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\* This file is part of matiec - a compiler for the programming

\* languages defined in IEC 61131-3

\*

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\* This code is made available on the understanding that it will not be

\* used in safety-critical situations without a full and competent review.

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\* An IEC 61131-3 compiler.

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\* Based on the

\* FINAL DRAFT - IEC 61131-3, 2nd Ed. (2001-12-10)

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\* This is part of the library conatining the functions

\* and function blocks defined in the standard.

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\* SR and RS function blocks

\* -------------------------

\*)

(\* The standard defines the SR FB thus:

+-----+

S1----------------| >=1 |---Q1

+---+ | |

R------O| & |----| |

Q1------| | | |

+---+ +-----+

\*)

FUNCTION\_BLOCK SR

VAR\_INPUT

S1, R : BOOL;

END\_VAR

VAR\_OUTPUT

Q1 : BOOL;

END\_VAR

Q1 := S1 OR ((NOT R) AND Q1);

END\_FUNCTION\_BLOCK

(\* The standard defines the RS FB thus:

+---+

R1----------------O| & |---Q1

+-----+ | |

S-------| >=1 |----| |

Q1------| | | |

+-----+ +---+

\*)

FUNCTION\_BLOCK RS

VAR\_INPUT

S, R1 : BOOL;

END\_VAR

VAR\_OUTPUT

Q1 : BOOL;

END\_VAR

Q1 := (NOT R1) AND (S OR Q1);

END\_FUNCTION\_BLOCK