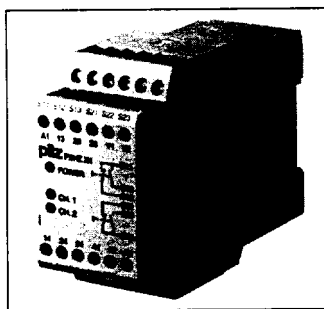


599-773

P2HZ X1

Standard Unit



PICONTROL
Two-Hand Relay to prEN 574
Type III C.

Order Reference

Voltage	Part Number
24 VDC	774 330
24 VAC	774 434
110 VAC	774 438
230 VAC	774 340

Please Note

- Button contacts should be gold plated due to the low current output
- To avoid indirect coupling and capacitance effects, the cables to the two pushbuttons must be run separately to any power cables
- The two-hand relay and the component parts of the press control must conform to EN requirements and safety regulations to prEN 574, prEN 692 and prEN 693
- Simultaneity monitoring of buttons S1 and S2
- The feedback control loop may only be opened after S1 and S2 have been operated
- The feedback control loop must be closed at least 250 ms before S1 and S2 are operated.

Description

- 45 mm P-93 Housing, DIN-Rail Mounting
- Relay outputs, positive-guided:
 - 3 safety contacts (N/O)
 - 1 auxiliary contact (N/C), unsuitable for safety circuits
- Semiconductor outputs signal status of output relays and operating voltage
- Feedback control loop for monitoring external relays/contactors
- LED status indication channel 1 and 2 and operating voltage.

Function

After applying the operating voltage and closing the feedback control loop, the unit is ready for operation. If the buttons S1 and S2 are simultaneously pressed (ie. within 0.5 s) then the output relays energise. The output relays will not energise if,

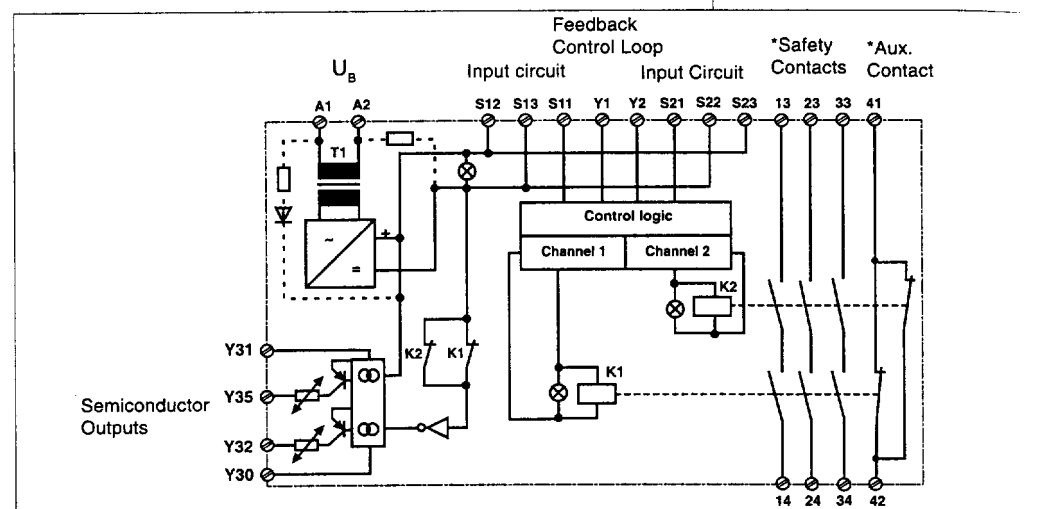
- only S1 or S2 is pressed
- simultaneity period is exceeded
- feedback control loop is open.

If the buttons are pressed simultaneously and then one is released the output relays de-energise immediately.

Reactivation: The output relays energise again only after both buttons have been released and pressed again (within simultaneously 0.5 s).

* To prevent contact welding, a fuse (max. 6.3 A quick / 4 A slow) must be connected before the safety contacts.

Internal Wiring Diagram

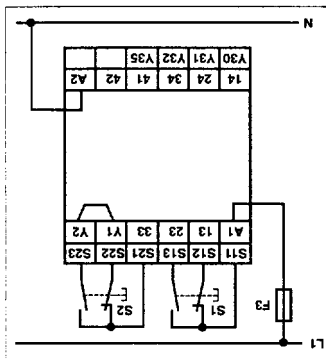


Technical Details, P2HZ X1 (for general technical details see appendix)

Operating Voltage U_B	24, 42, 48, 110, 115, 120, 230, 240 VAC; 24 VDC
Power Consumption at U_B	Max. 2.5 W/6 VA
Relay Contacts	3 safety contacts (N/O), 1 aux. contact (N/C); AgSnO ₂ , gold-plated
Switching Capability to	
DIN EN 60 947-4-1	AC1: 250 V/5 A/1250 VA, DC1: 24 V/2 A/48 W
DIN EN 60 947-5-1	AC15: 230 V/2.5 A; DC13: 24 V/1.5 A
Release Time of the output relays to end two-hand operation	N/O: approx. 15 ms, N/C: approx. 30 ms
Simultaneity	<0.5 s
Recovery Time	Min. 250 ms
Voltage/Current at Input Circuit	N/C: 24 V DC/20 mA, N/O: 24 V DC/10 mA
Semiconductor Outputs	24 VDC/20 mA, short-circuit-proof, PNP
external supply voltage:	24 VDC +10 %, -15 %
Operating Temperature	-10 to +55 °C
Airgap Creepage	DIN VDE 0110 part 2 para. 8, 4 kV/3
Contact Fuse Protection	6.3 A quick or 4 A slow (VDE 0660 Pt.200, DIN EN 60947)
Protection	Mounting IP 54, Housing IP 40, Terminals IP 20
Max. cross section of external conductors	2 x 1.5 mm ² or 1 x 2.5 mm ² Single-core or multi-core with crimp connectors
Dimensions (H x W x D)	87 x 45 x 121 mm
Weight	DC: 350 g, AC: 450 g

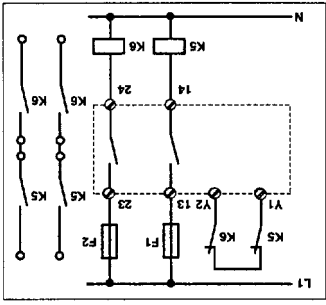
Connection Diagram

Fusing F3: min.: 1 A; max.: dependent upon cable cross section

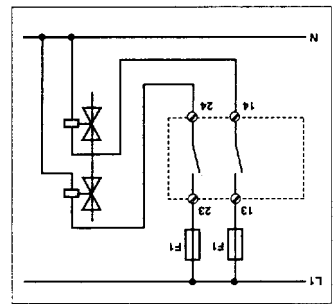


Feedback Control Loop

The function of the relays driven by the P2HZ X1 may be monitored. The relays' auxiliary contacts must be connected in series between Y1-Y2 so that they form a closed circuit when the two-hand switches are not in operation. When the contactors are energised, by operating the two-hand switches, the Y1-Y2 connection is broken. The output relay becomes operational again only when both buttons have been released and the connection remade.



Load Control: output configuration



Spark Suppression

When switching an inductive load like relays or contactors, then a spark suppression element must be wired in parallel to the load.

