

**Product KSM 121**

Measurements in mm (h.x.d.x.w): 100x115x22,5



**Description**

Expansion module for safe motion of one drive axes with enhanced encoder interface. The module is suitable for the use with an KSM100 series module. The module will be connected to the basic module via the Back-Plane-Connector just by snapping it on the head rail.

The module supports 1 encoder solutions (Incr.- TTL/HTL, Resolver, SIN/COS, Proxi-Sw.) and also 2 encoder solutions (variable combination of encoders possible).

The module provides 12 safe inputs for connecting safety related peripherals.

- Encoderinterface for 1 x Incr-TTL/SIN-COS/SSI front side and 1 x HTL using terminal clamps
- 12 safe inputs
- Cross circuit monitoring by pulse outputs of the basic module
- Comprehensive diagnostics implemented in FW
- Powersupply via basic module

**Technical data**

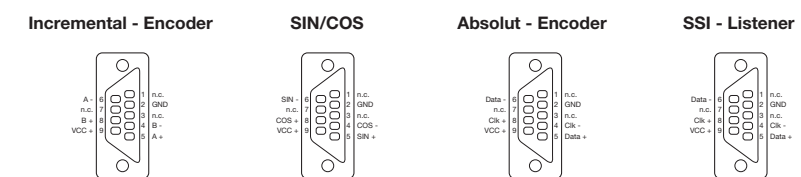
Safety characteristics		
	PI in accordance to EN 13849	PI e
	PFH/Architecture	1,2 * 10 <sup>9</sup> /Architecture Class 4
	SIL in accordance to EN 61508	SIL 3
	Proof-test-interval	20 years = max. period of application
General data		
	Safe digital input lines	12 incl. 8 OSSD
	Type of connectors	Pluggable terminals
	Drive monitoring - number of axis	1 axis
	Encoder interface 1 (frontside)/technology	1/SSI; SIN/COS; Inkr.-TTL
	Max. Frequency SIN/COS, Inkr. TLL	200 kHz
	Clock frequency/mode SSI	Master Mode 150 kHz/Slave Mode max. 250 kHz
	Type of connectors	D-SUB 9pol
	Encoder Interface 2 (terminals) - number/technology	1/Proxi-Sw.; Inkr.-HTL
	Max. Frequency HTL	10 kHz
	Type of connectors	Pluggable terminals
Electrical data		
	Power consumption	2,4 W
	Rated data digital In	24 VDC; 20 mA, Typ1 in accordance to EN61131-2
Environmental data		
	Temperature	0° up to 50° operational temp.; -10° up to +70° storage temp.
	Protection rating	IP 20
	Climate class	3 in accordance to DIN 50 178
	EMV	According to EN 55011 and EN 61000-6-2
Mechanical data		
	Size (h.x.d.x.w (mm))	100x115x22,5
	Weight	210 g
	Mounting	Snap-on mounting on standard head rail
	Max. terminal cross-section	1,5 mm <sup>2</sup>

**Pin Out - terminal diagram**

X 13	1 - U_ENC_2	sensorpowersupply of sensor
	2 - GND_ENC_2	sensorpowersupply of sensor
	3 - NC	NC
	4 - NC	NC
X 14	1 - DI 01	digital IN 01 OSSD compatible
	2 - DI 02	digital IN 02 OSSD compatible
	3 - DI 03	digital IN 03 OSSD compatible
	4 - DI 04	digital IN 04 OSSD compatible
X 23	1 - DI 05	digital IN 05
	2 - DI 06	digital IN 06
	3 - DI 07	digital IN 07
	4 - DI 08	digital IN 08
X 24	1 - DI 09	digital IN 09 OSSD compatible
	2 - DI 10	digital IN 10 OSSD compatible
	3 - DI 11	digital IN 11 OSSD compatible
	4 - DI 12	digital IN 12 OSSD compatible

The variable encoder power supply has to be provided external. It will be internal monitored.

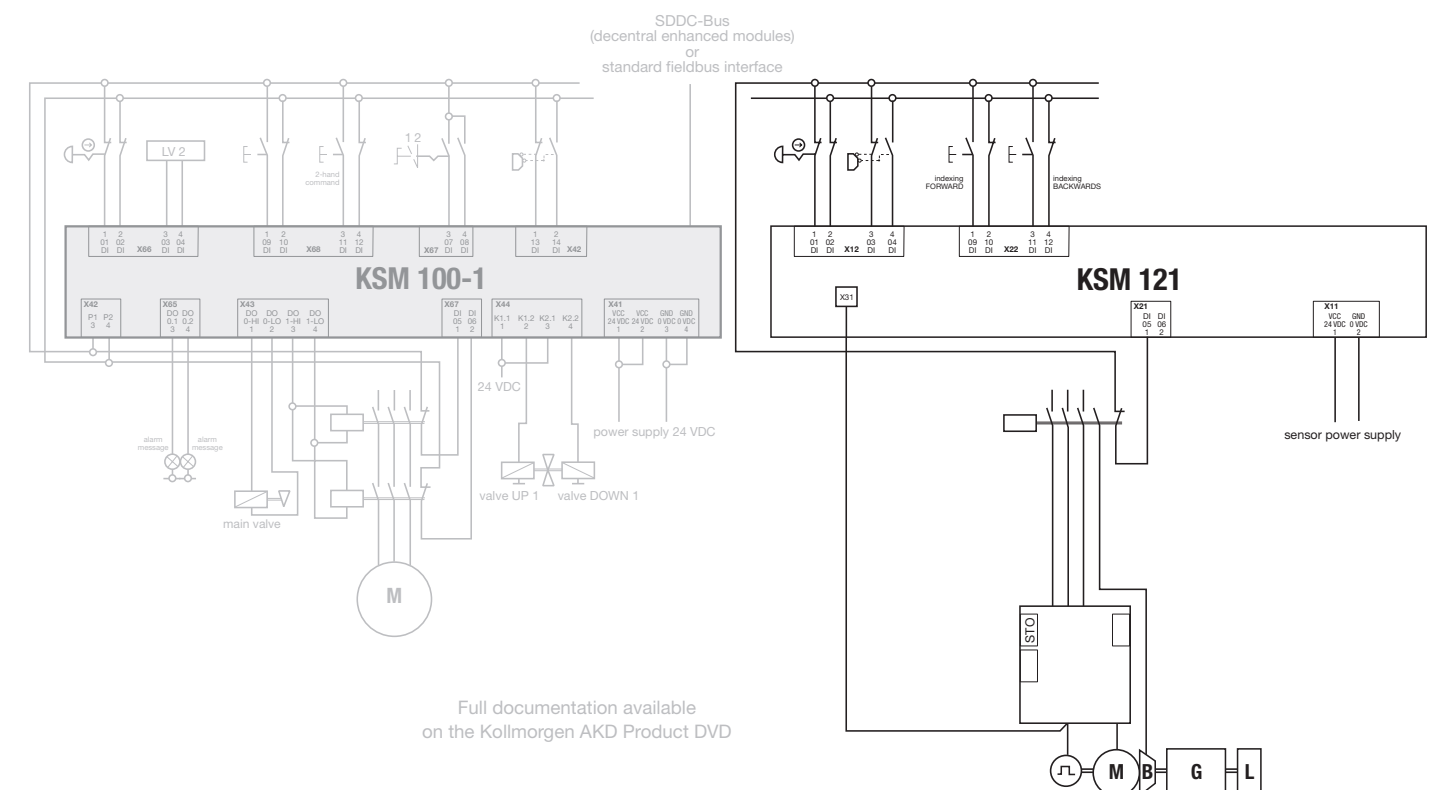
**Sensor interface - Pin Out**



**KSM 121 - I/O overview**

Quantity	I/O's
12	digital inputs

**KSM 121 - sketch (example)**



Full documentation available on the Kollmorgen AKD Product DVD