



SINT (8-bit integers)

Description

An operand of data type SINT (Short INT) has a length of 8 bits and consists of two components: a sign and a numerical value in the two's complement. The signal states of bits 0 to 6 represent the number value. The signal state of bit 7 represents the sign. The sign may assume "0" for the positive, or "1" for the negative signal state.

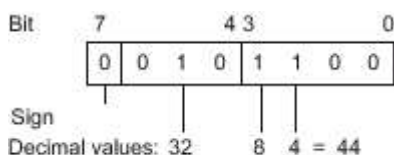
An operand of data type SINT occupies one BYTE in the memory.

The following table shows the properties of data type SINT:

Length (bits)	Format	Value range	Examples of value input
8	Signed integers (decimal system)	-128 to +127	<ul style="list-style-type: none"> • +44 • SINT#+44 • SINT#10#+44 <p>The value range extends to a maximum of SINT#255 when using the type SINT#. This value is interpreted as an integer with -1.</p>
	Binary numbers (only positive)	2#0 to 2#0111_1111	<ul style="list-style-type: none"> • 2#0010_1100 • SINT#2#0010_1100 • SINT#2#10
	Octal numbers (only positive)	8#0 to 8#177	<ul style="list-style-type: none"> • 8#54 • SINT#8#54
	Hexadecimal numbers (only positive)	16#0 to 16#7F	<ul style="list-style-type: none"> • 16#2C • SINT#16#2C <p>The value range extends to a maximum of SINT#16#FF when using the type SINT#. This value is interpreted as an integer with -1.</p>

Example

The following figure shows the integer +44 as a binary number:



See also

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