

PSGSG/ 2017- 18/001	Product Specifications For CT Cores	Drg. No.	RD DG 4 35
		Date	14.12.2017
		Product	GSM245
1.0	Application: Current Transformer Cores for Gas Insulated Switchgear Equipment		
2.0	Configuration: The cores shall be ring type and designed within specified (ID) X (OD) X (H) dimensions.		
3.0	Quantity Type – I : 6 No.s of Protection Core ,600-800-400/1A Type – II : 6 No.s of Protection Core ,2500-1250/1A Type – III : 6 No.s of Metering Core ,2500-1250/1A Type – IV : 10 No.s of Protection Core ,2500-1250/1A		
4.0	Specification:		
4.1	Material: For protection core (Type I, II & IV): GOSS (Grain Oriented silicon steel) or equivalent shall be used. For metering core (Type III) : CRGO M3 Material shall be used preferably..		
4.2	CT cores shall be developed with the following specifications:		
A)	Sl.no.	Technical specification	Type I (Protection)
	1	Standard	IEC 60044-I
	2	Frequency	50 Hz
	3	Ratio	1600-800-400/1A
	4	Burden (VA)	-
	5	Class	PS
	6	Min Knee point Voltage (V)	3200/1600/800
	7	Max Exciting current at min knee voltage (mA)	30/60/120
	8	CT dimensions (ID) X (OD) X (H) (mm)	325x 420x (to be specified by supplier) With Insulation
	9	Tolerances (ID) X (OD) X (H) (mm)	+3,+3,±5
	10	ISF	<5
	11	Quantity	6
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B)			
	Sl.no	Technical specification	Type II (Protection)
	1	Standard	IEC 60044-I
	2	Frequency	50 Hz
	3	Ratio	2500-1250 / 1A
	4	Burden (VA)	-
	5	Class	PS
	6	Min Knee point Voltage (V)	2500/1250
	7	Max Exciting current at min knee voltage (mA)	30/60
	8	CT dimensions (ID) X (OD) X (H) (mm)	325x 420x (to be specified by supplier) With Insulation
	9	Tolerances (ID) X (OD) X (H) (mm)	+3,+3,±5
	10	ISF	<5
11	Quantity	6	
C)			
	Sl.no	Technical specification	Type III (Metering)
	1	Standard	IEC 60044-I
	2	Frequency	50 Hz
	3	Ratio	2500-1250 / 1A
	4	Burden (VA)	20
	5	Class	0.2s
	6	Min Knee point Voltage (V)	2500/1250
	7	Max Exciting current at min knee voltage (mA)	30/60
	8	CT dimensions (ID) X (OD) X (H) (mm)	325x 420x (to be specified by supplier) With Insulation
	9	Tolerances (ID) X (OD) X (H) (mm)	+3,+3,±5
	10	ISF	<5
11	Quantity	6	
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D)	Sl.no.	Technical specification	Type IV (Protection)	
	1	Standard	IEC 60044-I	
	2	Frequency	50 Hz	
	3	Ratio	2500-1250 / 1A	
	4	Burden (VA)	-	
	5	Class	5P20	
	6	Min Knee point Voltage (V)	2500/1250	
	7	Max Exciting current at min knee voltage (mA)	30/60	
	8	CT dimensions (ID) X (OD) X (H) (mm)	325x 420x (to be specified by supplier) With Insulation	
	9	Tolerances (ID) X (OD) X (H) (mm)	+3,+3,±5	
	10	ISF	<5	
	11	Quantity	6	
5.0	Winding Process: Polyester film shall be built over the core for considerable thickness (at least few layers). Enameled copper wire shall be wound on this. The diameter of copper wire shall be minimum of 1.25 to 1.6 mm. Vendor shall specify the diameter of wire along with offer. Polyester film shall be wrapped between the winding layers. The soldered area shall be insulated with sleeve. Minimum two layers of Polyester film shall be wrapped after winding. Polyester band shall be developed after final insulation. The terminal connection shall be made with 4.0 Sq. mm silver plated, Teflon insulated high conductivity stranded copper wire/cable or equivalent. The terminal connections shall be held firmly so as not to transfer pull load on to soldered joint. The end of the terminal wire shall be tinned, ready for crimping/ soldering in to lugs. The final dimensions (IDxODxH) of the core shall be specified along with the offer.			
	6.0	Tests and Reports:		
	6.1	Dimensional : All dimensions shall comply to design specifications.		
6.2	The cores shall be subjected to all tests specified in IEC and corresponding test reports shall be submitted along with supply of Material.			
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6.3	Following reports shall be submitted along with the delivery: 1. Magnetic characteristics of materials used. 2. Accuracy measurements at different currents / Current vs accuracy plots. 3. Knee voltage / performance parameters measurement characteristics. 4. Phase angle error plots at different currents. 5. All other measurements carried out to qualify the Core as per IEC 60044-1		
7.0	Packing : The cores shall be packed in high density cardboard boxes or equivalent, with a primary wrapped in polyethylene or equivalent and packed individually in dust free and moisture free boxes. The components shall be guaranteed against all manufacturing defects.		
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