

Convert Non-Zero Input into Integer -1

NONZERO S7

DESCRIPTION

The NONZERO function is provided to simplify user programming and to improve execution time. It is entered as a Special Function, but does not involve the same overhead.

Execution time is similar to that of a simpler instruction, e.g. coil, contact, AND.

The NONZERO Special Function converts a non-zero input into integer -1. That is, it provides an output word that consists either 16 0's or 16 1's depending on whether the input is zero or non-zero respectively.

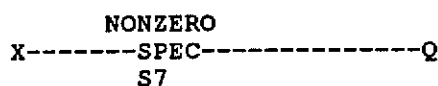
On controllers that have floating point facilities, it works in a exactly the same way regardless of whether the numeric value is an integer or in floating point.

FEATURES

- Considerable improvement in execution time and complexity over other techniques that achieve the same result
- More readable than other techniques
- Simple to use
- No possibility of fault conditions

SPECIFICATION

Control language:-



Equation:

$$Q = 0 \text{ if } X = 0$$

$$Q = -1 \text{ if } X \neq 0$$



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