

SINAMICS S120 drive system

Supplementary system components

Encoder system connection > SME125 Sensor Modules External

Overview



SME125 Sensor Module External

The SME125 Sensor Modules External are encoder evaluation units with degree of protection IP67, especially suitable for use in linear and torque motor applications. They can be installed close to the motor systems and encoders in the machine.

Sensor Modules External evaluate the encoder signals and motor temperature sensors specifically and convert the information obtained for DRIVE-CLiQ. The motor temperature signals are safely electrically separated.

Neither motor nor encoder data are saved in the SME125. The SME125 can be operated on Control Units with firmware release V2.4 and later.

The following encoder signals can be evaluated:

- Absolute encoder EnDat 2.1
- SSI absolute encoder¹⁾ with sin/cos 1 V_{pp} incremental signals, but without reference signal

The motor temperature can also be detected using a PTC thermistor.

Design

SME125 Sensor Modules External feature the following connections and interfaces as standard:

- 1 DRIVE-CLiQ interface with integrated 24 V DC electronics power supply from the Control Unit or Motor Module
- 1 encoder connection via circular connector
- 1 temperature sensor connection via circular connector
- 1 PE/ground connection

Technical specifications

Article No.	6SL3055-0AA00-5KA3
Product brand name	SINAMICS
Product type designation	S120
Product designation	SME125 Sensor Module External
Power requirement at 24 V DC, maximum without taking encoder into account	0.16 A
• Current carrying capacity of the encoder supply, for measuring system at 5 V DC	0.35 A
• Conductor cross-section, maximum	Acc. to connector contacts
• Fuse protection, maximum	Via DRIVE-CLiQ power supply source
Power loss	≤ 4.5 W
Encoders which can be evaluated	• Absolute encoder EnDat 2.1 with 5 V voltage supply • SSI absolute encoder with incremental signals sin/cos 1 V_{pp} with 5 V voltage supply
• Encoder frequency that can be evaluated, maximum	≤ 500 kHz
• Signal subdivision (interpolation)	≤ 16384 times (14 bit)
• SSI/EnDat 2.1 baud rate	100 kHz
Measuring system interface	17-pin M23 circular connector
Temperature sensor input	6-pin M17 circular connector
Output	IP67 DRIVE-CLiQ connector
Cable length, maximum	
• To measuring system ²⁾ / temperature sensor	3 m
• To automatic speed control	100 m
PE connection	M4 screw
Degree of protection	IP67
Width	117.6 mm
Height	44 mm
Depth	127 mm
Net weight	0.7 kg
Certificate of suitability	cULus

Selection and ordering data

Description	Article No.
SINAMICS SME125 Sensor Module External	6SL3055-0AA00-5KA3
For absolute encoders Without DRIVE-CLiQ cable	
Accessories	
Signal connector	6FX2003-0SU07
For temperature sensor input connector kit, 6+1-pole	
Signal connector	6FX2003-0SA17
For SME125 encoder system interface connector kit, 17-pole	

¹⁾ Only SSI encoders with 5 V supply voltage.

²⁾ The maximum cable length for the encoder system interface depends on the current consumption of the encoder system and the cross-section of the wires in the cable. However, the maximum length is 10 m.