



MIL-DTL-55021 twisted pair & triplet avionics cable

MIL-DTL-55021

Twisted Pair and Triplet Internal Aerospace Hook-Up

MIL-DTL-55021B 600 V Type I unshielded & Type II shielded twisted pair and triplet



MIL-DTL-55021B

Twisted Pair & Triplet

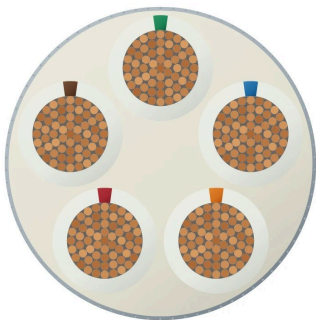
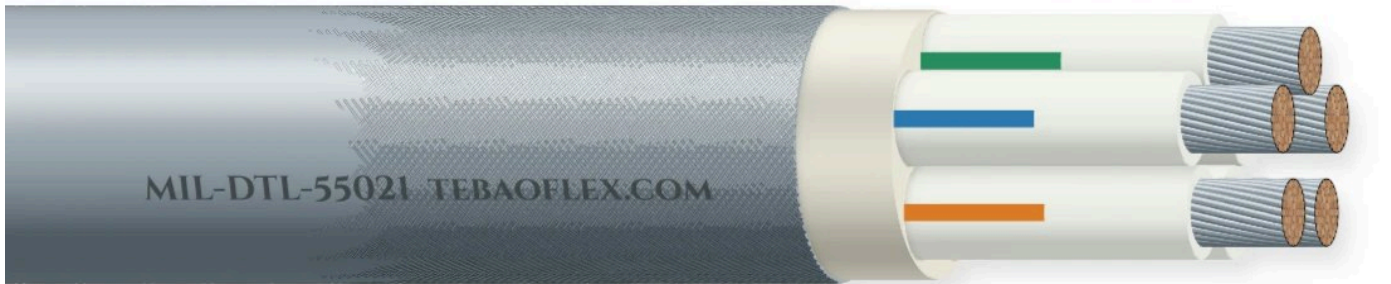
Type I Unshielded / Type II Shielded

Application

Precision-lay twisted-pair and twisted-triplet internal aerospace and defence hook-up cable (MIL-DTL-55021) built to MIL-DTL-55021B in Type I (unshielded, unjacketed) and Type II (85 % tinned/silver copper braid shielded, with optional jacket).

Typical uses: Airborne Line-Replaceable Unit (LRU) Avionics Chassis, Military Radar, Electronic Warfare (EW) & Sonar Racks, Synchro, Resolver, RVDT & LVDT Flight-Control Loops, Differential RS-422 / RS-485, ARINC 429 & CAN Bus Harnesses, Missile Guidance, Fire-Control & Telemetry Subsystems

Construction



Cross-section, not to scale

- 1 19-strand tinned or silver-plated copper conductors (30-12 AWG)
- 2 Component primary insulation (M81044 XL-PVDF or MIL-W-16878 PTFE)
- 3 $\geq 85\%$ tinned or silver-plated copper shield braid (Type II)
- 4 Optional thin-wall XL-PVDF, FEP or PTFE outer jacket (Type II Jacketed)

Technical data

Typical values

Rated voltage	600 Vrms (with M81044 or MIL-W-16878 Type B/E cores) · 1,000 Vrms (Type C/EE)	Dielectric withstand	2.0 kVrms to 2.5 kVrms core-to-core & core-to-shield for 1 min
Shield coverage (Type II)	≥ 85 % optical braid coverage	Mutual capacitance (typical)	55 pF/m to 95 pF/m (unshielded) · 95 pF/m to 155 pF/m (shielded)
Operating temp (M81044 cores)	−65 °C to +150 °C	Operating temp (PTFE cores)	−65 °C to +200 °C
Conductor sizes	30, 28, 26, 24, 22, 20, 18, 16, 14 & 12 AWG	Twist direction & pitch	Left-hand lay · 10 mm to 50 mm lay length per MIL-DTL-55021 Table I
Min. bend radius	4 × OD (Type I) · 6 × OD (Type II shielded)	Fluid & chemical resistance	Resistant to aviation fuels, hydraulic fluids, cleaning solvents & fungus
Flammability	Self-extinguishing per MIL-DTL-55021 / SAE AS4373	Standards	MIL-DTL-55021B (supersedes MIL-C-55021A)

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	Type, Cores & AWG	Primary Wire Spec	Max Lay Pitch mm (in.)	Nom. OD mm	Max R20 Ω/km	Weight kg/km
MIL-DTL-55021 Type I Unshielded Twisted Pairs (2C) & Triplets (3C) 6 sizes						
☐ M55021-T1-2C26-81044	Type I · 2 × 26 AWG Pair	M81044/12-26	25.4 (1.00")	1.68	139.5	3.7
☐ M55021-T1-2C24-81044	Type I · 2 × 24 AWG Pair	M81044/12-24	31.8 (1.25")	1.94	88.6	5.5
☐ M55021-T1-2C22-81044	Type I · 2 × 22 AWG Pair	M81044/12-22	38.1 (1.50")	2.18	54.7	8.0
☐ M55021-T1-2C20-81044	Type I · 2 × 20 AWG Pair	M81044/12-20	44.5 (1.75")	2.54	33.0	12.0
☐ M55021-T1-3C24-81044	Type I · 3 × 24 AWG Triplet	M81044/12-24	31.8 (1.25")	2.09	88.6	8.3
☐ M55021-T1-3C22-81044	Type I · 3 × 22 AWG Triplet	M81044/12-22	38.1 (1.50")	2.35	54.7	12.0
MIL-DTL-55021 Type II Shielded & Jacketed Twisted Pairs (2CS) & Triplets (3CS) 6 sizes						
☐ M55021-T2J-2C26-81044	Type II · 2 × 26 AWG Shld+jkt	M81044/12-26	25.4 (1.00")	2.45	139.5	10.2
☐ M55021-T2J-2C24-81044	Type II · 2 × 24 AWG Shld+jkt	M81044/12-24	31.8 (1.25")	2.72	88.6	12.8
☐ M55021-T2J-2C22-81044	Type II · 2 × 22 AWG Shld+jkt	M81044/12-22	38.1 (1.50")	2.98	54.7	16.4
☐ M55021-T2J-2C20-81044	Type II · 2 × 20 AWG Shld+jkt	M81044/12-20	44.5 (1.75")	3.38	33.0	22.1
☐ M55021-T2J-3C24-81044	Type II · 3 × 24 AWG Shld+jkt	M81044/12-24	31.8 (1.25")	2.90	88.6	16.5
☐ M55021-T2J-3C20-81044	Type II · 3 × 20 AWG Shld+jkt	M81044/12-20	44.5 (1.75")	3.60	33.0	29.5

– Also supplied with MIL-W-16878/4 (Type E 600 V PTFE) or MIL-DTL-22759 primary singles and bare unjacketed braids per MIL-DTL-55021.

Standards and approvals

- ✓ MIL-DTL-55021B (MIL-C-55021) Type I & Type II Compliant
- ✓ SAE AS81044 & MIL-W-16878 Qualified Component Cores

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/mil-dtl-55021-twisted-pair-and-triplet-internal-aerospace-hook-up-cable



Typical values for this cable type, based on MIL-DTL-55021B (MIL-C-55021) / MIL-DTL-81044 / MIL-W-16878. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.