**Unitronics Motion Inverter Peripherals**

1. **Cables and Wiring**
* All analog control cables and the cable used for the frequency input must be shielded.
* Use at least $75^{⁰}C \left(167F\right)$ copper wire.
* Control cables recommended tightening torque is 0.5Nm (4.5 lbs-in).
* Required wire torque, type and range for field input and output terminals listed below:

| **Model** | **Recommended cable size mm2 (AWG)** | **Terminal screw** | **Tightening torque Nm****(lbs-in)** |
| --- | --- | --- | --- |
| **RST** | **PE** |
| **UVW** |
| UMI-0004BE-B1 UMI-0004BU-B1 | 1.5(15) | 1.5(15) | M3 | 0.8 (7) |
| UMI-0007BE-B1 UMI-0007BU-B1 | 1.5(15) | 1.5(15) | M3 | 0.8 (7) |
| UMI-0015BE-B1 UMI-0015BU-B1 | 2.5(13) | 2.5(13) | M3 | 0.8 (7) |
| UMI-0022BE-B1 UMI-0022BU-B1 | 2.5(13) | 2.5(13) | M3 | 0.8 (7) |
| UMI-0004CU-B1 | 1.5(15) | 1.5(15) | M3 | 0.8 (7) |
| UMI-0007CU-B1 | 1.5(15) | 1.5(15) | M3 | 0.8 (7) |
| UMI-0007EE-B1 UMI-0007EU-B1 | 1.5(15) | 1.5(15) | M3 | 0.8 (7) |
| UMI-0015EE-B1 UMI-0015EU-B1 | 1.5(15) | 1.5(15) | M3 | 0.8 (7) |
| UMI-0022EE-B1 UMI-0022EU-B1 | 1.5(15) | 1.5(15) | M3 | 0.8 (7) |
| UMI-0040EE-B1 | 2.5(13) | 2.5(13) | M4 | 1.13 (10) |
| UMI-0055EE-B1 | 2.5(13) | 2.5(13) | M4 | 1.13 (10) |
| UMI-0075EE-B1 | 4(11) | 4(11) | M5 | 2.3 (20) |
| UMI-0110EE-B1 | 6(9) | 6(9) | M5 | 2.3 (20) |
| UMI-0150EE-B1 | 6(9) | 6(9) | M5 | 2.3 (20) |
| UMI-0180EE-B1 | 10(7) | 10(7) | M5 | 2.3 (20) |
| UMI-0220EE-B1 | 16(5) | 16(5) | M5 | 2.3 (20) |
| UMI-0300EE-B1 | 25(3) | 16(5) | M6 | 2.5 (22) |
| UMI-0370EE-B1 | 25(3) | 16(5) | M6 | 2.5 (22) |
| UMI-0450EE-B1 | 35(1) | 16(5) | M8 | 10 (88) |
| UMI-0550EE-B1 | 50(0) | 25(3) | M8 | 10 (88) |
| UMI-0750EE-B1 | 70(000) | 35(1) | M8 | 10 (88) |
| UMI-0900EE-B1 | 95(0000) | 50(0) | M12 | 35 (310) |
| UMI-1100EE-B1 | 120(00000) | 70(000) | M12 | 35 (310) |

|  |  |  |
| --- | --- | --- |
| **Model** | **Recommended cable size (mm2)** | **Required torque (in-lbs)** |
| **R,S,T; U,V,W; P1, (+), PB, (-)** | **PE** | **R,S,T; U,V,W; P1, (+); PB, (-)** | **PE** |
| UMI-0007CU-B5 | 14 | 12 | 11 | 10 |
| UMI-0015CU-B5 | 8 | 12 | 11 | 10 |
| UMI-0022CU-B5 | 8 | 12 | 11 | 10 |
| UMI-0040CU-B5 | 8 | 10 | 20 | 15 |
| UMI-0055CU-B5 | 8 | 10 | 20 | 15 |
| UMI-0075CU-B5 | 6 | 15 | 20 | 8 |
| UMI-0110CU-B5 | 3 | 8 | 25.5 | 18 |
| UMI-0150CU-B5 | 3 | 6 | 25.5 | 18 |
| UMI-0180CU-B5 | 2 | 6 | 25.5 | 75 |
| UMI-0220CU-B5 | 2 | 6 | 25.5 | 75 |
| UMI-0300CU-B5 | 2 | 6 | 25.5 | 75 |
| UMI-0370CU-B5 | 2 | 1 | 60 | 10 |
| UMI-0450CU-B5 | 1 | 1 | 90 | 10 |
| UMI-0550CU-B5 | 1 | 1 | 90 | 10 |
| UMI-0015EU-B5 | 14 | 12 | 11 | 10 |
| UMI-0022EU-B5 | 14 | 12 | 11 | 10 |
| UMI-0040EU-B5 | 8 | 12 | 11 | 10 |
| UMI-0055EU-B5 | 8 | 10 | 11 | 10 |
| UMI-0075EU-B5 | 8 | 10 | 20 | 15 |
| UMI-0110EU-B5 | 8 | 10 | 20 | 15 |
| UMI-0150EU-B5 | 6 | 10 | 20 | 15 |
| UMI-0180EU-B5 | 6 | 8 | 20 | 15 |
| UMI-0220EU-B5 | 3 | 8 | 25.5 | 18 |
| UMI-0300EU-B5 | 3 | 6 | 25.5 | 18 |
| UMI-0370EU-B5 | 2 | 6 | 25.5 | 75 |
| UMI-0450EU-B5 | 2 | 6 | 25.5 | 75 |
| UMI-0550EU-B5 | 2 | 6 | 25.5 | 75 |
| UMI-0750EU-B5 | 1 | 1 | 60 | 10 |
| UMI-0900EU-B5 | 1 | 1 | 90 | 10 |
| UMI-1110EU-B5 | 1 | 1 | 90 | 10 |

1. **Fuse, Breaker and Contactor**

| **Model**  | **Fuse(A)** | **Breaker (A)** | **The rated working current of the contactor (A)** |
| --- | --- | --- | --- |
| UMI-0004BE-B1 | 10 | 10 | 9 |
| UMI-0007BE-B1 | 16 | 16 | 12 |
| UMI-0015BE-B1UMI-0015BU-B1 | 25 | 25 | 25 |
| UMI-0022BE-B1UMI-0022BU-B1 | 50 | 40 | 32 |
| UMI-0004CU-B1 | 6 | 6 | 9 |
| UMI-0007CU-B1 | 10  | 10 | 9 |
| UMI-0007EE-B1UMI-0007EU-B1 | 6 | 6 | 9 |
| UMI-0015EE-B1UMI-0015EU-B1 | 10  | 10 | 9 |
| UMI-0022EE-B1UMI-0022EU-B1 | 10  | 10 | 9 |
| UMI-0040EE-B1 | 25 | 25 | 25 |
| UMI-0055EE-B1 | 35  | 32 | 25 |
| UMI-0075EE-B1 | 50  | 40 | 38 |
| UMI-0110EE-B1 | 63 | 63 | 50 |
| UMI-0150EE-B1 | 63  | 63 | 50 |
| UMI-0180EE-B1 | 100 | 100 | 65 |
| UMI-0220EE-B1 | 100 | 100 | 80 |
| UMI-0300EE-B1 | 125 | 125 | 95 |
| UMI-0370EE-B1 | 150 | 160 | 115 |
| UMI-0450EE-B1 | 150 | 200 | 170 |
| UMI-0550EE-B1 | 200 | 200 | 170 |
| UMI-0750EE-B1 | 250 | 250 | 205 |
| UMI-0900EE-B1 | 325 | 315 | 245 |
| UMI-1100EE-B1 | 350 | 350 | 300 |

| **Model** | **Max prospective line short circuit current** | **Fuse class type** | **Fuse current rating** |
| --- | --- | --- | --- |
| UMI-0007CU-B5 | 10kA | CC | 20A/600V |
| UMI-0015CU-B5 | 10kA | CC | 20A/600V |
| UMI-0022CU-B5 | 10kA | CC | 20A/600V |
| UMI-0040CU-B5 | 10kA | T | 40A/600V |
| UMI-0055CU-B5 | 10kA | T | 50A/600V |
| UMI-0075CU-B5 | 10kA | T | 50A/600V |
| UMI-0110CU-B5 | 10kA | T | 90A/600V |
| UMI-0150CU-B5 | 10kA | T | 125A/600V |
| UMI-0180CU-B5 | 10kA | T | 150A/600V |
| UMI-0220CU-B5 | 10kA | T | 150A/600V |
| UMI-0300CU-B5 | 10kA | T | 200A/600V |
| UMI-0370CU-B5 | 10kA | T | 250A/600V |
| UMI-0450CU-B5 | 10kA | T | 250A/600V |
| UMI-0550CU-B5 | 10kA | T | 250A/600V |
| UMI-0015EU-B5 | 5kA | CC | 20A/600V |
| UMI-0022EU-B5 | 5kA | CC | 20A/600V |
| UMI-0040EU-B5 | 5kA | CC | 20A/600V |
| UMI-0055EU-B5 | 5kA | CC | 30A/600V |
| UMI-0075EU-B5 | 5kA | T | 40A/600V |
| UMI-0110EU-B5 | 5kA | T | 50A/600V |
| UMI-0150EU-B5 | 5kA | T | 50A/600V |
| UMI-0180EU-B5 | 5kA | T | 80A/600V |
| UMI-0220EU-B5 | 10kA | T | 90A/600V |
| UMI-0300EU-B5 | 10kA | T | 125A/600V |
| UMI-0370EU-B5 | 10kA | T | 150A/600V |
| UMI-0450EU-B5 | 10kA | T | 200A/600V |
| UMI-0550EU-B5 | 10kA | T | 200A/600V |
| UMI-0750EU-B5 | 10kA | T | 400A/600V |
| UMI-0900EU-B5 | 10kA | T | 400A/600V |
| UMI-1110EU-B5 | 10kA | T | 400A/600V |
| UMI-0004BU-B1 | 5kA | CC | 10A/600V |
| UMI-0007BU-B1 | 5kA | CC | 20A/600V |
| UMI-0015BU-B1 | 5kA | CC | 20A/600V |
| UMI-0022BU-B1 | 5kA | CC | 30A/600V |
| UMI-0004CU-B1 | 5kA | CC | 10A/600V |
| UMI-0007CU-B1 | 5kA | CC | 20A/600V |
| UMI-0007EU-B1 | 5kA | CC | 10A/600V |
| UMI-0015EU-B1 | 5kA | CC | 10A/600V |
| UMI-0022EU-B1 | 5kA | CC | 20A/600V |