

PSGSG-83	<b>Product Specifications</b> <b>For</b> <b>ELECTRONIC PRESSURE SENSORS &amp; SWITCHES</b>		Drg. No.	
			Date	12/02/10
			Product	<b>GSM 145</b>
1.0	<b>Application : 145 kV GIS</b>			
2.0	<b>Type : PIN</b>			
3.0	<b>System Voltage : 145 kV</b>			
4.0	<b>Product Type : GSM 145</b>			
5.0	<b>GENERAL : Necessary accessories shall be offered separately.</b>			
6.0	<b>SPECIFICATIONS OF PRESSURE SENSORS :</b>			
6.1	Pressure Range of Sensor : 0 to 16 bar , 0 to 400 bar			
6.2	Application : SF6 gas (0-16 bar), Oil (0 – 400 bar)			
6.3	Material of Sensor : Stainless steel			
6.4	Signal output : 20 mA (max)			
6.5	Accuracy : 0.5 %			
6.6	Response Time : < 1 ms			
6.7	Operating Temperature : 0 –65 °C			
6.8	Degree of Weather Protection : IP 65 to IP 68			
6.9	Power Supply : 10 to 30 V			
6.10	Insulation voltage : > 500 V			
	Wiring Protection : Protection against polarity crossing, over-Voltage, short circuiting, shocks and vibrations.			
6.11	Dimensions : ~ 50.0 mm x50.0 mmx120 mm ( +/- 20 % allowed)			
6.12	Connection : L type connection is preferable (to create flexibility in cable routing).			
6.13	Digital display is not allowed.			
6.14	Overpressure limit and burst pressure shall be specified.			
6.15	Sensor Scheme and connection circuit details shall be provided in detail along with the offer.			
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<b>7.0</b>	<b>SPECIFICATIONS OF ELECTRONIC PRESSURE SWITCHES:</b>			
<b>7.1</b>	Pressure Range of Sensor	:	0 to 16 bar / 0 to 400 bar	
<b>7.2</b>	Application	:	SF6 gas (0-16 bar), Oil (0 – 400 bar)	
<b>7.3</b>	Material of Sensor	:	Stainless steel	
<b>7.4</b>	Signal output	:	20 mA (max)	
<b>7.5</b>	Accuracy	:	0.5 %	
<b>7.6</b>	Response Time	:	< 2 ms	
<b>7.7</b>	Operating Temperature	:	0 – 65 °C	
<b>7.8</b>	No. of Switching points	:	2	
<b>7.9</b>	Switch function	:	NC/NO	
<b>7.10</b>	Degree of Weather Protection	:	IP 65 to IP 68	
<b>7.11</b>	Power Supply	:	10 to 30 V	
<b>7.12</b>	Insulation voltage	:	> 500 V	
<b>7.13</b>	Wiring Protection	:	Protection against polarity crossing, over-Voltage, short circuiting, shocks and vibrations.	
<b>7.14</b>	Dimensions	:	~ 50.0 mm x50.0 mmx120 mm ( +/- 20 % allowed)	
<b>7.15</b>	Connection	:	L type connection is preferable (to create flexibility in cable routing).	
<b>7.16</b>	Switching pressure shall be adjustable as per the requirement.			
<b>7.17</b>	Digital display is not allowed.			
<b>7.18</b>	Overpressure limit and burst pressure shall be specified.			
<b>7.19</b>	Switching Scheme, configurations, preferable mode of operation, switching times and connection details shall be provided in detail along with the offer.			
<b>8.0</b>	<b>DRAWING APPROVAL:</b>  Outline General Arrangement (OGA) and component drawings as per Bill of Materials shall be submitted on order acceptance for approval prior to commencement of supply. Detailed drawing of the critical potion of sensor/switch like electrical and pressure connections.			
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<b>9.0</b>	<b>FACTORY TESTS:</b> All performance /calibration tests shall be carried out on the equipment supplied and test reports submitted along with the supply. A sample of test report shall be submitted along with the technical offer containing details of electrical and mechanical tests for which the pressure sensors and switches have been evaluated by the vendor. The pressure transducers and Switches shall have CE conformity.		
<b>10.0</b>	<b>PERFORMANCE GUARANTEE :</b>  Supplier shall provide Guarantee certificate for the components to ensure reliability of the equipment for a period of not less than 12 months from the date of dispatch. The components shall be guaranteed against all manufacturing defects.		
<b>11.0</b>	<b>OPERATING &amp; MAINTENANCE MANUALS:</b>  Supplier shall provide operation and maintenance manual covering instruction for safe handling. The user manuals shall have detailed information about dimensions, maintenance of the equipment, trouble shooting, spare parts and methods.		
<b>12.0</b>	<b>QUALIFYING REQUIREMENTS:</b>  The supplier shall be of International repute with proven record and should have supplied similar pressure sensors for gas insulated equipment, at least, for last three years. The supplier must submit along with the technical bid the references of supplies made so far.		
<b>13.0</b>	<b>PACKING:</b>  The components shall be protected and covered with moisture proof packing and requisite quantity of absorbents.		
<b>14.0</b>	<b>ANY OTHER INFORMATION:</b> In case of doubts please contact BHEL for clarifications. Supplier can furnish any other/additional information, considering overall requirements. Contact E-mail: mmrao@bhelrnd.co.in.		
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