

DATA SHEETS - HPI Series

550kV, 40kA - 2000A

1. Voltage Rating

1.1	Normal System Voltage	500kV
1.2	Rated Maximum Voltage	550kV
1.3	Voltage Range Factor	1.0

2. Interrupting Current Rating

2.1	Symmetrical Short Circuit Capability	40kA
2.2	Three second short-time current carrying capability	40kA
2.3	Close and Latching Capability	108kA
2.4	Capacitance Switching	
2.4.1	Line Charging Current	2000A
2.4.2	Isolated Shunt Capacitor Bank Current	2000A
2.4.3	Back to Back Shunt Capacitor Bank Current	2000A
2.5	Out of Phase Switching	10kA
2.6	Percent interrupting capability after 0-0 sec-CO-15 sec-CO duty cycle	100%

3. Continuous Current Rating 2000A

4. Operating Time (60 Hz basis)

4.1	Permissible Tripping Delay	1 sec.
4.2	Interrupting Time	2 cycles
4.3	Opening Time	1.02 cycles
4.4	Closing time	7 cycles
4.5	Minimum allowable reclosing time	20 cycles
4.6	Reclosing range	20-120 cycles

5. Temperature Range

5.1	Maximum Ambient	40°C
5.2	Minimum Ambient	
5.2.1	Without Tank Heaters	-30°C
5.2.2	With Tank Heaters	-40°C
5.3	Contact temperature rise (max.)	65°C

6.	Insulation Level	
6.1	One minute dry withstand (60 HZ)	860kV
6.2	Ten second wet withstand	N/A
6.3	Full wave lightning impulse (BIL)	1800kV
6.4	2 μsec chopped wave withstand	2320kV
6.5	3 μsec chopped wave withstand	2070kV
7.	Dielectric Strength at Atmospheric Pressure	1.2 times
8.	Pre-insertion Resistor	600 Ohm
9.	Voltage Grading Capacitors	Yes
10.	TRV Control Capacitors	None
11.	Breaks per Phase	2
12.	Operating Mechanism	
12.1	Type	Pneumatic
12.2	Individual or common mechanism	IPO
13.	SF6 System	
13.1	Normal operating pressure at 20°C	75 psig
13.2	Minimum operating pressure with full rating	64 psig
13.3	Temperature compensated gas density alarm	69 psig
13.4	Temperature compensated gas density lockout	64 psig
13.5	Overpressure relief valve	103 psig
13.6	Weight of SF6 gas	726 lbs.
14.	Trip Coil	
14.1	Voltage	125V DC
14.2	Allowable Voltage Range	70-140V DC
14.3	Current	14.4A
14.4	Number of trip coils	2 per pole
15.	Close Coil	

15.1	Voltage	125V DC
15.2	Voltage Range	90-140V DC
15.3	Current	9.9A
15.4	Number of close coils	1 per pole
16.	Bushings	
16.1	Manufacturer	NGK
16.2	Insulation Medium	SF6
16.3	Bushing Material	Composite
16.4	Insulation Class (BIL)	1800kV
16.5	Creepage Distance	318 inches
16.6	Permissible safe cantilever strength of installed bushing	300 lbs.
17.	Control Cabinet Heaters	
17.1	KW of heaters	.64kW each
17.2	Location	1-mechanism (X 3) 2-compressor motor 1-cabinet (X 4)
17.3	Voltage	120/240V AC
18.	CT Standard Ratings	
18.1	Max. number available per bushing	3
18.2	Number proposed per bushing	per customer spec
18.3	Relaying or metering accuracy	4 Metering/1 Protection per pole
18.4	Accuracy (metering)	0.3B4
18.5	Ratio	3000/2500/2200/1000: 5:5:5:5:5
18.6	Relaying or metering accuracy	Metering
18.7	Accuracy (protection)	C800
18.8	Ratio	3000/2500/2200/1000: 5:5:5:5:5
18.9	Thermal Rating Factor	1.5
19.	Maintenance Requirements	
19.1	Arcing contact material	Copper-Tungsten
19.2	Number of short circuits before internal maintenance check	20
19.3	Number of rated continuous current interruptions before internal maintenance check recommended	2000
19.4	Mechanical Life	10,000.