					
1	Assignment				✓	
1a	Variable and expression of elementary data type				✓	
1b	Variables and expression of different elementary data types				✓	Int or real
	with implicit type conversion according Figure 11					with no loss
4 -	Maniable and companies of companies of the	1	ĺ	1	,	

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 72 – ST language statements					
1	Assignment				✓	
1a	Variable and expression of elementary data type				✓	
1b	Variables and expression of different elementary data types				✓	Int or real
	with implicit type conversion according Figure 11					with no loss
1c	Variable and expression of user defined type				✓	
1d	Instances of function block type					
2a	Function call				✓	
2b	Function block call and FB output usage				✓	
2c	Method call					
3	RETURN				✓	
4	IF				✓	
5	CASE				✓	
6	FOR				✓	
7	WHILE				✓	
8	REPEAT				✓	
9	CONTINUE					
10	EXIT				✓	
11	Empty statement				✓	

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 73 – Graphic execution control element					
1a	Unconditional jump FBD		✓			
1b	Unconditional jump LD	✓				
2a	Conditional jump FBD		✓			
2b	Conditional jump LD	✓				
3a	Conditional return LD	✓				
3b	Conditional return FBD		✓			
4	Unconditional return	✓	✓			

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 74 – Power rails and link elements					
1	Left power rail	✓	✓			
2	Right power rail	✓	✓			
3	Horizontal link	✓	✓			
4	Vertical link	✓	✓			

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 75 – Contacts					
1	Normally open	✓				
2	Normally closed	√				

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3	Positive transition	√		
4	Negative transition	✓		
5a,b	Compare contact			

Feat	Table / Description	LD	FBD	IL	ST	Notes
	Table 76 - Coils					
1	Coil	✓				
2	Negated coil	✓				
3	Set coil	✓				
4	Reset coil	✓				
8	Positive transition-sensing coil	✓				
9	Negative transition-sensing coil	✓				