Woodward 9905-003

01 Synchronizing limits and breaker isolation

1 Confirm the matching variant

Check 9905-003 against the ±10° phase and 5% voltage-matching requirement. Do not substitute the limits of a similar-looking SPM-A order number.

2 Secure the breaker circuit

Place the generator and breaker controls in the approved commissioning condition. Prevent an unintended live close command while sensing and control wiring are being assessed.

Nominal frequency	50/60 Hz
Phase-angle window	±10°
Voltage matching	5%

02 Sensing circuits and governor connection

1 Verify bus and generator sensing

Check the selected 115 or 230 V AC arrangement and the phase relationship of the sensing circuits. Keep applied voltage within the stated tolerance.

2 Match the governor interface

Identify the actual speed-control interface and its required output arrangement. Use the relevant SPM-A connection instructions for that governor rather than a generic analog-output assumption.

Sensing voltage	115 or 230 V AC RMS, ±10%
Power consumption	5 W maximum

03 Timing selection and relay loading

1 Record the match-up selection

Inspect and retain the internal match-up-time selection. The available intervals and the 1/2-second factory setting affect how the synchronizing condition is accepted.

2 Check the relay load

Compare the breaker-control load with the applicable resistive or inductive contact rating. Include the circuit's actual voltage and switching duty in the assessment.

Match-up time	1/8, 1/4, 1/2 or 1 s; factory 1/2 s
Resistive contact load	10 A at 28 V DC; 3 A at 120 V AC
Inductive contact load	6 A at 28 V DC; 2 A at 120 V AC

04 Test modes and close-command duration

1 Use the appropriate test mode

Test the sensing and matching response in the approved CHECK or commissioning arrangement. Confirm mode selection before enabling any breaker-close path.

2 Assess the close pulse

Verify the approximately one-second close-command behavior using a controlled test circuit. Ensure that the receiving breaker circuit responds as intended without repeated unintended operation.

Operating modes	RUN, CHECK, PERMISSIVE, OFF
Breaker-close contact	Normally open
Close-command duration	Approximately 1 s

05 Generator sequence and retained settings

1 Verify the full synchronizing sequence

Under the site's approved generator procedure, assess voltage, frequency and phase matching together. A correct single sensing value is not sufficient acceptance of paralleling behavior.

2 Retain the generator settings

Save sensing connections, matching variant, mode settings, match-up time and breaker-test results. Keep the governor and breaker configuration with the synchronizer replacement record.

Technical basis: Woodward SPM-A Synchronizer Manual 82384U.

Related product navigation

Woodward 9905-969

Woodward 9905-021

These are related references, not confirmed substitutes or an automatically approved assembly.