

Auxiliary Relay Type RXP8n, RXPQ8n

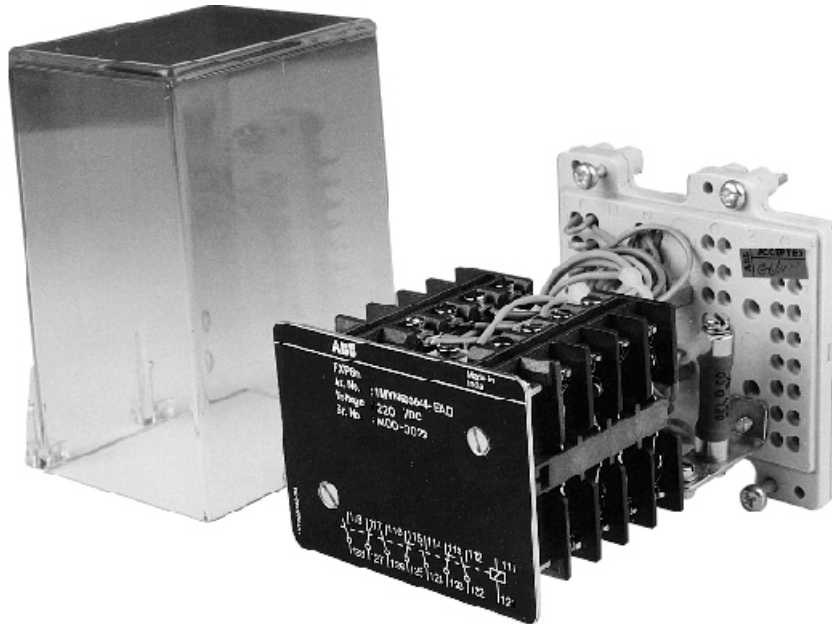
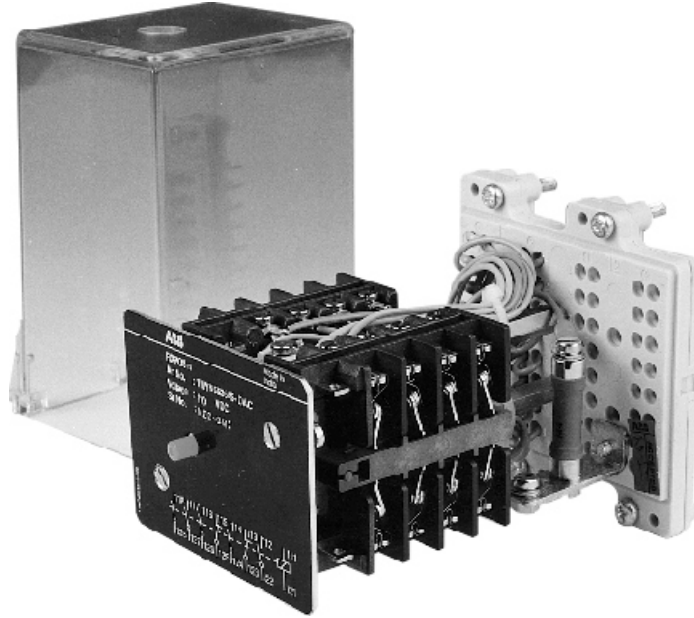


ABB Substation Automation Products



Features

- High degree of reliability, even when it has been idle for a long time
- 7 contacts with double interruption
- Contact configuration can be changed with ease
- Wide range of voltage & contact configurations
- Special versions
RXPQ8n..... High speed locking relay with hand reset.

Application

The auxiliary relays type RXP8n, RXPQ8n are used for all kinds of control and protection circuits in power stations and industrial installations, where a high degree of reliability and a high contact rating are stipulated, with minimal internal consumption. Acting as instantaneous switching element, it provides galvanic separation and contact multiplication in tripping and signaling circuits of protective relays.

Design & Principle

The auxiliary relays in the COMBIFLEX system, type RXP8n and RXPQ8n are instantaneous plunger type relay with 7 contacts with double interruption. They are designed to operate from d.c.

The magnet system comprises a fixed core and a moving, plunger-type armature, which actuates the contact bar directly. When the coil is de-energized, the armature of the magnet and the contact bar are forced back into their initial position by spring action. The contacts are arranged symmetrically in two rows, on either side of the magnet, clearly visible and readily accessible. They are designed for a maximum rated voltage of 250V d.c. or a.c. The material used for the contact tips is hard silver.

At the most, 3 normally closed contacts are permissible which should be distributed evenly between two sides. The field weakening resistor is cut in by means of a delayed normally closed contact on a special contact bar in series with the coil.

The relay type RXPQ8n is specially designed for high speed operation and mechanical latching. It has operation indicator which pops out when the relay latches. The relay can be hand reset by pressing in and resetting the operation indicator.

A transparent protective hood of material that does not burn readily provides good protection against dust. The plug-in relay module occupies two seats (2U 12C). The auxiliary relays should always be mounted with their contact bar horizontal.

Type designation of auxiliary relays:

RX			COMBIFLEX system
	P		basic auxiliary relay without operation indicator
	PQ		with mechanical latching, operation indicator and high speed operation
		8n	with 7 free contacts and 1 late opening NC contact for FWR

Example: RXP8n denotes a COMBIFLEX system, auxiliary relay with 7 free contacts.

Technical data

Energizing quantities, rated values and limits

Rated voltage U_N	:	24, 30, 48, 110, 125, 220, 250 V DC
Operative voltage range	:	+10%, -20%
Permitted ambient temperature range	:	0 Deg C to +55 Deg C
Pick-up voltage (% U_N)	:	RXPQ8n < 50% RXP8n < 80%
Drop-out voltage (% U_N)	:	Not applicable >4%
Pick-up time at U_N (typical)	:	<16 m secs 20-30 m sec
Power consumption at rated voltage	:	7.5 W 3.5 W
Thermal rating	:	Short time Continuous
Mechanical durability tested acc to IEC 255	:	5 Million switching operations & 200 latching operations 200 Draw-out / Plug-in operations
Weight	:	0.8Kg

Contact data

Contact configuration	:	4N/O+3N/C, 5N/O+2N/C, 6N/O+1N/C or 7NO
Maximum voltage within contacts system	:	250V dc/ac
Rated current	:	5 A
Max. making current	:	50 A

Max. Breaking capacities

Voltage	24V		48V		110V		250V		
	1	2 in parallel	1	2 in parallel	1	2 in parallel	1	2 in parallel	2 in series
DC resistive load	5A	10A	5A	10A	5A	7A	1A	-	5A
DC inductive. L/R=15ms	5A	10A	5A	8A	4A	-	1A	-	4A
DC inductive, L/R=40ms	4A	8A	4A	8A	3A	-	0.5A	-	2A
AC resistive & inductive	10A	-	10A	-	10A	-	10A	-	-

Electrical endurance; : 0,2 Million operations,
 Tested according to IEC 255-23 at 110 V dc, 0,5A L/R 40 ms.
 Terminals : Suitable for 2x2,5mm² wires

Electrical tests

Measurement of resistance; Tested acc. to IEC 255-6 : +/- 10% of specified
 Temperature-rise; Tested acc. to IEC 255-6 : Coil (class F)
 Insulation resistance; Tested acc. to IEC 255-5 : >100 M Ohm at 500 V dc
 Dielectric; Tested acc. to IEC 255-5 : 2,0 kV 50 Hz, 1 min
 Impulse; Tested acc. to IEC 255-5 : 5 kV, 1,2/50us, 0,5J

Environmental tests

Vibration response; Tested acc. to IEC 255-21-1 : 10-150Hz; 0.5g; 3 axis
 Vibration endurance; Tested acc. to IEC 255-21-1 : 10-150Hz; 1.0g; 3axis
 Dry heat; Tested acc. to IEC 68-2-2 : at +55 Deg C in energized condition
 Dry cold; Tested acc. to IEC 68-2-1 : at 0 Deg C
 Damp heat (cyclic - 6days); : 12 Hr/55 C + 12 Hr/25 C x 2 @ 93% RH
 Tested acc. to IEC 68-2-30
 Storage test; Tested acc. To IEC 68-2-48 : +70 Deg C for 72 Hrs and -25 Deg C for 72 Hrs

Ordering details:

- Relay type
- Auxiliary voltage
- Contact configuration

Connection diagram and Contact configuration

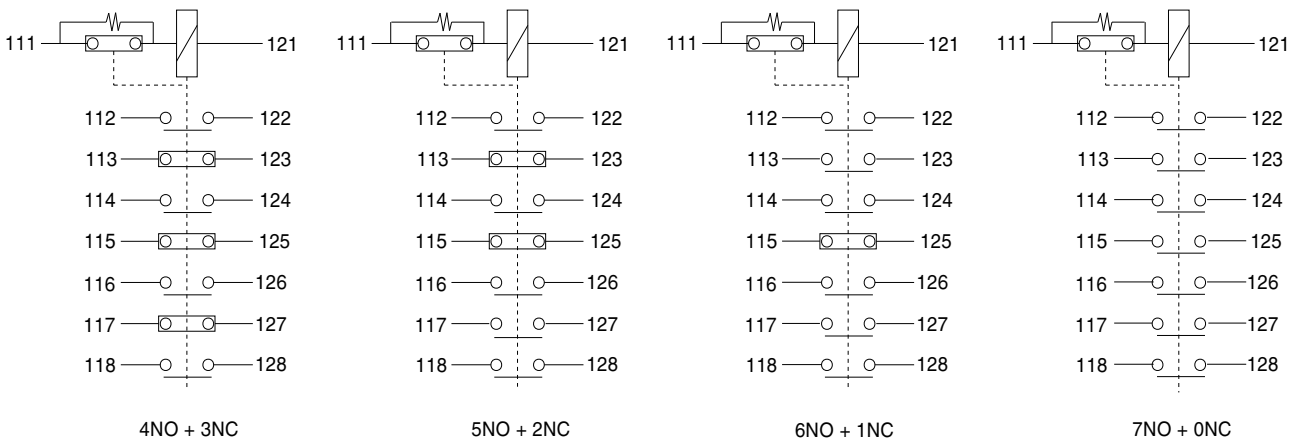


Fig. 1- COMBIFLEX RXP8n

Connection diagram and contact configuration (Cont'd)

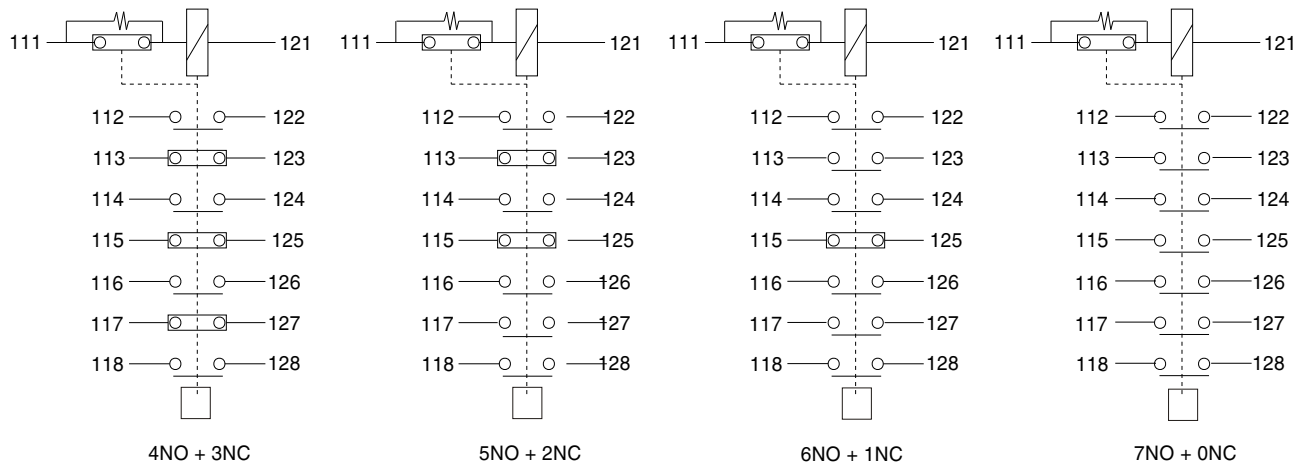


Fig. 2- COMBIFLEX RXPQ8n

Dimensions

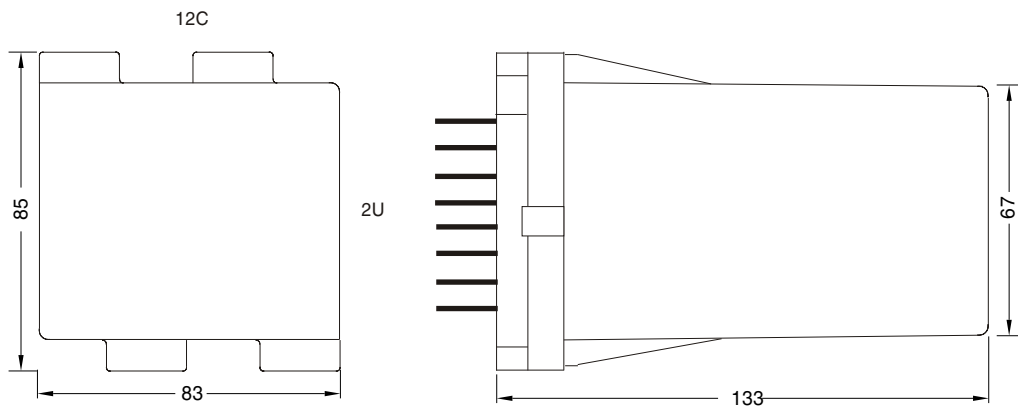
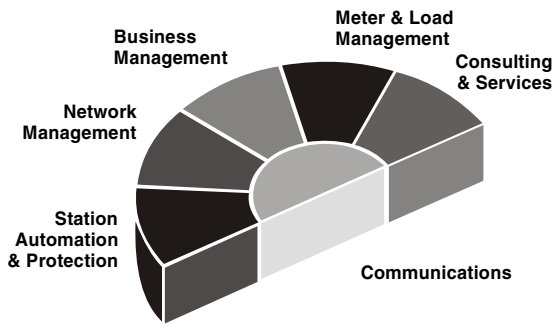


Fig. 3- Combiflex mounting

References

Connection and installation components in COMBIFLEX
Relay mounting systems

1MRK 513 003-BEN
1MRK 514 001-BEN



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