

HH-12

12 Bit 360° ABSOLUTE ROTARY ENCODER

Features:

Low cost
 Miniature size
 360° contactless rotational absolute position encoding
 12 bit - 0.088° absolute resolution
 Synchronous serial interface
 Operating temperature range : -40°C to +125°C

Operating Conditions:

Supply voltage $V_{DD} = 4,5 < V_{DD} < 5,5 \text{ V}$
 Supply current $< 20 \text{ mA}$

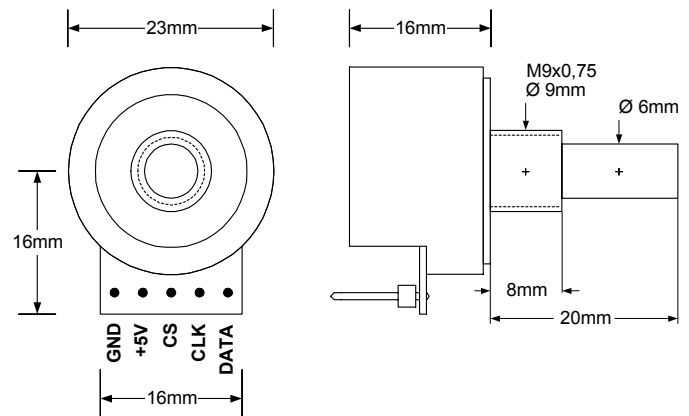
DC Characteristic for Digital Inputs and Outputs:

CMOS Schmidt-Trigger Inputs CLK,CS:
 High level input voltage Min = $0,7 * V_{DD}$
 Low level input voltage Max = $0,3 * V_{DD}$
 Schmitt -Trigger hysteresis Min = 1V

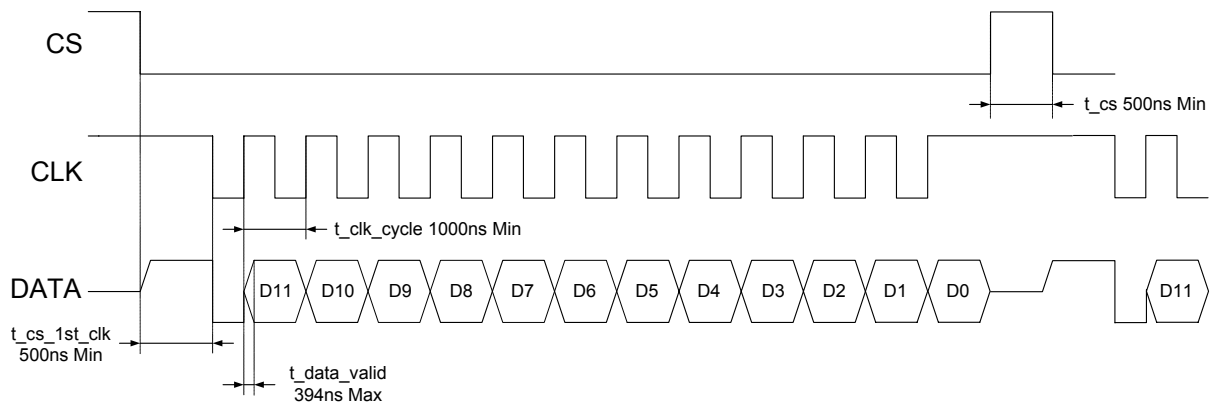
Tri State Output DATA:
 High level output voltage Min = $V_{DD} - 0,5 \text{ V}$
 Low level output voltage Max = $0,4 \text{ V}$
 Output current IO Max = 4mA



Mechanical Drawings:



Synchronous serial interface (SSI), Timing Diagramm:



$t_{cs_1st_clk}$: Time between falling edge of CSn and first falling edge of CLK = 500ns Min

t_{data_valid} : Time between rising edge of CLK and DATA valid = 394ns Max

t_{cs} : Pulse width of CS to initiate read-out of next angular position = 500ns Min

t_{clk_cycle} : Cycle Time of CLK to read out serial DATA = 1000ns Min ($0 > f_{CLK} < 1\text{MHz}$)