

MANUFACTURER-SOURCE TECHNICAL REFERENCE

ABB SPFEC12

SPFEC12 Analog Input Range, Scaling, and Commissioning Guide

ABB SPFEC12 Symphony Plus HR Series 15-Channel Analog Input Module

DOCUMENT SCOPE

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

Product / lookup identity	ABB SPFEC12
Reference number	SPFEC12
Document basis	Published ABB product records, PDFs, and manuals listed on page 3



Product page

<https://www.apterpower.com/ABB/spfec12>
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Field transmitter, NTAI05 termination, SPFEC12 14-bit conversion, I/O Expander Bus, and controller value

ABB SPFEC12 is a Symphony Plus HR Series analog input module that processes 15 high-level analog field signals. The module accepts 4 to 20 mA current and 1 to 5 VDC, 0 to 1 VDC, 0 to 5 VDC, 0 to 10 VDC, and -10 to +10 VDC voltage inputs.

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| 01 | System Inputs: Fifteen individually configured high-level analog inputs: 4-20 mA and the documented voltage ranges. |
| 02 | Processing: 14-bit analog input conversion and controller-facing I/O processing over the Harmony Rack architecture. |
| 03 | Outputs: Digitized process values to the controller; no analog output channels are documented for SPFEC12. |
| 04 | Communications: I/O Expander Bus to the rack controller; no HART/FSK support is documented for SPFEC12. |
| 05 | Boundary: Do not describe sibling All2ev's 16-bit group isolation, accuracy, or lifecycle as SPFEC12 specifications. |

 Fifteen conventional analog inputs without adding unsupported FSK smart-transmitter claims

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| 01 | Verification Status: VERIFIED_EXACT_MODEL_AND_FUNCTION |
| 02 | Exact Mapping: ABB's current Symphony Plus catalog identifies SPFEC12 as a 15-channel, 14-bit analog input module for conventional transmitters and standard analog inputs. |
| 03 | Lifecycle Status: HOLD – present in ABB's current product catalog and product record, but no exact current lifecycle-phase statement was found |



Model/revision, range, power, wiring, shields, function codes, scaling, diagnostics, and loop simulation

01	Verify the exact SPFEC12 nameplate and revision; do not merge with IMFEC12 or AI12ev.
02	Back up function-code configuration, channel ranges, scaling, alarms, and controller database before replacement.
03	Confirm NTAI05 wiring, channel polarity, current/voltage selection, shield grounding, and field power from approved drawings.
04	Do not connect a signal outside the documented range or assume HART/FSK support.
05	Follow ABB/site ESD and rack insertion/removal procedures and verify logic power before commissioning.
06	Loop-check every used channel and verify scaling, fault detection, alarms, and controller values after service.

Identity and release controls

Verification Status	VERIFIED_EXACT_MODEL_AND_FUNCTION
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Official ABB sources

ABB Ability Symphony Plus Product Catalog Rev G	https://library.e.abb.com/public/67f6b20f64d0443da36258e62a597791/2VAA005340%20en%20G%20Symphony%20Plus%20Product%20Catalog.pdf
ABB SPFEC12 product record	https://new.abb.com/products/SPFEC12/spfec12
ABB Harmony Rack I/O Product Overview WBPEEUS240011B1	https://library.e.abb.com/public/429d55ddf7c18f3ec1256d12005fbd8a/WBPEEUS240011B1_-_en_Harmony_Rack_I_O_Product_Overview.pdf
ABB Users Group Anchorage Harmony evolution mapping	https://library.e.abb.com/public/68e694fd1f5743ba949fbae1859ee3ac/02%20ABB%20Users%20Group%20Anchorage%20Harmony.pdf