

**02 - SITA Centurion 11kV Main Board - Switchgear Datasheet - Incomer Panel Requirements**



**Project: SITA CENTURION**  
**Specification: 11KV Switchgear**  
**Date: 29/01/2026**  
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**Note (1): Bidder must complete/enter YELLOW cells only**

**Note (2): SITA reserves the right to verify Data Sheet information**

ITEM	DESCRIPTION	UNIT	REQUIRED/OFFERED
<b>1</b>	<b>Board ratings</b>		
1.1	Rated voltage	kV	<b>11</b>
1.2	Maximum voltage	kV	<b>12</b>
1.3	Rated power frequency withstand voltage	kV	<b>28</b>
1.4	Rated lightning impulse withstand voltage	kV	<b>95</b>
1.5	Rated frequency	Hz	<b>50</b>
1.6	Main busbar rating	A	<b>1250</b>
<b>2</b>	<b>Circuit ratings</b>		
2.1	Panel Names	Names	<b>Incomer 1 from CoT Kentron SS, Incomer 2 from CoT NVIS SS</b>
2.2	Number of identical panels	Number	<b>2</b>
2.3	Incomer Switch Type		<b>Circuit Breaker</b>
2.4	Interrupting medium		<b>Vacuum</b>
2.5	Insulating medium		<b>Air</b>
2.6	Incomer breaker rating	A	<b>1250</b>
2.7	Low Voltage Compartment Height (max)	mm	
2.8	Busbar Coating		<b>Not required</b>
2.9	Minimum rated short time making current	kA/3s	<b>20kA/ 3s</b>
2.10	Internal ARC classification (AFLR)	kA/1s	<b>20kA/ 1s</b>
2.11	Specific creepage distance	mm/kV	<b>20</b>
2.12	Switchgear and Control Gear Assemblies- compliance with		<b>IEC62271-100</b>
2.13	Switchgear and Control Gear Assemblies: Internal Arc		<b>IEC612271-200 AFLR</b>
2.14	Loss of Service Continuity Category		<b>LSC-2,PM</b>
2.15	Earth Switch Interlocking Coil		<b>Yes</b>
2.16	Racking Interlocking Coil		<b>No</b>
2.17	Conventional CTs and VTs		<b>Yes</b>

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ITEM	DESCRIPTION	UNIT	REQUIRED/OFFERED
<b>3</b>	<b>Operating details</b>		
3,1	Operating sequence		<b>O-0.3s-CO-3min-CO</b>
3.2	Amount of Mechanical Operations	Quantit	<b>Less than 1000 per annum</b>
3.3	Operation Counter		<b>Yes</b>
<b>4</b>	<b>Control details</b>		
4,1	Tripping and closing voltage	V DC	<b>110</b>
4,2	Spring rewind motor	V DC	<b>110</b>
4.3	Back up Trip Coil		<b>Yes</b>
4.4	Undervoltage Release Trip Coil		<b>No</b>
4.5	Remote Control Panel		<b>No</b>
<b>5</b>	<b>Substation board cable connections</b>		
5,1	Power cabling entry		<b>Bottom back</b>
5,2	Control cabling entry		<b>Bottom back</b>
5.3	Cable Type: Incomers		<b>PILC</b>
5.4	Cable Size: Incomers		<b>240mm<sup>2</sup> Cu</b>
5.5	Cable Configuration		<b>Three Core</b>
5.6	Number of Cores per Phase		<b>One</b>
5.7	Type pf termination		<b>Bolted Lugs</b>
5.8	Manufacturer of Termination		
<b>6</b>	<b>Panel earthing requirements</b>		
6,1	Main earth bar	mm <sup>2</sup>	<b>150</b>
6,2	Cable earth switch		<b>Yes</b>
6,3	Busbar earth switch		<b>No</b>
<b>7</b>	<b>Control equipment on panel</b>		
7,1	Trip/close/neutral switch		<b>Yes</b>
7,2	Local/remote switch (lockable)		<b>Yes</b>
7.3	Stand Off Open/Close Socket		<b>Yes</b>
7.4	Cable live LEDs, with interlocking contact		<b>Yes</b>
7.5	Circuit breaker status LEDs		<b>Yes</b>
7.6	Data sheets and type test certificates attached		<b>Yes</b>
<b>8</b>	<b>Panel Heaters</b>		
8.1	Location of Heaters - Switch Compartment, 50W		<b>Yes</b>
8.2	Location of Heaters - Busbar Compartment		<b>No</b>
8.3	Location of Heaters - Cable Compartment, 100W		<b>Yes</b>
<b>9</b>	<b>Auxiliary Breaker Contacts, not used internally</b>		
9.1	Normally Open 52a	min	<b>3</b>
9.2	Normally Closed 52b	min	<b>3</b>
9.3	Change Over 52a/b	min	<b>3</b>

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ITEM	DESCRIPTION	UNIT	REQUIRED/OFFERED
<b>10</b>	<b>Connected Position Limit Switches, not used internally</b>		
10.1	Closed when connected	min	<b>3</b>
10.2	Open when connected	min	<b>3</b>
10.3	Change Over 52a/b	min	<b>3</b>
<b>11</b>	<b>Disconnected Position Limit Switches, not used internally</b>		
11.1	Closed in disconnected position	min	<b>3</b>
11.2	Open in disconnected position	min	<b>3</b>
11.3	Change Over 52a/b	min	<b>3</b>
<b>12</b>	<b>Earth switch auxiliary contacts, not internally used</b>		
12.1	Normally Open 57a	min	<b>3</b>
12.2	Normally Closed 57b	min	<b>3</b>
12.3	Change Over 57a/b	min	<b>3</b>
<b>13</b>	<b>11kV Voltage Transformers</b>		
<b>13.1</b>	<b>General information</b>		
13.1.1	Manufacturer		
13.1.2	Voltage transformer Model number		
13.1.3	Country of Origin		
13.1.4	Primary fuses		<b>High Rupturing Current (HRC) limiting type</b>
13.1.5	Primary fuse replacement possible with VT in withdrawn		<b>Yes</b>
13.1.6	Insulation Class		<b>Class E or Better</b>
13.1.7	Withdrawable rail mounted with handle, situated on top of		<b>Yes</b>
13.1.8	Plug in and withdrawable with automatic operating of		<b>Yes</b>
13.1.9	Latch to hold VT in service position		<b>Yes</b>
13.1.10	Latch release required before VT can be isolated.		<b>Yes</b>
13.1.11	Location		<b>Incomer VTs on incomer panels</b>
13.1.12	Height of VT compartment		

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ITEM	DESCRIPTION	UNIT	REQUIRED/OFFERED
<b>13.2</b>	<b>11kV VT Electrical Details</b>		
13.2.1	Number of phases		<b>3</b>
13.2.2	Number of limbs		<b>5</b>
13.2.3	Number Of Windings		<b>2</b>
13.2.4	Nominal Ratio	kV/V	<b>11/110</b>
13.2.5	Voltage Class	kV	<b>12</b>
13.2.6	Vector Group		<b>YnYn</b>
13.2.7	Accuracy Class		<b>3P/0.2</b>
13.2.8	Primary Voltage (Line To Earth)	kV	<b>11/√3</b>
13.2.9	Secondary Voltage (Line To Earth)	V	<b>2 x 110/√3</b>
13.2.10	Volt Ampere Burden	VA	<b>100 &amp; 50</b>
13.2.11	Type of VT		<b>Inductive</b>
13.2.12	Rated lightning impulse withstand voltage	kV	<b>95</b>
13.2.13	Voltage Factor		<b>1,9</b>
13.2.14	Voltage Selection Scheme between the two Incomers		<b>Yes</b>
<b>14</b>	<b>11kV CT Electrical Details</b>		
	<b>Incomers</b>		
14.1	CT Orientation		<b>P1 Facing Busbars</b>
14.2	<b>Core 0</b>		<b>Bay Controller, Protection</b>
14.2.1	Ratio		<b>400/1</b>
14.2.2	Secondary Rating	A	<b>1</b>
14.2.3	Burden	VA	<b>10</b>
14.2.4	Class		<b>5P20</b>
14.3	<b>Core 1</b>		<b>PQ Meter</b>
14.3.1	Ratio		<b>400/1</b>
14.3.2	Secondary Rating	A	<b>1</b>
14.3.3	Burden	VA	<b>10</b>
14.3.4	Class		<b>0,5</b>
14.4	<b>Core 2</b>		<b>Check Metering</b>
14.4.1	Ratio		<b>400/1</b>
14.4.2	Secondary Rating	A	<b>1</b>
14.4.3	Burden	VA	<b>10</b>
14.4.4	Class		<b>0,2</b>
14.5	<b>Core 3</b>		<b>Main Metering</b>
14.5.1	Ratio		<b>400/1</b>
14.5.2	Secondary Rating	A	<b>1</b>
14.5.3	Burden	VA	<b>10</b>
14.5.4	Class		<b>0,2</b>

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ITEM	DESCRIPTION	UNIT	REQUIRED/OFFERED
14.6	<b>Core 4</b>		<b>Arc Protection</b>
14.6.1	Ratio		<b>400/1</b>
14.6.2	Secondary Rating	A	<b>1</b>
14.6.3	Burden	VA	<b>10</b>
14.6.4	Class		<b>5P20</b>
<b>15</b>	<b>11kV Surge Arrestors</b>		
<b>15.1</b>	<b>General information</b>		
15.1.1	Manufacturer		
15.1.2	Surge arrester Model number		
15.1.3	Country of Origin		
15.1.4	Operating Duty Class	kA	<b>10</b>
15.1.5	Class		<b>Station</b>
15.1.6	System Maximum Operating Voltage (L-L)	kV	<b>12</b>
15.1.7	System Normal Rated Voltage (L-L)	kV	<b>11</b>
15.1.8	Maximum Continuous Operating Voltage MCOV (L-G) Uc	kV	<b>9,6</b>
15.1.9	Nominal Lightning Discharge Current (8/20µs)	kA	<b>100</b>
15.1.10	Peak Residual Voltage For 10kA 8/20µs Current Impulse	kV	<b>21</b>
15.1.11	BIL (Housing)	kV	<b>95</b>
15.1.12	Power Frequency Withstand	kV	<b>28</b>
15.1.13	Discharge Current Withstand (4/10µs - 2 Shots)	kA	<b>65</b>
15.1.14	Creepage Distance	mm/kV	<b>25</b>
15.1.15	Rated Energy Absorption Capability	kJ/kV	<b>2,5</b>
15.1.16	Type	kJ/kV	<b>ZnO</b>
<b>16</b>	<b>11kV Substation Incomer Protection</b>		
<b>16.1</b>	<b>General requirements</b>		
16.1.1	Manufacturer		
16.1.2	Type or designation		
16.1.3	Country of origin		
16.1.4	Onboard Indoor Protection		<b>Yes</b>

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ITEM	DESCRIPTION	UNIT	REQUIRED/OFFERED
<b>16.2</b>	<b>Minimum Functionality</b>		
16.2.1	Phase Segregated Differential Protection		No
16.2.2	3 Stage 3 Phase Over-current Protection (50/51)		Yes
16.2.3	3 Stage Earth Fault Protection (50/51 N)		Yes
16.2.4	Sustained Earth Fault Protection		No
16.2.5	Under Frequency Protection		No
16.2.6	Directional Over-current Protection		Yes
16.2.7	Directional Earth Fault Protection		Yes
16.2.8	Directional Sensitive Earth Fault Protection		No
16.2.9	Under / Over Voltage Protection		Yes
16.2.10	Fuse Fail Supervision		Yes
16.2.11	Main Trip Circuit Supervision (Dual State)		Yes
16.2.12	Backup Trip Circuit Supervision (Dual State)		Yes
16.2.13	Circuit Breaker Fail Protection		Yes
16.2.14	Voltage and Current Measuring Functions		Yes
16.2.15	3 Phase Power Measuring Functions		Yes
16.2.16	Circuit Breaker Wear Monitor		Yes
16.2.17	Number of Voltage Inputs		4
16.2.18	Maximum Power Consumption		
16.2.19	Transfer Scheme between the two Incomers		Yes
16.2.20	Attach Data Sheet, Technical Specifications and Type Test certificates		Yes
16.2.21	Conventional CT and VT inputs		Yes
16.2.22	Number of alarm outputs	min	6
16.2.23	Number of trip outputs	min	2
16.2.24	Number of Inputs	min	10
16.2.25	Auxiliary Voltage	V DC	110
16.2.26	Communication		<b>Modbus TCP IP, BACnet Protocol</b>
16.2.27	Local time synchronisation via communication port		Yes
<b>17</b>	<b>Bay Control Unit</b>		
17.1	As per spec		Yes
<b>18</b>	<b>11kV Arc Protection Relays (Can be part of Bay Controller)</b>		
<b>18.1</b>	<b>General requirements</b>		
18.1.1	Manufacturer		
18.1.2	Model number		
18.1.3	Country of origin		
18.1.4	Onboard Indoor Protection		Yes

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<b>18.2</b>	<b>Minimum Functionality</b>		
18.2.1	Breaker and busbar compartment sensors (entire board)		Yes
18.2.2	Cable compartment sensors (entire board)		Yes
18.2.3	Intertripping relays for bus strip		Yes
18.2.4	Slave relays for busbar/switch arc sensors		
18.2.5	Positive identification of activated arc sensor after each arc		Yes
18.2.6	2/2 Principle of operation, current & light		Yes
18.2.7	Cable compartment arc fault to trip local breaker only		Yes
18.2.8	Busbar or switch compartment arc fault to trip the entire		Yes
18.2.9	Health monitoring & alarm if any arc sensor is faulty		Yes
<b>19</b>	<b>11kV PQ and Stats Metering</b>		
19.1	PQ and Stats Energy Meter		
19.2	Manufacturer ( <b>PowerLogic ION9000 or similar or higher</b> )		
19.3	Main Features		DIN Rail, Remote Display, BACnet protocol, 0.2 Accuracy, 2 x 4-20mA Analogue outputs, 63rd Harmonics, etc.
19.4	Installation		11kV Incomers inside LV Cubicles and display on Cubicle Doors
<b>20</b>	<b>11kV Billing Metering</b>		
20.1	Main Metering Summation CTs on Incomer 1		Yes
20.2	Check Metering Summation CTs on Incomer 1		Yes
20.3	Metering Scheme Buswiring		Yes
20.4	Wire Summation CT outputs to terminals for future use		Yes

I, the bidder, confirm that the details provided in this data sheet are true and accurate. I further accept that all goods and/or works will be delivered as specified herein.

[Note (1): SITA reserves the right to verify Data Sheet information]

[Note (2): First convert to PDF, then add signature]

<b>Bidder's Name</b>
<b>Signature (above)</b>