



instrumentation cable series

74C068 SH M K1 EG NA

Nuclear K1 Class 1E Measuring Cable

RCC-E K1 / Class 1E LOCA-qualified screened twisted-pair nuclear measuring cable



RCC-E K1 / Class 1E

Low-Noise Measuring (M)

2.0 MGy + LOCA Qualified

Application

74C068 SH M K1 EG NA Nuclear K1 Class 1E Measuring Cable (150/250 V & 300/500 V) with tinned copper twisted pairs/triads, radiation-cross-linked K1 EPDM/PEEK-EPR insulation, individual + overall ('EG' Écran Général) tinned copper.

Typical uses: Reactor Protection System (RPS) Loops, Post-Accident Monitoring (PAMS / RG 1.97), Containment Pressure, Level & Flow (4-20 mA), 4-Wire Pt100 RTD Temperature Loops, Containment Hydrogen & Radiation Sensors

Construction



Cross-section, not to scale

- | | | |
|---|--|--|
| 1 | Stranded tinned annealed copper conductors | |
| 2 | High-IR K1 cross-linked EPDM / PEEK-EPR dielectric | |
| 3 | Individual pair screens (on multipair) | ≥ 85 dB pair-to-pair crosstalk attenuation |
| 4 | Écran Général (EG) overall EMC screen | |
| 5 | SH Zero-Halogen K1 Cross-Linked Outer Sheath | IEEE 383 & IEC 60332-3-24 flame retardant |

Technical data

Typical values

Rated voltage	150/250 V (300/500 V peak insulation rating)	Max. DC resistance @ 20 °C	36.7 Ω/km (0.50) · 24.8 Ω/km (0.75) · 18.2 Ω/km (1.0) · 12.2 Ω/km (1.5)
Insulation resistance @ 20 °C	≥ 5,000 MΩ·km (normal) · ≥ 10 MΩ·km (@ +170 °C LOCA)	Mutual capacitance	≤ 110 pF/m @ 1 kHz
Continuous operating temp.	-25 °C to +90 °C (60-year design life)	LOCA / HELB accident peak	+170 °C to +210 °C saturated/superheated steam
Short-circuit temperature	+250 °C (5 s)	Min. bend radius	8 × OD (fixed) · 12 × OD (pulling)
Seismic qualification	IEEE 344 / IEC 60980 safe-shutdown earthquake (SSE)	Transfer impedance	≤ 30 mΩ/m up to 30 MHz (EG dual screen)
Gamma & beta radiation	≥ 2.0 MGy (200 Mrad) cumulative dose	Boric acid & alkaline spray	30-day post-LOCA chemical spray & submergence
Flame & smoke (SH)	IEEE 383 / IEC 60332-3-24, IEC 60754-2 & IEC 61034-2	Standards	RCC-E K1 · IEEE 323 · IEEE 383 · RG 1.97 · IEC 60780-323

Sizes

6 standard constructions

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

Order designation	Pairs × cross-section	Outer Ø ≈ mm	Weight ≈ kg/km	Max. DC R Ω/km	Min. bend R mm
RCC-E K1 / Class 1E Screened Measuring Cables 6 sizes					
☐ 74C068 SH M K1 EG NA 1P×0.75	1 Pair × 0.75 mm² (EG)	8.4	98	24.8	67
☐ 74C068 SH M K1 EG NA 1Q×0.75	1 Quad (4-wire RTD) × 0.75 mm²	9.6	135	24.8	77
☐ 74C068 SH M K1 EG NA 2P×1.0	2 Pairs × 1.0 mm² (Indiv + EG)	12.8	215	18.2	102
☐ 74C068 SH M K1 EG NA 4P×1.0	4 Pairs × 1.0 mm² (Indiv + EG)	15.6	335	18.2	125
☐ 74C068 SH M K1 EG NA 7P×1.0	7 Pairs × 1.0 mm² (Indiv + EG)	18.8	495	18.2	150
☐ 74C068 SH M K1 EG NA 12P×1.0	12 Pairs × 1.0 mm² (Indiv + EG)	23.6	765	18.2	189

– 1-Quad (1Q) star-quad geometry provides balanced 4-wire Pt100 RTD resistance compensation.

Standards and approvals

- ✓ RCC-E K1 & RG 1.97 Compliant
- ✓ IEEE Std 323 & IEEE Std 383
- ✓ ISO 19443 Nuclear QA

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/74c068-sh-m-k1-eg-na-nuclear-k1-class-1e-measuring-cable



Typical values for this cable type, based on RCC-E K1 / IEEE 323 / IEEE 383 / IEC 60780-323. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.