

MANUFACTURER-SOURCE TECHNICAL REFERENCE

# ABB SPDSM04

## Product Reference

ABB SPDSM04 Eight-channel pulse input module for a Symphony Plus controller

### DOCUMENT SCOPE

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

|                           |                                                                   |
|---------------------------|-------------------------------------------------------------------|
| Product / lookup identity | ABB SPDSM04                                                       |
| Reference number          | SPDSM04                                                           |
| Document basis            | Published ABB product records, PDFs, and manuals listed on page 3 |



### Product page

<https://www.apterpower.com/ABB/spdsm04>  
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## Product role and published parameters

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

ABB SPDSM04 is an HR Series pulse input module for an ABB Ability Symphony Plus controller. Each channel can be programmed for a 5 VDC contact input, a 24 VDC contact input, or a 50 mV peak-to-peak to 10 V peak-to-peak pre-amplifier signal. System context: ABB SPDSM04 Eight-channel pulse input module for a Symphony Plus controller.

| Published field            | Manufacturer-published value or verified identity note                                     |
|----------------------------|--------------------------------------------------------------------------------------------|
| Product type               | HR Series pulse input module                                                               |
| Pulse input channels       | 8 independently configured, optically isolated channels                                    |
| Programmable input classes | 5 VDC contact, 24 VDC contact, or 50 mVpp to 10 Vpp pre-amplifier signal                   |
| Operating modes            | Period, frequency, totalize, or duration                                                   |
| Maximum input frequency    | 50 kHz at 50% duty cycle                                                                   |
| Power requirements         | 5 VDC $\pm 5\%$ at 1.4 A typical; 24 VDC $\pm 10\%$ at 62 mA typical from termination unit |
| Range 1                    | 4.0–6.0 VDC; 14.8 mA max at 6.0 VDC; logic 1 = 4.0–6.0 VDC; logic 0 = 0–1.0 V              |

## System function and signal path

|    |                                                                                                                                   |
|----|-----------------------------------------------------------------------------------------------------------------------------------|
| 01 | Up to eight isolated pulse inputs configured for 5 VDC contact, 24 VDC contact, or 50 mVpp–10 Vpp pre-amplifier signals.          |
| 02 | Period, frequency, totalize, or duration, depending on the configured function.                                                   |
| 03 | 50 kHz maximum at 50% duty cycle.                                                                                                 |
| 04 | Processes pulse measurements for a Symphony Plus controller; exact function-code numbers and configuration procedure remain HOLD. |

## Applications, answers, and official sources

**1** Rotational speed pulse acquisition: Measures compatible tachometer or speed pulses in frequency or period mode.

**2** Production and event counting: Totalizes verified contact or conditioned pulse events from industrial equipment.

**3** Pulse-output flow measurement: Processes compatible transmitter pulses for totalization or frequency-based monitoring.

**4** Duration and period monitoring: Measures documented pulse timing modes for controller diagnostics and sequence logic.

## Frequently asked questions

|                                                   |                                                                                                         |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>What is ABB SPDSM04?</b>                       | It is an eight-channel HR Series pulse input module for a Symphony Plus controller.                     |
| <b>How many input channels does it have?</b>      | Eight independently configured, optically isolated pulse input channels.                                |
| <b>Which input signal classes are documented?</b> | 5 VDC contact, 24 VDC contact, and 50 mVpp to 10 Vpp pre-amplifier signals.                             |
| <b>Which measurement modes are supported?</b>     | Period, frequency, totalize, and duration.                                                              |
| <b>What is the maximum input frequency?</b>       | 50 kHz at 50 percent duty cycle.                                                                        |
| <b>What power does the module require?</b>        | ABB lists 5 VDC +/-5% at 1.4 A typical and 24 VDC +10%/-10% at 62 mA typical from the termination unit. |

## Official ABB sources

|                                                             |                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ABB Ability Symphony Plus Product Catalog 2VAA005340</b> | <a href="https://library.e.abb.com/public/95elecba9fd429e9cd7c975bd915cbb/2VAA005340%20en%20D%20Symphony%20Plus%20Product%20Catalog.pdf">https://library.e.abb.com/public/95elecba9fd429e9cd7c975bd915cbb/2VAA005340%20en%20D%20Symphony%20Plus%20Product%20Catalog.pdf</a> |
| <b>ABB Harmony evolution mapping presentation</b>           | <a href="https://library.e.abb.com/public/68e694fd1f5743ba949fbae1859ee3ac/02%20ABB%20Users%20Group%20Anchorage%20Harmony.pdf">https://library.e.abb.com/public/68e694fd1f5743ba949fbae1859ee3ac/02%20ABB%20Users%20Group%20Anchorage%20Harmony.pdf</a>                     |
| <b>ABB Harmony Rack I/O Product Overview WPPEUS240011B1</b> | <a href="https://library.e.abb.com/public/429d55ddf7c18f3ec1256c95006f67bc/WBPEEUS240011B1_-_en_Harmony_Rack_I_O_Product_Overview.pdf">https://library.e.abb.com/public/429d55ddf7c18f3ec1256c95006f67bc/WBPEEUS240011B1_-_en_Harmony_Rack_I_O_Product_Overview.pdf</a>     |