



PSD MG2003 – PowlVac 15kV “K1” Breakers Field Checklist & Maintenance Table

Breaker kV/kA (K factor 1):	15kV/25kA	15/36kA	15kV/50kA	15kV/63kA
Vacuum Interrupter Part No.:	C-H WL35911	C-H WL35296A	C-H WL35297A	C-H WL35949
V-I Assembly No.:	<u>60501G01</u>	<u>60500G01</u>	<u>60500G03</u>	
Bkr. Continuous Current Rating:	1200A, 2000A	1200A, 2000A	1200A, 2000A, 3000A	1200A, 2000A, 3000A
Push Rod Part No. / Push Rod Spring Color; (Length):	<u>50934G22</u> / silver; (9.50")	<u>50934G23</u> / blue; (9.50")	<u>50934G24</u> / red; (9.50")	<u>50934G25</u> / no color; (9.813")
Sliding Contact Assembly No.:	<u>50952G01</u>	<u>50952G01</u>	1200A / 2000A – <u>50956G01</u> (14)	<u>60500P01</u>
(qty. of contact fingers per side):	(10)	(10)	3000A – <u>50956G02</u> (14)	Multilam
Primary Stab Part No.:	1200A → ¼” <u>50403P04</u> 2000A → ½” <u>50403P01</u>	1200A → ¼” <u>50403P04</u> 2000A → ½” <u>50403P01</u>	1200A, 2000A, 3000A → ½” <u>50403P01</u>	Upper → <u>50403P11</u> (left) Upper → <u>50403P13</u> (right) Lower → <u>50403P12</u>
Contact Stroke:	.350" ↔ .450"			.450" ↔ .550"
Push Rod over-travel; “nut gap”:	.063" ↔ .625"			.188" ↔ .875"
Contact Resistance: (maximum allowable)	1200A = <u>70</u> micro-ohms 2000A = <u>50</u> micro-ohms	1200A = <u>60</u> micro-ohms 2000A = <u>50</u> micro-ohms	1200A = <u>60</u> micro-ohms 2000A = <u>45</u> micro-ohms 3000A = <u>40</u> micro-ohms	1200A = <u>20</u> micro-ohms 2000A = <u>20</u> micro-ohms 3000A = <u>20</u> micro-ohms
Opening Speed, (Minimum):	≥42"/sec			
Opening Time:	3-cycle breakers: t<35ms; 5-cycle breakers: t<55ms			
Closing Speed, (Minimum):	≥24"/sec.			
Closing Time:	≤ 60ms			

Measurement Parameter Descriptions (Refer to applicable PowlVac breaker instruction bulletin for additional details)

Contact Stroke:	Breaker " <i>contact travel</i> " in inches, determined by measuring the difference between the <i>closed</i> and <i>open</i> position of the <u>lower contact block</u> . Stroke will vary depending upon operational conditions.
Nut gap; (Contact Spring Loading Force):	Dimensional measurement of the gap between the push rod operating yoke and the nut on the end of the push rod stud. This measurement can only be taken when the breaker is in the <i>closed</i> position.
Contact Resistance:	Maximum conductor path resistance, measured in micro ohms, from the upper to lower primary stab assemblies.
Closing time:	Time measurement in milliseconds, initiated at application of closing voltage and stopped at contact touch. Time in cycles based on 60 cycles system.
Closing speed:	Determined by 0.25 S (S = breaker stroke measured in inches) divided by Tc (Tc = Elapsed time in milliseconds for the breaker contacts to travel the last 25% of the breaker closing stroke)
Opening time:	Time measurement in milliseconds, initiated at application of opening voltage, and stopped at contact part. Time in cycles based on 60 cycles system.
Opening speed:	Determined by 0.75 S (S = breaker stroke measured in inches) divided by Tt (Tt = Elapsed time in milliseconds for the breaker contacts to travel the first 75% of the breaker opening stroke)
Auxiliary contacts:	Time measurement in milliseconds, initiated at application of opening or closing voltage, and stopped when contact changes state. Time in cycles based on a 60-cycles system.