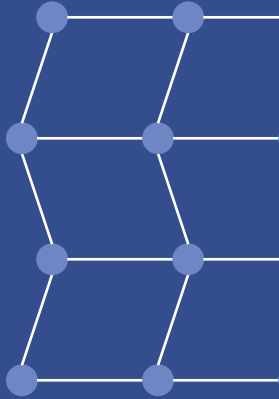


MANUFACTURER-SOURCE TECHNICAL REFERENCE

ABB SPHSS13

Product Reference

ABB SPHSS13 SPHSS13 Hydraulic Servo Module



DOCUMENT SCOPE

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

Product / lookup identity	ABB SPHSS13
Reference number	SPHSS13
Document basis	Published ABB product records, PDFs, and manuals listed on page 3



Product page

<https://www.apterpower.com/ABB/sphss13>
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Product role and published parameters

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

ABB SPHSS13 is a Symphony Plus HR Series hydraulic servo module for closed-loop valve-position control. The module accepts redundant LVDT position feedback and supports AC or DC LVDTs, then regulates redundant protected servo outputs in ± 300 mA servo mode or 4–20 mA/20–160 mA I/H modes. System context: ABB SPHSS13 SPHSS13 Hydraulic Servo Module.

Published field	Manufacturer-published value or verified identity note
Function	Hydraulic servo valve-position control
Operating power	+5 VDC $\pm 5\%$ at 576 mA typical; +15 VDC $\pm 5\%$ at 15 mA; -15 VDC $\pm 5\%$ at 12 mA; +24 VDC $\pm 10\%$ at 335 mA typical from termination unit
Power dissipation	2.88 W at +5 VDC; 0.23 W at +15 VDC; 0.18 W at -15 VDC; 8.04 W at +24 VDC, typical
LVDT secondary inputs	4 analog inputs total: 2 LVDT position inputs, each with 2 secondaries; 24 Vpp ± 7 VDC common mode; 10 kohm differential input impedance
LVDT excitation outputs	2 analog primary excitation outputs; 400 Hz to 15 kHz
Servo outputs	2 protected analog outputs; opening or shorting one does not affect the other; servo mode ± 300 mA
I/H modes	4–20 mA or 20–160 mA

System function and signal path

01	System Inputs: Redundant AC or DC LVDT position feedback, raise/lower/trip-bias contacts, and controller demand/configuration.
02	Processing: Onboard microprocessor, memory, and communication circuitry perform proportional or proportional-integral valve-position control, automatic feedback/demodulator calibration, and redundancy handling.
03	Outputs: Protected redundant servo-coil current or I/H current, LVDT excitation, scaled/unscaled feedback, test output, and hard-manual open-collector status/control output.
04	Communications: Harmony Rack/HR Series controller interface through the module mounting architecture; field signals route through NTHS03 and NKHS03 in the documented configuration.

Applications, answers, and official sources

1 Steam-turbine valve positioning: Controls throttle, governor, and steam control-valve actuators with redundant LVDT feedback.

2 Gas-turbine fuel and guide-vane control: Regulates fuel valves, inlet guide vanes, and nozzle-angle actuators through servo or I/H outputs.

3 Hydro-turbine hydraulic servo control: Provides HR Series closed-loop positioning for approved hydraulic turbine actuator arrangements.

4 Non-modulating valve position indication: Reports open-close valve position without control, replacing SPLPS01 functionality in the ABB-documented use case.

Frequently asked questions

What is ABB SPHSS13?	It is a Symphony Plus HR Series hydraulic servo valve-position control module.
What does it drive?	A servo valve or I/H converter controlling a hydraulic actuator.
Which position sensors are supported?	ABB documents AC or DC LVDTs with redundant position-feedback inputs.
What servo current is documented?	Servo mode supports ± 300 mA.
Which I/H ranges are documented?	4–20 mA and 20–160 mA.
Does it have redundant outputs?	Yes. ABB documents two protected servo outputs; opening or shorting one does not affect the other.

Official ABB sources

ABB Ability Symphony Plus HR Series Control and I/O	https://new.abb.com/control-systems/symphony-plus/control-and-io/hr-series-control-and-i-o
ABB Ability Symphony Plus Product Catalog Rev E	https://library.e.abb.com/public/fa6c9b92b1ef4d9cba4acd211ba01e5b/2VAA005340%20en%20E%20Symphony%20Plus%20Product%20Catalog.pdf.pdf
ABB Symphony Plus lifecycle/evolution update – SPHSS13	https://library.e.abb.com/public/0e820d314f9e491380a1bfbf0e7073d1/04_Symphony%20Plus%20life%20cycle%20updates-Jim%20Day.pdf