

# WhisperShade® IQ® System

The next generation of window-shade motorization



The West Midtown Intermodal Ferry Terminal, New York City. Architecture: William Nicholas Bodouva & Associates. Photo: Jim Roof Creative, Inc.

 **MechoSystems**  
Design with light.®

# WhisperShade IQ System

## Four main components:

- 1 **IQ2 Electronic Drive Unit**—ultra-quiet, robust performance with flexible control options and precise positioning.
- 2 **IQ switch**—provides fixed, repeatable stop positions and three customizable intermediate stop positions.
- 3 **IQ/MLC2®**—microprocessor based, four-motor controller, with built in MechoNet™ communication and intermediate positioning for standard motors.
- 4 **MechoNet**—integration of various window-covering devices with a variety of switches, accessories, dry-contact devices, or 3rd-party control systems.

This family of advanced motorization products functions as a system to provide:

- Whisper-quiet, powerful motorization.
- Two-way communication over MechoNet facilitating building-wide control.
- Precise shade-band and blind alignment.
- Support of local, group, sub-master, and master control.

- Flexibility in the methods of integration with A/V, lighting, and Building Management Systems (BMS).
- Simplified, cost-effective wiring.
- Option to integrate with SunDialer® or SolarTrac® automated-shading systems.

The WhisperShade IQ System is ideal for the everyday shading needs of personal comfort, whole-building automation shading, and monumental or specialty shading.



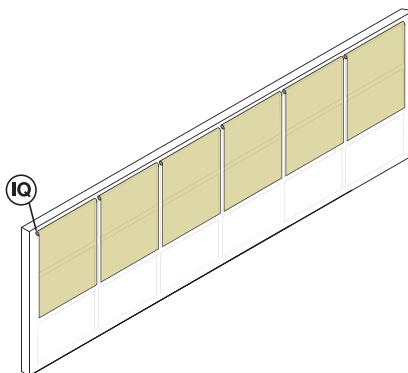
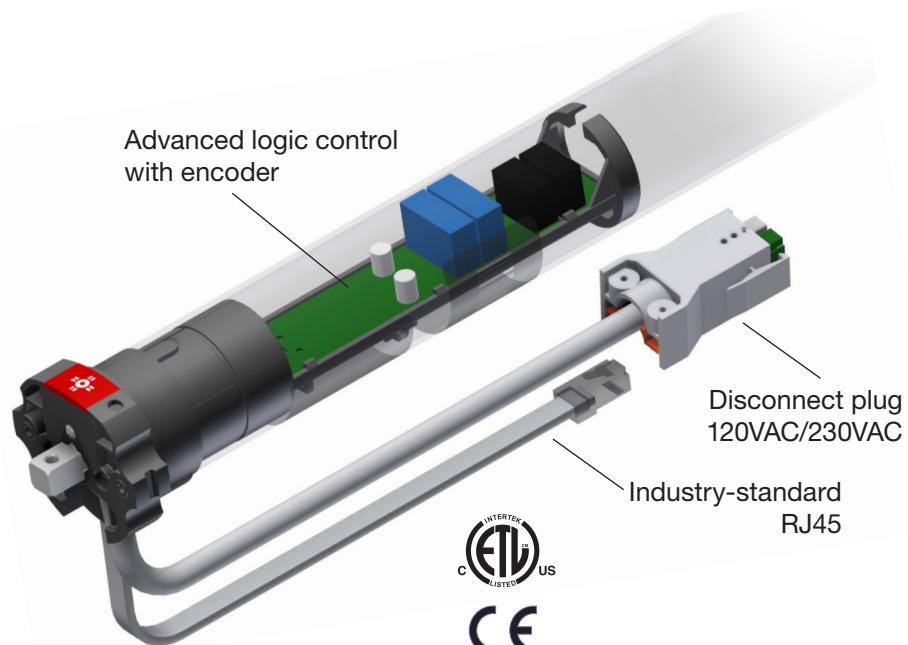
U.S. Green Building Council Headquarters, Washington, D.C., WDG Architecture, photo: Larry Olsen.

## IQ2 Electronic Drive Unit

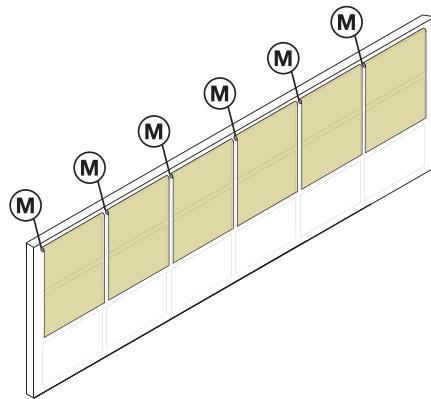
- Quiet operation, even at larger lifting capacities.
- Built-in MechoNet, a serial-communication protocol, for two-way communication.
- Built-in dry-contact interface.
- Embedded digital encoder for precise shade-band positions.
- Five shade-band positions, including three customizable intermediate positions.
- Automatic calibration.
- Over a 100 alignment points available.

### High-torque, large lifting capacity

- A single motor to drive multiple shade bands.
- Multi-banding to reduce the motor count and wiring needs, thus, minimizing costs.
- Variety of configurations including DoubleShades®, monumental, multi-banded, SkyLighter®, and specialty shades.



High torque (120VAC) IQ2 Electronic Drive Units can quietly lift multiple or larger shade bands, reducing motor and wiring costs.



Low voltage motors can typically operate one or two shades at a time, increasing motor and wiring costs.

1

### Lifting Capacity

SnapLoc® tube	506 (6 Nm) model*	509 (9 Nm) model*	512 (12 Nm) model*
2.2 in. (5.58cm)	48 lb. (21.9kg)	72 lbs. (32.6kg)	96 lb. (43.8kg)
2.5 in. (6.35cm)	42 lb. (19.3kg)	63 lbs. (28.5kg)	85 lb. (38.5kg)
3.5 in. (8.89cm)	30 lb. (13.8kg)	45 lbs. (20.4kg)	60 lb. (27.5kg)
<b>Specifications</b>	120VAC +/-10%, 60Hz, 0.9A max., 34 r.p.m.  230VAC +/-10%, 50Hz, 0.56 max., 26 r.p.m.	120VAC +/-10%, 60Hz, 1.1A max., 34 r.p.m.  230VAC +/-10%, 50Hz, 0.8A max., 26 r.p.m.	120VAC +/-10%, 60Hz, 1.8A max., 34 r.p.m.

\* All EDUs are 2 in. (50mm) in diameter.

Larger capacities available on request. Please check the lead times.

The IQ2 Electronic Drive Unit comes with a five-year non-depreciating warranty.

(2)

## The IQ switch— Dry-contact control

More switches, more convenient control, more flexibility.

An IQ switch can directly control a single shade band, a group of shades, or part of a hierarchy of local and master controls, without expensive group controllers.

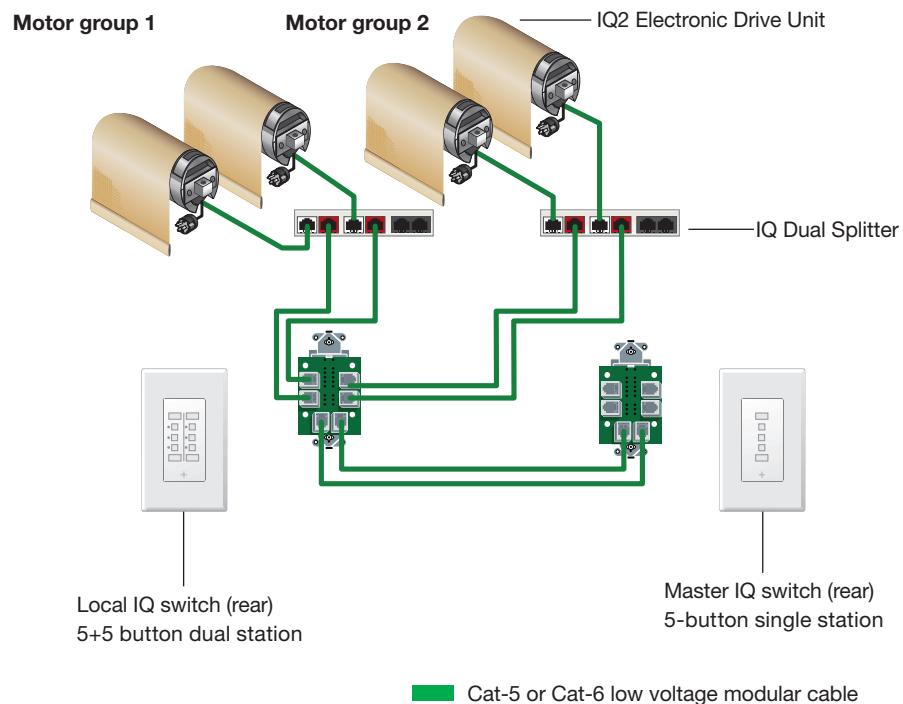
- Up to 250 motors, 4,000 ft. (1,219.2m) per switch group.
- Direct wiring of the switch to the IQ2 Electronic Drive Unit for cost-effective and simple installation.
- Switches that fit standard Decora® and Claro™ wall plates to serve a wide range of applications.

### Two-mode operation: Normal and Uniform

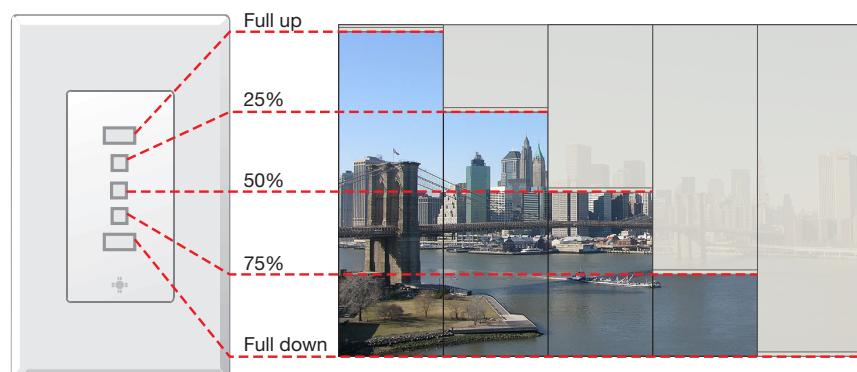
- **Normal mode:** Shade-band heights are adjustable to full-up, full-down, and three intermediate positions. Shade-band heights can be stopped at any position or any one of five positions.
- **Uniform mode:** Shade-band heights are adjustable to only the five positions for a neat facade.

### Switch configurations

- 5-button switch offers full operation including intermediate shade-band heights.
- 2-button switch allows full-up or full-down only for blackout shade-band heights.
- The motor can be put into the 1-button switch mode for interfacing with a bedside control in patient rooms in health-care facilities.



### Five alignment positions



In addition to full-up and full-down, the switch provides three intermediate heights. These positions are factory preset at 25%, 50%, and 75% heights but can be user-customized to align with architectural features such as mullions or set at any other desired heights.

### IQ switches

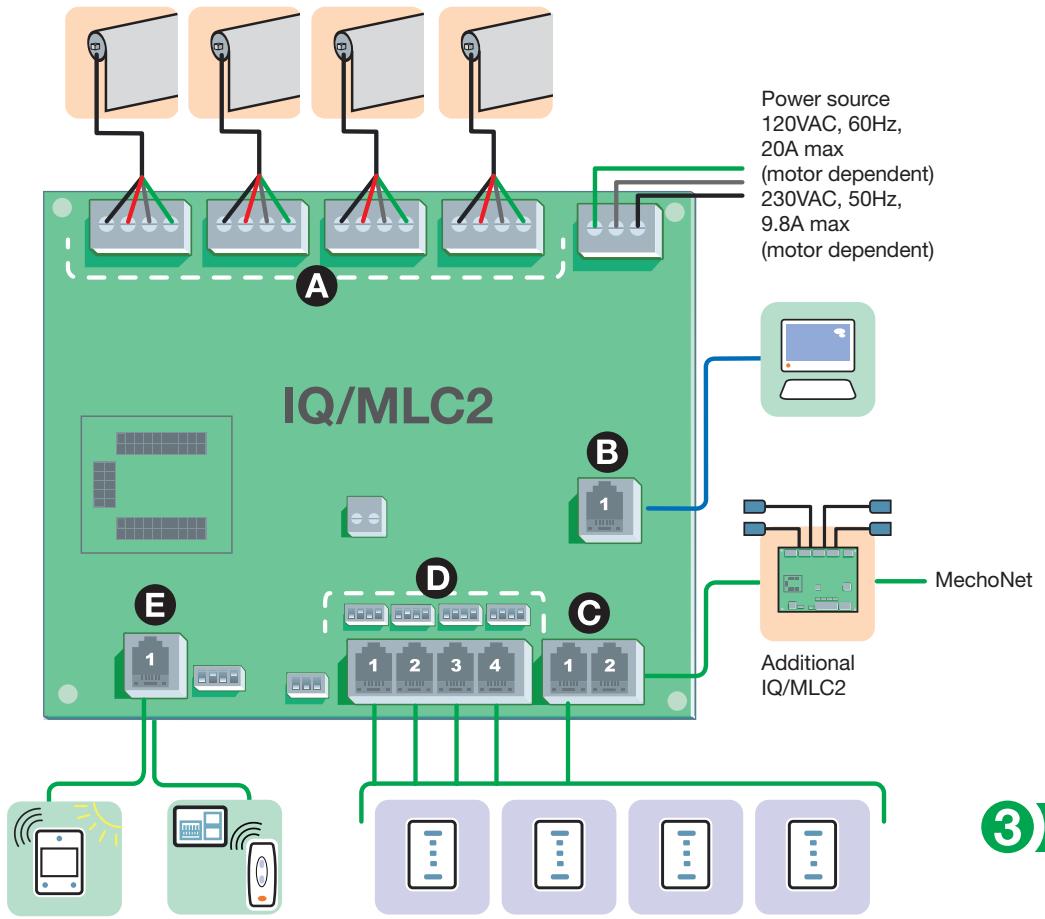
2-button single- station	5-button single- station	2+2 button dual- station	5+2 button dual- station	5+5 button dual- station	5-button single-station with LED
IMLC DS02 WH WH	IMLC DS05 WH WH	IMLC DS22 WH WH	IMLC DS52 WH WH	IMLC DS55 WH WH	IMLC DS05 WH WH

Switches are also available with LED indicators. Switchplates are sold separately. Available color: WH = White

## **IQ/MLC2® with standard motors**

IQ/MLC2, the next-generation microprocessor-based motor controller or “dumb motor,” can be integrated on MechoNet along with the IQ2 Electronic Drive Unit.

- Control of standard tubular and other motors controls with mechanical limit switches, including for oversized motors, necessary for monumental shades.
- Built-in MechoNet communications.
- Control of motors for other devices such as standard square or round motors for projection screens, venetian blinds, window operators, and exterior-operable louvers.
- See the IQ/MLC2 brochure for the full range of features of the IQ2 motor controller.



**A**

Independent control of four standard line-voltage motors (120VAC or 230VAC, 600W).

**B**

RS232 port for convenient serial interface with A/V, BAS, and lighting systems.

**C**

Two master-control ports for the simultaneous dry-contact control of all internal motors. The master ports can be used to daisy-chain additional IQ/MLC2 units to permit grouping of up to 2,000 motors.

**D**

Local-switch ports for dry-contact control of each motor. Switch ports can be mapped to any motors on the network for creating local groups. The ports also provide dry-contact input from other systems.

**E**

Accessory input port to allow Somfy® IR or RF wireless control, photocell control, or other remote-control options.

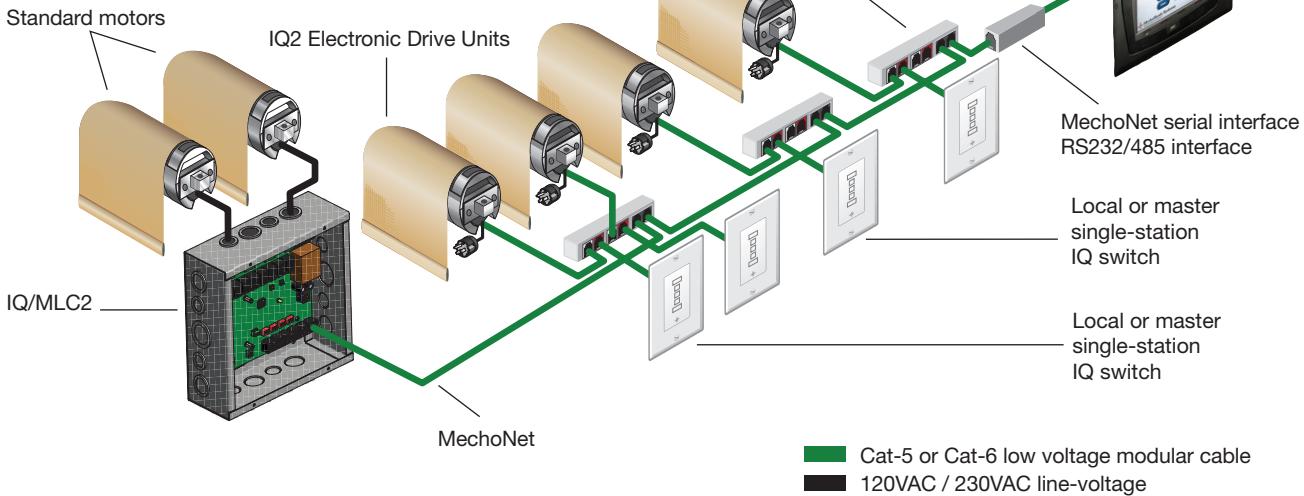
## MechoNet

- RS485-based network.
- Carrier Sense Multiple Access/Collision Detect (CSMA/CD) robust network.
- A simple RS232-based protocol to make 3rd-party integration easy.
- Industry-standard Cat-5 or Cat-6 cabling with RJ45 terminations.
- Up to 250 MechoNet devices over a maximum of 4,000 ft. (1219.2m) of cabling.

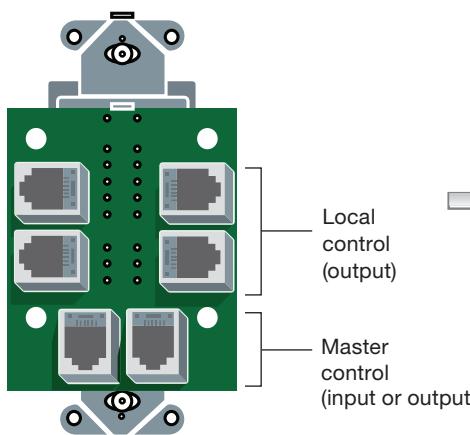
## A/V, lighting, and BMS integration

- WhisperShade IQ motor works seamlessly with 3rd-party control systems, maximizes flexibility, and makes the installation easy.
- The system can connect to other devices via RS232, RS485, Wi-Fi®, RF, or other wireless control.

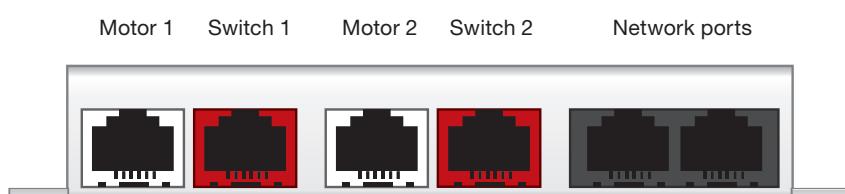
- The motor can directly integrate with Somfy® RTS compatible accessories.
- Compatible controls include Control4®, Crestron®, Leviton®, Lutron®, Savant®, and Vantage®.



Rear of IQ switch



IQ Dual Splitter



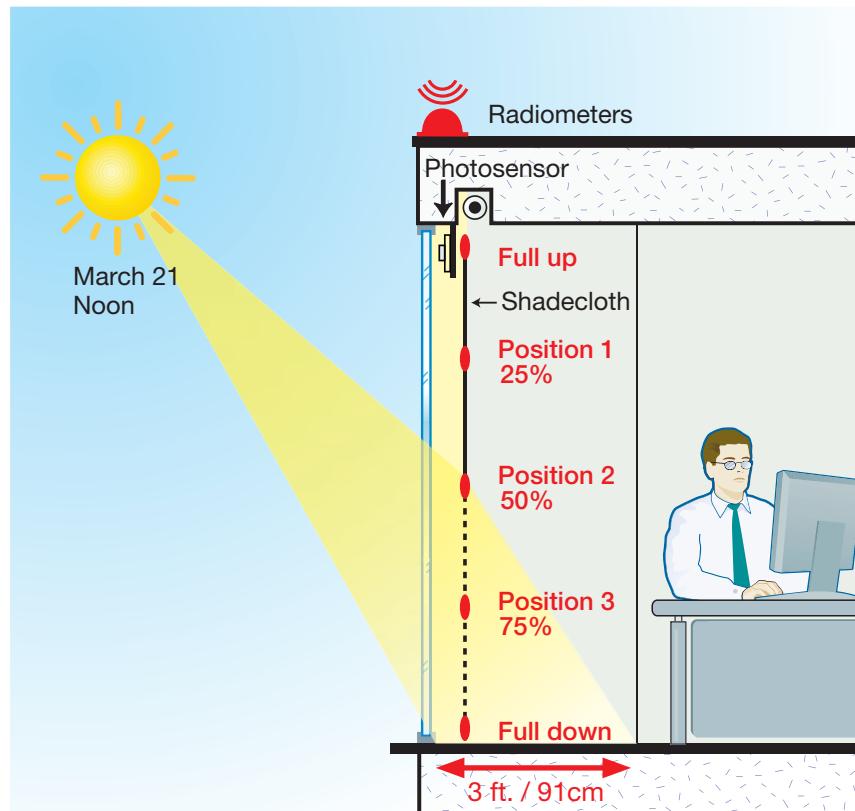
The wiring-accessory device where there are connections for two IQ motors and two associated IQ switches. There are also connections for daisy-chaining the MechoNet network.

## Automation

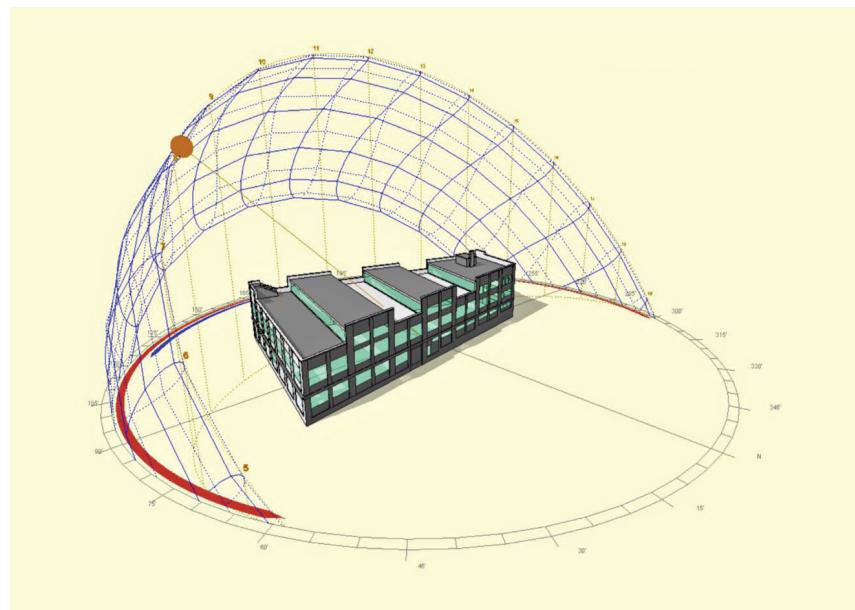
- Seamless integration with SolarTrac® and SunDialer® automated-shade systems.
- Designed to maximize natural daylight, SolarTrac increases energy efficiency while providing occupants with a comfortable environment and views to the outside.
- SunDialer provides low cost solar-tracking and sky-monitoring features for small-scale and retrofitted projects.
- Use of either system results in a reduction of energy costs.
- BACnet over IP, RS232, and RS485 enable SolarTrac to communicate with lighting, audio-visual, and building automation systems.



The New York Times Building. Image courtesy of The New York Times Company, Forest City Ratner Companies, Renzo Piano Building Workshop, FXFowle Architects, photo Artefactory.



Peak solar altitudes during the year on the south elevation of a, 40° north latitude position. The SolarTrac system is preset to five user-defined solar penetration levels. (3 ft. / 91cm shown above.)



Specialized solar radiometers collect real-time sky data. Using this information, SolarTrac creates a sky model of the microclimatic conditions of the moment and also over time. The geographical position of MechoSystems Headquarters in Long Island City, New York, USA, is shown above.



IAC/InterActiveCorp, New York City. Architecture: Gehry Partners, LLP. Architectural interiors: STUDIOS Architecture.



**MechoSystems**  
Design with light®

MechoSystems Inc.  
Corporate Headquarters  
42-03 35th Street  
Long Island City, NY 11101  
T: +1 (718) 729-2020  
F: +1 (718) 729-2941  
E: marketing@mechosystems.com  
W: mechosystems.com

Copyright © 2014 MechoShade Systems, Inc. All rights reserved. All trademarks herein are owned by MechoShade Systems, Inc. No part of this document may be reproduced or otherwise used without the express written consent of MechoShade Systems, Inc. This literature was printed on post-consumer paper.



L10147.0814\_rev2