WhisperShade® IQ®2 Electronic Drive Unit Specification Submittal

Models

WhisperShade® IQ®2 Intelligent Electronic Drive Unit
Stock no.: P5X7 0634 - - S2 6Nm, 34rpm, 120VAC
P5X7 1234 - - S2 12Nm, 34rpm, 120VAC

Other torque variations up to 50Nm are available upon request. (-- denotes connector options)

Features

- Intelligent, encoded tubular motor with an internal communication and control card
- Internal electronics eliminate the component mounting, wiring and installation costs associated with a separate controller
- Quiet operation over a wide range of torque variations, (6Nm, 12Nm, through 50Nm)
- Provides repeatable and precise positioning of roller shades up to ± 1/16 in. (± 0.16cm)
- 104 available alignment points, including three(3) user-programmable presets (intermediate stop positions)
- Two inherent methods of control:
  a. Cost-effective, low voltage, dry contact control for local switch or 3rd party control operation
  b. Two-way, communication network to support whole-building, low voltage control and integration
- Scalable, flexible and industry-proven network architecture
- Cost effective power wiring permits the daisy chaining of three-conductor power from motor-to-motor
- Uniform Mode setting to maintain at all times the architect’s design intent with a controlled and precisely aligned window wall
- The IQ System, including the WhisperShade IQ2 Intelligent Electronic Drive Unit, meets the reliability and safety standards of UL325, CSA 22.2 No. 427-92 and CE.

Description

The WhisperShade IQ2 intelligent electronic drive unit represents the pinnacle of roller-shade control functionality. The product’s internal microprocessor-based controls enable it to connect directly to the MechoSystems’ MechoNet network without any external controllers. This bidirectional communication network offers flexibility, reliability, and scalability to whole building control. A variety of configuration options ensure that the motor offers unprecedented functionality including specialized solar-shade and room-darkening operating modes, random delay and simultaneous start motor configurations, as well as differentiated automation and override positioning. Nine (9) internal control addresses support complex, overlapping, multilevel (individual, group, master, etc.) control requirements. PC-based tools support field configurations and programming of the motor from anywhere on the control network without having to climb ladders to configure or reconfigure. A variety of accessories are available including interfaces to third party equipment such as audio-visual, lighting and BMS (building management systems). Integration can be accomplished using dry contacts, RS-232 and Ethernet to support the ultimate in comfort, convenience, functionality and energy efficiency.
Specifications

Model 506, 120VAC

**ELECTRICAL**
- Input: 120VAC, ± 10%, 60Hz, 0.9A max.
- Switch: 15-24VDC, 10mA max. per switch contact
- DC Supply: 12-18VDC, 1W total
- Net: +/-13V Max unloaded
  - MechoSystems MechoNet protocol
  - DC Supply: 12-18VDC, 1W total (IN1)

**MECHANICAL**
- Torque: 53 in.-lb (6Nm)
- Lift Capacity: 42.2 lbs (19.18 kg) - 2.5 in. (6.4cm) tube
- Speed: 34 rpm
- Maximum number of rotations: 170
- Motor weight: 5.4 lbs (2.45kg)

**ENVIRONMENTAL – IP44 rated**
- Temperature: 32° to 131° F (0° to 55° C)
- Humidity: less than 90%, non-condensing

Model 512, 120VAC

**ELECTRICAL**
- Input: 120VAC, ± 10%, 60Hz, 1.8A max.
- Switch: 15-24VDC, 10mA max. per switch contact
- DC Supply: 12-18VDC, 1W total
- Net: +/-13V Max unloaded
  - MechoSystems MechoNet protocol
  - DC Supply: 12-18VDC, 1W total (IN1)

**MECHANICAL**
- Torque: 105 in.-lb (12Nm)
- Lift Capacity: 84.8 lbs (38.36 kg) - 2.5 in. (6.4cm) tube
- Speed: 34 rpm
- Maximum number of rotations: 170
- Motor weight: 6.6 lbs (3kg)

**AGENCY APPROVALS**
- ETL Listed to UL325, CSA 22.2 No. 427-92

Dimensions and mounting

- Power and communication cable feed through the motor head located at either the right side for right-drive motors or left side for left-drive motors
- Motor mounted inside the shade tube

Note: The deductions shown are only for shades with a 2.5 in. (6.4cm) tube, or larger, utilizing MechoSystems' recessed idle-end plug.

Additional deductions may be required. Please contact your local representative for more information.

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<tr>
<td>506</td>
<td>P5X7 0634 -- S2</td>
<td>26.5 in. (69.3cm)</td>
<td>0.75 in. (1.9cm)</td>
<td>0.5 in. (1.3cm)</td>
<td>1.25 in. (3.2cm)</td>
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<tr>
<td>512</td>
<td>P5X7 1234 -- S2</td>
<td>30 in. (76.2cm)</td>
<td>0.75 in. (1.9cm)</td>
<td>0.5 in. (1.3cm)</td>
<td>1.25 in. (3.2cm)</td>
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Typical Point-to-Point Diagram

LOW VOLTAGE CABLE LEGEND

**A**
CATS/6E — FOR LOW VOLTAGE DRY CONTACT CONNECTIONS
24AWG 4UTP (6-CONDUCTOR STRANDED UNSHELLED TWISTED PAIR)
OLYMPIC WIRE AND CABLE (www.olympicwire.com 1-800-526-2269) PART No.
30781SPF.
TERMINATION: RJ-45 MODULAR PLUG CRIMPED (USOC) ON BOTH ENDS

CATS/6E — FOR LOW VOLTAGE DRY CONTACT CONNECTIONS IN PLENUM AREAS
24AWG 4UTP (6-CONDUCTOR SOLID UNSHELLED TWISTED PAIR)
OLYMPIC WIRE AND CABLE (www.olympicwire.com 1-800-526-2269) PART No.
386448S
SOLID CONDUCTOR RJ-45 MODULAR PLUGS CRIMPED (USOC) ON BOTH ENDS
DISTANCE LIMITATION: 400' CUMULATIVE (Furnished & Installed by Others)

**A2**
CATS/SE — CABLE FOR ETHERNET CONNECTIONS
24AWG 4UTP (6-CONDUCTOR STRANDED UNSHELLED TWISTED PAIR)
TERMINATION: RJ-45 MODULAR PLUGS CRIMPED (EIA606A) ON BOTH ENDS
DISTANCE LIMITATION: 325' CUMULATIVE (Furnished & Installed by Others)

**A4**
CATS/SE — CABLE FOR RS-232 CONNECTIONS
24AWG 4UTP (6-CONDUCTOR STRANDED UNSHELLED TWISTED PAIR)
TERMINATION: RJ-12 MODULAR PLUGS CRIMPED (USOC) ON BOTH ENDS CONNECTED
TO IDE-9/RJ-12 ADAPTOR (BY OTHERS)
DISTANCE LIMITATION: 25' CUMULATIVE (Furnished & Installed by Others)

NOTES
1. PARALLEL WIRING TO NEXT DEVICE PER BRANCH CIRCUIT CAPACITY. ALL CONNECTIONS
   MUST MEET NATIONAL AND LOCAL CODES AND REGULATIONS.
2. ADDRESS SCHEDULES REQUIRED.
3. MAXIMUM VOLTAGE FOR ALL UNMARKED CABLE IS .43.5 VDC.
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Five-year warranty
Limited warranty on motors and electronics to be free of manufacturing defects in factory materials or workmanship for five years from the date of shipment.

Technical support department:
MechoShade Systems, Inc.
Monday–Friday, 8:30 a.m.–6:00 p.m. EST
T: +1 (718) 729-2020 x 2006
techsupport@mechosystems.com
Technical-wiring diagram assistance is available.

MechoSystems, Inc., reserves the right to make improvements or changes in its products without prior notice. However, every attempt is made to ensure that the information herein is accurate and up to date. Verify with MechoSystems to confirm the product availability, latest specifications, and suitability for your application.