

SIEMENS

Industrial Automation & Drive Technology

6SL3055-0AA00-5CA2

SINAMICS SMC30 Sensor Module Cabinet-Mounted

SMC30 Sensor Module — Encoder Interface

Cabinet-mounted sensor module for evaluating conventional encoder signals and transmitting the acquired actual values via DRIVE-CLiQ to compatible SINAMICS control systems. The Siemens product description specifies support for TTL/HTL incremental encoders, SSI combination encoders with incremental tracks, and SSI encoders without incremental signals. The supplied article is the 30 mm version and is delivered without a DRIVE-CLiQ cable.

Product lifecycle	PM300 — Active Product
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Key Technical Specifications

Parameter	Specification
Article Number (MLFB)	6SL3055-0AA00-5CA2
Product family	SINAMICS SMC30 Sensor Module Cabinet-Mounted
Encoder interfaces	TTL / HTL incremental; SSI combination encoder with incremental tracks; SSI encoder without incremental signals
Encoder input current range	4 ... 20 mA (typ. 10 mA)
Encoder supply	24 V DC / 0.35 A or 5 V DC / 0.35 A
Maximum encoder frequency	500 kHz
SSI baud rate	100 ... 1000 kBaud
SSI absolute-position resolution	Up to 30 bits
Maximum cable length — TTL	100 m (328 ft); bipolar signals required
Maximum cable length — HTL	100 m (328 ft) for unipolar signals; 300 m (984 ft) for bipolar signals
Maximum cable length — SSI	100 m (328 ft)
Electronics supply	24 V DC; 20.4 ... 28.8 V
Current requirement, electronics	Max. 0.20 A at 24 V DC, without encoder
Maximum fuse protection	20 A
Maximum conductor cross-section	2.5 mm²
Maximum power loss	10 W
PE connection	M4 screw
Mounting	TH 35 standard mounting rail according to EN 60715 / IEC 60715
Dimensions	30 × 150 × 111 mm (W × H × D)
Weight	Approx. 0.45 kg (0.99 lb)
Protection / enclosure	IP20 / IPXXB
Certificate / approval	cULus
DRIVE-CLiQ cable	Not included
Country of origin	Germany (current Siemens Industry Mall record)

Functional Description

The SMC30 is used where the encoder on a motor or machine does not provide a native DRIVE-CLiQ interface. It conditions the encoder feedback and makes speed, actual position and associated feedback information available to the SINAMICS control architecture. Siemens documentation identifies the SMC30 as a sensor module for TTL, HTL and SSI encoder technologies.

Application & Selection Notes

Select the SMC30 according to the actual encoder technology, signal topology, supply voltage, cable length and required feedback resolution. For HTL encoders, Siemens permits cable lengths up to 300 m when bipolar A+/A– and B+/B– signals are evaluated and the power-supply cable has a minimum cross-section of 0.5 mm². The module can be mounted on a TH 35 standard rail. The DRIVE-CLiQ connection must be made using a compatible system cable.

Compatibility

Siemens documentation lists this SMC30 article for SINAMICS S110/S120/S150 Control Units and for SINAMICS G220 converters equipped with the DRIVE-CLiQ option module. Siemens SINUMERIK ONE documentation also lists 6SL3055-0AA00-5CA2 as the SMC30 option for TTL/HTL or SSI combination encoder applications.

Ordering Identification

MLFB: 6SL3055-0AA00-5CA2

Product: SINAMICS SMC30 Sensor Module Cabinet-Mounted

Configuration: For TTL/HTL or SSI encoder systems; 30 mm overall width; without DRIVE-CLiQ cable.

Primary Siemens References

[Siemens D36.1 — Motion Control Drives, December 2025](#)

[Siemens Industry Mall — Article 6SL3055-0AA00-5CA2](#)

[Siemens SMC30 Equipment Manual / Technical Specifications](#)

[Siemens SINUMERIK ONE / Motion Control catalog](#)

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