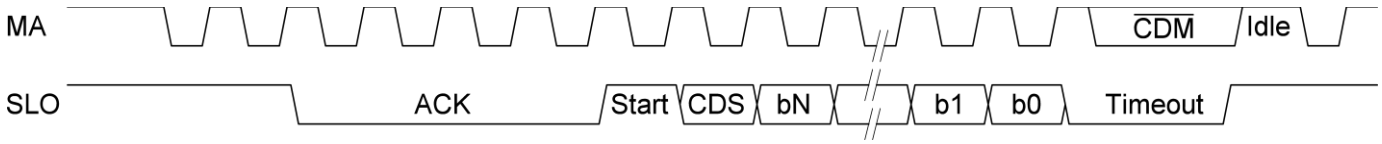
More information on BiSS protocols is available on the BiSS website: www.biss-interface.com

LENZ BISS C B3 – bidirectional point-to-point isochronous interface for fast acquiring angle data, read Electronic Data Sheet (EDS) and configure encoder.

MA – Clock pulse output of the BiSS C master;

SLO – Data output of the BiSS C slave;



Ack size – 4 T_{MA};

SCD size – 32 bits: b31…b0;

Position data size – 24 bits: b31…b8;

Error bit b7 – logic high when angle data is correct or not full initialized, logic low when rotor's air gap too large;

Warning bit b6 – logic high when encoder is working fine and absolute position can recover on restart, otherwise – logic low;

CRC6 b5…b0 – the CRC polynomial for position, error and warning data is: $x^6 + x^1 + x^0$, inverted.

Timing information

	Minimum	Typical	Maximum
MA clock frequency, $1/T_{MA}$, MHz	0,1		12,5
BISS timeout, us – during SCD reading – during register access	 12,6 13,5	 12,9 14	 13,2 14,5
Delay MA → SL include slave, MA input and SLO output RS485 drivers delays, ns		50	
Line delay due to cable length, MA + SLO, ns/m		10	
Idle time, ns	40		
SCD request rate, kHz $1/T_{MA}$ = 12,5 MHz, Idle = 40 ns			61,7