



DIN 72551 / ISO 6722 / LV 112 Reduced-Wall (FLR) Automotive Wires

# FLR2X-A / FLR2X-B

## FLR2X XLPE Automotive Wire

60 V DC ISO 6722-1 Class C (-40 to +125 °C) cross-linked polyethylene (2X / XLPE) halogen-



60 V DC ISO 6722-1

Class C (-40 to +125 °C)

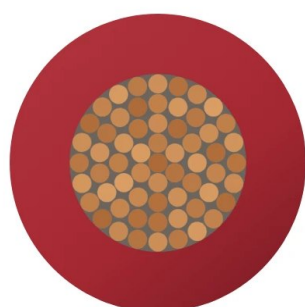
Cross-Linked XLPE (2X) Halogen-Free

### Application

FLR2X-A and FLR2X-B are ISO 6722-1 Class C (-40 °C to +125 °C) reduced-wall automotive primary wires insulated with electron-beam or silane cross-linked polyethylene ('2X' = XLPE / VPE). Thermoset cross-linking prevents melting under +250 °C short-circuit over

**Typical uses:** Engine-compartment harnesses, Powertrain & transmission looms, EV & hybrid low-voltage sub-systems, Commercial truck engine bays, ABS / ESP chassis sensor leads

### Construction



Cross-section, not to scale

|   |                                       |            |
|---|---------------------------------------|------------|
| 1 | Cu-ETP1 bare copper (Type A or B)     | ISO 6722-1 |
| 2 | Cross-linked polyethylene (2X / XLPE) | ISO 6722-1 |
| 3 | Cross-linked colour/stripe surface    | ISO 6722-1 |

## Technical data

Typical values

|                              |                                                                                                            |                             |                                                                                       |
|------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|
| Nominal voltage              | 60 V DC / 25 V AC                                                                                          | Wet dielectric test         | 3.0 kV AC rms for 5 min ( $\geq 0.5 \text{ mm}^2$ ) · 1.0 kV ( $< 0.5 \text{ mm}^2$ ) |
| In-line spark test           | 5.0 kV AC rms ( $\geq 0.5 \text{ mm}^2$ )                                                                  | Thermal class               | ISO 6722-1 Class C: -40 °C to +125 °C (3000 h)                                        |
| Short-term ageing & overload | 240 h at +150 °C · 6 h thermal overload at +175 °C                                                         | Short-circuit withstand     | Up to +250 °C (5 s) without thermoset melting                                         |
| Min. wall thickness          | 0.20 mm (0.22–0.5 mm <sup>2</sup> ) · 0.24 mm (0.75–1.5 mm <sup>2</sup> ) · 0.28 mm (2.5 mm <sup>2</sup> ) | Scrape & pinch resistance   | Exceeds PVC FLRY/FLRYW in hot pinch and needle scrape tests                           |
| Halogen content              | 100 % halogen-free (zero chlorine/bromine acid gas)                                                        | Automotive fluid resistance | Resists hot engine oil, diesel, gasoline, coolant, brake fluid & AdBlue/DEF           |
| Standards                    | ISO 6722-1 Class C, DIN 72551 & VDA LV 112                                                                 |                             |                                                                                       |

## Sizes

16 standard constructions

Tick the sizes you need and send this page to [info@tebaoflex.com](mailto:info@tebaoflex.com) or WhatsApp +86 185 9591 3361.

| Designation                                           | Type & Size mm <sup>2</sup> | Strands × Ø / Wall mm | Max. OD mm | Copper kg/km | Total mass ≈ kg/km | Min. bend R mm |
|-------------------------------------------------------|-----------------------------|-----------------------|------------|--------------|--------------------|----------------|
| FLR2X-A / FLR2X-B size range 16 sizes                 |                             |                       |            |              |                    |                |
| <input type="checkbox"/> FLR2X-A 0.22 mm <sup>2</sup> | 0.22 mm <sup>2</sup> Type A | 7×0.21 · 0.20 mm      | 1.20       | 2.1          | 3.0                | 4.8            |
| <input type="checkbox"/> FLR2X-A 0.35 mm <sup>2</sup> | 0.35 mm <sup>2</sup> Type A | 7×0.26 · 0.20 mm      | 1.30       | 3.3          | 4.3                | 5.2            |
| <input type="checkbox"/> FLR2X-B 0.35 mm <sup>2</sup> | 0.35 mm <sup>2</sup> Type B | 12×0.21 · 0.20 mm     | 1.40       | 3.3          | 4.4                | 5.6            |
| <input type="checkbox"/> FLR2X-A 0.50 mm <sup>2</sup> | 0.50 mm <sup>2</sup> Type A | 19×0.19 · 0.22 mm     | 1.60       | 4.8          | 6.2                | 6.4            |
| <input type="checkbox"/> FLR2X-B 0.50 mm <sup>2</sup> | 0.50 mm <sup>2</sup> Type B | 16×0.21 · 0.22 mm     | 1.60       | 4.8          | 6.2                | 6.4            |
| <input type="checkbox"/> FLR2X-A 0.75 mm <sup>2</sup> | 0.75 mm <sup>2</sup> Type A | 19×0.23 · 0.24 mm     | 1.90       | 7.2          | 9.0                | 7.6            |
| <input type="checkbox"/> FLR2X-B 0.75 mm <sup>2</sup> | 0.75 mm <sup>2</sup> Type B | 24×0.21 · 0.24 mm     | 1.90       | 7.2          | 9.0                | 7.6            |
| <input type="checkbox"/> FLR2X-A 1.00 mm <sup>2</sup> | 1.00 mm <sup>2</sup> Type A | 19×0.26 · 0.24 mm     | 2.10       | 9.6          | 11.7               | 8.4            |
| <input type="checkbox"/> FLR2X-B 1.00 mm <sup>2</sup> | 1.00 mm <sup>2</sup> Type B | 32×0.21 · 0.24 mm     | 2.10       | 9.6          | 11.7               | 8.4            |
| <input type="checkbox"/> FLR2X-A 1.50 mm <sup>2</sup> | 1.50 mm <sup>2</sup> Type A | 19×0.32 · 0.24 mm     | 2.40       | 14.4         | 16.9               | 9.6            |
| <input type="checkbox"/> FLR2X-B 1.50 mm <sup>2</sup> | 1.50 mm <sup>2</sup> Type B | 30×0.26 · 0.24 mm     | 2.40       | 14.4         | 16.9               | 9.6            |
| <input type="checkbox"/> FLR2X-B 2.50 mm <sup>2</sup> | 2.50 mm <sup>2</sup> Type B | 50×0.26 · 0.28 mm     | 3.00       | 24.0         | 27.6               | 12.0           |
| <input type="checkbox"/> FLR2X-B 4.00 mm <sup>2</sup> | 4.00 mm <sup>2</sup> Type B | 56×0.31 · 0.32 mm     | 3.70       | 38.4         | 43.2               | 14.8           |
| <input type="checkbox"/> FLR2X-B 6.00 mm <sup>2</sup> | 6.00 mm <sup>2</sup> Type B | 84×0.31 · 0.32 mm     | 4.30       | 57.6         | 63.5               | 17.2           |
| <input type="checkbox"/> FLR2X-B 10.0 mm <sup>2</sup> | 10.0 mm <sup>2</sup> Type B | 80×0.41 · 0.48 mm     | 6.00       | 96.0         | 105.5              | 24.0           |
| <input type="checkbox"/> FLR2X-B 16.0 mm <sup>2</sup> | 16.0 mm <sup>2</sup> Type B | 126×0.41 · 0.52 mm    | 7.20       | 153.6        | 167.0              | 28.8           |

– Dimensions and maximum overall diameters conform to ISO 6722-1 Class C / DIN 72551 / LV 112.

## Electrical data

16 sizes

| Type & Size mm <sup>2</sup> | Max. DC R @ 20 °C mΩ/m | Single wire in air A | In harness bundle A |
|-----------------------------|------------------------|----------------------|---------------------|
| 0.22 mm <sup>2</sup> Type A | 84.80                  | 7                    | 5                   |
| 0.35 mm <sup>2</sup> Type A | 54.40                  | 10                   | 8                   |
| 0.35 mm <sup>2</sup> Type B | 54.40                  | 10                   | 8                   |
| 0.50 mm <sup>2</sup> Type A | 37.10                  | 13                   | 10                  |
| 0.50 mm <sup>2</sup> Type B | 37.10                  | 13                   | 10                  |
| 0.75 mm <sup>2</sup> Type A | 24.70                  | 18                   | 14                  |
| 0.75 mm <sup>2</sup> Type B | 24.70                  | 18                   | 14                  |
| 1.00 mm <sup>2</sup> Type A | 18.50                  | 22                   | 17                  |

| Type & Size mm <sup>2</sup> | Max. DC R @ 20 °C<br>mΩ/m | Single wire in air<br>A | In harness bundle<br>A |
|-----------------------------|---------------------------|-------------------------|------------------------|
| 1.00 mm <sup>2</sup> Type B | 18.50                     | 22                      | 17                     |
| 1.50 mm <sup>2</sup> Type A | 12.70                     | 28                      | 22                     |
| 1.50 mm <sup>2</sup> Type B | 12.70                     | 28                      | 22                     |
| 2.50 mm <sup>2</sup> Type B | 7.60                      | 38                      | 30                     |
| 4.00 mm <sup>2</sup> Type B | 4.71                      | 50                      | 39                     |
| 6.00 mm <sup>2</sup> Type B | 3.14                      | 64                      | 50                     |
| 10.0 mm <sup>2</sup> Type B | 1.82                      | 88                      | 69                     |
| 16.0 mm <sup>2</sup> Type B | 1.16                      | 118                     | 92                     |

– Current ratings are reference values at +25 °C ambient; derate for multi-wire harness bundles and elevated engine-bay temperatures.

## Standards and approvals

- ✓ ISO 6722-1 Class C (+125 °C)
- ✓ VDA LV 112 (2X Halogen-Free)
- ✓ DIN 72551
- ✓ VW 60306 / BMW GS 95007 / MB DBL 6312
- ✓ RoHS 3 & ELV Compliant

## 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/flr2x-xlpe-automotive-wire



Typical values for this cable type, based on ISO 6722-1 Class C / DIN 72551 / LV 112. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.