



Control & signal cable

IMSA 50-2

Loop Detector Lead-In Traffic Signal Cable

IMSA Spec 50-2 600 V foil-shielded PE twisted-pair traffic loop detector lead-in cable

IMSA Spec 50-2

600 V Shielded Lead-In

18 / 16 / 14 / 12 AWG Pairs

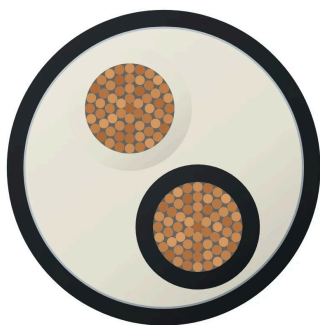


Application

IMSA 50-2 loop-detector lead-in traffic signal cable (IMSA Spec 50-2, 600 V, -40 to +80 °C) connecting roadway inductive vehicle loops to controller cabinets via 18–12 AWG tinned copper twisted pairs, PE insulation, 100 % Al/PET foil shield, and HDPE jacket.

Typical uses: Municipal Intersection Traffic Control, Highway Ramp-Metering & Vehicle Counting, Automated Toll-Plaza Loop Classifiers, Airport Taxiway & Parking Barrier Loops, Weigh-in-Motion (WIM) Roadside Cabinets

Construction



Cross-section, not to scale

- 1 Stranded tinned copper pairs
- 2 Low-capacitance PE insulation
- 3 100 % Al/PET shield + drain wire
- 4 Black polyethylene outer jacket

Technical data

Typical values

Rated voltage	600 V RMS	Conductor DC resistance	21.4 (18 AWG) · 13.5 (16) · 8.5 (14) · 5.4 Ω/km (12 AWG)
Mutual capacitance	Approx. 65–85 pF/ft (210–280 nF/km) shielded	Pair inductance	Approx. 0.18–0.22 µH/ft (0.60–0.72 µH/m)
Operating temperature range	-40 °C to +80 °C	Cold-bend rating	-40 °C without cracking
Pair twist lay	Minimum 6 twists per foot (20 twists/m)	Shielding construction	100 % Al/PET tape + tinned Cu drain wire
Min. bending radius	10 × overall cable diameter	Groundwater & salt resistance	PE core + HDPE outer jacket
Sunlight & UV resistance	Carbon-black UV-stabilised PE (≥ 2 %)	Standards	IMSA Specification No. 50-2

Sizes

12 standard constructions

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

Order designation	Cross-section / size	Conductor build	Wall ≈ mm	Outer Ø ≈ mm	Metal kg/km	Weight ≈ kg/km	Min. bend R fixed mm
Standard IMSA 50-2 configurations 12 sizes							
☐ IMSA 50-2 1PR 18AWG	1 PR × 18 AWG	Solid / Stranded Cu	1.10	6.10	18.9	43.0	61
☐ IMSA 50-2 1PR 16AWG	1 PR × 16 AWG	Solid / Stranded Cu	1.10	6.90	25.5	58.0	69
☐ IMSA 50-2 1PR 14AWG	1 PR × 14 AWG	Solid / Stranded Cu	1.10	7.90	34.8	79.0	79
☐ IMSA 50-2 1PR 12AWG	1 PR × 12 AWG	Solid / Stranded Cu	1.10	9.10	49.3	112.0	91
☐ IMSA 50-2 2PR 18AWG	2 PR × 18 AWG	Solid / Stranded Cu	1.10	9.40	37.8	86.0	94
☐ IMSA 50-2 2PR 16AWG	2 PR × 16 AWG	Solid / Stranded Cu	1.17	10.60	50.6	115.0	106
☐ IMSA 50-2 2PR 14AWG	2 PR × 14 AWG	Solid / Stranded Cu	1.31	11.90	68.2	155.0	119
☐ IMSA 50-2 3PR 18AWG	3 PR × 18 AWG	Solid / Stranded Cu	1.12	10.20	49.3	112.0	102
☐ IMSA 50-2 4PR 18AWG	4 PR × 18 AWG	Solid / Stranded Cu	1.23	11.20	62.5	142.0	112
☐ IMSA 50-2 6PR 18AWG	6 PR × 18 AWG	Solid / Stranded Cu	1.49	13.50	90.2	205.0	135
☐ IMSA 50-2 4PR 14AWG	4 PR × 14 AWG	Solid / Stranded Cu	1.56	14.20	116.6	265.0	142
☐ IMSA 50-2 6PR 14AWG	6 PR × 14 AWG	Solid / Stranded Cu	1.90	17.30	169.4	385.0	173

– Outer diameters and weights are nominal engineering values for IMSA 50-2 subject to standard manufacturing tolerances per IMSA Specification 50-2 (1984 / 2012) Shielded Loop-Detector Lead-In Cable.

Electrical & rating data

12 sizes

Configuration	Max. DC R @ 20 °C Ω/km	Primary rating (A or nF/km)	Secondary rating	Dielectric test V/AC rms
1 PR × 18 AWG	21.40	10.0	8.5	2,000
1 PR × 16 AWG	13.50	10.0	8.5	2,000
1 PR × 14 AWG	8.50	18.0	15.3	2,000
1 PR × 12 AWG	5.40	18.0	15.3	2,000
2 PR × 18 AWG	21.40	10.0	8.5	2,000
2 PR × 16 AWG	13.50	10.0	8.5	2,000
2 PR × 14 AWG	8.50	18.0	15.3	2,000
3 PR × 18 AWG	21.40	10.0	8.5	2,000
4 PR × 18 AWG	21.40	10.0	8.5	2,000
6 PR × 18 AWG	21.40	10.0	8.5	2,000
4 PR × 14 AWG	8.50	18.0	15.3	2,000
6 PR × 14 AWG	8.50	18.0	15.3	2,000

– Electrical resistance at +20 °C and dielectric withstand voltages verified per IMSA Specification 50-2 (1984 / 2012) Shielded Loop-Detector Lead-In Cable.

Standards and approvals

- ✓ IMSA Specification 50-2 (1984 / 2012) Shielded Loop-Detector Lead-In Cable
- ✓ CE (2014/35/EU) & RoHS 3 (2015/863/EU) Compliant
- ✓ REACH SVHC Compliance Verified

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

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/imsa-50-2-loop-detector-lead-in-traffic-signal-cable



Typical values for this cable type, based on IMSA Specification 50-2 (1984 / 2012) Shielded Loop-Detector Lead-In Cable. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.