DINT (32-bit integers)

Description

An operand of data type DINT (Double INT) has a length of 32 bits and consists of two components: a sign and a numerical value in the two's complement. The signal states of bits 0 to 30 represent the number value. The signal state of bit 31 represents the sign. The sign may assume "0" for the positive, or "1" for the negative signal state.
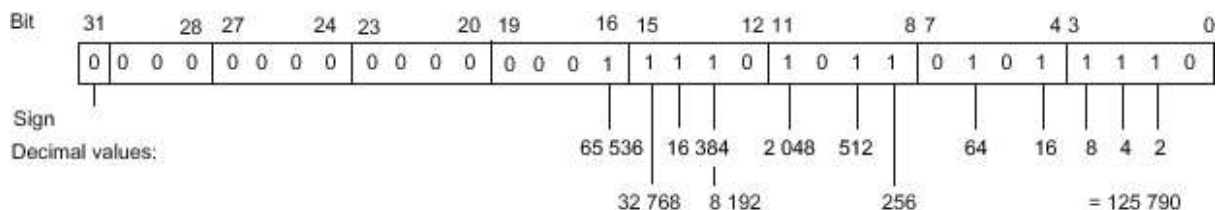
An operand of data type DINT occupies four BYTE in the memory.

The following table shows the properties of data type DINT:

Length (bits)	Format	Value range	Examples of value input
32	Signed integers (decimal system)	-2_147_483_648 to +2_147_483_647	• +125_790 • DINT#+125_790 • DINT#10#+125_790 • L#275
	Binary numbers (only positive)	2#0 to 2#0111_1111_1111_1111_1111_1111_1111_1111	• 2#0000_0000_0000_0001_1110_1011_0101_1110 • DINT#2#0000_0000_0000_0001_1110_1011_0101_1110 • DINT#2#10
	Octal numbers (only positive)	8#0 to 8#177_7777_7777	• 8#36_5536 • DINT#8#36_5536
	Hexadecimal numbers	16#0 to 16#7FFF_FFFF	• 16#0001_EB5E • DINT#16#0001_EB5E

Example

The following figure shows the integer +125790 as a binary number:

See also

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