INT (16-bit integers)

Description

An operand of data type INT has a length of 16 bits and consists of two components: a sign and a numerical value in the two's complement. The signal states of bits 0 to 14 represent the number value. The signal state of bit 15 represents the sign. The sign may assume "0" for the positive, or "1" for the negative signal state.

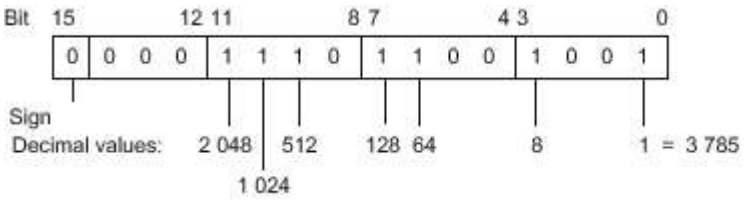
An operand of data type INT occupies two BYTE in the memory.

The following table shows the properties of data type INT:

Length (bits)	Format	Value range	Examples of value input
16	Signed integers (decimal system)	-32_768 to +32_767	• +3_785 • INT#+3_785 • INT#10#+3_785
	Binary numbers (only positive)	2#0 to 2#0111_1111_1111_1111	• 2#0000_1110_1100_1001 • INT#2#0000_1110_1100_1001 • INT#2#10
	Octal numbers (only positive)	8#0 to 8#7_7777	• 8#7311 • INT#8#7311
	Hexadecimal numbers (only positive)	16#0 to 16#7FFF	• 16#0EC9 • INT#16#0EC9

Example

The following figure shows the integer +3785 as a binary number:



See also

[Overview of the valid data types]
[Basics of constants]
[Data type conversion for S7-1200 (S7-1200)]