



SPM-D10 Series

One Breaker Synchronizer

APPLICATIONS

The SPM-D10 is a microprocessor-based synchronizer designed for use on three phase AC generators equipped with Woodward or other compatible speed controls and automatic voltage regulators. The SPM-D10 synchronizer provides automatic frequency, phase and voltage matching using either analog- or discrete output bias signals.

Part-No. 8440-1668 SPM-D1040B/**XN** is a direct replacement of the SPM-A synchronizer.

DESCRIPTION

Synchronizing

- Phase match or slip frequency synchronization with voltage matching
- Two-phase sensing of generator and bus
- Selectable operating modes like SPM-A (Run, Check, Permissive, and OFF)
- Synchro-check possible
- Synchronization time monitoring

Isolated operation

- Frequency control
- Voltage control

DESCRIPTION

Dead bus operation

- Closing of CB on demand

Control outputs

Standard

- Discrete raise/lower for speed
- Discrete raise/lower for voltage

X & XN Packages

- Analog bias outputs for voltage and speed freely configurable for all levels (+/-1 V, +/-3 V, 0 to 5 V, 0.5 to 4.5 V, +/-10 V +/-5 V, 0 to 20 mA, +/-20 mA, and much more configurable)
- Speed bias output configurable as 500 Hz PWM output with adjustable voltage level
- Two raise/lower outputs configurable for either speed or voltage

Operating Features

- Two-line Liquid Crystal display for operation and alarm indication
- Synchroscope
- Indication of control activity and breaker state
- Multi-level password protection for parameters
- Configuration directly or via PC
- English or German language adjustable

FURTHER SPM-D SYNCHRONIZERS

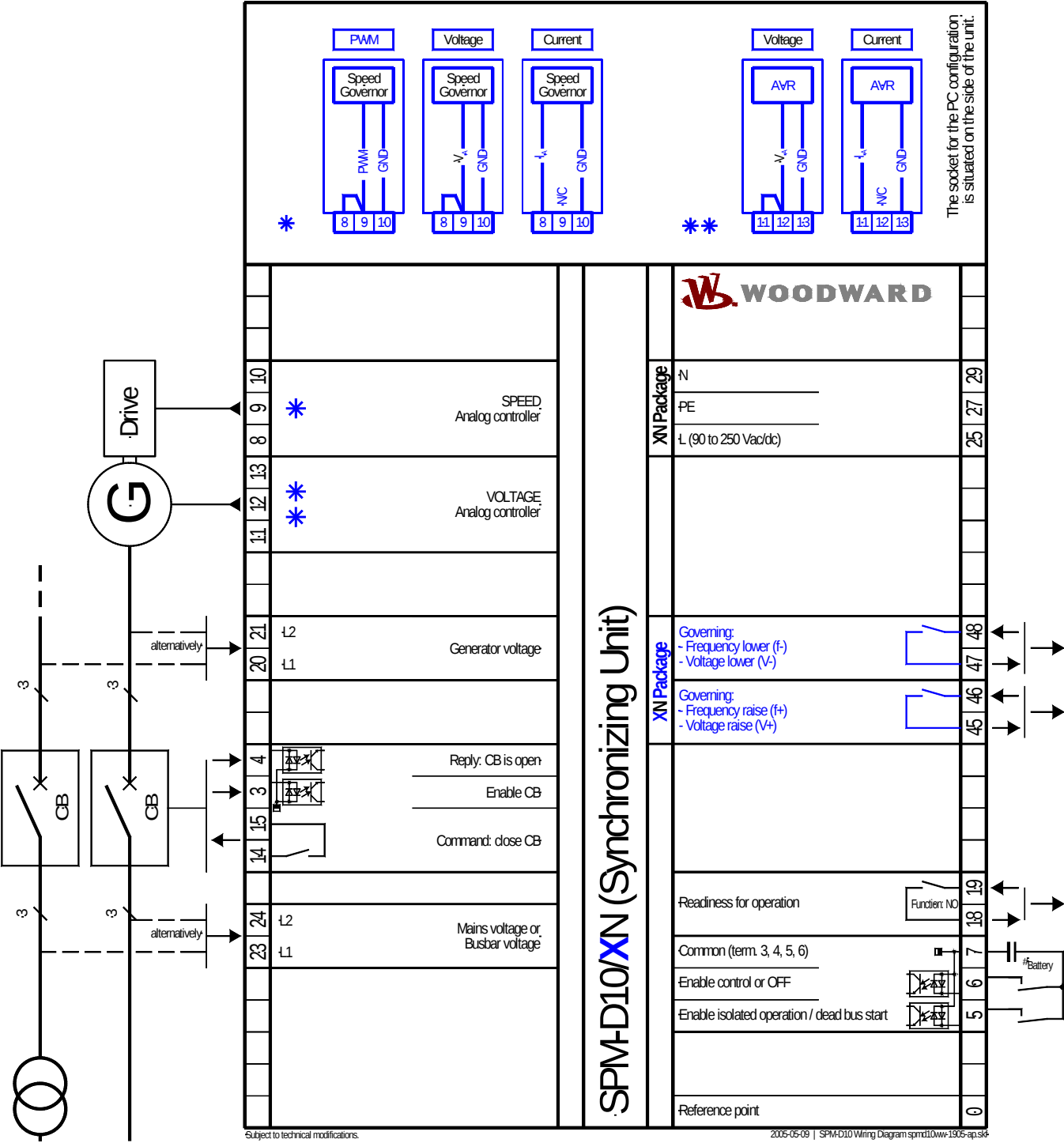
- The SPM-D10/**YB** Series provides three-phase generator and bus measurement refer to product specifications 37298 for more information
- The SPM-D11 Series provides load/var sharing refer to product specifications 37292 for more information

- Synchronization for one circuit breaker
- Frequency, phase, and voltage matching
- Selectable types of control output
- Digital display of generator and bus values
- Microprocessor technology for flexible and reliable operation
- Wide range power supply available
- Additional mains protection and display of mains values available
- PC and front panel configurable
- CE marked
- UL/cUL Listed

Relay outputs	isolated
Contact material	AgCdO
Load (GP)	2.00 Aac@250 Vac
	2.00 Adc@24 Vdc / 0.36 Adc@125 Vdc / 0.18 Adc@250 Vdc
Pilot duty (PD)	
	1.00 Adc@24 Vdc / 0.22 Adc@125 Vdc / 0.10 Adc@250 Vdc
Housing	Type APRANORM DIN 43 700
Dimensions	144×72×122 mm
Front cutout	138[+1.0]×67[+0.7] mm
Connection	screw/plug terminals depending on connector 1.5 mm² or 2.5 mm²
Front	insulating surface
Protection system	with correct installation
	Front
	IP42 (sealed IP54; gasket kit = P/N 8923-1037)
	Back
	IP21
Weight	approx. 800 g
Disturbance test (CE)	tested according to applicable EN guidelines
Listings	UL/cUL listed (voltages up to 300 Vac)



WIRING DIAGRAM



International

Woodward
PO Box 1519
Fort Collins CO, USA
80522-1519
1000 East Drake Road
Fort Collins CO 80525
Ph: +1 (970) 498-3634
Fax: +1 (970) 498-3058
email:
SalesPGD_NAandCA@woodward.com

Europe

Woodward GmbH
Handwerkstrasse 29
70565 Stuttgart, Germany
Ph: +49 (0) 711 789 54-510
Fax: +49 (0) 711 789 54-101
email:
SalesPGD_EMEA@woodward.com

Distributors & Service

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www.woodward.com

For more information contact:

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FEATURES OVERVIEW

SPM-D10 Series Synchronizer #1	SPM-D10	SPM D10/N	SPM-D10/X	SPM D10/XN
Measuring/Display				
Generator voltage, 2phase	Ü	Ü	Ü	Ü
Busbar voltage, 2phase	Ü	Ü	Ü	Ü
Mains voltage, 3phase				
Control				
Breaker	1	1	1	1
Synchronization, 2phase	Ü	Ü	Ü	Ü
Isolated operation	Ü	Ü	Ü	Ü
Controller				
Discrete raise/lower: speed	Ü	Ü	Ü #2	Ü #2
Discrete raise/lower: voltage	Ü	Ü	Ü #2	Ü #2
Analog output: speed			Ü	Ü
Analog output: voltage			Ü	Ü
PMW output: speed			Ü	Ü
Listings/Approvals				
CE marked	Ü	Ü	Ü	Ü
UL/cUL listed	Ü	Ü	Ü	Ü
Accessories				
Configuration via PC #3	Ü	Ü	Ü	Ü
Power supply				
24 Vdc	Ü		Ü	
Wide range 90 to 250 Vac/dc		Ü		Ü
English	37215	37215	37215	37215
German	GR37215	GR37215	GR37215	GR37215
Part numbers P/N				
Measuring inputs 100 Vac	5448-890	8440-1432	5448-893	8440-1667
Measuring inputs 400 Vac #4	8440-1019	8440-1433	8440-1301	8440-1668

#1 Information about the SPM-D10YB can be found in the separate product specs 37298

#2 Configurable to either speed or voltage

#3 Cable incl. software necessary (DPC)

#4 All units with 400V measuring inputs can also be used for 100V system voltage