

MANUFACTURER-SOURCE TECHNICAL REFERENCE

ABB FEN-21 – Requested Code 68679303 Verification

Product Reference

ABB FEN-21 Resolver and TTL Encoder Interface Module

DOCUMENT SCOPE

Independent Apter Power manual compiled only from the cited ABB manufacturer sources. No product photograph is included.

Product / lookup identity	ABB FEN-21 – Requested Code 68679303 Verification
Reference number	68679303
Document basis	Published ABB product records, PDFs, and manuals listed on page 3



Product page

<https://www.apterpower.com/ABB/fen-21-68679303-nameplate-verification>

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Product role and published parameters

WHAT IT IS, WHAT IT DOES, AND WHERE IT FITS

ABB FEN-21 is a drive feedback interface for a resolver and a TTL incremental encoder; ABB's current public product ID is 68805848, while requested code 68679303 is not corroborated in the reviewed ABB sources and remains on nameplate/order-record hold. Installed in a supported ABB drive option slot, it converts the resolver's excitation, sine, and cosine signals or the TTL encoder's A/B/Z pulse signals into position and speed feedback used by the drive control program; it can also accept PTC/KTY motor-temperature feedback and two digital position-latch inputs. System context: ABB FEN-21 Resolver and TTL Encoder Interface Module.

Published field	Manufacturer-published value or verified identity note
Module type	Resolver and TTL encoder interface
Verified model	FEN-21
Current ABB public product ID	68805848
Requested numeric code	68679303 – identity relationship not confirmed in reviewed ABB public sources
Resolver input	Differential sine and cosine, 2 to 7 Vrms
Resolver excitation	4 to 12 Vrms AC, 1 to 20 kHz, maximum 100 mArms
Resolver performance	24-bit position resolution and 24-bit speed resolution

System function and signal path

01	Resolver Path: FEN-21 supplies a differential sinusoidal excitation to the resolver rotor and receives differential sine and cosine stator signals proportional to rotor angle. The drive uses the decoded result for 24-bit position and speed feedback.
02	Ttl Encoder Input: Differential RS-422/485 A, B, and Z pulse channels provide incremental position, speed, direction, and reference-mark information to the drive at up to 500 kHz.
03	Encoder Emulation: The module can reproduce differential TTL A/B/Z signals with a programmable 1-to-65535 pulses-per-revolution emulation for another receiving device.
04	Temperature Feedback: A KTY84 or PTC motor temperature sensor can be connected through the resolver input only when the required insulation from live motor parts is present.

Applications, answers, and official sources

1 Resolver motor feedback: Supplies resolver excitation and processes sine/cosine rotor-angle signals for closed-loop speed and position control in a compatible ABB drive.

2 TTL incremental encoder feedback: Receives differential A/B/Z pulses for motor speed, direction, position, and reference-mark feedback.

3 Encoder signal emulation: Outputs a differential TTL A/B/Z emulation signal to a compatible receiving device when the engineered drive application requires shared feedback.

4 Position capture and motor temperature: Uses two digital latch inputs for position events and an insulated KTY84/PTC sensor for documented motor-temperature monitoring in machinery drive applications.

Frequently asked questions

What is ABB FEN-21?	It is a feedback interface module for a resolver, a TTL incremental encoder, TTL encoder emulation, two position-latch inputs, and an optional PTC/KTY temperature signal.
Is 68679303 officially verified as the FEN-21 product ID?	Not from the reviewed ABB public sources. ABB's current public FEN-21 record uses product ID 68805848, so 68679303 requires a matching ABB nameplate or order record.
What resolver signals does FEN-21 handle?	It supplies 4-to-12-Vrms, 1-to-20-kHz excitation and receives differential sine and cosine signals of 2 to 7 Vrms.
Which TTL encoder signals are supported?	Differential RS-422/485 A, B, and Z signals up to 500 kHz, with 1 to 65535 pulses per revolution and a reference mark.
Can FEN-21 power the TTL encoder?	Yes. A jumper selects +5.5 V or +24 V. The exact encoder voltage/current and cable drop must be checked, and the jumper must be removed when an external supply is used.
Does FEN-21 provide an encoder output?	Yes. It provides differential TTL A/B/Z encoder emulation up to 500 kHz with 1 to 65535 pulses per revolution and a reference mark.

Official ABB sources

ABB FEN-21 official product page	https://www.abb.com/global/en/products/68805848
FEN-21 Resolver Interface User's Manual	https://library.e.abb.com/public/d27e80d0db1c4b60b142e5c69ebb387d/EN_FEN-21_UM_E.pdf
ABB ACS850-04 hardware manual	https://library.e.abb.com/public/0be9bbab29e380b5c1257b88001f7002/EN_ACS850_E0_E_HW_C_screen.pdf