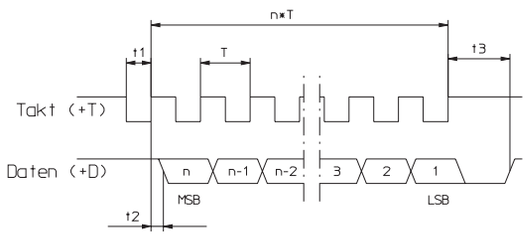
Rotary Measuring Technology

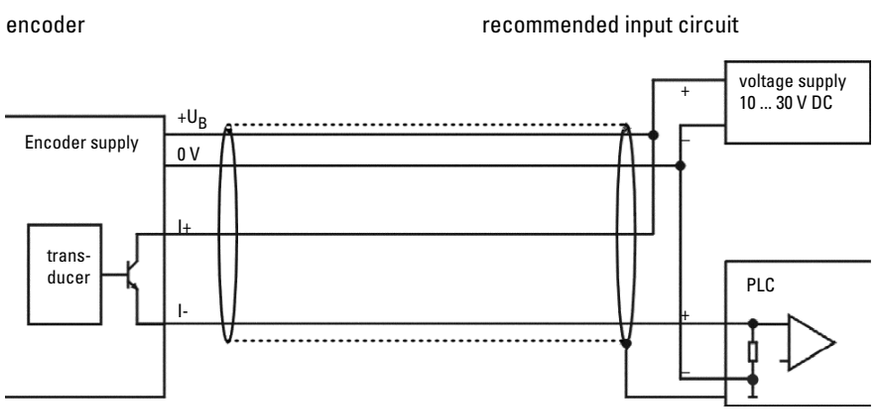
Data transmission:



Typical values:
t1 ≥ 1 µs
t2 < 0,5 µs (without cable)
t3 = max.40 µs
2 µs ≤ T ≤ 10 µs
n = resolution in bits

At rest, the clock and data lines are on high. The first trailing pulse edge signals the start of data transmission.
The data are transmitted in bits, starting with the MSB with the leading pulse edges after that.
Transmission of a complete data item requires n + 1 leading pulse edges
(n = resolution in bits).

After the load positive-going clock signal, the data line stays on low until the encoder is ready for a new data item. The clock line must stay on high for at least as long and after that, can start as new read-out sequence with a trailing edge.

Please note:
The data are updated synchronously with the read-out cycle.
The data are therefore as current as the temporal distance between two read-outs; periodic read-out of the encoder is therefore recommended. After a long break in read-out and with the encoder simultaneously turning the shaft, the data content may be 'out of date' by the time of the first read-out and should be ignored.

Type of connection and recommended input circuit for encoder for encoder type 5850 and 7031 with current interface 4 ...20 mA