Product data

Features
- Module Driver Board for AP9200 and AP9201 encoders
- Small size, easy to connect
- Compatible with ASSIST Evaluation & Programming Tool
- Suitable for development and for series production

Key Specifications
Supply voltage .... 5 V DC from ASSIST Board

Supply current......................... 10 mA

Transmission frequency......... 0 – 2 MHz

Temperature .... -20 to 100°C

Description
The Module Driver Board is required for communication between the ASSIST Interface Board and the AP9200 and AP9201 encoders. The Module Driver Board contains a switch that enables or disables the RS422-drivers and -receivers

For AP9200 encoder: set switch to RS422

For AP9201 encoder: set switch to UART

Encoder In/outputs

Encoder	Signal type	Switch
AP9200	Differential RS422	RS422
AP9201	Single-ended 5V CMOS/TTL	UART

The encoder I/Os can be measured on the test pins, see Figures 4 and 5.

ASSIST Board In/outputs
The ASSIST Board I/Os are single-ended 5V CMOS/TTL signals, see Figure 5.

Connectors
The Encoder connector and the ASSIST Board connector are both 8-pin DIN41651 connectors.
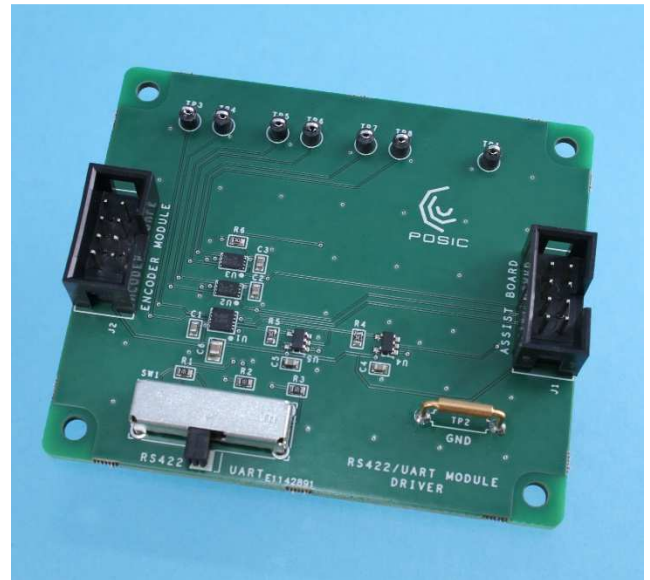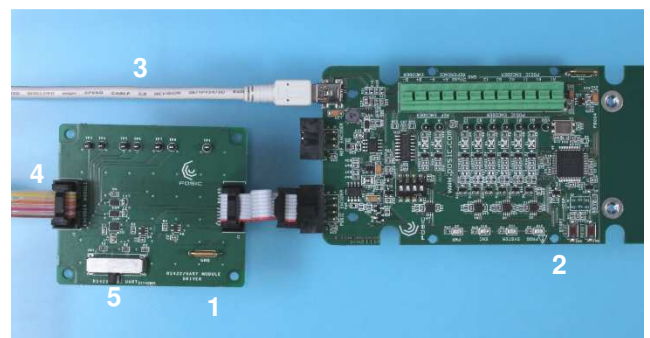

Fig 1 Module Driver Board.

Fig 2 Module Driver Board (1) connected to ASSIST Interface Board (2), which is connected via USB cable (3) to a PC with ASSIST software. The encoder is connected on the left side (4) and the encoder signal type is selected by means of the switch (5).

Ordering information
Open Collector Interface Board including flat cable for connection to ASSIST Interface Board.

Code: MDB001

Specifications

Absolute Maximum Ratings

Parameter	Symbol	Remark	Min	Typ	Max	Unit
Supply voltage	V_S	Overvoltage, and reverse polarity	-0.5		5.5	V DC
Storage Temperature	T_S	No supply voltage applied	-40		125	°C

Recommended Operating Conditions

Parameter	Symbol	Remark	Min	Typ	Max	Unit
Supply voltage	V_S		4.75		5.25	V
Operating Temperature	T_A		-20	25	100	°C

Electrical Characteristics

Electrical characteristics over recommended operating conditions, typical values at VDD = 5.0 V, T_A = 25°C.

Parameter	Symbol	Remark	Min	Typ	Max	Unit
Supply current	I_S			10		mA
Frequency	F	SSI clock signal	0		2	MHz

Technical drawings

Encoder Connector Pin	Test Pin	Encoder AP9200	Encoder AP9201
1	TP1	VDD, 5V Supply	VDD, 5V Supply
2	TP2 (GND)	GND, Ground	GND, Ground
3	TP3	Clock+	Clock
4	TP4	Clock-	Data
5	TP5	Data+	-
6	TP6	Data-	-
7	TP7	-	-
8	TP8	-	-

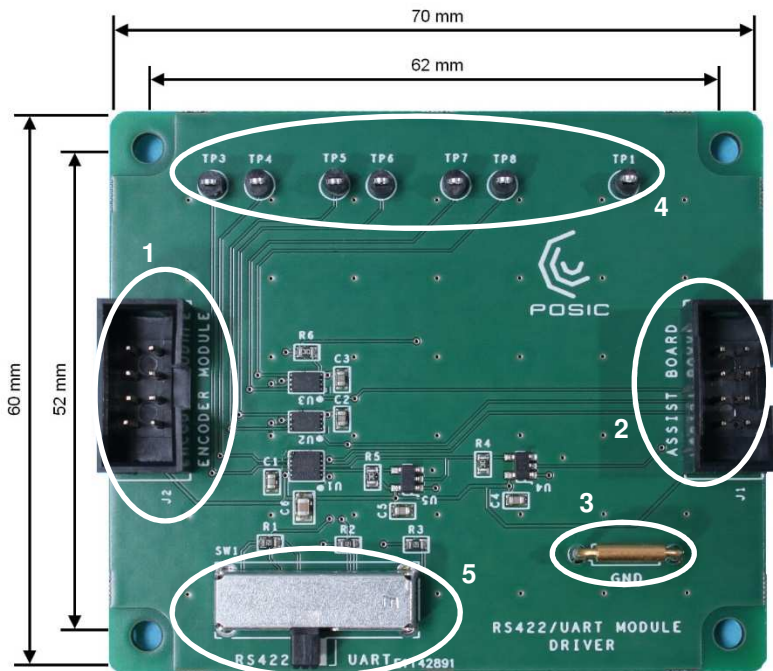Fig 3   Pinout of the encoder connector and the test pins.

Fig. 4   Dimensions and explanations for the Module Driver Board MDB001

1)   Encoder connector
2)   ASSIST Interface Board connector
3)   Ground pin GND
4)   Test pins TP1 – 8
5)   Encoder selection switch:
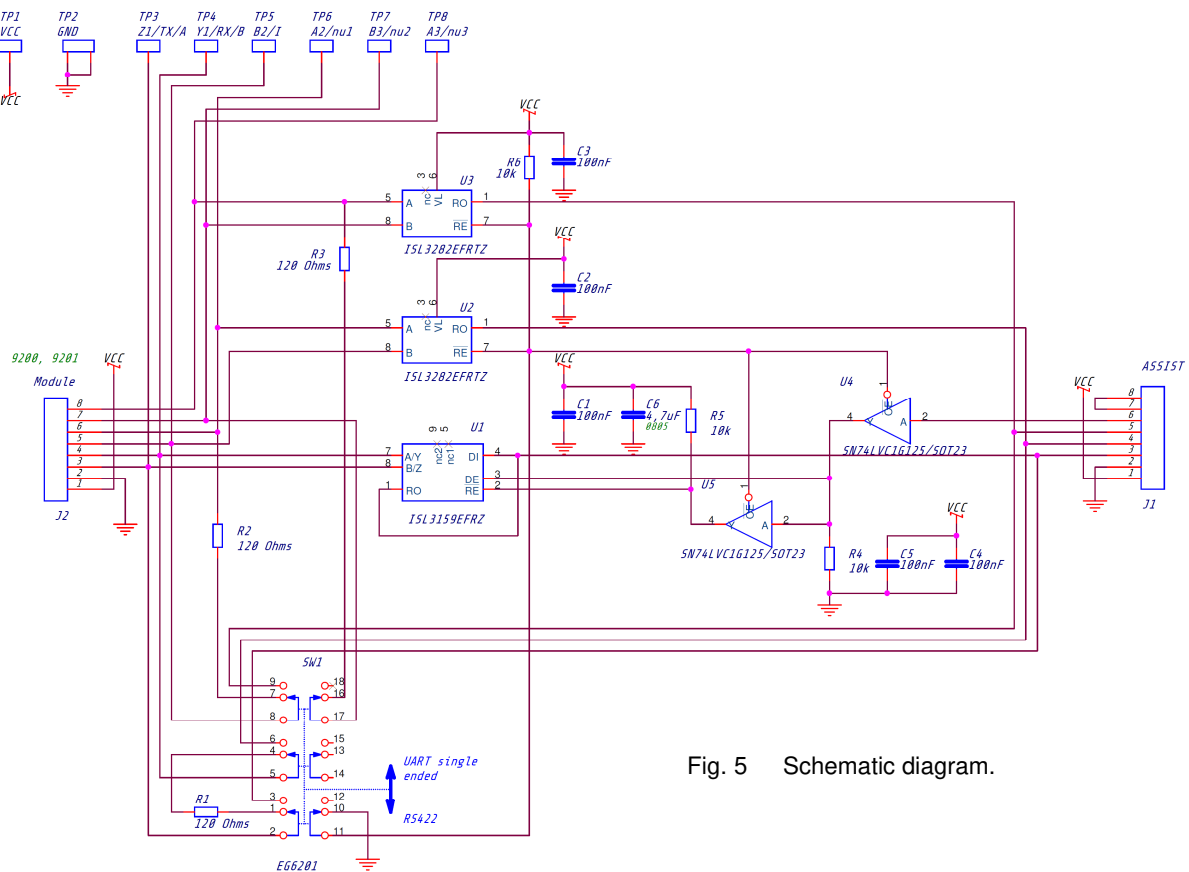- Set to RS422 for encoder AP9200
- Set to UART for encoder AP9201

Fig. 5   Schematic diagram.