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 14:41:04

Serial number Cable02

| | Test result | | |
|-------------------------------|-------------|--|--|
| Continuity test | 1 error | | |
| LV isolation test | No commands | | |
| HV isolation test | 10 errors | | |
| 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 | 586mOhm |
|-----------------|------------|---------|----------|-----------|
| Passed | LVreturn1 | LVR1 S | LVR1 Sr | 580,3mOhm |
| Passed | LV2 | LV2 S | LV2 Sr | 585,7mOhm |
| Passed | LVreturn2 | LVR2 S | LVR2 Sr | 581,6mOhm |
| Passed | LV3 | LV3 S | LV3 Sr | 589,7mOhm |
| 🏏 Passed | LVreturn3 | LVR3 S | LVR3 Sr | 581,9mOhm |
| √ Passed | LV4 | LV4 S | LV4 Sr | 584,3mOhm |
| √ Passed | LVreturn4 | LVR4 S | LVR4 Sr | 578,6mOhm |
| √ Passed | LV5 | LV5 S | LV5 Sr | 581,7mOhm |
| √ Passed | LVreturn5 | LVR5 S | LVR5 Sr | 581,7mOhm |
| √ Passed | LV6 | LV6 S | LV6 Sr | 572,8mOhm |
| √ Passed | LVreturn6 | LVR6 S | LVR6 Sr | 574,9mOhm |
| √ Passed | LV7 | LV7 S | LV7 Sr | 588mOhm |
| √ Passed | LVreturn7 | LVR7 S | LVR7 Sr | 581,7mOhm |
| √ Passed | LV8 | LV8 S | LV8 Sr | 572,4mOhm |
| √ Passed | LVreturn8 | LVR8 S | LVR8 Sr | 571,9mOhm |
| √ Passed | LV9 | LV9 S | LV9 Sr | 588,8mOhm |
| Passed | LVreturn9 | LVR9 S | LVR9 Sr | 579,7mOhm |
| Passed | LV10 | LV10 S | LV10 Sr | 592,4mOhm |
| Passed | LVreturn10 | LVR10 S | LVR10 Sr | 584,8mOhm |
| Passed | LV11 | LV11 S | LV11 Sr | 587,7mOhm |
| Passed | LVreturn11 | LVR11 S | LVR11 Sr | 588,2mOhm |
| Passed | LV12 | LV12 S | LV12 Sr | 588,3mOhm |
| Passed | LVreturn12 | LVR12 S | LVR12 Sr | 588,3mOhm |
| | | | | |

| ~ | | | | | | |
|--------------------------|------------------------------------|---------|---------|-----------|--|--|
| Passed | PH | PH S | PH Sr | 591,9mOhm | | |
| Passed | PHreturn | PHR S | PHR Sr | 581,9mOhm | | |
| > Drains | | | | | | |
| 💢 Open | Drain | Drain S | Drain r | 9,106MOhm | | |
| HV channels | and Tsensor for continuity test | | | | | |
| Threshold=15 | • | | | | | |
| √ Passed | Tsensor1 | TS1 S | TS1 Sr | 12,34Ohm | | |
| √ Passed | Tsensor2 | TS2 S | TS2 Sr | 12,40hm | | |
| √ Passed | Tsensor3 | TS3 S | TS3 Sr | 12,14Ohm | | |
| √ Passed | Tsensor4 | TS4 S | TS4 Sr | 12,230hm | | |
| √ Passed | H1 | H1 S | H1 Sr | 12,08Ohm | | |
| √ Passed | H2 | H2 S | H2 Sr | 12,410hm | | |
| Passed | H3 | H3 S | H3 Sr | 12,08Ohm | | |
| √ Passed | H4 | H4 S | H4 Sr | 12,22Ohm | | |
| √ Passed | HR1 | HR1 S | HR1 Sr | 12,18Ohm | | |
| √ Passed | H5 | H5 S | H5 Sr | 12,16Ohm | | |
| √ Passed | H6 | H6 S | H6 Sr | 12,03Ohm | | |
| √ Passed | H7 | H7 S | H7 Sr | 12,40hm | | |
| Passed | H8 | H8 S | H8 Sr | 12,27Ohm | | |
| Passed | HR2 | HR2 S | HR2 Sr | 12,43Ohm | | |
| Passed | H9 | H9 S | H9 Sr | 12,24Ohm | | |
| Passed | H10 | H10 S | H10 Sr | 12,210hm | | |
| Passed | H11 | H11 S | H11 Sr | 12,05Ohm | | |
| Passed | H12 | H12 S | H12 Sr | 12,07Ohm | | |
| √ Passed | HR3 | HR3 S | HR3 Sr | 12,22Ohm | | |
| INSULATION TEST 1 VS all | | | | | | |
| > LV channe | 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

Fail; LV1; 32377884.4589516; Ohm; 32,38MOhm Fail; LVR1; 61289358.479785; Ohm; 61,29MOhm Passed; LV2; 267504967.063156; Ohm; 267,5MOhm Fail; LVR2; 25529.4182087329; Ohm; 25,53kOhm Passed; LV3; 286461014.239827; Ohm; 286,5MOhm Passed; LVR3; 300929332.624888; Ohm; 300,9MOhm Passed; LV4; 413897600.722271; Ohm; 413,9MOhm Passed; LVR4; 108841576.70327; Ohm; 108,8MOhm Fail; LV5; 25531.2015617364; Ohm; 25,53kOhm Passed; LVR5; 143036670.186912; Ohm; 143MOhm Passed; LV6; 850363362.56814; Ohm; 850,4MOhm Fail; LVR6; 25532.4706613457; Ohm; 25,53kOhm Fail; LV7; 25534.1283748609; Ohm; 25,53kOhm Fail; LVR7; 25536.4073589503; Ohm; 25,54kOhm Passed; LV8; 1465009518.84416; Ohm; 1,465GOhm Passed; LVR8; 352704681.573518; Ohm; 352,7MOhm Passed; LV9; 1687771623.04385; Ohm; 1,688GOhm Passed; LVR9; 1006573196.4292; Ohm; 1,007GOhm Passed; LV10; 577774396.7323; Ohm; 577,8MOhm Passed; LVR10; 304687996.861879; Ohm; 304,7MOhm Passed; LV11; 648473339.066655; Ohm; 648,5MOhm Passed; LVR11; 548756550.213375; Ohm; 548,8MOhm Passed; LV12; 679304044.53954; Ohm; 679,3MOhm

Fail; LVR12; 25537.6909763037; Ohm; 25,54kOhm

--> HV channels Parameters for HV isolation test Voltage=1,2kV; Threshold=1GOhm; Trise=10s; Tmeas=1s **Passed** H1 F 41,14GOhm HV1 **Passed** HV2 H2 F 47,3GOhm **Passed** HV3 H₃ F 6,461GOhm Passed HV4 H4 F >98,2GOhm Passed HV5 H5 F 6,659GOhm **Passed** HV6 H6 F 25,78GOhm **Passed** HV7 H7 F >98,2GOhm **Passed** HV8 H8 F 12,43GOhm Passed HV9 H9 F >98,2GOhm **Passed** HV10 H10 F 50,78GOhm **Passed** HV11 H11 F 14,12GOhm **Passed** HV12 H12 F 32,89GOhm Passed HVreturn1 HR1 F 91,81GOhm 🌠 Passed HVreturn2 HR2 F >98,2GOhm Passed HVreturn3 HR3 F >98,2GOhm Parameters for HV isolation test Voltage=50V; Threshold=100MOhm; Trise=1s; Tmeas=2s Passed Tsensor1 TS1 F 1,112GOhm **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

Fail; PH; 25537.1971228005; Ohm; 25,54kOhm Passed; PHR; 185971203.546636; Ohm; 186MOhm

Fail; LV_group; 25539.5418901506; Ohm; 25,54kOhm

HV

Low group

1,92GOhm

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

HV_group

--> HV channels

Passed

Parameters for HV isolation test

