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 09/05/2024 12:11:09

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

Passed	LV1	LV1 S	LV1 Sr	559,8mOhm
Passed	LVreturn1	LVR1 S	LVR1 Sr	557,8mOhm
Passed	LV2	LV2 S	LV2 Sr	564,4mOhm
Passed	LVreturn2	LVR2 S	LVR2 Sr	556,9mOhm
Passed	LV3	LV3 S	LV3 Sr	564,8mOhm
Passed	LVreturn3	LVR3 S	LVR3 Sr	559,4mOhm
Passed	LV4	LV4 S	LV4 Sr	558,7mOhm
Passed	LVreturn4	LVR4 S	LVR4 Sr	553mOhm
Passed	LV5	LV5 S	LV5 Sr	558,4mOhm
Passed	LVreturn5	LVR5 S	LVR5 Sr	553,5mOhm
Passed	LV6	LV6 S	LV6 Sr	549mOhm
Passed	LVreturn6	LVR6 S	LVR6 Sr	551,6mOhm
Passed	LV7	LV7 S	LV7 Sr	567,8mOhm
Passed	LVreturn7	LVR7 S	LVR7 Sr	553,6mOhm
Passed	LV8	LV8 S	LV8 Sr	545,5mOhm
Passed	LVreturn8	LVR8 S	LVR8 Sr	544,3mOhm
Passed	LV9	LV9 S	LV9 Sr	567,7mOhm
Passed	LVreturn9	LVR9 S	LVR9 Sr	559,1mOhm
Passed	LV10	LV10 S	LV10 Sr	562,6mOhm
Passed	LVreturn10	LVR10 S	LVR10 Sr	558,3mOhm
Passed	LV11	LV11 S	LV11 Sr	565,9mOhm
Passed	LVreturn11	LVR11 S	LVR11 Sr	564,5mOhm
Passed	LV12	LV12 S	LV12 Sr	562,2mOhm
Passed	LVreturn12	LVR12 S	LVR12 Sr	566,3mOhm

V				
√ Passed	PH	PH S	PH Sr	571,9mOhm
Passed	PHreturn	PHR S	PHR Sr	558,5mOhm
> Drains				
💢 Open	Drain	Drain S	Drain r	230,8MOhm
HV channels	and Tsensor for continuity test			
Threshold=15	•			
√ Passed	Tsensor1	TS1 S	TS1 Sr	11,73Ohm
Passed	Tsensor2	TS2 S	TS2 Sr	11,71Ohm
Passed	Tsensor3	TS3 S	TS3 Sr	11,75Ohm
Passed	Tsensor4	TS4 S	TS4 Sr	11,68Ohm
Passed	H1	H1 S	H1 Sr	11,59Ohm
Passed	H2	H2 S	H2 Sr	11,80hm
Passed	H3	H3 S	H3 Sr	11,55Ohm
Passed	H4	H4 S	H4 Sr	11,66Ohm
√ Passed	HR1	HR1 S	HR1 Sr	11,61Ohm
√ Passed	H5	H5 S	H5 Sr	11,75Ohm
√ Passed	H6	H6 S	H6 Sr	11,5Ohm
√ Passed	H7	H7 S	H7 Sr	11,84Ohm
Passed	H8	H8 S	H8 Sr	11,790hm
Passed	HR2	HR2 S	HR2 Sr	11,66Ohm
Passed	H9	H9 S	H9 Sr	11,90hm
Passed	H10	H10 S	H10 Sr	11,78Ohm
Passed	H11	H11 S	H11 Sr	11,46Ohm
√ Passed	H12	H12 S	H12 Sr	11,53Ohm
Passed	HR3	HR3 S	HR3 Sr	11,55Ohm
	I 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; 1753395299.70721; Ohm; 1,753GOhm Passed; LVR1; 1963525816.75675; Ohm; 1,964GOhm Passed; LV2; 1518350115.67422; Ohm; 1,518GOhm Passed; LVR2; 1393477823.07077; Ohm; 1,393GOhm Passed; LV3; 2405657492.89531; Ohm; 2,406GOhm Passed; LVR3; 1815033198.46476; Ohm; 1,815GOhm Passed; LV4; 1808422240.38285; Ohm; 1,808GOhm Passed; LVR4; 1079605389.16664; Ohm; 1,08GOhm Passed; LV5; 1420106070.20949; Ohm; 1,42GOhm Passed; LVR5; 2327566774.07918; Ohm; 2,328GOhm Passed; LV6; 752857907.45437; Ohm; 752,9MOhm Passed; LVR6; 908168441.81975; Ohm; 908,2MOhm Passed; LV7; 1454739733.06761; Ohm; 1,455GOhm Passed; LVR7; 828755003.08767; Ohm; 828,8MOhm Passed; LV8; 883241971.30306; Ohm; 883,2MOhm Passed; LVR8; 1599903830.27811; Ohm; 1,6GOhm Passed; LV9; 1332443568.84319; Ohm; 1,332GOhm Passed; LVR9; 1416625825.99078; Ohm; 1,417GOhm Passed; LV10; 997086663.076105; Ohm; 997,1MOhm Passed; LVR10; 2132950222.11616; Ohm; 2,133GOhm Passed; LV11; 1511543994.91111; Ohm; 1,512GOhm Passed; LVR11; 2200968636.11151; Ohm; 2,201GOhm Passed; LV12; 1422146575.86742; Ohm; 1,422GOhm Passed; LVR12; 1609329675.1012; Ohm; 1,609GOhm

--> HV channels Parameters for HV isolation test Voltage=1,2kV; Threshold=1GOhm; Trise=10s; Tmeas=1s Passed HV1 H₁F >98,41GOhm **Passed** HV2 H2 F 76,92GOhm >98,41GOhm **Passed** HV3 H₃ F Passed HV4 H4 F >98,41GOhm Passed HV5 H5 F >98,41GOhm **Passed** HV6 H6 F 73,57GOhm **Passed** HV7 H7 F >98,41GOhm **Passed** HV8 H8 F 91,89GOhm Passed HV9 H9 F >98,41GOhm **Passed** HV10 H10 F 98,05GOhm **Passed** HV11 H11 F 33,93GOhm **Passed** HV12 H12 F >98,41GOhm Passed HVreturn1 HR1 F >98,41GOhm Passed HVreturn2 HR2 F >98,41GOhm Passed HVreturn3 HR3 F 94,81GOhm Parameters for HV isolation test Voltage=50V; Threshold=100MOhm; Trise=1s; Tmeas=2s Passed Tsensor1 TS1 F >4,101GOhm **Passed** Tsensor2 TS2 F >4,101GOhm Passed Tsensor3 TS3 F >4,101GOhm Passed Tsensor4 TS4 F >4,101GOhm **INSULATION GROUP TEST** --> LV channels Parameters for HV isolation test Threshold=10MOhm

Passed; PH; 1310119608.01493; Ohm; 1,31GOhm Passed; PHR; 1560413351.48201; Ohm; 1,56GOhm

Passed; LV_group; 199911588.983386; Ohm; 199,9MOhm

HV

Low group

>4,921GOhm

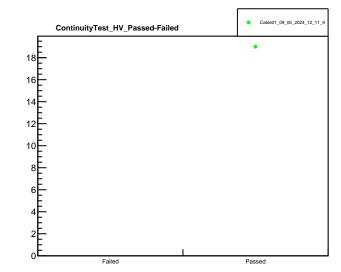
Voltage=1,2kV; Threshold=100MOhm; Trise=10s

HV_group

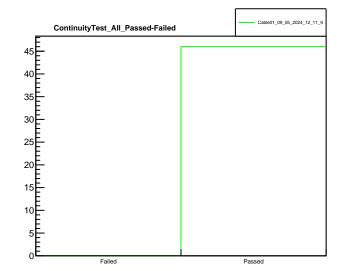
--> HV channels

Passed

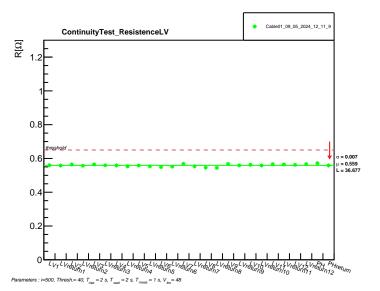
Parameters for HV isolation test



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



Parameters : i=500, Thresh.= 40, $T_{\rm rise}$ = 2 s, $T_{\rm walt}$ = 2 s, $T_{\rm meas}$ = 1 s, $V_{\rm lim}$ = 48



ContinuityTest_LV_Passed-Failed

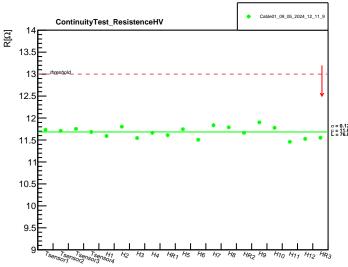
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Failed Passed

Parameters : i=500, Thresh.= 40, $T_{\rm rise}$ = 2 s, $T_{\rm walt}$ = 2 s, $T_{\rm meas}$ = 1 s, $V_{\rm lim}$ = 48



Parameters : i=500, Thresh = 40, $T_{\rm rise}$ = 2 s, $T_{\rm wait}$ = 2 s, $T_{\rm meas}$ = 1 s, $V_{\rm lim}$ = 4