

**07 - SITA Beta 11kV Main Board Switchgear Datasheet - Transformer Feeder Panel Requirements**



**Project: SITA BETA**  
**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**

<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>1.6MVA Transformer 1 Feeder,                  1.6MVA Transformer 2 Feeder,                  1.6MVA Transformer 3 Feeder,                  1.6MVA Transformer 4 Feeder (FUTURE)</b>
2.2	Number of identical panels	Number	<b>4</b>
2.3	Transformer Feeder Switch Type		<b>Circuit Breaker</b>
2.4	Interrupting medium		<b>Vacuum</b>
2.5	Insulating medium		<b>Air</b>
2.6	Transformer feeder breaker current rating	A	<b>630</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		<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	Quantity	<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: Feeders		<b>XLPE</b>
5.4	Cable Size: Feeders		<b>TBC</b>
5.5	Cable Configuration		<b>Three Core</b>
5.6	Number of Cores per Phase		<b>One</b>
5.7	Type of 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	Buchholz Alarm Indication		<b>Yes</b>
7.7	Buchholz Trip Indication		<b>Yes</b>
7.8	Winding Temperature Alarm Indication		<b>Yes</b>
7.9	Winding Temperature Trip Indication		<b>Yes</b>
7.10	Data sheets and type test certificates attached		<b>Yes</b>

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<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>
<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</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 CT Electrical Details</b>		
	<b>Incomers</b>		
13.1	CT Orientation		<b>P1 Facing Busbars</b>
13.2	<b>Core 0</b>		<b>Bay Controller, Protection</b>
13.2.1	Ratio		<b>150/1</b>
13.2.2	Secondary Rating	A	<b>1</b>
13.2.3	Burden	VA	<b>10</b>
13.2.4	Class		<b>5P20</b>
13.3	<b>Core 1</b>		<b>PQ Meter</b>
13.3.1	Ratio		<b>150/1</b>
13.3.2	Secondary Rating	A	<b>1</b>
13.3.3	Burden	VA	<b>10</b>
13.3.4	Class		<b>0,5</b>

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ITEM	DESCRIPTION	UNIT	REQUIRED/OFFERED
<b>14</b>	<b>11kV Transformer Feeder Protection</b>		
<b>14.1</b>	<b>General requirements</b>		
14.1.1	Manufacturer		
14.1.2	Type or designation		
14.1.3	Country of origin		
14.1.4	Onboard Indoor Protection		<b>Yes</b>
<b>14.2</b>	<b>Minimum Functionality</b>		
14.2.1	Phase Segregated Differential Protection		<b>No</b>
14.2.2	3 Stage 3 Phase Over-current Protection (50/51)		<b>Yes</b>
14.2.3	3 Stage Earth Fault Protection (50/51 N)		<b>Yes</b>
14.2.4	Sustained Earth Fault Protection		<b>No</b>
14.2.5	Under Frequency Protection		<b>No</b>
14.2.6	Directional Over-current Protection		<b>Yes</b>
14.2.7	Directional Earth Fault Protection		<b>Yes</b>
14.2.8	Directional Sensitive Earth Fault Protection		<b>No</b>
14.2.9	Under / Over Voltage Protection		<b>Yes</b>
14.2.10	Fuse Fail Supervision		<b>Yes</b>
14.2.11	Main Trip Circuit Supervision (Dual State)		<b>Yes</b>
14.2.12	Backup Trip Circuit Supervision (Dual State)		<b>Yes</b>
14.2.13	Circuit Breaker Fail Protection		<b>Yes</b>
14.2.14	Voltage and Current Measuring Functions		<b>Yes</b>
14.2.15	3 Phase Power Measuring Functions		<b>Yes</b>
14.2.16	Circuit Breaker Wear Monitor		<b>Yes</b>
14.2.17	Number of Voltage Inputs		<b>4</b>
14.2.18	Maximum Power Consumption		
14.2.19	Attach Data Sheet, Technical Specifications and Type Test certificates		<b>Yes</b>
14.2.20	Conventional CT and VT inputs		<b>Yes</b>
14.2.21	Number of alarm outputs	min	<b>6</b>
14.2.22	Number of trip outputs	min	<b>2</b>
14.2.23	Number of Inputs	min	<b>10</b>
14.2.24	Auxiliary Voltage	V DC	<b>110</b>
14.2.25	Communication		<b>Modbus TCO IP/ BACnet Protocol</b>
14.2.26	Local time synchronisation via communication port		<b>Yes</b>
<b>15</b>	<b>Bay Control Unit</b>		
15.1	As per spec		<b>Yes</b>

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ITEM	DESCRIPTION	UNIT	REQUIRED/OFFERED
<b>16</b>	<b>11kV PQ and Stats Metering</b>		
16,1	PQ and Stats Energy Meter		
16,2	Manufacturer ( <b>PowerLogic PM8000 or similar</b> )		
16,3	Main Features		<b>Modbus TCP IP, BACnet protocol, 0.5 Accuracy, 31st Harmonics, etc.</b>
16,4	Installation		<b>11kV Transformer Feeder LV Cubicle Doors</b>
<b>17</b>	<b>Provision for Future Hardwired Downstream</b>		
17,1	Downstream breaker open/ close, racking status and earth switch status displayed on Bay Controller Mimic		<b>Yes</b>
17,2	Circuit Breaker Close blocking when downstream Earth Switch is applied		<b>Yes</b>
17,3	Intertrip receive from downstream		<b>Yes</b>
17,4	Circuit breaker racking, open/close status and earth switch status send to downstream. (Dry contacts)		<b>Yes</b>
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>