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OVE Certification
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Certificate No.: 85461/CABL

CERTIFICATE OF ACCEPTANCE

Customer's Testing Facility



Main location:

**Studer Cables AG
Herrenmattstrasse 20
4658 Däniken
Switzerland**

Additional location:

**Studer Cables AG
Güterstrasse 11
5014 Gretzenbach
Switzerland**

The above mentioned laboratory and its staff have been assessed in accordance with the **OVE Customers' Testing Facilities Program (SMT/CTF Stage 3)** and found to comply with the requirements of the latest editions of the OVE Certification Directive ZRL 2 (Stage 3) and the Operational Document ECS 032.

Scope of Approval

Power, Control and Communication Cables

The standards and test procedures for which the Customer's Testing Facility has been accepted to operate in OVE's CTF Program are listed in the Annex.

This certificate is valid until **2026-02-28**.

Change of standards, operational documents and procedure documents may have an influence to the validity of this certificate.

Österreichischer Verband für Elektrotechnik
Head of OVE Certification

T. Neumayer
Digitally signed by T. Neumayer
Email=t.neumayer@ove.at



Wien, 2025-02-25

Dipl.-Ing. T. Neumayer

OVE CTF Program

This Certificate Of Acceptance confirms the participation of the above mentioned laboratory in the CTF program of OVE and does not authorize the manufacturer to use any certification mark of OVE.



Scope of CTF:

| Standard | | Title |
|--|---------------|---|
| Tests on electric and optical fibre cables under fire conditions | | |
| IEC 60332-1-2 | EN 60332-1-2 | Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame |
| IEC 60332-1-3 | EN 60332-1-3 | Part 1-3: Test for vertical flame propagation for a single insulated wire or cable - Procedure for determination of flaming droplets/particles |
| IEC 60332-2-2 | EN 60332-2-2 | Part 2-2: Test for vertical flame propagation for a single small insulated wire or cable - Procedure for diffusion flame |
| IEC 60332-3-21 | EN 60332-3-21 | Part 3-21: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category A F/R |
| IEC 60332-3-22 | EN 60332-3-22 | Part 3-22: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category A |
| IEC 60332-3-23 | EN 60332-3-23 | Part 3-23: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category B |
| IEC 60332-3-24 | EN 60332-3-24 | Part 3-24: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category C |
| IEC 60332-3-25 | EN 60332-3-25 | Part 3-25: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category D |
| Tests for electric cables under fire conditions - Circuit integrity | | |
| IEC 60331-2 | --- | Part 2: Test method for fire with shock at a temperature of at least 830 °C for cables of rated voltage up to and including 0,6/1,0 kV and with an overall diameter not exceeding 20 mm |
| IEC 60331-21 | VDE 472-814 | Part 21: Procedures and requirements - Cables of rated voltage up to and including 0,6/1,0 kV |
| --- | EN 50200 | Method of test for resistance to fire of unprotected small cables for use in emergency circuits |
| Test on gases evolved during combustion of materials from cables | | |
| IEC 60754-1 | EN 60754-1 | Part 1: Determination of the halogen acid gas content |
| IEC 60754-2 | EN 60754-2 | Part 2: Determination of acidity (by pH measurement) and conductivity |
| Electric and optical fibre cables - Test methods for non-metallic materials | | |
| IEC 60811-201 | EN 60811-201 | Part 201: General tests - Measurement of insulation thickness |
| IEC 60811-202 | EN 60811-202 | Part 202: General tests - Measurement of thickness of non-metallic sheath |
| IEC 60811-203 | EN 60811-203 | Part 203: General tests - Measurement of overall dimensions |
| IEC 60811-401 | EN 60811-401 | Part 401: Miscellaneous tests - Thermal ageing methods - Ageing in an air oven |
| IEC 60811-402 | EN 60811-402 | Part 402: Miscellaneous tests - Water absorption tests |
| IEC 60811-404 | EN 60811-404 | Part 404: Miscellaneous tests - Mineral oil immersion tests for sheaths |
| IEC 60811-410 | EN 60811-410 | Part 410: Miscellaneous tests - Test method for copper-catalyzed oxidative degradation of polyolefin insulated conductors |

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| Standard | | Title |
|---|------------------|---|
| IEC 60811-501 | EN 60811-501 | Part 501: Mechanical tests - Tests for determining the mechanical properties of insulating and sheathing compounds |
| IEC 60811-502 | EN 60811-502 | Part 502: Mechanical tests - Shrinkage test for insulations |
| IEC 60811-503 | EN 60811-503 | Part 503: Mechanical tests - Shrinkage test for sheaths |
| IEC 60811-504 | EN 60811-504 | Part 504: Mechanical tests - Bending tests at low temperature for insulation and sheaths |
| IEC 60811-505 | EN 60811-505 | Part 505: Mechanical tests - Elongation at low temperature for insulations and sheaths |
| IEC 60811-506 | EN 60811-506 | Part 506: Mechanical tests - Impact test at low temperature for insulations and sheaths |
| IEC 60811-507 | EN 60811-507 | Part 507: Mechanical tests - Hot set test for cross-linked materials |
| IEC 60811-508 | EN 60811-508 | Part 508: Mechanical tests - Pressure test at high temperature for insulation and sheaths |
| IEC 60811-510 | EN 60811-510 | Part 510: Mechanical tests - Methods specific to polyethylene and polypropylene compounds - Wrapping test after thermal ageing in air |
| IEC 60811-512 | EN 60811-512 | Part 512: Mechanical tests - Methods specific to polyethylene and polypropylene compounds - Tensile strength and elongation |
| IEC 60811-513 | EN 60811-513 | Part 513: Mechanical tests - Methods specific to polyethylene and polypropylene compounds - Wrapping test after conditioning |
| IEC 60811-606 | EN 60811-606 | Part 606: Physical tests - Methods for determining the density |
| Common test methods for cables under fire conditions | | |
| --- | EN 50399 | Heat release and smoke production measurement on cables during flame spread test - Test apparatus, procedures, results |
| Railway applications - Railway rolling stock cables having special fire performance - Test methods | | |
| --- | EN 50305 cl. 6.1 | Electrical resistance of conductors |
| --- | EN 50305 cl. 6.2 | Voltage test on completed cable |
| --- | EN 50305 cl. 6.4 | Insulation resistance |
| --- | EN 50305 cl. 6.5 | Spark test |
| --- | EN 50305 cl. 6.6 | Surface resistance |
| --- | EN 50305 cl. 6.7 | D.C. stability |
| --- | EN 50305 cl. 6.8 | Dielectric strength |
| --- | EN 50305 cl. 8.2 | Acid and alkali resistance |
| Fire behaviour of building materials and building components | | |
| --- | DIN 4102-12 | Part 12: Circuit integrity maintenance of electric cable systems - Requirements and testing |

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