



EN 50288-7 process instrumentation cable

RE-2Y(st)Y

Instrumentation Cable

EN 50288-7 PE-insulated collectively or PiMF-screened PVC instrumentation cable

BS EN 50288-7

300/500 V · L/R ≤ 25-40 μH/Ω

Ex-i Blue / Black PVC



Application

Low-capacitance 300/500 V process instrumentation cable built to BS EN 50288-7 with IEC 60228 Class 2 copper conductors, polyethylene (2Y) core insulation, collective or PiMF Al/PET screen with tinned copper drain wire and flame-retardant PVC sheath.

Typical uses: Oil & Gas Refineries & Petrochemical Plants, DCS, SCADA & PLC Marshalling Systems, Ex-i Intrinsically Safe Process Loops (IEC 60079-14), Power Generation & Water Treatment, Pharmaceutical & Bulk Chemical Processing

Construction



Cross-section, not to scale

- 1 Stranded copper conductors
- 2 Low-capacitance polyethylene insulation
- 3 Individual pair screen (PiMF option)
- 4 Polyester binder tape
- 5 Collective electrostatic screen (st)
- 6 Flame-retardant PVC outer sheath

Technical data

Typical values

Rated voltage U0/U	300/500 V	Test voltage	2000 V AC (core/core) · 2000 V AC (core/screen) for 1 min
Insulation resistance	≥ 5000 MΩ·km at +20 °C	Mutual capacitance (at 800 Hz)	≤ 100 nF/km (OS) · ≤ 115 nF/km (PiMF)
Max. L/R ratio (inductance/resistance)	≤ 25 μH/Ω (0.5–1.0 mm ²) · ≤ 40 μH/Ω (1.5 mm ²)	Operating temperature, fixed	–40 °C to +70 °C
Operating temperature, installation	–5 °C to +50 °C	Max. short-circuit temperature	+150 °C (max. 5 s on PE dielectric)
Min. bending radius, fixed	7.5 × OD	Min. bending radius, during pulling	10 × OD
Pair twist lay length	≤ 50–100 mm (staggered lays in multi-pair)	Flame retardance	IEC 60332-1-2 & IEC 60332-3-24 (Cat C bunched)
Oil & chemical resistance	EN 50290-2-22 TM1 / ICEA S-73-532 oil resistant	UV & weather resistance	UV-stabilised black RAL 9005 sheath (ISO 4892-2)
Standards	BS EN 50288-7		

Sizes

19 standard constructions

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

Order designation	Format	Screening	Outer Ø ≈ mm	Copper kg/km	Weight ≈ kg/km	Min. bend R fixed mm
0.5 mm ² (7×0.30 mm) — L/R ≤ 25 μH/Ω · R ₂₀ ≤ 36.7 Ω/km 5 sizes						
☐ RE-2Y(st)Y 1×2×0.5	1×2×0.5 mm ²	OS	5.8	15	45	44
☐ RE-2Y(st)Y 2×2×0.5	2×2×0.5 mm ²	OS	8.2	25	76	61
☐ RE-2Y(st)Y 4×2×0.5 PiMF	4×2×0.5 mm ²	PiMF+OS	10.6	52	132	80
☐ RE-2Y(st)Y 8×2×0.5 PiMF	8×2×0.5 mm ²	PiMF+OS	13.8	98	224	104
☐ RE-2Y(st)Y 12×2×0.5 PiMF	12×2×0.5 mm ²	PiMF+OS	16.5	144	318	124
0.75 mm ² (7×0.37 mm) — L/R ≤ 25 μH/Ω · R ₂₀ ≤ 25.0 Ω/km 5 sizes						
☐ RE-2Y(st)Y 1×2×0.75	1×2×0.75 mm ²	OS	6.2	20	54	46
☐ RE-2Y(st)Y 2×2×0.75	2×2×0.75 mm ²	OS	9.0	34	92	68
☐ RE-2Y(st)Y 4×2×0.75 PiMF	4×2×0.75 mm ²	PiMF+OS	11.6	71	162	87
☐ RE-2Y(st)Y 8×2×0.75 PiMF	8×2×0.75 mm ²	PiMF+OS	15.2	136	278	114
☐ RE-2Y(st)Y 12×2×0.75 PiMF	12×2×0.75 mm ²	PiMF+OS	18.2	202	396	136
1.0 mm ² (7×0.43 mm) — L/R ≤ 25 μH/Ω · R ₂₀ ≤ 18.5 Ω/km 3 sizes						
☐ RE-2Y(st)Y 1×2×1.0	1×2×1.0 mm ²	OS	6.6	25	64	50
☐ RE-2Y(st)Y 4×2×1.0 PiMF	4×2×1.0 mm ²	PiMF+OS	12.5	90	194	94
☐ RE-2Y(st)Y 8×2×1.0 PiMF	8×2×1.0 mm ²	PiMF+OS	16.5	174	338	124
1.5 mm ² (7×0.53 mm) — L/R ≤ 40 μH/Ω · R ₂₀ ≤ 12.3 Ω/km 6 sizes						
☐ RE-2Y(st)Y 1×2×1.5	1×2×1.5 mm ²	OS	7.4	35	82	56
☐ RE-2Y(st)Y 2×2×1.5	2×2×1.5 mm ²	OS	10.8	63	146	81
☐ RE-2Y(st)Y 4×2×1.5 PiMF	4×2×1.5 mm ²	PiMF+OS	14.1	129	258	106
☐ RE-2Y(st)Y 8×2×1.5 PiMF	8×2×1.5 mm ²	PiMF+OS	18.6	252	448	140
☐ RE-2Y(st)Y 12×2×1.5 PiMF	12×2×1.5 mm ²	PiMF+OS	22.4	374	642	168
☐ RE-2Y(st)Y 24×2×1.5 PiMF	24×2×1.5 mm ²	PiMF+OS	30.8	742	1,215	231

– All multi-pair sizes (≥ 2 pairs) are available in both collective screen RE-2Y(st)Y and individual + collective screen RE-2Y(st)Y PiMF.

Electrical parameters by cross-section (EN 50288-7)

6 sizes

Conductor size	Stranding Class 2	Max. DC R @ 20 °C Ω/km	Max. L/R ratio $\mu\text{H}/\Omega$	Max. C (OS) nF/km	Max. C (PiMF) nF/km
0.50 mm ²	7 × 0.30 mm	36.7	25	100	115
0.75 mm ²	7 × 0.37 mm	25.0	25	100	115
1.00 mm ²	7 × 0.43 mm	18.5	25	100	115
1.30 mm ²	7 × 0.49 mm	14.2	40	100	115
1.50 mm ²	7 × 0.53 mm	12.3	40	100	115
2.50 mm ²	7 × 0.67 mm	7.4	60	115	125

– Low mutual capacitance ($\leq 100 \text{ nF}/\text{km}$) and controlled L/R ratio ($\leq 25\text{--}40 \mu\text{H}/\Omega$) satisfy ATEX / IECEx Ex-ia and Ex-ib entity parameter budgets over long field cable runs.

Standards and approvals

- ✓ BS EN 50288-7 Compliant
- ✓ IEC 60332-1-2 & IEC 60332-3-24 Cat C
- ✓ CE, RoHS 2 (2011/65/EU) & REACH

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/re-2y-st-y-instrumentation-cable



Typical values for this cable type, based on BS EN 50288-7 (300/500 V). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.