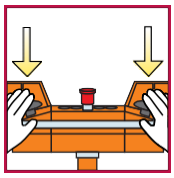
Preventa safety modules
Type XPSBF
For electrical monitoring of two-hand control stations



Operating principle

Two-hand control stations are designed to provide protection against hand injury.
They require machine operators to keep their hands clear of the dangerous movement zone.
The use of two-hand control is an individual protective measure, which can safely protect only one operator.
Separate two-hand control stations must be provided for each operator in a multiple-worker environment.

Safety modules **XPSBF** for two-hand control stations comply with the requirements of European standard EN 574/ ISO 13851 for two-hand control systems.
The control stations must be designed and installed such that they cannot be activated involuntarily or easily rendered inoperative. Depending on the application, the requirements of type C standards specific to the machinery involved must be met (additional personal protection methods may have to be considered).

To initiate a dangerous movement, both operators (two-hand control pushbuttons) must be activated within an interval y 0.5 s (synchronous activation). If one of the two pushbuttons is released during a dangerous operation, the control sequence is cancelled. Resumption of the dangerous operation is possible only if both pushbuttons are returned to their initial position and reactivated within the required time interval.
The safety distance between the control units and the hazardous zone must be sufficient to ensure that when only one operator is released, the hazardous zone cannot be reached before the dangerous movement has been completed or stopped.

Maximum achievable safety level

b PL e/Category 4 conforming to EN/ISO 13849-1
b SILCL3 conforming to EN/IEC 61508 and EN/IEC 62061

Product certifications

b UL
b CSA
b TÜV

Selection

Standard EN 574/ ISO 13851 defines the selection of two-hand controls according to its behavior.
The following table details the 3 types of two-hand control conforming to EN 574/ISO 13851.
For each type, it lists the operating characteristics and minimum requirements.

Requirements of standard EN 574/ISO 13851	Type I	Type II	Type III		
			A	B	C
Use of both hands (simultaneous action)	■	■	■	■	■
Link between input and output signals	■	■	■	■	■
Output signal inhibited	■	■	■	■	■
Prevention of accidental operation	■	■	■	■	■
Tamper-proof	■	■	■	■	■
Output signal reinitialised		■	■	■	■
Synchronous action (specified time limit)			■	■	■
Use of proven components (Category 1 conforming to EN/ISO 13849-1)	■		XPSBAE		
Redundancy with partial error detection (Category 3 conforming to EN/ISO 13849-1)		■		XPSBCE XPSBF	
Redundancy + Self-monitoring (Category 4 conforming to EN/ISO 13849-1)					XPSBCE XPSBF
Two-hand control station	XY2SBpp				

■ Conforming to standard EN/ISO 13849-1
■ Meets the requirements of standard EN 574/ISO 13851

References

Description	Type conforming to standard EN 574	Connection	Number of safety circuits	Additional outputs	Supply	Reference	Weight kg/ *lb*
Safety modules for electrical monitoring of two-hand control stations	III C	Captive screw clamp terminals Terminal block removable from module	2 NO	2 solid-state	⎓ 24 V	**XPSBF1132**	0.150/ *0.331*
			2 NO	2 solid-state	⎓ 24 V	**XPSBF1132P**	0.150/ *0.331*

XPSBF1132