



fiber optic cable series

BRUsens DTS BSSA N

Non-Metallic Stainless-Tube Temperature

Laser-welded 316L stainless-tube & aramid/PA/LSZH jacketed DTS temperature cable



IEC 61757-2-2 DTS

316L Hermetic FIMT

Ø 3.8 mm Fast Response

Application

BRUsens DTS BSSA N Non-Metallic Stainless-Tube Temperature Sensing Cable combining a hermetically laser-welded AISI 316L stainless-steel central FIMT with non-metallic aramid yarn reinforcement and a fast-response PA12/HDPE/LSZH.

Typical uses: Road, Rail & Utility Tunnel Fire Detection, HV Export & Land Cable Conduit DTS, LNG, Ammonia & Cryogenic Tank Leak Detection, Conveyor Gallery Linear Heat Detection, Dam Seepage & Hydrological Profiling

Construction



Cross-section, not to scale

- 1 Strain-free DTS sensing fibres
- 2 Laser-welded 316L stainless-steel FIMT
- 3 Non-metallic aramid tensile layer
- 4 Fast-response outer sheath

Technical data

Typical values

Sensing principle	Raman OTDR (MM) & Brillouin BOTDA/BOTDR (SM)	Temperature resolution	±0.1 °C to ±0.5 °C (interrogator-dependent)
Metallic cross-section	≈ 0.9 mm ² 316L stainless tube (single-point earthing)	Operating temperature	-40 °C to +85 °C (-196 °C LNG cryo dry-tube option)
Thermal response (τ_{63})	≤ 1.8 s in water · ≤ 6.5 s in air	Short-term fire exposure	Up to +150 °C (sheath) / +400 °C (316L tube integrity)
Outer diameter	3.8 mm (2-4F) · 4.2 mm (6F)	Max. tensile load	1,000 N installation · 500 N permanent
Crush resistance	3,000 N / 100 mm	Min. bend radius	15 × OD static · 20 × OD dynamic
Multimode fibres	50/125 µm OM3 (≤ 2.4 / 0.6 dB/km @ 850/1300 nm)	Single-mode fibres	ITU-T G.652.D / G.657.A1 (≤ 0.35 / 0.21 dB/km)
Excess fibre length	0.20 % to 0.35 % strain-free inside 316L FIMT	Hydrostatic pressure	30 MPa (300 bar) on 316L FIMT
Flame & smoke (LSZH)	IEC 60332-3-24, IEC 60754-2 & IEC 61034-2	Chemical resistance	PA12 / HDPE resists hydrocarbons, acids & brine
Standards	IEC 61757-2-2 & EN 54-22		

Sizes

4 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Fibre compliment & jacket	Outer Ø mm	Weight ≈ kg/km	Max. pull N	Crush N/100 mm
BSSA N — 316L FIMT + Aramid + Polymer Sheath 4 sizes					
☐ BRUsens DTS BSSA N-02MM	2 × 50/125 OM3 · LSZH	3.8	22	1,000	3,000
☐ BRUsens DTS BSSA N-04MM	4 × 50/125 OM3 · LSZH	3.8	23	1,000	3,000
☐ BRUsens DTS BSSA N-02MM02SM	2 × OM3 + 2 × G.652.D SM · PA12	3.8	21	1,000	3,000
☐ BRUsens DTS BSSA N-04MM02SM	4 × OM3 + 2 × G.652.D SM · HDPE	4.2	26	1,200	3,000

– Dry-FIMT version available for -196 °C LNG cryogenic tank leak monitoring where tube gel would freeze.

Standards and approvals

- ✓ IEC 61757-2-2 & EN 54-22
- ✓ IEC 60332-3-24 LSZH
- ✓ RoHS 2 & REACH Compliant

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

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Email

info@tebaoflex.com

Web

tebaoflex.com/cables/brusens-dts-bssa-n-non-metallic-stainless-tube-temperature-sensing-cable



Typical values for this cable type, based on IEC 61757-2-2 / IEC 60794-1-21 / EN 54-22. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.