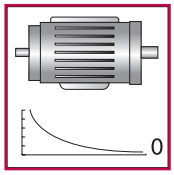
Preventa safety modules

XPSVNE

For zero speed detection

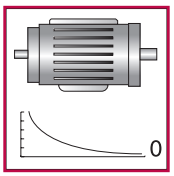
Catalogue

june 2014



Schneider Electric

Preventa safety modules
Type XPSVNE
For zero speed detection



Operating principle

Preventa safety modules **XPSVNE** for zero speed detection are used to detect the stop condition of electric motors. Their most common applications include: providing the unlock signal for electrically interlocked sliding or removable machine guards, controlling rotation direction signals for reversing motors and engaging locking brakes after a motor has come to a standstill.

As electric motors run down, a remanent voltage is produced in the windings of the motor due to residual magnetism. This voltage is proportional to the speed of the motor and, therefore, decreases as the motor comes to a standstill.
This remanent voltage is measured in a redundant manner so as to detect the stop condition of the motor. The cabling between the motor windings and the inputs of the **XPSVNE** module is also monitored to prevent a cabling breakage or fault being seen as a stopped motor.
A transformer should not be used to connect the motor to terminals Z1, Z2 and Z3 since there is no monitoring of the connection with the motor winding via the resistance monitoring.

Modules **XPSVNE** are suitable for detecting the stop condition of all types of AC or DC motor driven machines which, when the motor runs down, produce a remanent voltage in the windings due to residual magnetism. These machines can be controlled by electronic devices, such as variable speed drives or DC injection brakes.
The input filters for standard **XPSVNE** modules are designed for a frequency of up to 60 Hz.
For motors operating at a frequency higher than 60 Hz, which therefore produce a high frequency remanent voltage, special modules **XPSVNE●●●●HS** should be used.

Modules **XPSVNE** have 2 potentiometers mounted on the front face of the module which allow independent adjustment of the switching threshold for each input circuit. This allows adjustment for different types of motors and application requirements.

To aid diagnostics, modules **XPSVNE** have 4 LEDs and 2 solid-state outputs to provide information on the status of the zero speed detection circuit.

Maximum achievable safety level

- PL d/Category 3 conforming to EN/ISO 13849-1
- SILCL 2 conforming to EN/IEC 62061

Product certifications

- UL
- CSA
- TÜV

References

Description	Connection	Number of safety circuits/ Solid-state outputs for PLC	Supply	Frequency of motor power supply	Reference	Weight kg/ *lb*
Safety modules for zero speed detection	Captive screw clamp terminals Terminal block removable from module	2/ 2	⎓ 24 V	⩽ 60 Hz	**XPSVNE1142P**	0.500/ *1.102*
				> 60 Hz	**XPSVNE1142HSP**	0.500/ *1.102*
			∿ 115 V	⩽ 60 Hz	**XPSVNE3442P**	0.600/ *1.333*
				> 60 Hz	**XPSVNE3442HSP**	0.600/ *1.323*
			∿ 230 V	⩽ 60 Hz	**XPSVNE3742P**	0.600/ *1.323*
				> 60 Hz	**XPSVNE3742HSP**	0.600/ *1.323*

XPSVNE●●●●●

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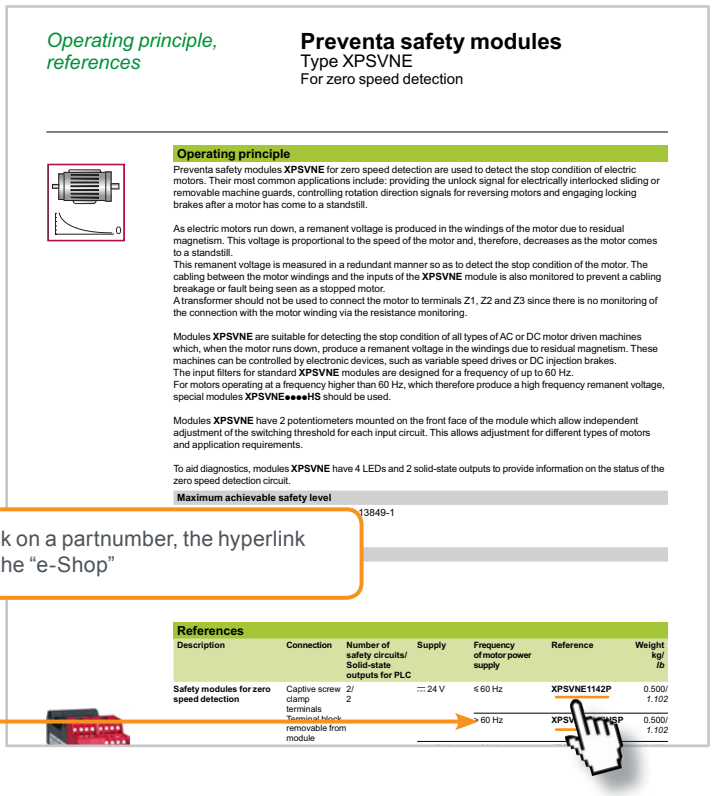
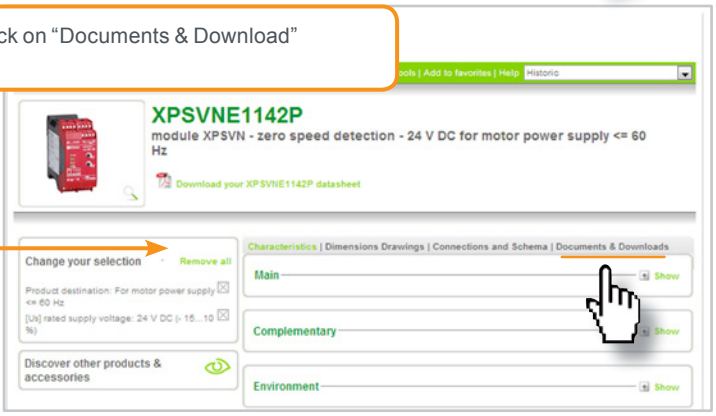
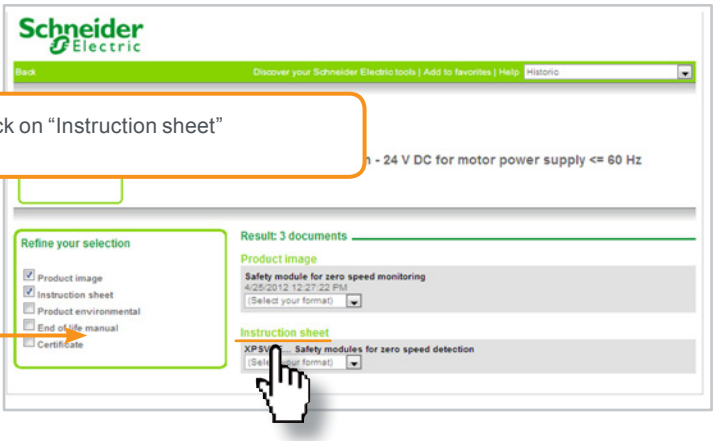
>> Wiring diagram and Functional Diagram are available on the “e-Shop” via the partnumber.



> Click on a partnumber, the hyperlink opens the “e-Shop”



> Click on “Documents & Download”



> Click on “Instruction sheet”

Embedded hyperlinks in catalogues

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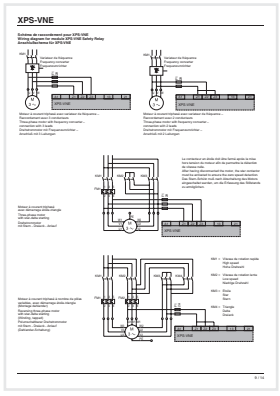
direct access to information on the internet



More information on
http://www.schneider-electric.com/machinesafety

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