CERN - Lab. CMS Cables - B15S-012



Software version 4.14-00

Unit under test FULL_TEST_su_cavo_ps_pp1_V3

Filename C:\Users\Public\Documents\CEETIS\Projects\FULL_TEST_su_cavo_ps_pp1_V3.project

Date/Time 07/05/2024 15:30:03

Serial number Cable01

	Test result			
Continuity test	1 error			
LV isolation test	No commands			
HV isolation test	Pass			
Test of electrical components	No commands			
Voltage and Current	No commands			
Other tests	Pass			
	FAILED			

Ambient Temperature: °C Ambient Rel. Humidity: %

CONTINUITY AND RESISTANCE MEASUREMENTS

-->LV channels

Parameters for continuity test

Current=500mA; Threshold=40Ohm; Trise=2ms; Twait=2s; Tmeas=1ms; Auto ranging=On; Voltage limit=48V

Parameters for continuity test

Threshold=10hm

THI COHOIG TO	ZI III II			
√ Passed	LV1	LV1 S	LV1 Sr	563,4mOhm
√ Passed	LVreturn1	LVR1 S	LVR1 Sr	562mOhm
√ Passed	LV2	LV2 S	LV2 Sr	568,3mOhm
√ Passed	LVreturn2	LVR2 S	LVR2 Sr	560,2mOhm
√ Passed	LV3	LV3 S	LV3 Sr	569,1mOhm
√ Passed	LVreturn3	LVR3 S	LVR3 Sr	563,3mOhm
√ Passed	LV4	LV4 S	LV4 Sr	562,5mOhm
√ Passed	LVreturn4	LVR4 S	LVR4 Sr	557mOhm
√ Passed	LV5	LV5 S	LV5 Sr	562,3mOhm
√ Passed	LVreturn5	LVR5 S	LVR5 Sr	557,7mOhm
√ Passed	LV6	LV6 S	LV6 Sr	552,4mOhm
√ Passed	LVreturn6	LVR6 S	LVR6 Sr	555mOhm
Passed	LV7	LV7 S	LV7 Sr	571,6mOhm
√ Passed	LVreturn7	LVR7 S	LVR7 Sr	557,5mOhm
√ Passed	LV8	LV8 S	LV8 Sr	549,6mOhm
√ Passed	LVreturn8	LVR8 S	LVR8 Sr	547,7mOhm
√ Passed	LV9	LV9 S	LV9 Sr	571,7mOhm
√ Passed	LVreturn9	LVR9 S	LVR9 Sr	562,8mOhm
√ Passed	LV10	LV10 S	LV10 Sr	566,6mOhm
√ Passed	LVreturn10	LVR10 S	LVR10 Sr	562mOhm
√ Passed	LV11	LV11 S	LV11 Sr	569,6mOhm
√ Passed	LVreturn11	LVR11 S	LVR11 Sr	568,3mOhm
√ Passed	LV12	LV12 S	LV12 Sr	565,7mOhm
Passed	LVreturn12	LVR12 S	LVR12 Sr	569,8mOhm

V				
√ Passed	PH	PH S	PH Sr	576mOhm
Passed	PHreturn	PHR S	PHR Sr	562,7mOhm
> Drains				
💢 Open	Drain	Drain S	Drain r	1,166GOhm
HV channels	and Tsensor for continuity test			
Threshold=1				
√ Passed	Tsensor1	TS1 S	TS1 Sr	11,80hm
Passed	Tsensor2	TS2 S	TS2 Sr	11,77Ohm
Passed	Tsensor3	TS3 S	TS3 Sr	11,82Ohm
√ Passed	Tsensor4	TS4 S	TS4 Sr	11,75Ohm
Passed	H1	H1 S	H1 Sr	11,66Ohm
√ Passed	H2	H2 S	H2 Sr	11,870hm
√ Passed	H3	H3 S	H3 Sr	11,61Ohm
Passed	H4	H4 S	H4 Sr	11,730hm
√ Passed	HR1	HR1 S	HR1 Sr	11,68Ohm
Passed	H5	H5 S	H5 Sr	11,81Ohm
√ Passed	H6	H6 S	H6 Sr	11,57Ohm
Passed	H7	H7 S	H7 Sr	11,90hm
Passed	H8	H8 S	H8 Sr	11,86Ohm
Passed	HR2	HR2 S	HR2 Sr	11,73Ohm
Passed	H9	H9 S	H9 Sr	11,97Ohm
Passed	H10	H10 S	H10 Sr	11,84Ohm
Passed	H11	H11 S	H11 Sr	11,52Ohm
Passed	H12	H12 S	H12 Sr	11,59Ohm
√ Passed	HR3	HR3 S	HR3 Sr	11,62Ohm
	TEST 1 VS all			
> LV chann	els			

Parameters for HV isolation test

Voltage=50V; Threshold=100MOhm; Trise=10s; Twait=3s; Tmeas=1s; Auto ranging=On; Current limit=1,95mA; Tmeas red.=Off; Tmeas fact.=1; Voltage ramp=120V/s

Parameters for HV isolation test

Trise=1s; Twait=8s; Tmeas=8s

Passed; LV1; 1658162230.2784; Ohm; 1,658GOhm Passed; LVR1; 1264170762.27633; Ohm; 1,264GOhm Passed; LV2; 1865462030.05199; Ohm; 1,865GOhm Passed; LVR2; 1348109215.31891; Ohm; 1,348GOhm Passed; LV3; 1740155427.33794; Ohm; 1,74GOhm Passed; LVR3; 1343249351.3735; Ohm; 1,343GOhm Passed; LV4; 873198990.2264; Ohm; 873,2MOhm Passed; LVR4; 1644833304.11305; Ohm; 1,645GOhm Passed; LV5; 1671098645.13728; Ohm; 1,671GOhm Passed; LVR5; 1447238722.36784; Ohm; 1,447GOhm Passed; LV6; 911324651.82704; Ohm; 911,3MOhm Passed; LVR6; 581311692.96123; Ohm; 581,3MOhm Passed; LV7; 1279528188.58258; Ohm; 1,28GOhm Passed; LVR7; 1970331758.22737; Ohm; 1,97GOhm Passed; LV8; 1191029029.65709; Ohm; 1,191GOhm Passed; LVR8; 845187688.02608; Ohm; 845,2MOhm Passed; LV9; 2078427631.09869; Ohm; 2,078GOhm Passed; LVR9; 2354729902.2419; Ohm; 2,355GOhm Passed; LV10; 789099387.64607; Ohm; 789,1MOhm Passed; LVR10; 1303464721.46951; Ohm; 1,303GOhm Passed; LV11; 937720843.441995; Ohm; 937,7MOhm Passed; LVR11; 2043856795.05491; Ohm; 2,044GOhm Passed; LV12; 1537200981.9937; Ohm; 1,537GOhm Passed; LVR12; 1913101596.89036; Ohm; 1,913GOhm

Passed; PHR; 1699064110.44163; Ohm; 1,699GOhm --> HV channels Parameters for HV isolation test Voltage=1,2kV; Threshold=1GOhm; Trise=10s; Tmeas=1s Passed HV1 H₁F >98,21GOhm **Passed** HV2 H2 F >98,21GOhm **Passed** HV3 H₃ F >98,21GOhm Passed HV4 H4 F 88,94GOhm Passed HV5 H5 F >98,21GOhm **Passed** HV6 H6 F >98,21GOhm **Passed** HV7 H7 F >98,21GOhm **Passed** HV8 H8 F 71,12GOhm Passed HV9 H9 F >98,21GOhm **Passed** HV10 H10 F 25,83GOhm **Passed** HV11 H11 F 54,79GOhm **Passed** HV12 H12 F >98,21GOhm Passed HVreturn1 HR1 F >98,21GOhm Passed HVreturn2 HR2 F >98,21GOhm Passed HVreturn3 HR3 F >98,21GOhm Parameters for HV isolation test Voltage=50V; Threshold=100MOhm; Trise=1s; Tmeas=2s **Passed** Tsensor1 TS1 F >4,092GOhm **Passed** Tsensor2 TS2 F >4,092GOhm Passed Tsensor3 TS3 F >4,092GOhm Passed Tsensor4 TS4 F >4,092GOhm **INSULATION GROUP TEST** --> LV channels Parameters for HV isolation test Threshold=10MOhm

Passed; PH; 2129845001.92727; Ohm; 2,13GOhm

Passed; LV_group; 204150783.758022; Ohm; 204,2MOhm

HV

Low group

>4,919GOhm

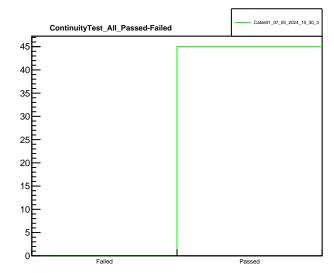
Voltage=1,2kV; Threshold=100MOhm; Trise=10s

HV_group

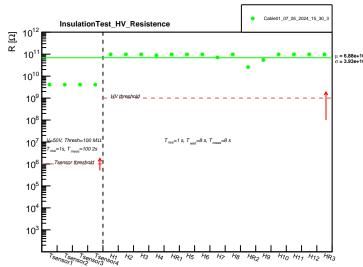
--> HV channels

Passed

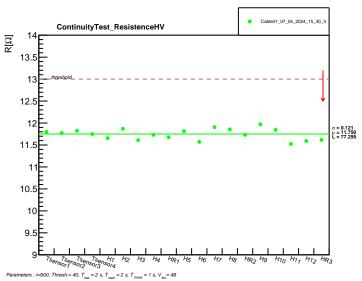
Parameters for HV isolation test



Parameters : i=500, Thresh.= 40, $T_{rise} = 2$ s, $T_{wait} = 2$ s, $T_{meas} = 1$ s, $V_{kim} = 48$



 $Initial\ Parameters: V=1.2\ kV,\ Thresh=1\ G\Omega,\ T_{rise}=10\ s,\ T_{wait}=8\ s,\ T_{meas}=1\ s,\ i_{lim}=1.95\ mA,\ V_{namp}=120\ V/s$



 $Parameters: V=50 \ V, \ Thresh=100 \ M\Omega, \ T_{_{rise}}=1 \ s, \ T_{_{meat}}=8 \ s, \ I_{_{meas}}=8 \ s, \ i_{_{lim}}=1.95 \ mA, \ V_{_{mmp}}=120 \ V/s$

InsulationTest_All_Passed-Failed

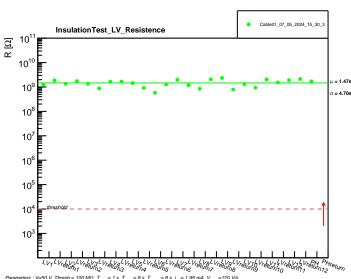
45 40

35

30

25

15



Passed

Parameters : V=50 V, Thresh.= 100 M Ω , T $_{rise}$ = 1 s, T $_{walt}$ = 8 s, T $_{meas}$ = 8 s, i $_{lim}$ = 1.95 mA, V $_{mmp}$ =120 V/s

