

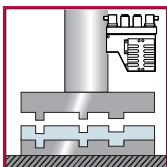
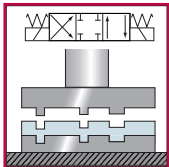
Preventa safety modules

For monitoring hydraulic safety system valves
(in linear or eccentric presses)

XPSPVT, XPSPVK

Catalog

October 2015



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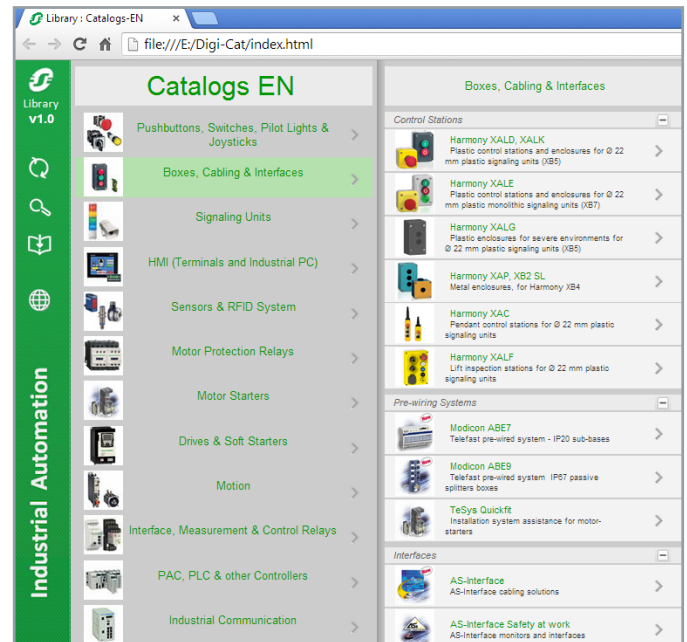
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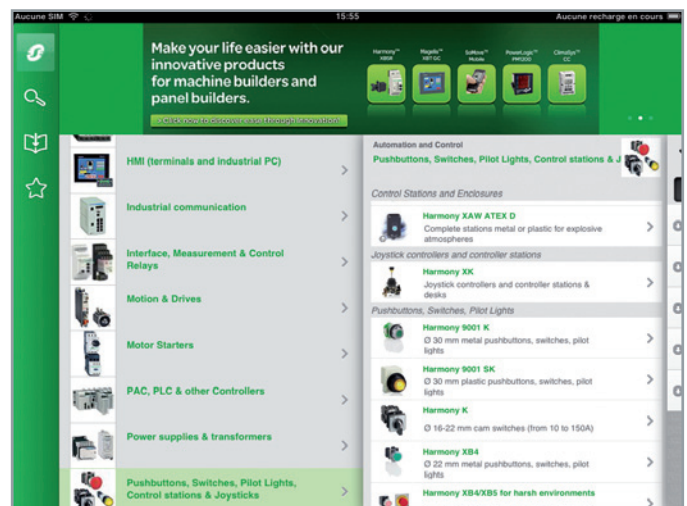
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General contents

Preventa safety modules for monitoring hydraulic safety system valves (in linear or eccentric presses)

■ Type XPSPVT

For dynamic monitoring of hydraulic valves on linear presses

- Operating principle,
- References..... page 4

■ Type XPSPVK,

For dynamic monitoring of double-bodied solenoid valves

- Operating principle,
- References..... page 5

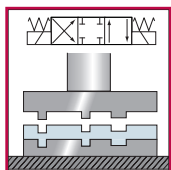
■ Product reference index

- Index..... page 6

Preventa safety modules

Type XPSPVT

For dynamic monitoring of hydraulic valves on linear presses



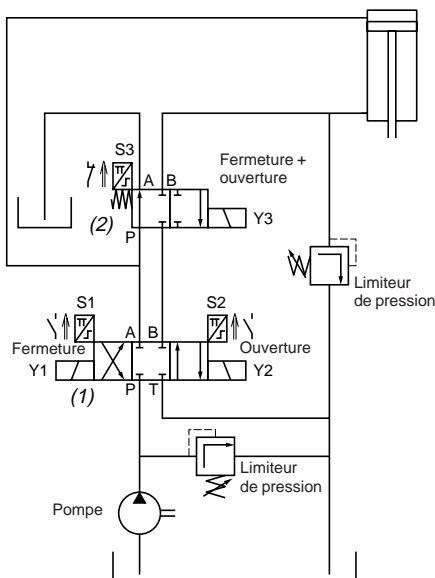
Operating principle

Safety module **XPSPVT** is specifically designed for monitoring hydraulic safety system valves which control the movements of potentially dangerous machines.

The operating principle of this module is explained in the circuit diagram of a hydraulic safety system for linear presses (see below).

Hydraulic safety system circuit operating on a linear press.

Monitoring of valves in position 0.



(1) 3 position hydraulic valve.

(2) 2 position hydraulic valve.

This hydraulic safety system features a 3 position piston which controls the up and down stroke of the operating cylinder. The circuit is equipped with a safety valve to complete the redundant system. This circuit must be activated to enable the up and down stroke of the cylinder.

If either of the 2 pistons becomes defective (for example, due to a broken spring or to oil contamination), and the valve piston shifts from its normal position towards the open position, the **XPSPVT** module will detect it and prevent resumption of the piston stroke.

Proximity sensors integrated in the valve to detect the piston positions and connected to the **XPSPVT** module must be damped when the valve coils are in the de-energised state (zero position).

The sensor circuits of the **XPSPVT** module are designed to allow connection of NPN and PNP proximity sensors or sensing components. Either 2-wire or 3-wire types can be used.

Maximum achievable safety level

- PL e/Category 4 conforming to EN/ISO 13849-1,
- SILCL 3 conforming to EN/IEC 62061

Product certifications

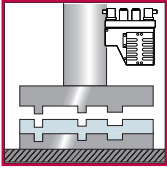
- UL
- CSA
- TÜV

References

Description	Display	Supply	Reference	Weight kg/ lb
Safety module for dynamic monitoring of hydraulic valves on linear presses	8 LEDs	24 V $\overline{\text{---}}$	XPSPVT1180	0.540/ 1.190



XPSPVT1180



Operating principle

Safety module **XPSPVK** is specially designed for dynamic monitoring of the safety valves in eccentric presses, conforming to European standard EN 692.

This standard establishes the specifications related to safety control systems for presses equipped with friction clutches.

To meet the requirements of this standard, the clutch/brake control must be monitored dynamically.

This function is provided by a double-bodied solenoid valve (safety valve for presses) which performs the functions of two valves mounted in one body.

The position of the two valve pistons can be monitored by proximity sensors, mechanical limit switches or pressure switches.

Module **XPSPVK** checks for the correct operation of the double-bodied safety valves at 3 points in the cycle.

- Start at top dead centre: checks the rest position of the two valves.
- Take-on point (transfer function): checks that the two valves are in the “activated” (energised) position.
- Press stop trigger point: checks that the two valves return to the rest position. Return must be simultaneous for both valves within a defined time period.

To set up an automatic disconnect of the **XPSPVK** module at the first machine stroke, a NC auxiliary contact mounted on the main control contactor or on another contactor/relay, activated at the same time, can be wired to terminals 7 and 8 in parallel with the RESET button.

If a fault is detected during the cycle, the **XPSPVK** module will stop the slide stroke and will also inhibit the start of another cycle.

Maximum achievable safety level

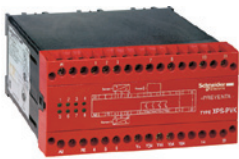
- PL e/Category 4 conforming to EN/ISO 13849-1
- SILCL 3 conforming to EN/IEC 62061

Product certifications

- UL
- CSA
- TÜV

References

Description	Display	Supply	Reference	Weight kg/ lb
Safety modules for dynamic monitoring of double-bodied solenoid valves	8 LEDs	24 V $\overline{\text{DC}}$	XPSPVK1184	0.700/ 1.543
		115 V \sim	XPSPVK3484	0.900/ 1.984
		230 V \sim	XPSPVK3784	0.900/ 1.984



XPSPVK

X	
XPSPVT1180	4
XPSPVK1184	5
XPSPVK3484	5
XPSPVK3784	5



More information on
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Schneider Electric Industries SAS

Head Office
35, rue Joseph Monier
F-92500 Rueil-Malmaison
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