ABB YPH108B/SPC

Extended Speed Measuring Board

SPC Encoder-Level, Timing and Analog-Reference Decisions

Preserve the capacitor-input and signal-level choices before restoring the encoder pair, then test timing and non-isolated analog duties separately.

Before You Order

Encoder interface	Record single-ended/differential signaling and actual 5/12/24 V selections for both encoders.
SPC configuration	Photograph jumpers and capacitor-input connections on the installed board.
Used functions	List synchronization filter selections and the receiving analog-output reference circuits.

The installed relationship

Encoder channels	Two encoders -> A/B/Z optoisolated channels -> CDC speed/time processing
Synchronization	Binary event -> selected input filter -> hardware/application timing
Analog boundary	Non-isolated output -> documented receiving reference and load

Data describe YPH108B/SP/SPC, including the SPC capacitor-input distinction. Encoder-level thresholds and power selection depend on the selected 5/12/24 V configuration. Analog-output accuracy is not a speed-measurement accuracy claim.

ACV700 CDC encoder measurement — fault decisions

Errors depend on encoder cable route	Review single-ended drive, level and SPC input selection before altering the mechanical speed reference.
Synchronization event is missed	Reconcile filter selection and actual event duration using the approved measurement method.
Analog discrepancy with correct encoder direction	Inspect non-isolated reference wiring and output scaling separately.

Carry the decision into the installation

1 Record the SPC electrical setup	Capture encoder-level selections, jumper positions and the actual differential/single-ended connection.
2 Retain A/B/Z identity	Restore both encoder channel groups and compare direction/reference relationships with the application.
3 Check encoder power separately	Review the connected encoder supply selection and demand before enabling pulse reception.
4 Prove synchronization events	Test the installed event source against its chosen input filter and application timing duty.
5 Verify analog interpretation	Compare each commanded analog quantity with the corresponding output and receiving input reference.
6 Accept the application function	Demonstrate the intended speed/timing behavior with encoder, synchronization and analog observations kept distinct.

As-left proof

Input proof

Signal form and voltage agree with the restored SPC jumper arrangement.

Timing proof

Direction, index and synchronization response match the application record.

Output proof

Used analog channels respond correctly with their intended reference.

Interpreting the Separate Specifications

Encoder limit	Input frequency and electrical level describe the receiving encoder interface.
Filter limit	The synchronization response depends on the selected software filter.
Analog limit	Resolution and accuracy describe the analog-output stage, not the entire speed measurement.

Decisions from the observed installation

A 5 V encoder is moved onto the capacitor input

Restore the documented non-capacitor arrangement before testing speed.

An output specification is presented as encoder accuracy

Return the value to its correct analog-stage context.

The evidence to retain for YPH108B/SPC

Configuration record	Board marking, jumpers, encoder levels, channel assignment and filter selection.
Functional record	Direction/index, synchronization event and each used analog-output observation.

Technical basis

ABB ACV 700 Hardware Manual, Control System

Related product references

Separate supply references; listing does not establish interchangeability.

ABB XO08R1 XOO8R1-B04 1SBP260101R1001	Digital Relay Output Extension Module; separate supply reference
ABB YPK113A	UART Communication Board; separate supply reference

Discuss YPH108B/SPC and the installed application with Apter Power.
sales13@apterpower.com | +86 18030235313