USB-C cable validation record

DAISO YMU-25-P10 / G273-011 / 1.0 m / c_sample1

19 October 2026 | 100 Vac / 50 Hz | DAISO-CABLE-20261019-01

Finding: all 29 cases passed in one uninterrupted run

All 29 cases passed the v5.8.13 full cable procedure. The original outcome is SCREENING_COMPLETE. Coverage comprises Fixed 5 / 9 / 15 / 20 / 28 / 36 / 48 V current round trips, seven 120 s loaded holds, before/after light-load baselines and a final 48 V to 5 V return. There was no CY4500 capture interruption.

The 120 s hold at the 48 V / 5 A setpoint produced median ASD input readings of 47.051 V / 5.000 A / 235.255 W. Nominal 240 W is the setpoint product, not measured power of 240 W at the ASD input.

Voltage droop exceeded the 1 m Reference A reference by approximately 117 - 120 mV at 3 A and 207 - 210 mV at 5 A. This is a power-path comparison, distinct from isolated cable resistance or a standards-compliance verdict.

Specimen and test conditions

Item	Record
DUT	DAISO; entered model YMU-25-P10; package code G273-011; JAN 4550480762425
Specimen name	DAISO_YMU-25-P10_G273-011_1m_c_sample1
Declared specifications	1.0 m; detachable; 5-48 V / up to 5 A / 240 W; E-Marker; USB 3.2 Gen2 10 Gbps [P01]
SRC	Framework FRANDVCH00_s_sample1; C1; entered maximum 240 W
Power path	SRC > DUT Cable > CY4500-EPR > ASD-PD31
AC / orientation	100 Vac / 50 Hz; operator-entered metadata; as-connected; ASD cc2
Procedure	full; 0.1 A start, 0.2 A steps; 3 readings/point; 120 s holds; hold-settle 1 s; cooldown 5 s
Capture / control	Mandatory CY4500 live guard; ASD v5.8.13; COM3 USB Type-B

YMU-25-P10 is the entered model. The manufacturer meaning of the two package codes is unconfirmed; both are retained. Records identify one specimen; both CH32 capture sets use the same c_sample1 name.

Loaded holds and reference comparison

Each of the seven 120 s holds yielded 120 samples at 1 s intervals, spanning approximately 119 s in recorded sample times. The 1 s wait after LOAD_ON is outside the hold duration. Values are steady ASD input readings.

Target V/A	V min	V median	V max	I median	P median W
5/3	4.851	4.855	4.859	3.000	14.565
9/3	8.553	8.558	8.562	3.000	25.674
15/3	14.550	14.554	14.559	3.000	43.662
20/5	19.159	19.169	19.183	5.000	95.845
28/5	27.050	27.061	27.076	5.000	135.305
36/5	35.039	35.047	35.060	5.000	175.235
48/5	47.035	47.051	47.066	5.000	235.255

Comparison with Reference A / 1 m

Target V/A	DUT droop V	Ref droop V	Delta mV	Apparent path delta mOhm
5/3	0.2185	0.0985	+120.0	+41.38
9/3	0.5185	0.4005	+118.0	+40.69
15/3	0.5155	0.3990	+116.5	+40.17
20/5	0.8895	0.6800	+209.5	+42.76
28/5	0.8830	0.6765	+206.5	+42.14
36/5	0.8850	0.6775	+207.5	+42.35
48/5	0.8855	0.6790	+206.5	+42.14

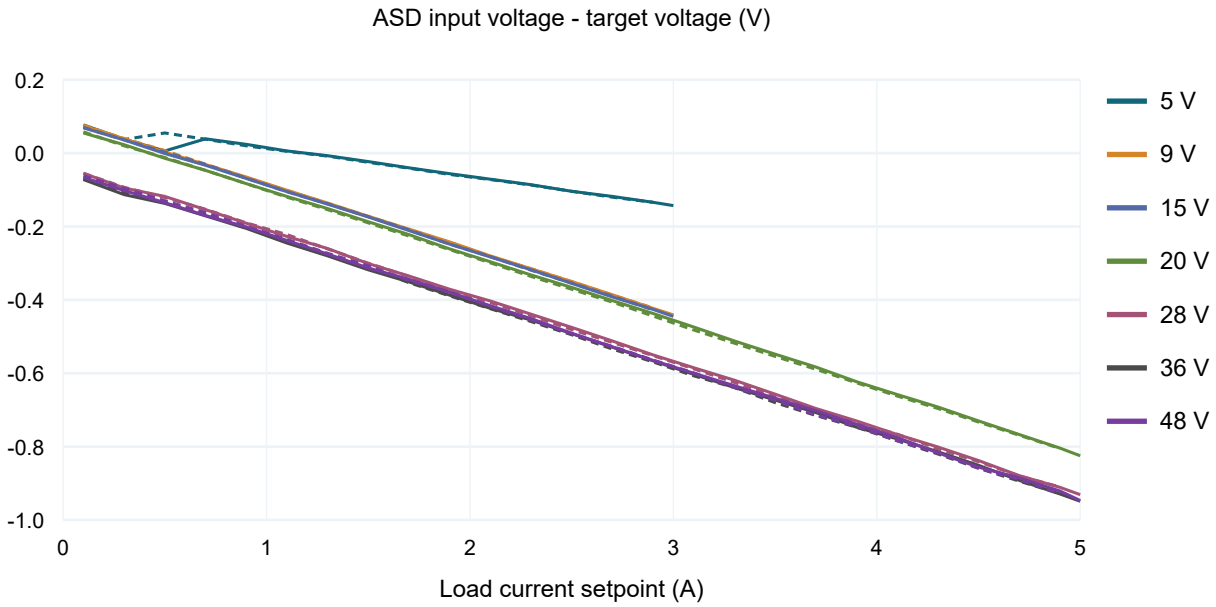
Reference RA01 is the 17 October 2026 Reference A c_sample1 full run (29/29 PASS). Source/port, 100 Vac / 50 Hz metadata, cc2, loads and procedure settings match. Both cables are nominally 1 m; measurements were taken at different times.

Droop = mean of before/after 0.1 A voltage medians minus the loaded-hold median. Apparent path resistance = droop / measured high-low current difference. Both DUT and reference metrics were independently reproduced from their original CSVs. Apparent path resistance differences are approximately 40 - 43 mOhm.

Source regulation, contacts, CY4500, the ASD input path and time-dependent differences contribute; these are not isolated cable resistances. The reference used RS232 ASD control, this run USB Type-B. The reference is a same-bench comparator, not a calibration standard or independently verified USB-IF certification.

Current round trips and 5 V return

Round trips reached 3 A at 5 / 9 / 15 V and 5 A at 20 / 28 / 36 / 48 V. Traces show medians of three readings per point; solid/dashed lines distinguish the two legs. All acquired points, including the return legs, met the procedure tracking checks.



T29: light-load return from Fixed 48 V to 5 V

Setpoint	Read voltages V	Read currents A	Result
48 V / 0.1 A	47.936, 47.937, 47.934	0.100, 0.100, 0.100	PASS
5 V / 0.1 A	5.077, 5.073, 5.074	0.100, 0.100, 0.100	PASS

The configured endpoint delay is 2 s with three readings at each endpoint. This verifies settled endpoints, not transition-time compliance. Logs also confirm final LOAD_OFF acknowledgement and zero current.

Procedure criteria

Tracking checks use +/-1 V and +/-max(0.050 A, 2% of setpoint). Safety ceilings are 252 W, 5.25 A and 80 degrees C ASD internal temperature. These are procedure checks, not USB compliance limits. The minimum 48 V hold reading, 47.035 V, is 0.965 V below target and within the procedure +/-1 V window.

Capture and data integrity

Audit item	Result
Original run	initial_cable_suite_20261019_191249_471751
Cases / cleanup	SCREENING_COMPLETE; 29/29 PASS; 29 exit code 0; 29 LOAD_OFF verified
Case / preflight rows	1,786 / 58; steady=1,779, precheck=7
Raw ADC responses	All 1,844 rows independently checked for CRC, V/I decoding and tracking.
Power calculation	P versus V x I differs by no more than 0.00101 W.
Control logs	3,027 CRC-valid receive buffers; no matched warnings/errors.
Live capture	59 guard PASS; 59 exported PD CSVs
Versions / PDOs	59 instrument snapshots match; all 29 preflight PDO lists match discovery.
Hold continuity	7 x 120 samples; max adjacent gap 1.009 s

CY4500 PD traffic inventory

PD CSV rows	REQUEST	EPR_REQUEST	PS_RDY	SOFT_RESET
14,831	282	132	414	131

HARD_RESET, REJECT and WAIT counts are all zero. No SOP packets were marked invalid by CY4500. The 59 files include discovery, each case 5 V preflight and main measurements. SOFT_RESET totals include procedure-driven reacquisition and must not all be treated as spontaneous faults.

Every REQUEST/EPR_REQUEST has a later PS_RDY in the same capture. This is not certification of one-to-one transaction matching, transition timing or complete protocol compliance. CH32 acquisition history is reported separately and is not mixed into these 59-file totals.

ASD and CY4500 used separate externally powered WCH CH319M-MagIso-R0 USB paths to the PC. No USB capture stall was observed during this cable run.

Coverage map for all 29 cases

Case	Phase	Target V/A	Steady N	Result
T01	low_before	5/0.1	3	PASS
T02	current	5/3	93	PASS
T03	loaded_hold	5/3	120	PASS
T04	low_after	5/0.1	3	PASS
T05	low_before	9/0.1	3	PASS
T06	current	9/3	93	PASS
T07	loaded_hold	9/3	120	PASS
T08	low_after	9/0.1	3	PASS
T09	low_before	15/0.1	3	PASS
T10	current	15/3	93	PASS
T11	loaded_hold	15/3	120	PASS
T12	low_after	15/0.1	3	PASS
T13	low_before	20/0.1	3	PASS
T14	current	20/5	153	PASS
T15	loaded_hold	20/5	120	PASS
T16	low_after	20/0.1	3	PASS
T17	low_before	28/0.1	3	PASS
T18	current	28/5	153	PASS
T19	loaded_hold	28/5	120	PASS
T20	low_after	28/0.1	3	PASS
T21	low_before	36/0.1	3	PASS
T22	current	36/5	153	PASS
T23	loaded_hold	36/5	120	PASS
T24	low_after	36/0.1	3	PASS
T25	low_before	48/0.1	3	PASS
T26	current	48/5	153	PASS
T27	loaded_hold	48/5	120	PASS
T28	low_after	48/0.1	3	PASS
T29	transition	48/0.1	6	PASS

All cases come from the same R01 full run. Before/after baselines, loaded holds and current round trips are not combined across different runs. T29 lists its initial 48 V setpoint; its return endpoint is 5 V.

E-Marker records and assessment scope

Item	Observation / record
Cable	Passive; current 5 A; maximum 48 V; Cable VDO 0x000A2642
VID / PID / XID	0x0000 / 0x0000 / 0x00000000
ID Header / Product VDO	0x18000000 / 0x00000000
Speed field	usb_speed=2; CH32 decoder label: USB4 Gen2; cable VDO version=0

ID	Capture / session	CC	Overall	EPR objects
C01	CH01 / 1	2	PARTIAL	0
C02	CH01 / 2	1	PASS	11
C03	CH02 / 1	1	PASS	11
C04	CH02 / 2	2	PASS	11

Cable identity fields agree across all four sessions. C01 remains PARTIAL because the EPR PDO list was not acquired. C02-C04 obtained all 11 EPR objects and passed. The load test is linked to C04 result.json. JSON and raw logs survived the final report-update interruption.

Zero VID/PID/XID values limit identification and traceability; alone they do not establish defect, counterfeit status or certification. The official 10 Gbps claim and CH32 speed label are retained with separate attribution. No USB data-transfer test was performed; neither 10 Gbps nor USB4 performance was demonstrated.

Assessment limits

This is Fixed-power screening of one specimen at 100 Vac in the recorded orientation. PPS/AVS loaded sweeps, all orientations, temperature rise, insulation withstand, mechanical durability, long-duration operation and USB-IF certification were not assessed. Temperature columns are fan-dependent ASD internal readings, not source/cable/plug temperatures. Independent ripple bandwidth/calibration checks, traceable calibration evidence and independent AC meter logs are not included.

Package and sources

reports contains bilingual PDFs and Markdown. analysis contains cases, normalized ADC/preflight rows, holds, sweeps, path/reference comparisons and PD/CRC audits. evidence retains anonymized R01, both CH32 captures/four sessions and the Reference A reference. source_csv/source_csv_line trace original CSV rows. Original mode has no literal steady value; measured rows without -precheck/-ramp suffixes are steady.

P01: DAISO official product page / JAN 4550480762425 (2026-10-19). Source of declared specifications. Package codes are operator-reported. File hashes and mappings: manifest_sha256.csv / source_manifest.csv / evidence_index.csv.