



# PRODUCT STANDARD

## SWITCHGEAR ENGINEERING DIVISION

SG 12920 REV-03

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### PLUG-IN TYPE AUXILIARY RELAY COMPLETE WITH BASE

**1 SCOPE & APPLICATION** This product standard covers the requirement of AC/DC plug in auxiliary relays used for various application in switchgears and control panels.

**2 APPLICABLE STANDARD** Plug-in-relay - IS 3231

**3 TECHNICAL PARAMETERS**

Sl No	Parameter		Rating
3.1	Coil rating	DC	30V, 48V, 50V, 110V, 220V, and 250V.
3.2		Contact Arrangement (Min. nos of Contacts)	4 C/O 2NO+2NC
3.3	Coil Burden		=<4 watts (max. 4 watts)
3.4	Contact rating	Make and carry continuous AC/DC	1250 VA/Watt with maximum of 660 V and 5 Amp
		Breaking Capacity (AC)	1250 VA with maximum of 660V and 5A.
		Breaking Capacity (DC Resistive)	100 Watts with a maximum of 220 V and 5 A
		Breaking Capacity (DC inductive)	50 Watts with a maximum of 220 V and 5 A and maximum time constant 45m sec.
3.5	No. of Operations	Mechanical Test	20 million operations
		Electrical	1 million operations
3.6	Insulation test		2 kV AC 50Hz for 1 min
3.7	Case		Relay shall be fitted with transparent cover with front or rear connection plug in base.
3.8	Mounting		Suitable for 35 mm DIN rail mounting or base mounted.
3.9	Operation indicator		Required
3.10	Special sockets/lugs		If required for wire termination on the relay shall be supplied in adequate qty along with the relay
3.11	Protection against reverse polarity		Plug-in relay should have protection against malfunction/failure on reverse polarity i.e. protection of relays against reverse polarity of voltage.

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<b>REV.</b>	<b>03</b>	<b>PRINTS TO :-</b>	<b>APPROVED :-</b>		
<b>ALTD.</b>	<b>VD</b>	<b>SWE, SWM(P) QCX,</b>	<b>NNS</b>		
<b>APPD.</b>	<b>SC</b>		<b>PREPARED</b>	<b>ISSUED</b>	<b>DATE</b>
<b>DATE</b>	<b>24.07.12</b>		<b>HRP</b>	<b>APS</b>	<b>10.05.00</b>



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<b>4</b>	<b>Acceptance Criteria</b>
4.1	Type and No. of auxiliary contacts & auxiliary supply to be matched with order specification.
4.2	Visual check for defect free plug-in-relay.

<b>5</b>	<b>Equivalent Chart</b>	
	MAKE	TYPE
5.1	Jyoti make	RE300
5.2	ABB Make	P8n
5.3	Areva make	VAA11
5.4	Guardian make	11-Serise (sensitive version)

**Checklist to be filled by vendor.**

<u>Sl No</u>	<u>Parameter</u>		<u>Rating</u>	<u>Compliance of Vendor (YES/NO)</u>
6.1	Coil rating	DC	30V, 48V, 50V, 110V, 220V, and 250V.	
		AC (50HZ)	110V, 240V.	
6.2	Contact Arrangement (Min. nos of Contacts)		4 C/O or 2NO+2NC.	
6.3	Coil Burden		=<4 watts (max. 4 watts)	
6.4	Contact rating	Make and carry continuous AC/DC	1250 VA/Watt with maximum of 660 V and 5 Amp	
		Breaking Capacity (AC)	1250 VA with maximum of 660V and 5A.	
		Breaking Capacity (DC Resistive)	100 Watts with a maximum of 220 V and 5 A	
		Breaking Capacity (DC inductive)	50 Watts with a maximum of 220 V and 5 A and maximum time constant 45m sec.	
6.5	No. of Operations	Mechanical Test	20 million operations	
		Electrical	1 million operations	
6.6	Insulation test		2 kV AC 50Hz for 1 min	
6.7	Case		Relay shall be fitted with transparent cover	

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		with front or rear connection plug in base.	
6.8	Mounting	Suitable for 35 mm DIN rail mounting or base mounted.	
6.9	Operation indicator	Required	
6.10	Special sockets/lugs	If required for wire termination on the relay shall be supplied in adequate qty along with the relay	
6.11	Protection against reverse polarity	Plug-in relay should have protection against mal-function/failure on reverse polarity i.e. protection of relays against reverse polarity of voltage.	

***Please note that above check list shall be filled and enclosed with the offer. Any offer without duly filled checklist will not be entertained and will be reject technically without any further communication.***

BP Numbers for various voltage range:

S/N	Voltage	BP Number M/s Jyoti make	BP Number M/s Guardian make	BP Number M/s Areva make	BP Number M/s ABB make
1	220V DC	BP9049251269	BP9049123643	BP9049123520	BP9049123589
2	110V DC	BP9049251247	BP9049123651	BP9049123538	BP9049123597
3	48V DC	BP9049123503	BP9049123686	BP9049123562	BP9049123627
4	30V DC	BP9049123490	BP9049123678	BP9049123554	BP9049123619
5	110V AC	BP9049122639	BP9049123694	BP9049123570	BP9049123635

***Note: In case of order, vendor to submit one sample (of relays to be supplied) with order acceptance for physical verification by BHEL, before supply of bulk quantity.***