APTER POWER
INDUSTRIAL AUTOMATION

MANUFACTURER-SOURCE TECHNICAL REFERENCE

ABB IMHSS03

IMHSS03 Hydraulic Servo, LVDT, and Valve Commissioning Guide

ABB IMHSS03 Harmony Rack Hydraulic Servo and Valve Position Module

DOCUMENT SCOPE

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

Product / lookup identity	ABB IMHSS03
Reference number	IMHSS03
Document basis	Published ABB product records, PDFs, and manuals listed on page 3

Product page

https://www.apterpower.com/ABB/imhss03

Apter Power contact

sales13@apterpower.com | +86 180 3023 5313

Controller function code, IMHSS03 servo command, hydraulic actuator, LVDT feedback, and trip contacts

ABB IMHSS03 is an intelligent Harmony Rack hydraulic servo module for valve-position control. The module drives a servo valve or I/H converter to move a hydraulic actuator and uses LVDT feedback to measure actuator position.

01	System Inputs: Redundant LVDT position feedback, raise/lower/trip-bias contact inputs, and controller demand/configuration.
02	Processing: Onboard microprocessor, memory, and communication circuitry execute valve-position control under function code 55 or 150.
03	Outputs: Protected servo-coil current, I/H converter output, LVDT excitation, scaled panel-meter feedback, unscaled feedback, test output, and hard-manual digital output.
04	Communications: Harmony Rack I/O Expander Bus to the controller; direct field I/O is wired through the termination unit.
05	Boundary: IMHSS03 controls position; turbine speed detection is normally coordinated with IMFCS01 and must not be attributed to IMHSS03 itself.

Turbine valve-position loop scope with SPHSS13 treated as an engineered replacement platform

01	Verification Status: VERIFIED_EXACT_MODEL_FUNCTION_AND_DETAILED_IO
02	Exact Mapping: ABB identifies IMHSS03 as an intelligent valve-position control I/O module through which a Harmony controller drives a servo valve or I/H converter for manual or automatic hydraulic-actuator control.
03	Lifecycle Status: HOLD - ABB 2016 evolution material calls SPHSS13 a direct replacement for IMHSS03, but no current exact IMHSS03 lifecycle-phase statement was found

Model/revision, LVDT excitation/phasing, servo coils, I/H range, contacts, termination, feedback, and trips

01	Treat turbine hydraulic control as critical equipment and use an approved outage, bypass, and rollback plan.
02	Back up function-code configuration, calibration, gains, limits, polarity, servo mode, and alarms before service.
03	Verify the exact LVDT type, excitation frequency, wiring, common mode, impedance, and mechanical calibration.
04	Confirm servo-coil or I/H converter current range and load impedance before energizing outputs.
05	Verify NTHS03/NKHS03, jumpers, dipshunts, shields, field power, and hard-manual wiring against approved drawings.
06	After replacement, test raise/lower/trip-bias inputs, hard manual, redundant outputs, LVDT feedback, failsafe behavior, calibration, alarms, and controller tracking.

Identity and release controls

Verification Status	VERIFIED_EXACT_MODEL_FUNCTION_AND_DETAILED_IO

Official ABB sources

ABB Harmony Rack Turbine Control Data Sheet WBPEEUD240010A1	https://library.e.abb.com/public/28a562fcd841b552c1256d12005fbd8a/WBPEEUD240010A1_-_en_Harmony_Rack_Turbine_Control_Data_Sheet.pdf
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 Symphony Plus lifecycle/evolution update - SPHSS13	https://library.e.abb.com/public/0e820d314f9e491380a1bfbf0e7073d1/04_Symphony%20Plus%20life%20cycle%20updates-Jim%20Day.pdf
ABB 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