

## Technical data sheet

### TPE Control Cable · shielded

#### LUTZE MOTIONFLEX® M (C) TPE, Shielded

#### Flexing Motor Cable for Linear and Twisting Motion Application



#### Identification

|          |                          |
|----------|--------------------------|
| Type     | MO M (C) TPE (4×AWG12)   |
| Part No. | <a href="#">A4061204</a> |

#### Product version

|                   |    |
|-------------------|----|
| Datasheet version | 00 |
|-------------------|----|

#### Use/Application/Properties

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Application | <ul style="list-style-type: none"><li>• Shielded motor supply cable to connect power to 3-phase motors. VFD's and Servo Drives</li><li>• Suitable for motion application with repetitive movement, flexing and torsional stress</li><li>• Thermoset XLPE offering superior overload and short-circuit temperature</li><li>• Compliant with NFPA 79 for wiring of industrial machinery</li><li>• TC-ER for use with cable trays without conduit, which can reduce installation costs in industrial environments</li><li>• WTTC – wind turbine tray cable rating for use in wind power generation</li><li>• Dry, damp or wet conditions</li></ul>                                                       |
| Properties  | <ul style="list-style-type: none"><li>• Highly flexible XLPE conductor design</li><li>• Reduced cable diameter</li><li>• High insulation resistance</li><li>• Low-capacitance cable</li><li>• Cutting oil resistant - mineral and bio/vegetable based oil, specially tested with plant based cutting oil.</li><li>• Ecolab certified resistance to common cleaning agents and chemicals used in food and beverage washdown procedures</li><li>• Improved oil resistance due to specifically developed TPE jacket</li><li>• Crush impact resistant</li><li>• Gas/vapor-tight sheath per UL 1277</li><li>• Sunlight resistant</li><li>• Flame-retardant</li><li>• Talc free and silicone free</li></ul> |

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SYSTEMATIC TECHNOLOGY

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#### Construction

|                                    |                             |
|------------------------------------|-----------------------------|
| Description                        | LUTZE MOTIONFLEX® M (C) TPE |
| Number of conductors/cross-section | (4×AWG12)                   |
| Number of conductors               | 4                           |
| Cross-section, metric              | 4 mm <sup>2</sup>           |
| Cross-section AWG                  | AWG 12                      |
| Jacket material                    | TPE                         |
| Jacket color                       | black similar to RAL 9005   |
| Outer Ø                            | 13.6 mm                     |
| Outer Ø                            | 0.535 inch                  |
| Weight                             | 29.28 kg/100 m              |
| Weight                             | 197 Lbs/Mft                 |
| Cu-Index                           | 115 Lbs/Mft                 |

#### Construction Element 1

|                        |                                                |
|------------------------|------------------------------------------------|
| Element construction   | AWG12/4C                                       |
| Conductor construction | AWG 12 (168/34)                                |
| Conductor              | AWG conductor<br>CU-wire bare                  |
| Conductor category     | fine wire                                      |
| Conductor marking      | black • with white number print • green/yellow |
| Conductor insulation   | XLPE<br>XHHW-2<br>Wet/Dry                      |
| Wrapping               | Non-woven material                             |

#### Overall construction

|                        |                                                                   |
|------------------------|-------------------------------------------------------------------|
| Overall stranding      | conductors layered construction                                   |
| Overall shield         | Braid shield<br>tinned copper wires<br>optical cover approx. 85 % |
| Jacket characteristics | Oil resistant<br>Silicone-free<br>Flame-retardant                 |

#### Technical data

|                               |                                                                                                  |
|-------------------------------|--------------------------------------------------------------------------------------------------|
| Rated voltage U <sub>N</sub>  | 600 V TC-ER 90C<br>1000 V 90C Flexible Motor Supply<br>1000 V WTTC 90C<br>Cable, 1000 V 105C AWM |
| Temperature range moving      | -15 °C ... +80 °C                                                                                |
| Temperature range fixed       | -40 °C ... +105 °C                                                                               |
| Minimum bending radius moving | 12×D                                                                                             |
| Minimum bending radius fixed  | 6×D                                                                                              |
| Torsion                       | ± 130°/m                                                                                         |

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### Technical Data Element 1

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|                      |          |
|----------------------|----------|
| Element construction | AWG12/4C |
|----------------------|----------|

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### Certifications/Standards

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|                |                                                                                                                                                                                |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Certifications | UL Flexible Motor Supply Cable<br>TC-ER<br>WTTTC<br>Meets NEC 336,392<br>Class I and II, Div. 2 and Class I<br>Zone 2 per NEC 501, 502, 505<br>C(UL) TC and CIC FT4<br>UL 1277 |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|          |           |
|----------|-----------|
| UL style | AWM 21270 |
|----------|-----------|

|            |                             |
|------------|-----------------------------|
| Conformity | CE<br>RoHS<br>REACH<br>TSCA |
|------------|-----------------------------|

|                            |                         |
|----------------------------|-------------------------|
| Oil resistant according to | Oil Res I<br>Oil Res II |
|----------------------------|-------------------------|

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### General

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|      |                                                                                  |
|------|----------------------------------------------------------------------------------|
| Note | CE These products are in conformity with the EU Low Voltage Directive 2014/35/EU |
|------|----------------------------------------------------------------------------------|