



Resolver feedback drag-chain cable

Resolver Feedback Cable

Individually pair-screened + overall braided PUR resolver feedback cable



Individual + Overall Screen

Sin/Cos/Ref + Thermal

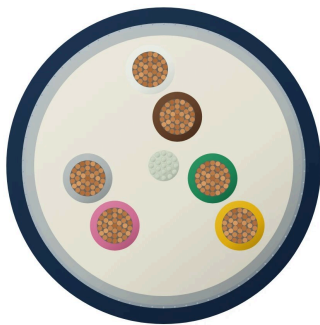
DESINA RAL 6018

Application

Precision analogue resolver feedback cable with individually copper-screened twisted pairs — e.g. $3 \times (2 \times 0.14)C + (2 \times 0.5)C$ — for carrier excitation (Ref+/Ref-), Sin/Cos quadrature outputs and stator PTC/KTY84 thermal sensing in high-acceleration drag chains.

Typical uses: Heavy-Duty CNC & Press Servos, Injection Moulding Clamping Axes, Metallurgical & Rolling Mill Drives, Automated Welding & Stamping Lines, Gantry & Transfer Line Actuators

Construction



Cross-section, not to scale

- 1 Quadrature & thermal conductors
- 2 Low-loss PP core insulation
- 3 Individual pair copper screen (C)
- 4 PTFE / non-woven sliding wrap
- 5 Overall EMC braid screen
- 6 Outer motion jacket

IEC 60228 Class 6

Technical data

Typical values

Rated voltage U0/U	300 V (UL AWM) · 350 V peak (VDE)	AC test voltage	1500 V AC core/core · 1000 V AC core/screen
Screen / Field control	Individual tinned Cu pair screens + overall Cu braid	Capacitance	≈ 45 pF/m (core/core) · ≤ 2 pF/m Sin/Cos skew
Near-end cross-talk (NEXT)	≥ 65 dB at 10 kHz–1 MHz between screened pairs	Temperature, flexing	–40 °C to +80 °C
Temperature, fixed installation	–50 °C to +80 °C	Max. conductor temperature	+80 °C
Min. bending radius, moving	7.5 × OD in energy chain	Min. bending radius, fixed	4 × OD
Max. travel speed	5 m/s gliding · 10 m/s unsupported	Max. acceleration	Up to 50 m/s ²
Oil resistance	DIN EN 50363-10-2 · UL Oil Res I & II	Flame retardance	IEC 60332-1-2 · UL 1581 FT1 / VW-1
Halogen-free / Smoke density	IEC 60754-1/2 halogen-free PUR	Hydrolysis & microbes	Hydrolysis-resistant polyether PUR (EN ISO 846)
Standards	Siemens 6FX8008-1BD21 / Bosch Rexroth / Lenze spec		

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	Configuration	Resolver system architecture	Outer Ø ≈ mm	Total Cu kg/km	Weight ≈ kg/km	Min. bend R chain mm
Individually Pair-Screened + Overall Braided (C) Resolver Cables 9 sizes						
☐ RES-FD-CP 3×(2×0.14)C+(2×0.5)C	3×(2×0.14)C + (2×0.5)C	Standard 3-Pair Resolver + PTC/KTY	8.9	64	112	67
☐ RES-FD-CP 3×(2×0.14)C+(3×0.14)C	3×(2×0.14)C + (3×0.14)C	Resolver + 3-Wire PT100/KTY Sensor	8.6	56	102	64
☐ RES-FD-CP 4×(2×0.14)C+(2×0.5)C	4×(2×0.14)C + (2×0.5)C	Dual-Speed Resolver + Thermal Pair	9.8	78	134	74
☐ RES-FD-CP 3×(2×0.25)C+(2×0.5)C	3×(2×0.25)C + (2×0.5)C	Long-Run 0.25 mm ² Resolver + Thermal	9.9	82	138	74
☐ RES-FD-CP 3×(2×0.25)C+(2×1.0)C	3×(2×0.25)C + (2×1.0)C	Heavy-Duty Resolver + 1.0 mm ² Supply	10.6	96	158	80
☐ RES-FD-CP 2×(2×0.25)C+(2×0.5)C	2×(2×0.25)C + (2×0.5)C	2-Pair Resolver + Excitation Supply	8.7	66	114	65
☐ RES-FD-CP 4×(2×0.25)C	4×(2×0.25)C	4-Pair Individually Screened Resolver	9.5	76	128	71
☐ RES-FD-CP 5×(2×0.25)C	5×(2×0.25)C	5-Pair Multi-Turn Resolver Array	10.4	92	152	78
☐ RES-FD-CP 3×(2×0.14)C+2×(0.5)C	3×(2×0.14)C + 2×(0.5)C	Siemens 6FX8008-1BD21 Compatible	9.2	69	118	69
Differential Twisted-Pair Overall Braided (TP) Resolver Cables 3 sizes						
☐ RES-FD-TP 4×2×0.25+2×0.5	4×2×0.25 + 2×0.5	Bosch Rexroth / SEW Resolver TP	8.3	51	94	62
☐ RES-FD-TP 4×2×0.25+2×1.0	4×2×0.25 + 2×1.0	Extended-Distance Resolver TP	8.8	58	106	66
☐ RES-FD-TP 4×2×0.38+4×0.5	4×2×0.38 + 4×0.5	Low-Attenuation Resolver > 50 m	9.7	74	130	73

– For resolver cable runs exceeding 35 m, step up from 0.14 mm² to 0.25 mm² or 0.38 mm² pairs to minimise carrier amplitude attenuation.

Electrical & cross-talk parameters

5 sizes

Pair cross-section	Assigned resolver winding	Max. DC R @ 20 °C Ω/km	Pair C @ 1 kHz pF/m ≈	NEXT @ 10 kHz dB ≥	AC test V _{rms}
(2×0.14 mm ²)C	Sin (S1/S3), Cos (S2/S4), Ref (R1/R2)	138.0	45	70	1,500
(2×0.25 mm ²)C	Long-Run Sin, Cos & Excitation	79.0	48	70	1,500
2×0.38 mm ²	Extended-Range Resolver (> 50 m)	52.0	50	60	1,500
(2×0.50 mm ²)C	Stator Thermal Sensor (KTY84 / PTC / PT1000)	39.0	58	72	1,500
(2×1.00 mm ²)C	High-Power Resolver Excitation / Thermal	19.5	64	72	1,500

– Matched capacitance (<2 pF/m skew between Sin and Cos pairs) prevents ratiometric arctan(Sin/Cos) angle calculation errors at the R/D converter.

Standards and approvals

- ✓ CE & RoHS 2 / REACH Compliant
- ✓ UL AWM Style 20236 / 20233 (80 °C 30 V / 300 V)
- ✓ DESINA Measuring-System Green (RAL 6018)

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/resolver-feedback-cable



Typical values for this cable type, based on DIN VDE 0812 / UL AWM Style 20236. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.