Catch-Pin Bracket

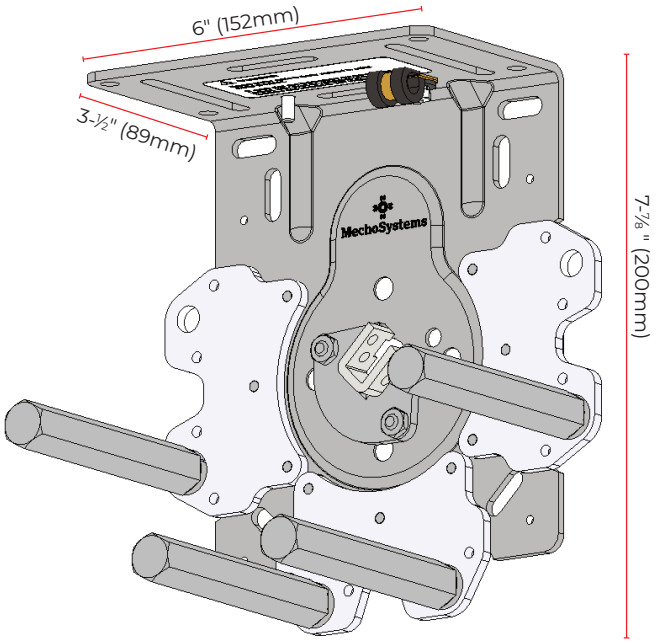
Electro®/1 and Electro®/2 Extended and Extended-Plus Brackets

A versatile, highly-configurable bracket system for monumental and high-bay shades with enhanced performance, rigidity, and ease of installation. Supports, top-down, bottom-up, sloped and horizontal skylight applications.

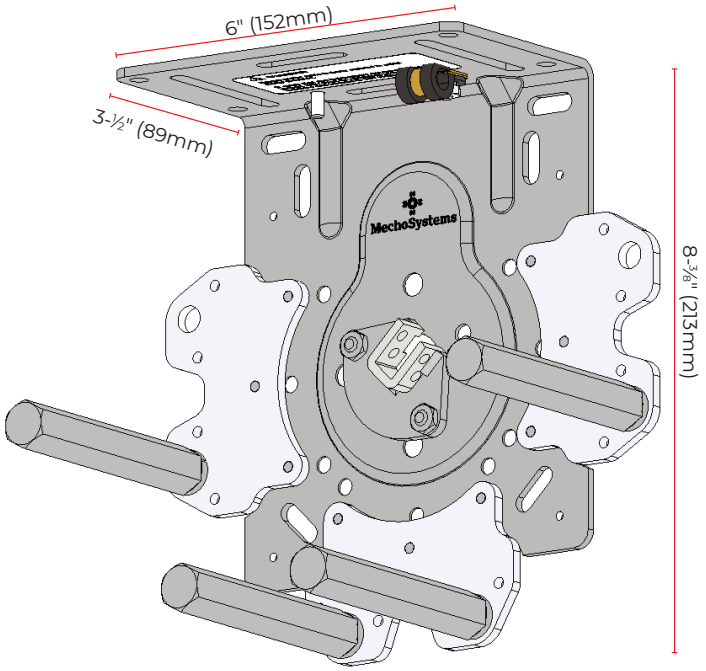
The Extended version of the Catch Pin Bracket supports shades with RUDs (roll-up diameters) up to 5-5/8" (144mm) or approximately 50' tall. The Extended-Plus assembly supports shades well in excess of 50' tall with its 6-5/8" (168mm) max RUD, and allows use of the 6" diameter tube for wide shade applications. Both brackets can be configured with or without fascia and facilitate ceiling, wall and jamb mount conditions.

A quieter, smoother and more reliable performance is achieved through the use of self-aligning oil impregnated roller bearings in the idle end.

Ceiling mount,
Electro/1 Extended Bracket, Round-head motor



Ceiling mount,
Electro/1 Extended-Plus Bracket, Round-head motor



Features

- Easy installation for ceiling, wall, or jamb mount with or without fascia.
- A wide top flange for better access to the mounting hardware around the shade tube.
- Slots on the mounting flange of the bracket for easy adjustment in projection and width.
- Support of round-head motor applications up to 25Nm and star-head motor applications up to 50Nm.
- Catch Pins are removable for shade installation and replaceable after installation.
- Slotted holes on the foot and body of the bracket provide installation flexibility to conveniently ensure optimal bracket location, while “kill” holes lock the bracket into place and balance the load.

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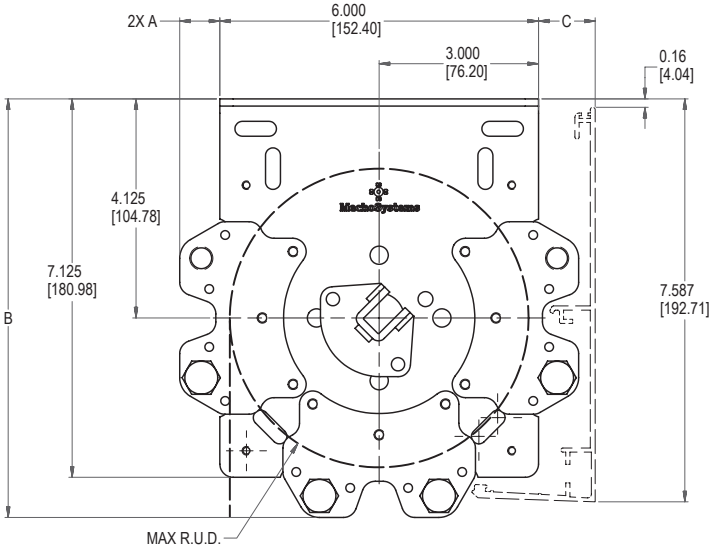
Catch-Pin Bracket

Electro®/1 and Electro®/2 Extended and Extended-Plus Brackets

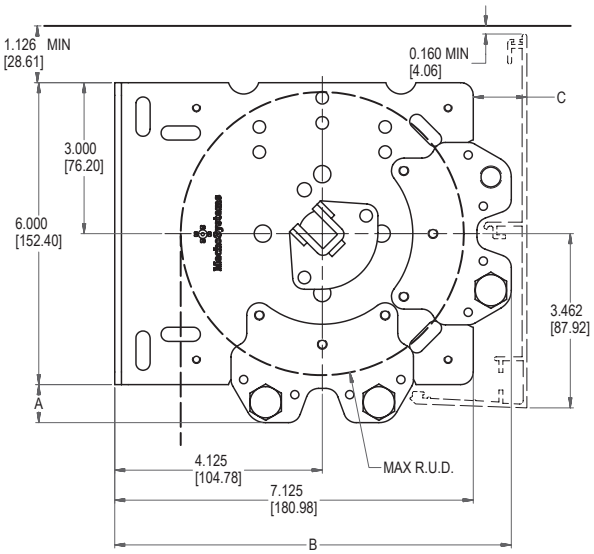
Specifications

- Max system weight – 400 lb (181 kg)
- Max load on the light duty idle end pin – 100 lb (45 kg)
- Max load on the heavy duty idle end shaft – 200 lb (90 kg)
- Tubes available 3-1⁄2" (89 mm), 4-1⁄2" (114.5mm), and 6" (152mm)
- Fabric Deducts vary depending on the assembly
  Drive: 1.188" (30.18mm) – 1.625" (41.28mm)
  Center Support: 0.875" (22.22mm) – 1.813" (46.05mm)
  Idle:" 1.250" (31.75mm) – 2.125" (53.98mm)

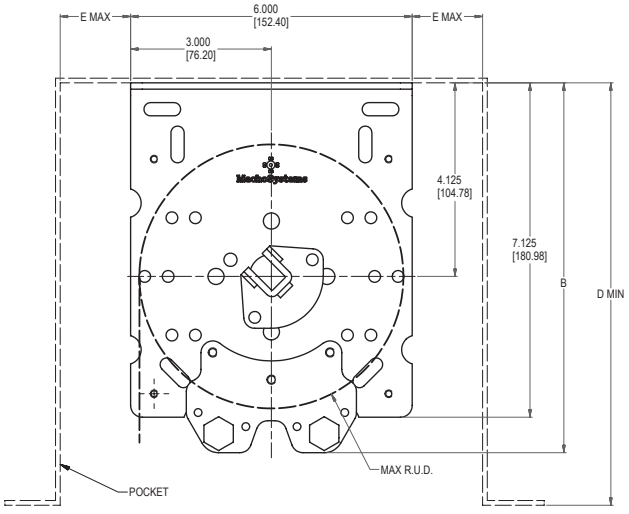
Bracket Dimensions, Ceiling Mount



Bracket Dimensions, Wall Mount



Bracket Dimensions, Pocket Mount



Dimensions

	Extended Bracket		Extended-Plus Bracket	
	Ceiling/Wall	Pocket	Ceiling/Wall	Pocket
Max RUD	5-5/8" (143)	5-5/8" (143)	6-5/8" (168)	5-5/8" (143)
A	3/4" (19)	-	1-1/4" (32)	-
B	7-7/8" (200)	7-7/8" (200)	8-3/8" (213)	7-7/8" (200)
C	1-1/16" (27)	-	1-9/16" (40)	-
D	-	8-3/8" (213)	-	8-3/8" (213)
Tube: 3-1/2"	-	1-1/2"(38)	-	1-1/2"(38)
Tube: 4-1/2"	-	2-1/2" (64)	-	2-1/2" (64)
Tube: 6"	-	N/A	-	4" (102)

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Cradle to Cradle Certified™

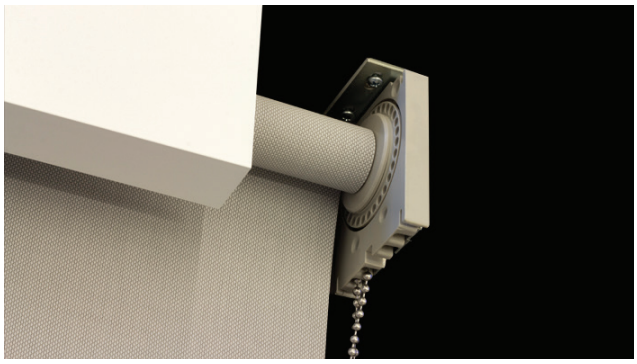
Mecho's manual hardware systems, Mecho®/5 and UrbanShade, are Cradle to Cradle Certified Bronze. When used with EcoVeil®, EcoVeil® Sheer, and AcoustiVeil shadecloths, they make up a fully certified Cradle to Cradle Bronze shade system. They are the only fully certified shade systems.

The Cradle to Cradle Certified Product Standard - administered by the Cradle to Cradle Products Innovation Institute - guides designers and manufacturers through a continual improvement process that looks at a product through five quality categories - material health, material reutilization, renewable energy and carbon management, water stewardship, and social fairness.

CERTIFIED ™
cradle to cradle
BRONZE

Cradle to Cradle Certified products offer:

- Qualification for points in U.S. Green Building Council's LEED® Rating System.
- Opportunities to be specified for a growing number of building projects.
- Special recognition in the architecture and interior-design communities.



Manual Shade Systems with EcoVeil®, EcoVeil® Sheer, & AcoustiVeil Shadecloth

The Mecho/5 and UrbanShade manual roller-shade systems with EcoVeil, EcoVeil Sheer, and AcoustiVeil shadecloth are two complete window-covering systems. Both the hardware and textile components are designed for disassembly and recyclability.

Mecho/5 and UrbanShade Manual Hardware Systems

Mecho/5 features the biggest shade size range that a manual-drive systems can lift before motorization is required. It is ideal for projects with wide width windows.

UrbanShade is a low profile window-covering system. The cost-effective option is easy to install and is smoothly operated.

Both systems are Cradle to Cradle Certified Bronze.

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UrbanShade® Double-Bracket System

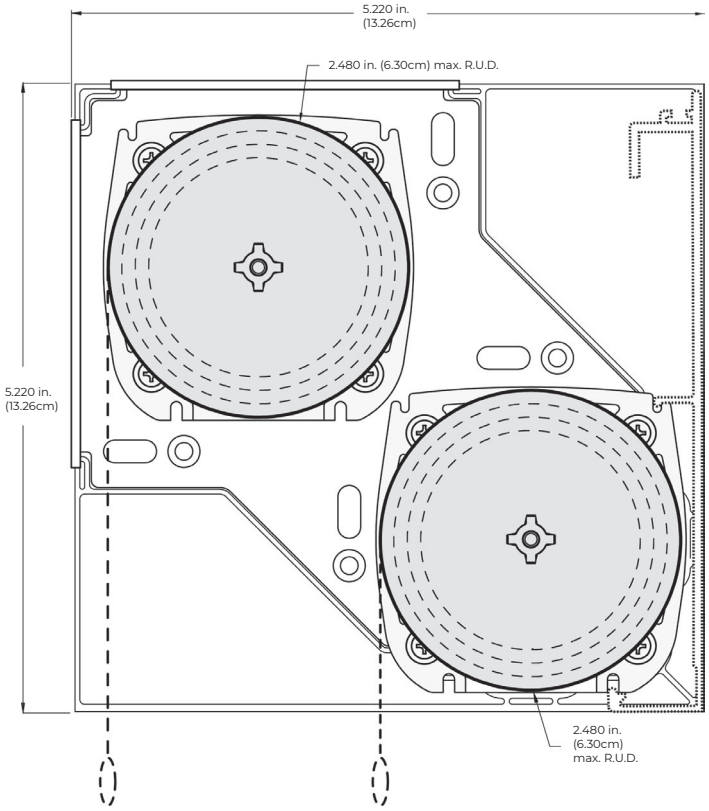
Motorized and Manual

The UrbanShade family now includes an economical two-shade-band system. It can accommodate any combination of:

- Two motorized shades.
- Two manual shades.
- One motorized and one manual shade.

The configuration is a shade system which provides a variety of light- and heat-control options. The versatile design allows two shade bands on two individual tubes to be offset-mounted on a single bracket with any combination of motorized or manual lift systems. The design eliminates the need for two separate brackets and reduces labor, installation time, and cost.

The UrbanShade Double-Bracket can darken a room with maximum privacy or allow views to the outside with solar protection by raising only the opaque shadecloth.



Features

- Available in a compact size of 5.22 x 5.22 in. (13.3 x 13.3cm).
- Fascia offered in captured: square and round, and continuous: square and round, in a full range of colors.
- Suitable for home theaters, media and conference rooms, and bedrooms.
- Cost effective.
- Aesthetically pleasing, strong brackets made of metal with plastic sheaths.
- Choice of battery powered with RTS wireless remote control or low voltage with wireless RTS, RS485, or dry-contact controls.

Single-Bracket System

- Manual chain-driven system with an optional LAM (Lift-Assist Mechanism).
- Motorized—battery powered with RTS wireless remote control.
- Motorized—low voltage with wireless RTS, RS485, or dry-contact control.
- Manual cassette.
- Motorized cassette.
- Manual-to-motorized conversion kit.

Double-Bracket System

- Manual-to-motorized conversion kit.
- Manual double-bracket with an optional LAM (Lift-Assist Mechanism).
- Motorized double-bracket.

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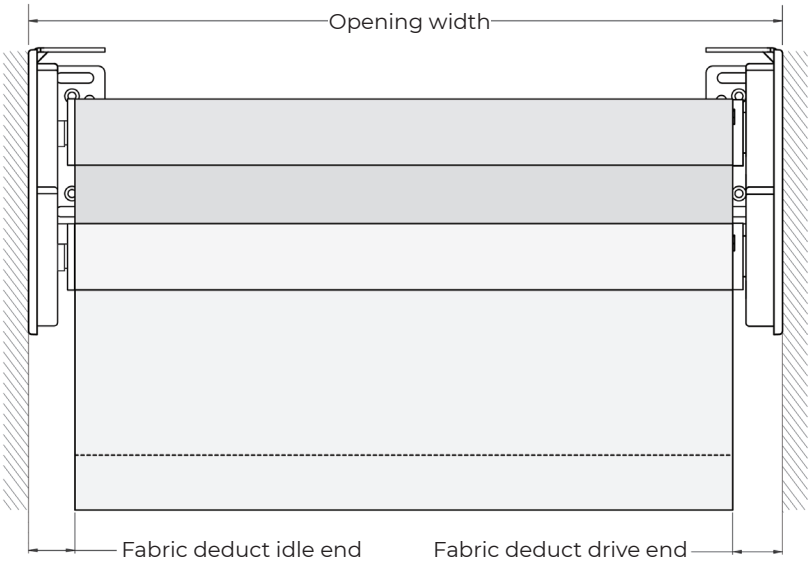
UrbanShade® Double-Bracket System

Motorized and Manual



Shade system deductions

Deduct	Options	Drive	Idle	Total
Fabric (motorized)	Concealed Hembar	0.750 in. (1.91cm)	0.688 in. (1.75cm)	1.438 in. (3.65cm)
	Exposed 1.5 in. (3.81cm) Hembar			
	Exposed Universal Hembar			
	Exposed Hembar with Guide Cable			
	Exposed Hembar with Guide Wheel	1.25 in. (3.18cm)	1.25 in. (3.18cm)	2.5 in. (6.35cm)
Fabric (manual w/ LAM) (manual w/o LAM)	Concealed Hembar	0.875 in. (2.22cm)	0.688 in. (1.75cm)	1.563 in. (3.97cm)
	Exposed 1.5 in. (3.81cm) Hembar			
	Exposed Universal Hembar			
	Exposed Hembar with Guide Cable			
	Exposed Hembar with Guide Wheel	1.375 in. (3.49cm)	1.375 in. (3.49cm)	2.750 in. (6.99cm)

Shade systems and size and weight limitations

	Tube diameter	Motor	Max. R.U.D.	Max. hanging weight	Max. no. turns	Min. opening width
Motorized	1.375 in. (3.49cm)	LT-30	2.48 in. (6.30cm)	< or = 14.2 lbs. (6.44kg)	40	13 in. (33.02cm)
	1.563 in. (3.97cm)	ST-30		< or = 22.6 lbs. (10.25kg)	35	19 in. (48.26cm)
Manual w/LAM	1.230 in. (3.12cm)	-		< or = 12 lbs. (5.44kg)	28	21 in. (53.34cm)
	1.375 in. (3.49cm)	-		< or = 12 lbs. (5.44kg)		
	1.563 in. (3.97cm)	-		< or = 11 lbs. (4.99kg)		
Manual w/o LAM	1.230 in. (3.12cm)	-		< or = 7 lbs. (3.18kg)	No limit	12 in. (30.48cm)
	1.375 in. (3.49cm)	-		< or = 6 lbs. (2.72kg)		
	1.563 in. (3.97cm)	-		< or = 5.5 lbs. (2.49kg)		

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Mecho® DoubleShade® Brackets

DoubleShades have all the same features of the standard Mecho/5 or 5x brackets, plus support light-filtering and room-darkening shadecloth on the same bracket – a compact, efficient solution for mixed-use spaces.

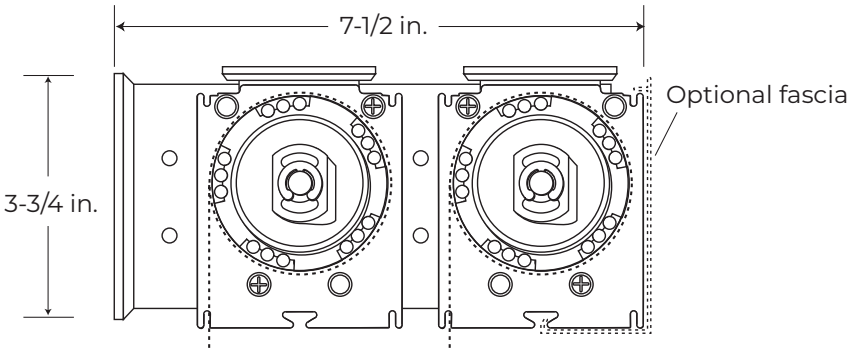
Compact Size

DoubleShade's compact size allows two shades to fit in a smaller room projection than two individually installed shades on the same window.

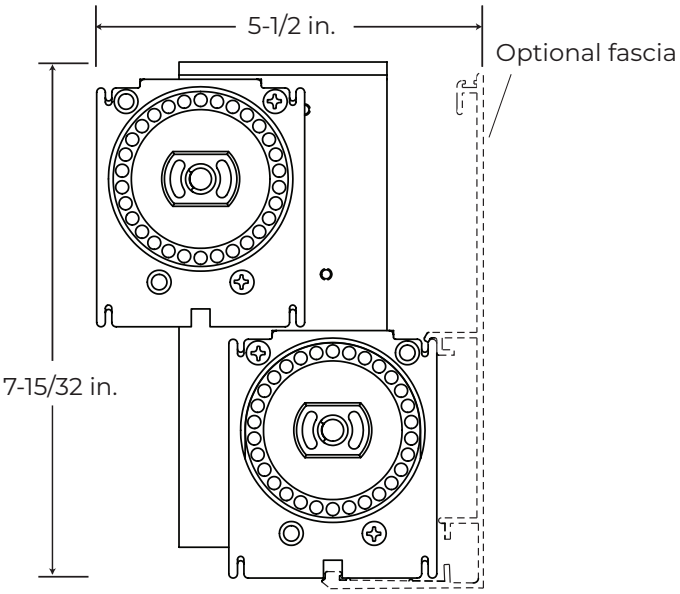
Ease of Installation

DoubleShades provide faster, easier, more economical installation of two shades per window. The mounting brackets require less measuring and are pre-spaced to insure proper alignment of both shades in relation to each other.

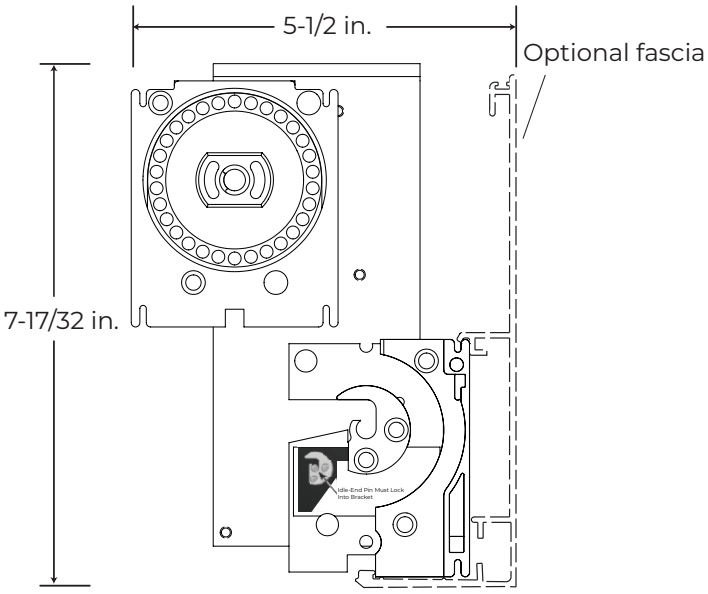
DoubleShade #10



DoubleShade #15



DoubleShade #16



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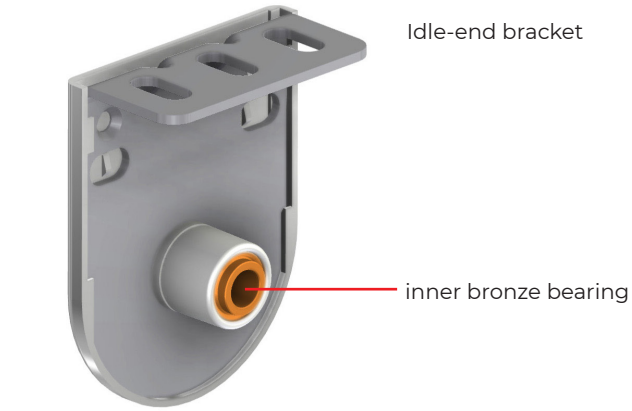
Electro®/1 Bracket

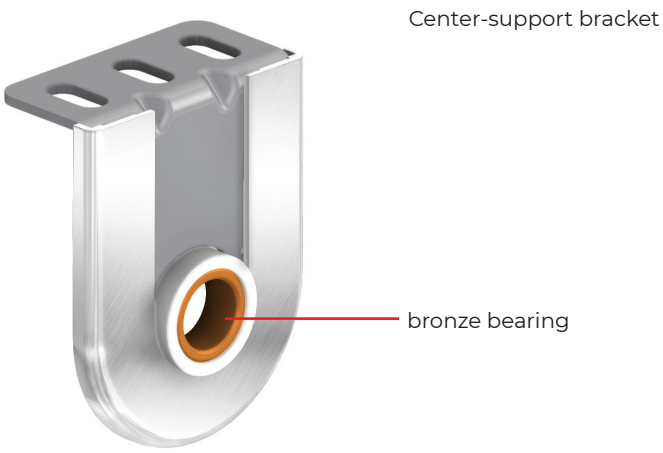
More functional and has an aesthetically pleasing profile

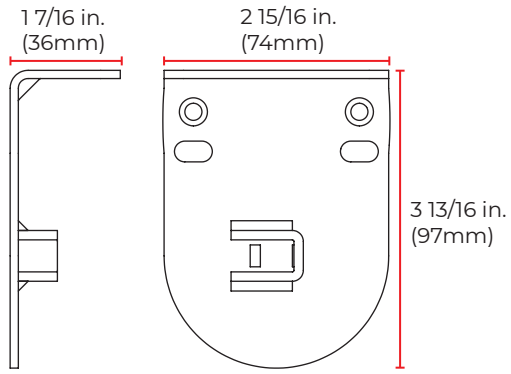
The idle-end bearing (see top diagram, right) on the Electro/1 bracket has been upgraded. An inner-bronze, oil-impregnated, and self-aligning bearing reduces friction for quieter operation. Future maintenance is also minimized as a result of this upgrade.

The ElectroShade® System

- Is ideal for conference rooms, public spaces, high-bay windows, and areas where accesibility is difficult.
- Maintains a uniform appearance on a building's facade when used with control systems.
- Reduces energy consumption and maximizes daylighting when included in the SolarTrac® or SunDialer® Systems.
- End caps are available in white, black, grey, and metallic.
- Can be operated with a variety of standard (and optional) control systems.







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ElectroPocket™

Easier, faster, more economical way to install motorized shades

Mecho's patented, innovative ElectroPocket significantly reduces installation time and expense due to minimal electrician time required.

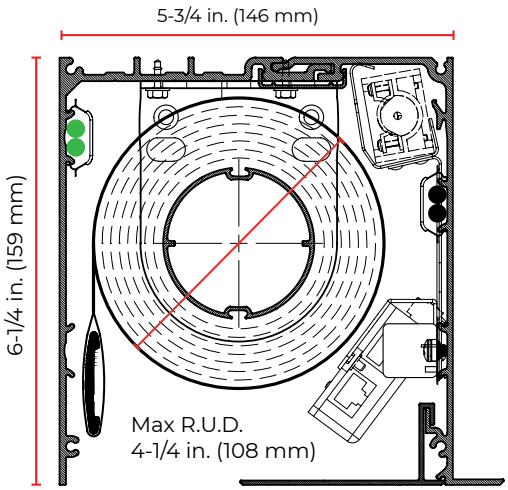
ElectroPocket is the industry's first ETL/UL certified pocket mounting solution for motorized roller shades and is ideal for new or renovation projects because its design eliminates the need for extensive wiring.

In addition to housing the roller shade, ElectroPocket provides a certified wiring raceway with optional accessory clips to secure all wiring safely away from a shade's moving parts. Our unique, proprietary design uses standard wire and cable instead of more expensive metal clad or conduit wiring to reduce maintenance and installation costs. ElectroPocket can be pre-wired on the job site before installation so it can be motorized at a later date making it the perfect solution for tenant fit-outs in multi-family or mixed-use facilities.

Features

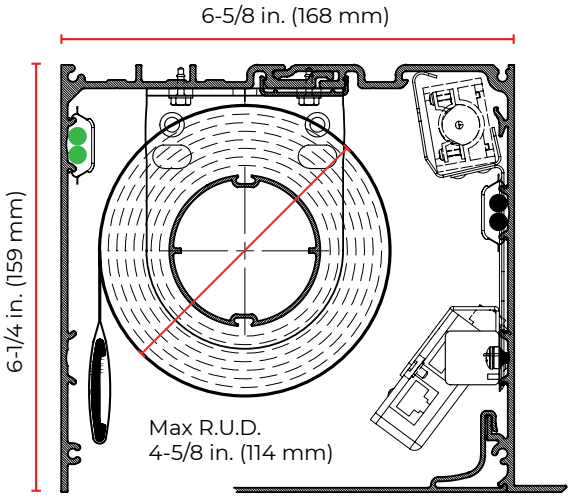
- Reduced wiring and electrical installation costs
- Easier installation in retro-fit and renovation applications
- Uses modular wiring kits with standard connectors –comparable to office cubicle wall wiring and installation
- Sections clip together at jobsite
- Standard 10.5' sections nest for easier handling, jobsite transportation and lower shipping costs
- Modular design promotes upgrades in motorization and automation as requirements change
- Guides for easy bracket placement, shade installation, programming, and servicing

ElectroPocket 4155 with tile support (4156 = no tile support)



Models 4155 and 4156 support
- Electro®/1, Electro/2 DC, Electro/3, and Electro/3 Extended bracket systems.
- Optional 2-, 3-, and 4-in. closure mounts.*

ElectroPocket 4165 with tile support (4166 = no tile support)



Models 4165 and 4166 support
- Electro/1, Electro/2 DC, Electro/3, Electro/3 Extended, and Electro/SL bracket systems.
- Optional 2-, 3-, 4-, and 5-in. closure mounts.*

low voltage

line voltage

**The 2-, 3-, and 5-in. closures, only available in 15-ft. lengths.*

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ElectroPocket™

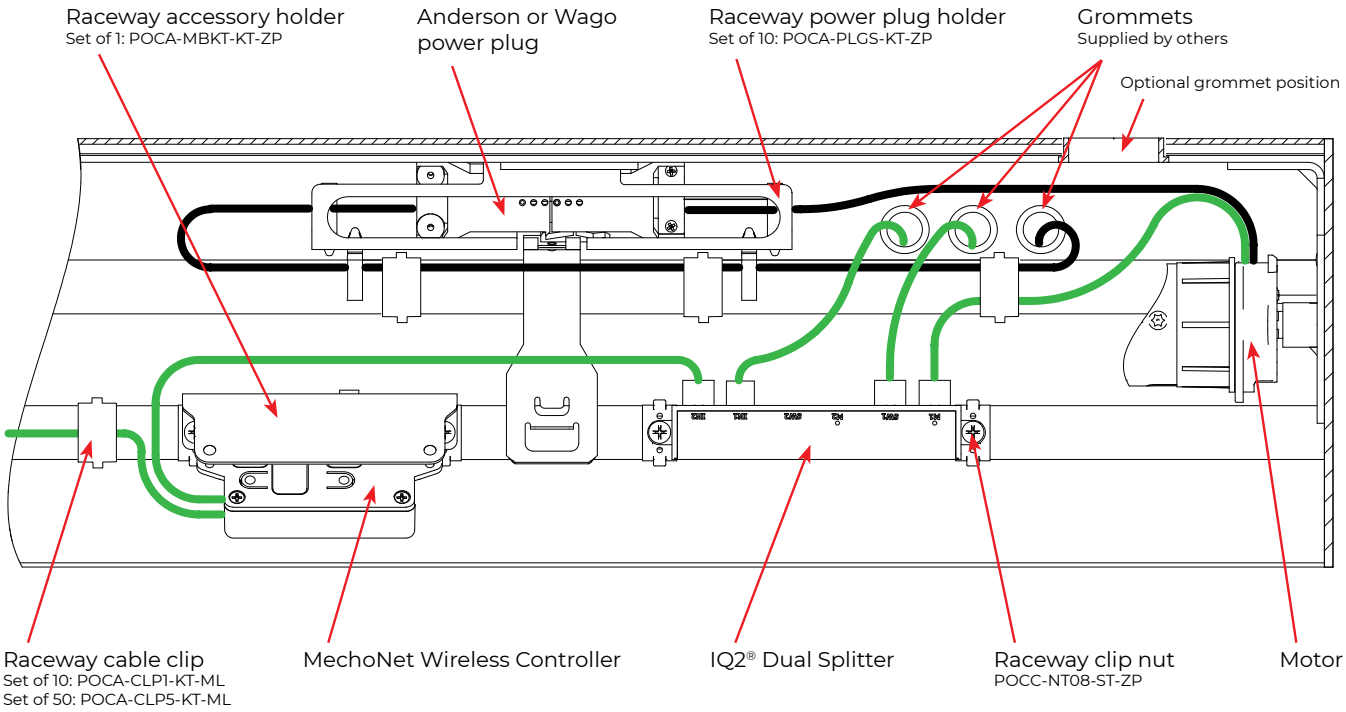
Easier, faster, more economical way to install motorized shades

ElectroPocket components kits

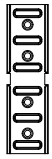
Conversion kit for 1 full length
Set of 1: POCA-CNVE-KT-ZP

low voltage

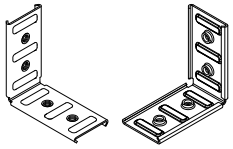
line voltage



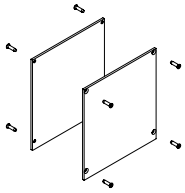
Also available



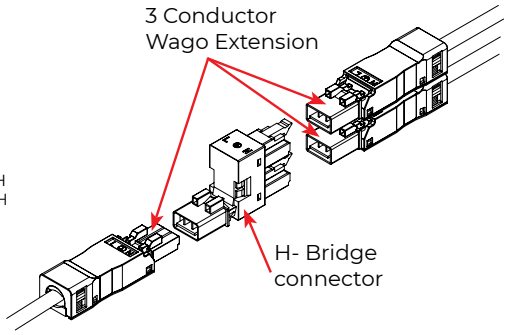
Straight joint
Part no. POCX-CJNT-ST-ZP



Corner Joint Kit
Set of 10: POCO-JNT1-KT-ZP



End Cap Kits
5-3/4 in. x 6-1/4 in.: POC5-ECAP-KT-WH
6-5/8 in. x 6-1/4 in.: POC5-ECAP-KT-WH



120VAC Modular Cabling Accessories
H-Bridge Connector: WAGO-HY03-FE-WH
Wago 5 ft extension: WAGO-0305-EX-WH
Wago 10ft extension: WAGO-0310-EX-WH
Wago 1 ft extension: WAGO-0301-EX-WH

Pocket
connecting clip
Set of 4: POCA-LNK4-KT-ML
Set of 50: POCA-LN50-KT-ML

Wire conduit clip
Set of 10: POCA-WIR1-KT-ML

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Solutions for Healthier Hospitals

WindowManagement®

MechoSystems supports the Healthier Hospitals Program with solar-shading systems that meet the Safer Chemicals Challenge (Healthy Interiors Goal v2.0, November 2015).

EcoVeil Sheer™ Collection

EcoVeil Sheer, a 100% polyester twill shadecloth woven from pigmented yarns in a soft palette, is the first window-covering textile to meet the Safer Chemicals Challenge. Available in a 1% or 3% open weave, it diffuses natural light and offers a chic look, all without chemicals of concern.

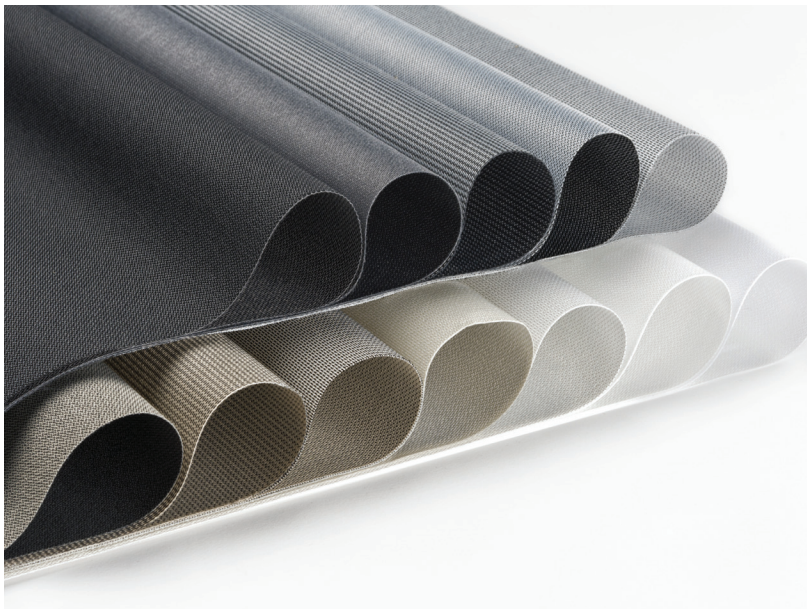
Healthier Hospitals
A PRACTICE GREENHEALTH PROGRAM

Nightingale Awards gold

Features

- 100% polyester
- PVC free
- Contains zero chemical flame retardants, formaldehyde, antimicrobials, or PFC's
- Passes NFPA 701® flame test
- Is reversible
- 12 designer colors
- Stocked in 63 in. (160cm) and 118 in. (300cm)

EcoVeil Sheer in the Bjarke Ingels designed VIA 57 West, New York City.



EcoVeil Sheer Collection

Furniture described herein meets the Healthy Interiors goal of the Safer Chemicals Challenge according to the manufacturer. Practice Greenhealth does not verify this information.

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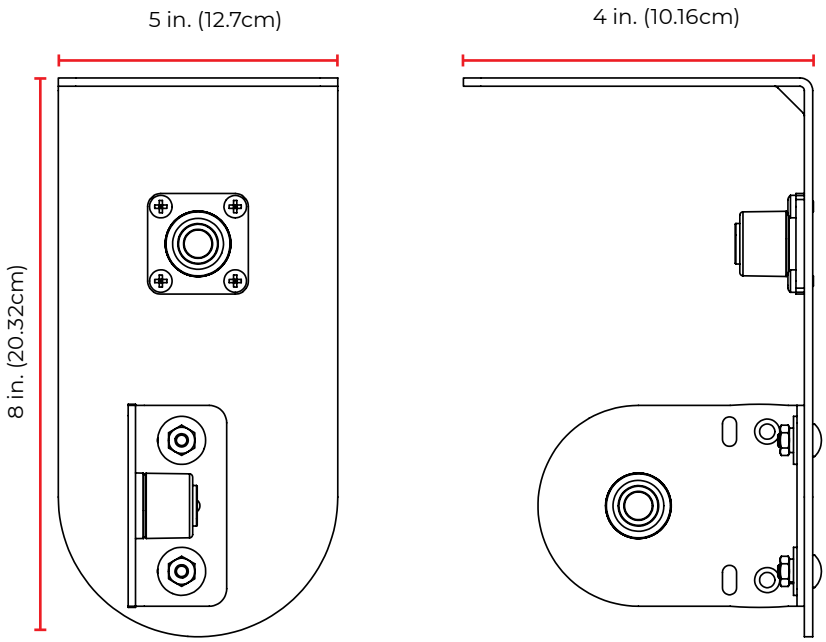
Hi/Lo Corner Bracket®

Minimize light Gap

Until now, wall-mounted roller-shades have left an unmanaged “light gap” where two walls meet at 90° angles. Mechos’ Hi/Lo Corner Bracket offers a practical solution for these pesky, large light gaps. By utilizing a higher pocket for one of the two shades, the Hi/Lo Corner Bracket will minimize the light gap.



The Hi/Lo Corner Bracket:

- Minimizes the light gap common to curtainwall corners.
- Offers continuity of shading—even at right angles.
- Features a higher pocket that need only be one window- bay-wide to accomplish tight, corner-window coverage. The rest of the shade bands are installed at the lower pocket level.
- Idle-End brackets are recommended in the corner.

Hi/Lo Corner Bracket

Shadecloth options	Max. height (2.2 in. 5.5cm tube)	Max. height (2.5 in. 6.5cm tube)	Max. R.U.D.* (roll-up diameter)
0200 Blackout	31½ ft. (9.6m)	25 ft. (7.6m)	3.56 in. (9.04cm)
0700 Blackout	33½ ft. (10.2m)	27 ft. (8.2m)	3.56 in. (9.04cm)
1300 Series	16½ ft. (5.02m)	13 ft. (4m)	3.56 in. (9.04cm)
6000 Series	20 ft. (6.1m)	16 ft. (4.9m)	3.56 in. (9.04cm)

*Please add 1 in. of clearance to the pocket above and beyond the R.U.D.

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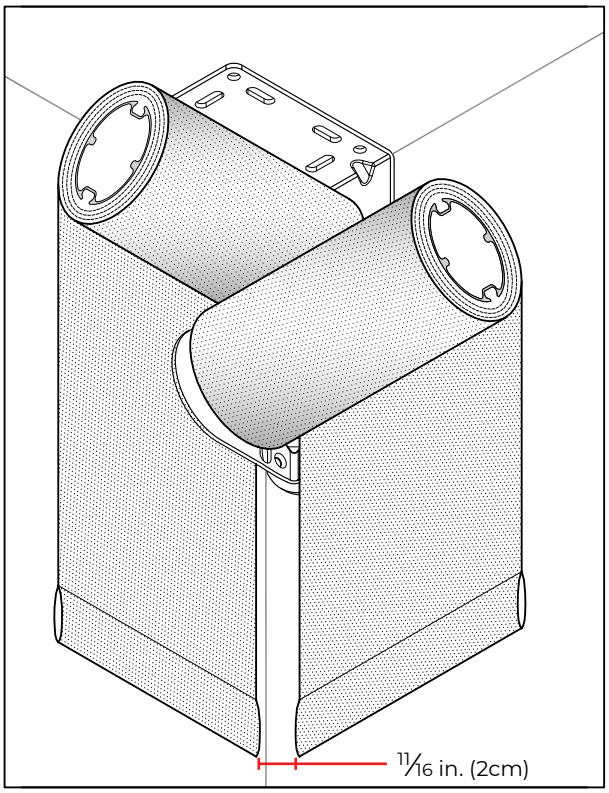
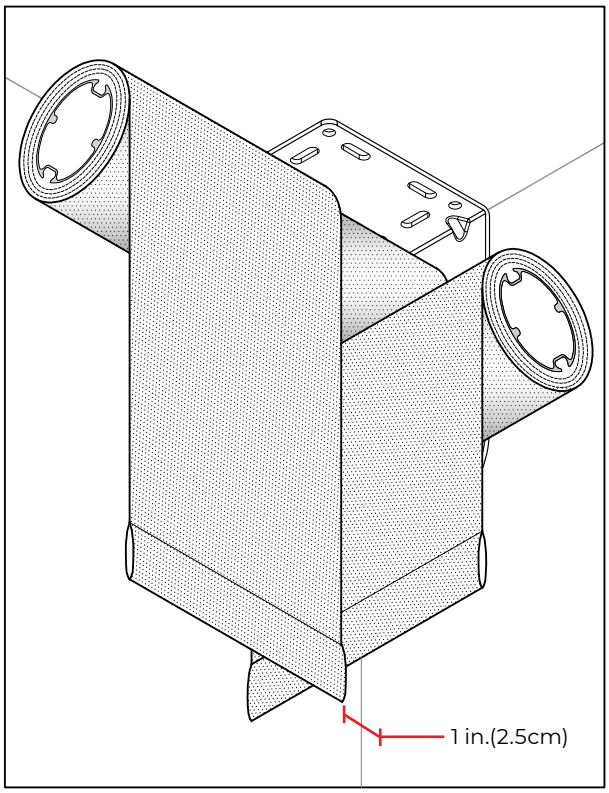
Hi/Lo Corner Bracket®

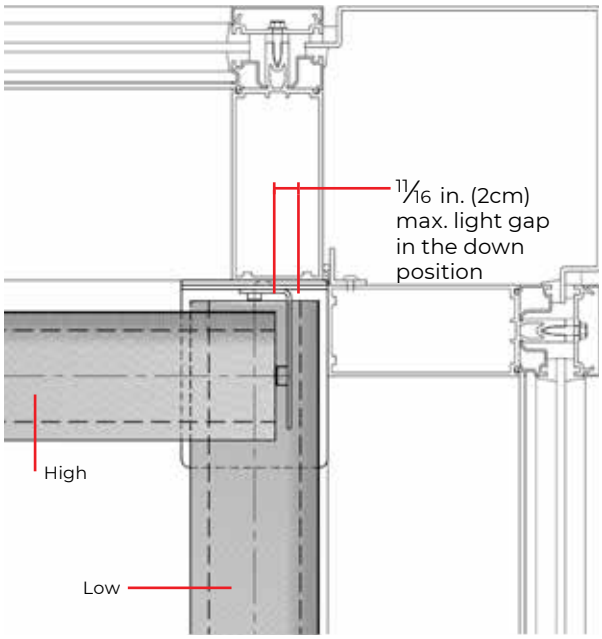
Minimize light Gap



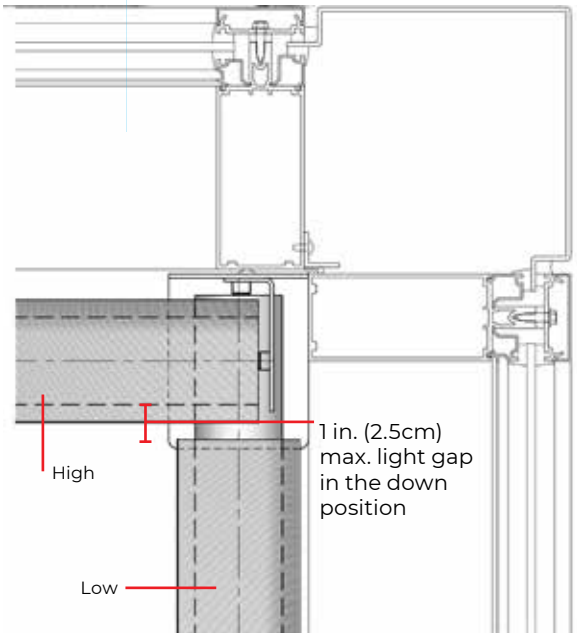
Inside corner — regular roll



Inside corner — reverse roll



Inside corner — regular roll



Inside corner — reverse roll

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IQ/MLC2

Networkable Motor Group Controller

The IQ/MLC2® is our next-generation, microprocessor-based motor controller. Building on the success of its predecessor, the IQ/MLC®, the IQ/MLC2 controls up to four standard line-voltage tubular motors and extends the DIP-switch-configurable group controls into a network solution capable of handling the most advanced daylighting and integration requirements.Whether it's a single window or a whole-building motorized shade project, the IQ/MLC2 provides a scalable and flexible tool suitable for a wide variety of applications.

Flexible group control

- Control of four standard line-voltage tubular motors (120 or 230VAC, 600W, ¼ hp max. per motor).
- Four local control ports for flexible dry-contact group control.
- Configuration of any combination of motors from any local port.
- Motor assignments that can be changed without tools or rewiring.

Extensible master control

- Two master control ports for dry-contact control of all internal motors simultaneously.
- Daisy-chaining to permit grouping of up to 2,000 motors.

Industry-leading uniformity

- Control ports with five alignment points: top and bottom limits, plus three programmable intermediate stops.
- Default presets at 25%, 50%, and 75% of shade travel.
- Customizable presets from the switch with no tools required.
- Uniform mode that restricts shades to programmed positions to manage a room's uniform-height aesthetic.

Control ports operating from virtually any manufacturer's dry-contact switch

- Supports rocker switches, keypads, hospital-bed pillow switches, and a variety of 3rd-party control equipment.
- Features momentary and maintained button-press operation.
- External control equipment powered by internal, isolated DC supply.

Versatile remote and wireless control options

- IR or RF control from a remote, smartphone, tablet, or 3rd-party system.

Eco-friendly technology

- Auto port providing automation and daylighting control through sensors and schedulers.
- Direct integration with SolarTrac® and SunDialer® WindowManagement® solutions.

Whole-building control network

- Internal two-way communication network provides control and feedback for up to 2,000 motors per segment.
- Eight network addresses for each motor, for multi-level group control.
- Network addresses for auto port and local control ports, for control across an entire network.
- Optional IP interface provides Ethernet integration and remote support and troubleshooting over the internet.

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IQ/MLC2

Networkable Motor Group Controller

Integration with 3rd-party equipment without extra interface components

- RS232 port for convenient two-way serial interface with A/V, BAS, and lighting systems.
- Control ports providing dry-contact integration directly to any 3rd-party system.

Expansion-port modularly expands IQ/MLC2 functionality

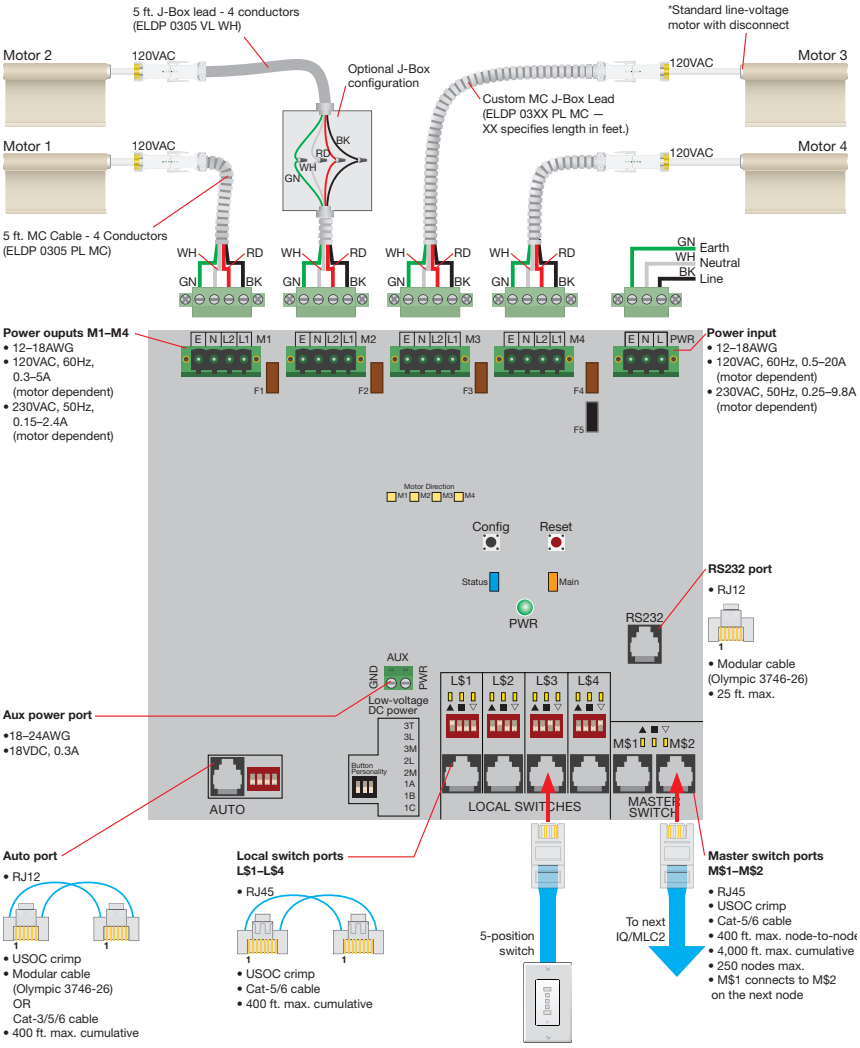
- Four-motor expander card provides control of up to eight motors from a single IQ/MLC2 unit.
- Port provides capability for future enhancements.

Time-saving installation features

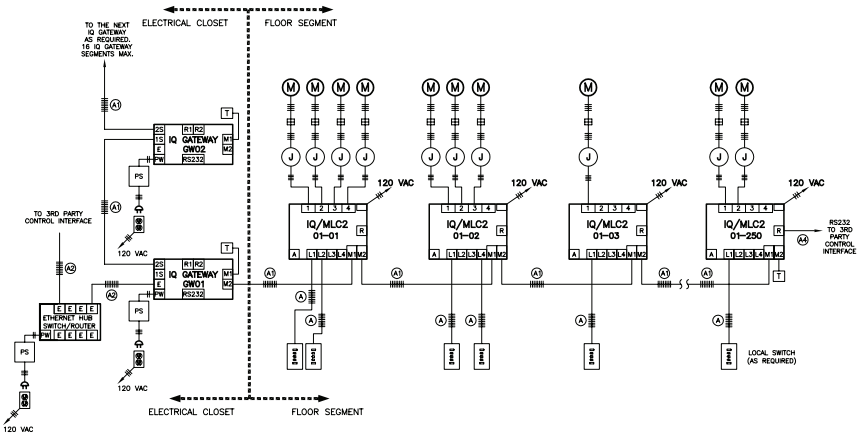
- Modular connectors and feedback LEDs for inputs and outputs allow simple wiring and troubleshooting.
- Reversible motor direction without rewiring.
- Setup, calibration, and changes to motors, presets, and operating modes that require no tools.

Reliable operation

- Second-generation technology.
- Flash-upgradable to support future enhancements.
- Spike and brownout protection.
- Listed: UL325 and CAN/CSA 22.2 No. 247-92.



System Diagram



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LEED® v4 New Construction

Core and Shell, Schools, and Healthcare

Category and Credit	Potential Points	MechoSystems Contribution
Integrative Process Beginning in pre-design and continuing throughout the design phases, identify and use opportunities to achieve synergies across the disciplines and building systems including shading, glazing, lighting levels, and thermal-comfort ranges.	NC, CS, S: 1 HC: 1–5	MechoSystems can develop an input file for the MEP that will cost-effectively add shade automation to the building's modeling program, saving time needed for the MEP to include automated shade control.
Energy and Atmosphere Optimize Energy Performance Establish an energy performance target no later than the schematic design phase. Must establish target as KBTU/sq. ft.-year (KW/sq. m-year) of the source energy use.	NC, CS: 1–18 S: 1–16 HC: 1–20	MechoSystems' SolarTrac® and SunDialer® Systems are designed to automatically adjust shade-band positions incrementally, according to real-time microclimatic sky conditions. Automatically controlled interior shading devices and daylight-responsive lighting-control systems can be modeled for credit in the Proposed Design per ASHRAE Standard 90.1, Appendix G.
Materials and Resources Building Product Disclosure and Optimization—Material Ingredients Option 1: Material Ingredient Reporting Option 2: Material Ingredient Optimization	NC, CS, S, HC: 1–2, EP	Many MechoSystems shadecloths products comply with Option 1 by meeting the requirements of one or more of the following material transparency standards or certifications: • C2C Certified™ or Material Health Certification (MHC) • Health Product Declaration (HPD) • Declare™ Label The Mecho®/5 and manual UrbanShade® systems with EcoVeil®, EcoVeil Sheer™, and AcoustiVeil™ are C2C Certified v3.1 Bronze. Chelsea Blackout meets Option 2: C2C MHC Silver.
Materials and Resources Furniture and Medical Furnishings Enhance the environmental and human health performance attributes associated with freestanding furniture and medical furnishings.	HC: N	A selection of shadecloths and shading systems contribute to this credit. Please contact Rachel Berman, Sustainability Program Manager, at rachel.berman@mechosystems.com for compliance documents.
Indoor Environmental Quality Thermal Comfort Promote occupants' productivity, comfort, and wellbeing by providing thermal-comfort design and thermal-comfort control.	NC, CS, S, HC: 1	Manual, motorized, and automated shading systems with override capabilities allow occupants to deploy appropriate shade-band heights to help reduce radiant temperature.
Indoor Environmental Quality Daylight Connect building occupants with the outdoors, reinforce circadian rhythms, and reduce the use of electrical lighting by introducing daylight into the space. Provide manual or automatic (with manual override) glare-control devices for all regularly occupied spaces.	NC, CS, S: 1–3 HC: 1–2	Manual and automated shading can be used for this credit. Automated shading systems by MechoSystems including SolarTrac and Sundialer, are designed to automatically adjust shade-band positions incrementally according to real-time microclimatic sky conditions. Per a January 27, 2017, addendum, spaces with dynamic facade systems, or spaces smaller than 250 sq. ft. (23 m^2) are exempt from the ASE requirement.
Indoor Environmental Quality Daylight A direct line of sight to the outdoors is achieved via vision glazing for 75% of all regularly occupied floors of a building.	NC, CS, S: 1, EP HC: 1–2, EP	Automated shades are programmed to maximize vision glazing for occupants. The SolarTrac System lowers shades only to protect occupants from uncomfortable glare and solar-heat gain. This ensures occupants consistently achieve a direct line of sight to the outdoor environment.

NC = New Construction
HC = Healthcare
CS = Core and Shell
S = Schools
EP = Exemplary Performance Available

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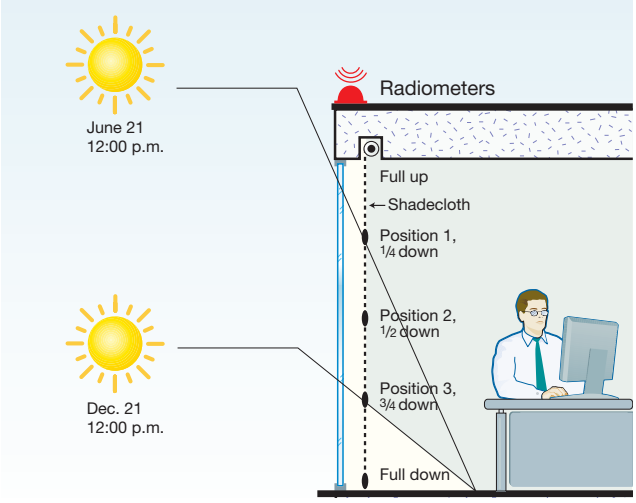
LEED® v4 New Construction

Core and Shell, Schools, and Healthcare

SolarTrac® and SunDialer®

These systems are designed to automatically adjust shade-band positions incrementally, according to real-time microclimatic sky conditions. Both maximize daylighting opportunities while maintaining views to the outside and reducing the heat load on the building envelope. They adjust shade-band positions to provide significant reductions in energy-peak demands over the building's life.

SolarTrac is ideal for large-scale applications, while SunDialer is appropriate for smaller and retrofitted projects.



MechoAutomation

An automated-shading and lighting-control system ensures that electrical-lighting is as energy efficient as possible. A complete lighting-control system operates in response to SolarTrac to set appropriate electrical-lighting levels for each zone in a building through modeling strategies, override controls, and lighting sensors. For additional energy-saving design strategies, consult your local MechoSystems representative.

EcoVeil®

This shadecloth is the first environmentally certified product of its kind. It is PVC-free, reclaimable, fully recyclable, UV-resistant, and Cradle to Cradle Certified v3.1 Bronze.

EcoVeil Sheer®

This 100% polyester shadecloth is woven with individually pigmented yarns. Inherently flame retardant, this distinctive twill is the first shadecloth to pass NFPA 701® without chemical flame retardants.

ThermoVeil®, EuroTwill®, EuroVeil®, EcoVeil, and EcoVeil Sheer shadecloths are GREENGUARD Gold certified. Chelsea and Classic Blackout.

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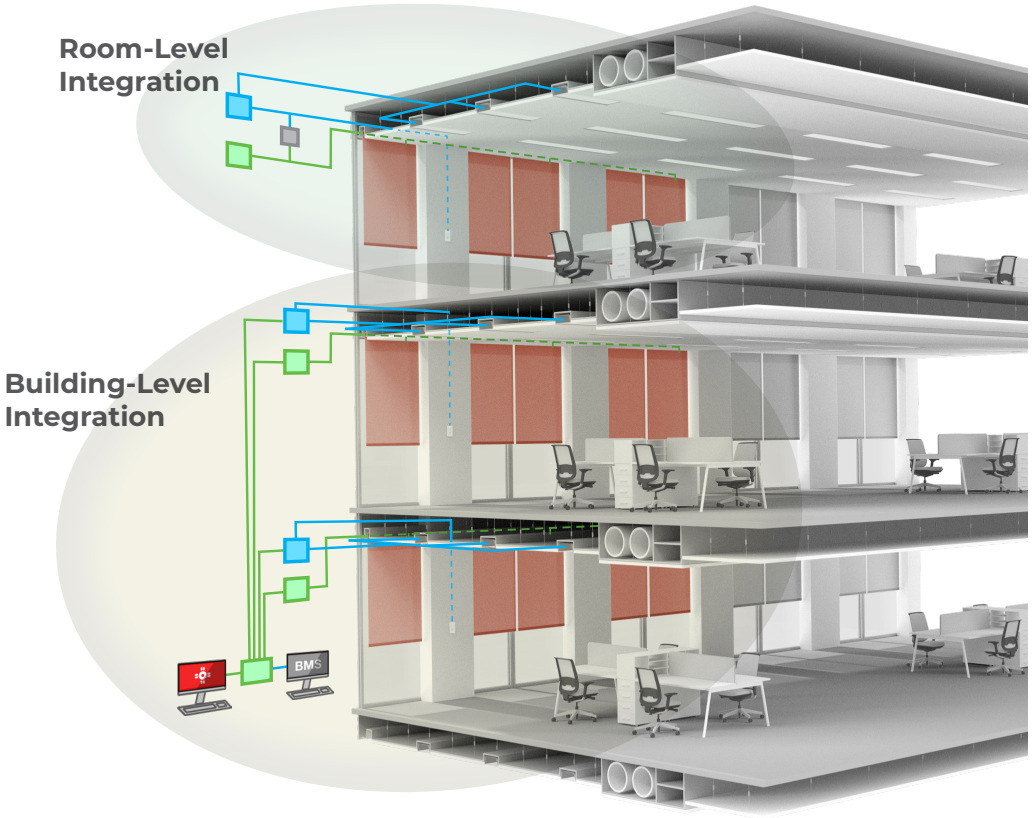
Lutron®/3rd-Party Integration w/MechoNet™

Flexible two-way communication

MechoNet's flexible, 2-way communication supports scalable solutions (from room control up to whole-building automation), and is built to unify window-covering control under one network.

MechoNet interacts with 3rd-party systems in order to:

- Unify the user's experience by supporting shade control through any company's keypad, touchscreen remote, etc.
- Facilate scenes of coordinated settings to enhance the functionality of a space.
- Interact with 3rd-party systems to exchange sensor data and/or device status in order to enhance the control and automation of each system.
- Maximize the intelligent operation of a space or building by optimizing conditions for comfort, view,
energy conservation, occupant wellness, and productivity.



Room-Level Integration

- Dry Contact: native to every MechoNet motor or motor controller.
- RS-232/RS-485: MechoSystems' MNI supports 2-way communication to any device on MechoNet.

Building-Level Integration

- Typically 3rd-party systems (i.e., Lutron), are integrated with BMS through BACnet.
- Mechos' BACnet interface supports 2-way integration over IP to 3rd-party systems.

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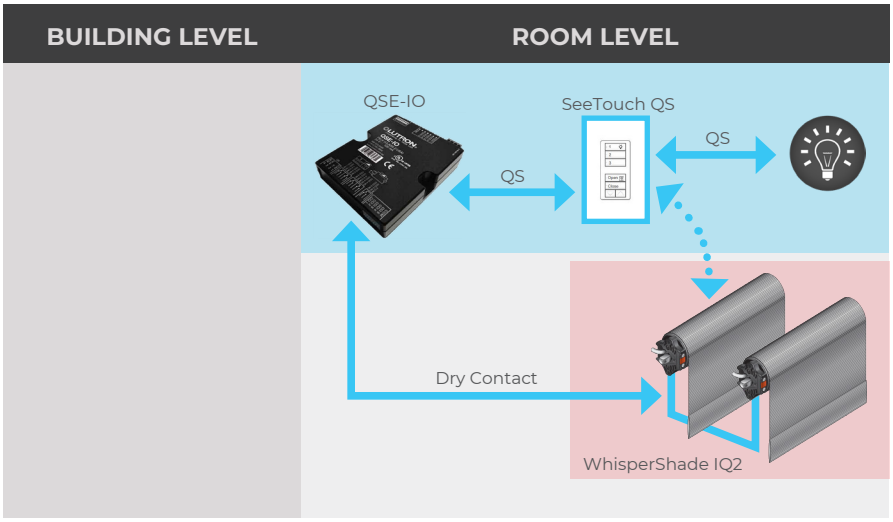
MechoNet Integration

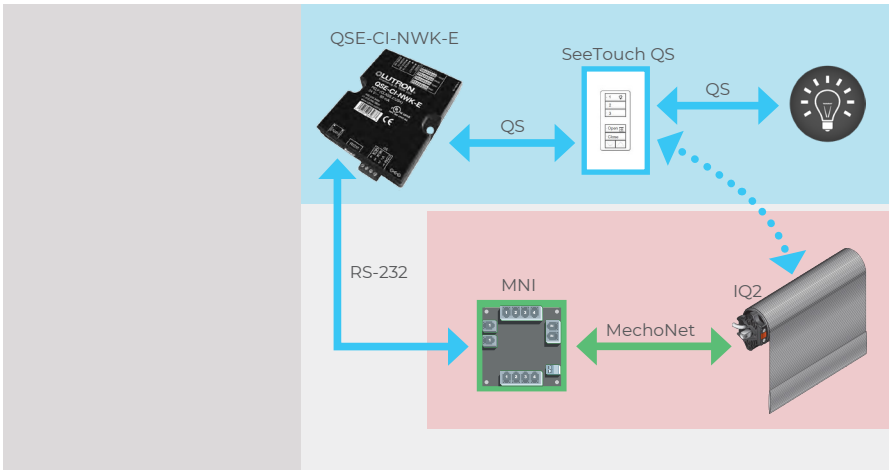
Room-Level Solutions with Lutron's QS System Switches



Room-level control option ❶

Lutron keypads control Mecho shades through Lutron's dry-contact interface (QSE-IO).

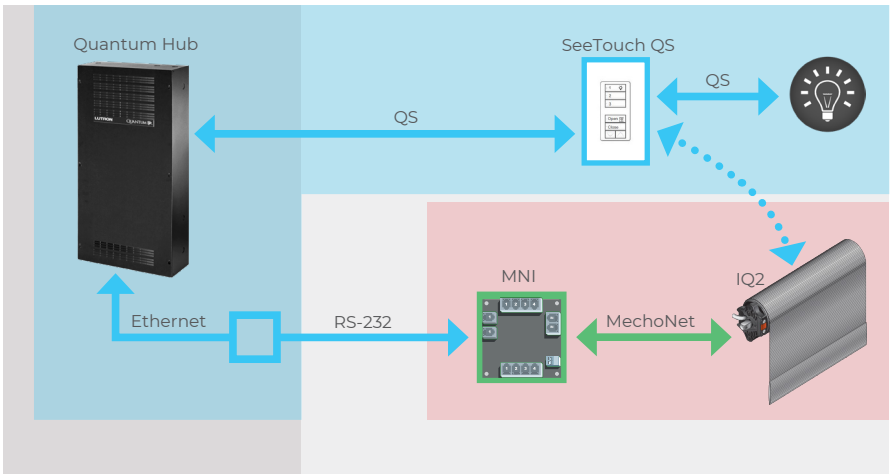
- 1-way only
- See Lutron Application Note #493
- Lutron maps keypads per room requirements
- 2 zones: 1 x up/down, 1 x 3 presets



Room-level control option ❷

Mecho shades are controlled through Lutron keypads via Lutron's serial interface (QSE-CI-NWK-E) and our MechoNet Network Interface (MNI). MNI supports 2-way RS-232 communication.*

- Lutron provides table of keypad addresses per room requirements
- Mecho maps keypads and button controls to shade zones
- 200+ zones max



Room-level control option ❸

Lutron keypads control Mecho shades via Lutron Quantum using Lutron's driver via its Quantum controller/hub.

- 2-way communication*
- Reference Lutron Application Note #493
- Mecho provides address table of shades
- Commissioning to be contracted with Lutron to map button controls to shade zones
- See Lutron for the number of zones

* Lutron must be consulted for support

- MechoSystems products
- Lutron products

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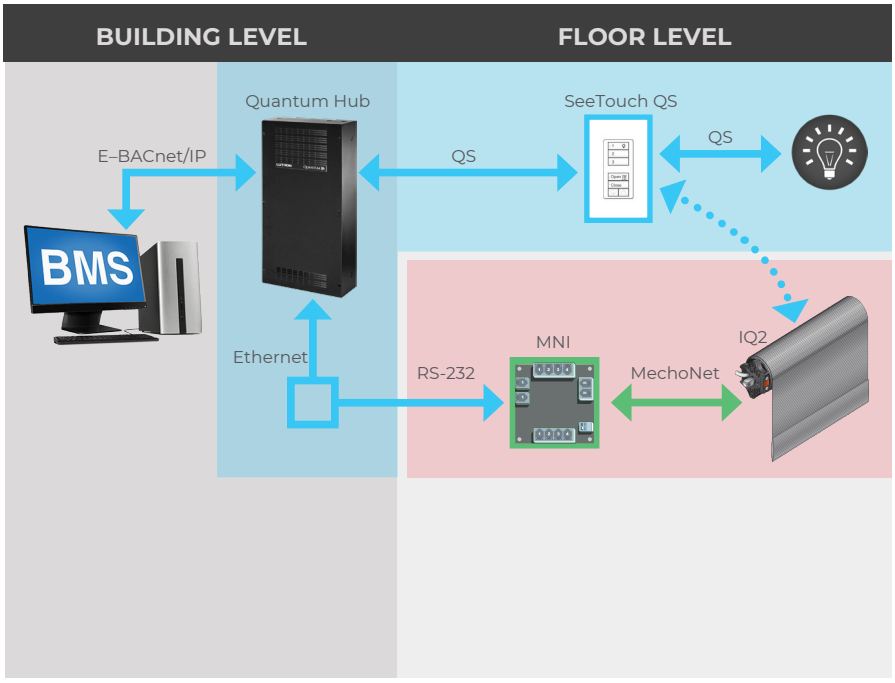
MechoNet Integration

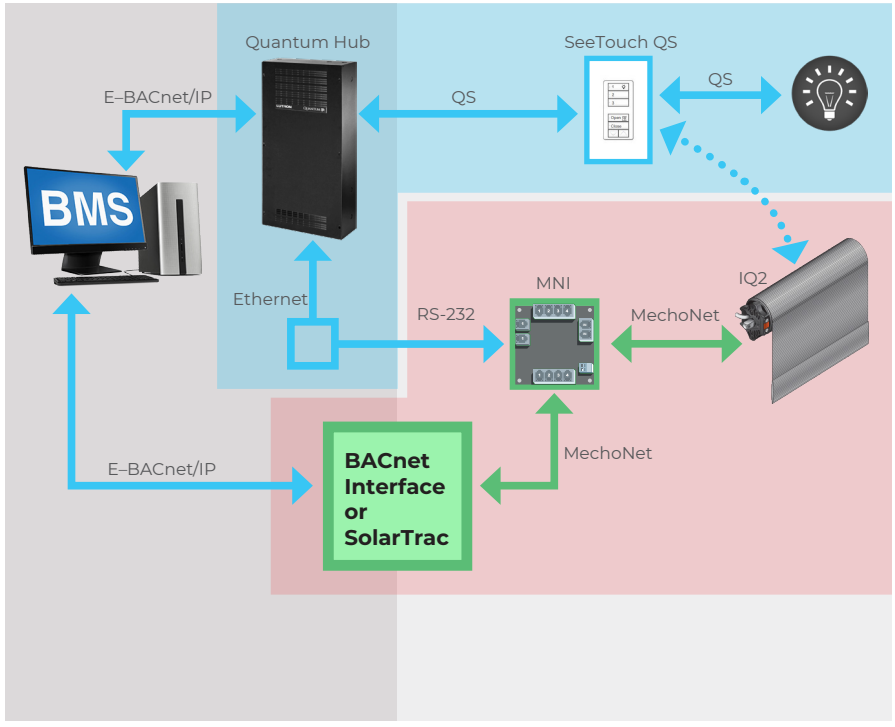
Room-Level Solutions with Lutron's QS System Switches



Building-level control option ❶

Lutron keypads control MechoSystems shades at the floor level. Lutron Quantum hub controls MechoSystems shades at the building level. Feedback of shade position through Quantum requires Lutron programming.

- Reference Lutron Application Note #493
- Mecho provides address table of shades
- Commissioning to be contracted with Lutron to map button controls to shade zones



Building-level control option ❷

Lutron keypads control MechoSystems shades at the floor level. Lutron Quantum or SolarTrac controls Mecho shades at the building level. Feedback of shade position to BMS occurs via BACnet through MechoSystems' BACnet Interface or SolarTrac System.

- Reference Lutron Application Note #493
- Mecho provides address table of shades
- Commissioning to be contracted with Lutron to map button controls to shade zones
- Mecho maps addressing of shades to "BUS" or building-level control requirements
- 65,000 BMS points of contact

- MechoSystems products - Lutron products

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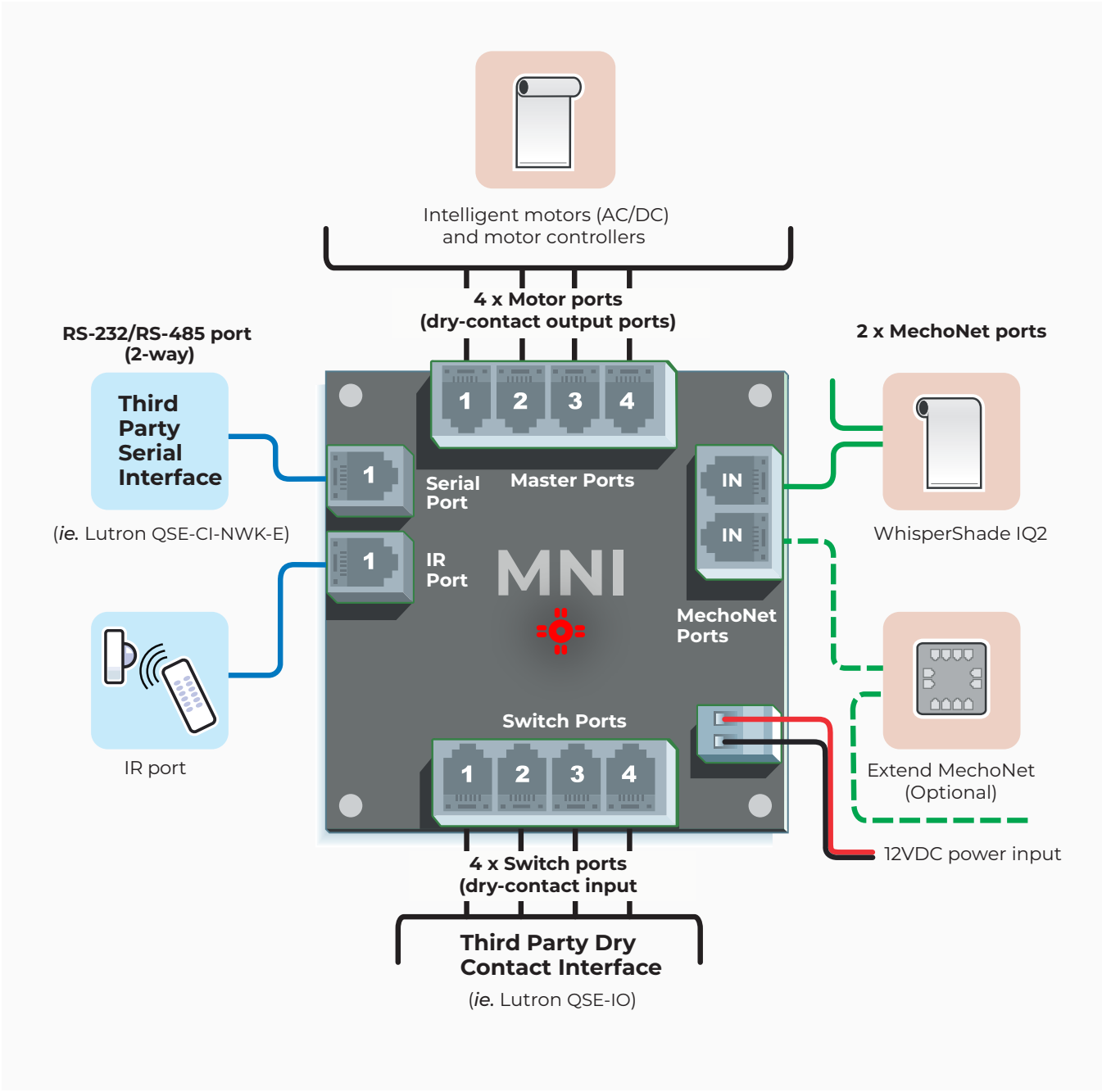
MechoNet Integration

MechoNet Network Interface (MNI)



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MagnaShade®

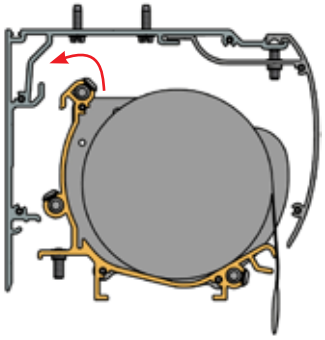
Small Profile. Big Solution.

Features:

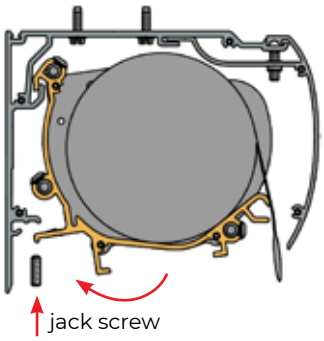
- A patented floating-mounting system centers the shadecloth tube at all times. The configuration minimizes tube deflection, and maximizes shadecloth flatness.
- The unique shallow profile—high and wide—can be up to approximately 40 ft. (12m) wide by 20 ft. (6m) high.

Simplified installation

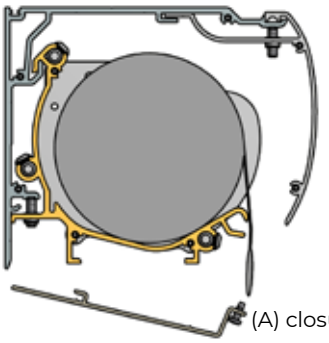
1. The housing-cassette is attached to a ceiling or wall.

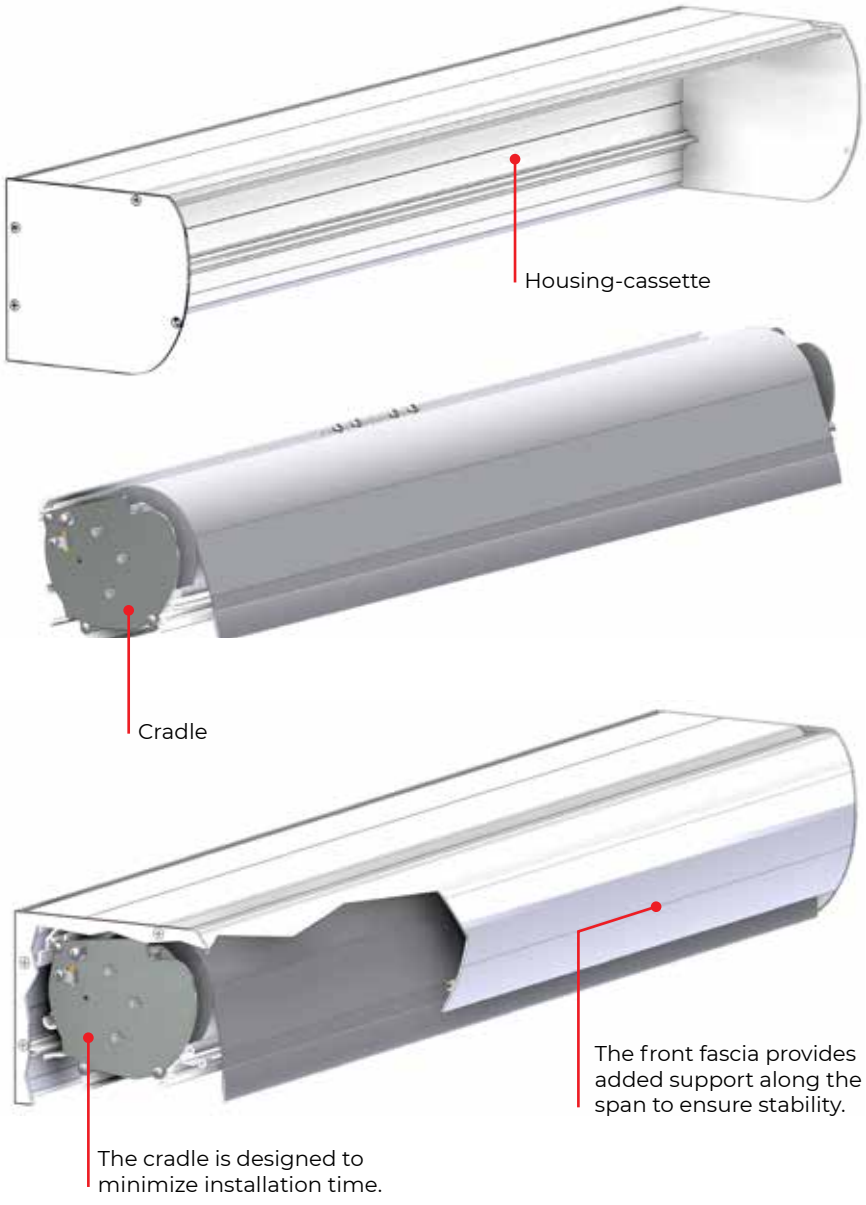


2. The pre-fabricated cradle is hooked onto the top inside of the cassette.



3. The cradle is lowered into place and secured along the span with jack screws.





4. The closure mount (A) is hooked into the bottom of the cradle and then secured along the span with screws.

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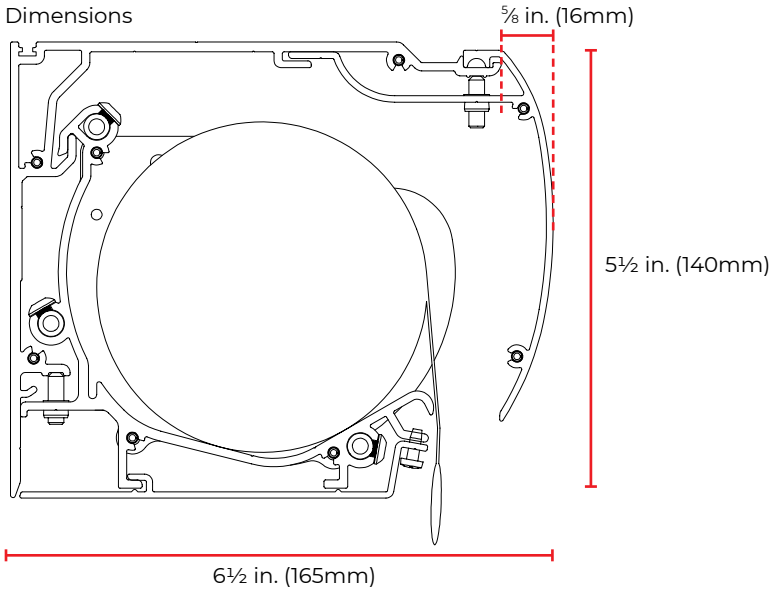
MagnaShade®

Small Profile. Big Solution.

Shadecloth options	Max. width	Max. height
0800 Series	40 ft. (12.2m)	20 ft. (6.1m)
1300 Series	40 ft. (12.2m)	20 ft. (6.1m)
1500 Series	40 ft. (12.2m)	20 ft. (6.1m)

Dimensions



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Mecho®/5 System

Sets the standard for quality and performance

Mecho/5 is the only complete hardware-and-shadecloth system with a twenty-five year Limited Warranty including 100% replacement and no depreciation over the life of the warranty.

When installed with EcoVeil® shadecloth, the Mecho/5 system is the only Cradle to Cradle Bronze™ certified window-shading system in the U.S.

For multi-banded applications, Mecho's adjustable shade coupler is included to speed the installation process and ensure precise, even and consistent shade heights and eliminate hembar misalignment.

Features

- Patented technology allows for a smooth and consistent experience
- Mecho/5 durability is built for commercial applications
- Single or double-shade bracket options
- Smooth and quiet operation
- Works with large shades and multibanding without motorization, saving time and money
- A patented, overrunning-clutch-drive system
- An oil-impregnated, self-lubricating, large-diameter sprocket
- Fast, easy installation
- Field-tested and performance-proven reliability from hundreds of thousands of installations

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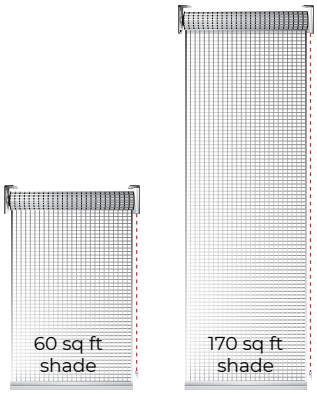
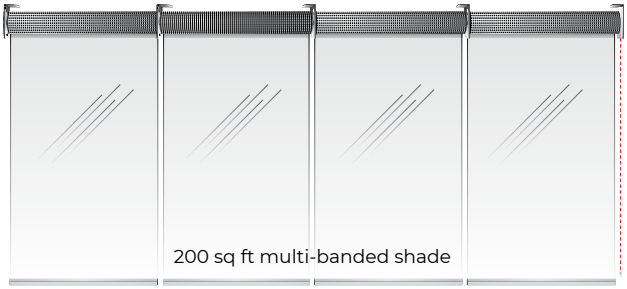
Mecho®/5x

Lift larger. Lift heavier. Experience Effortless.



Different shades, similar operating experience

Pull force is within the same range (3 to 8.5 lbs)

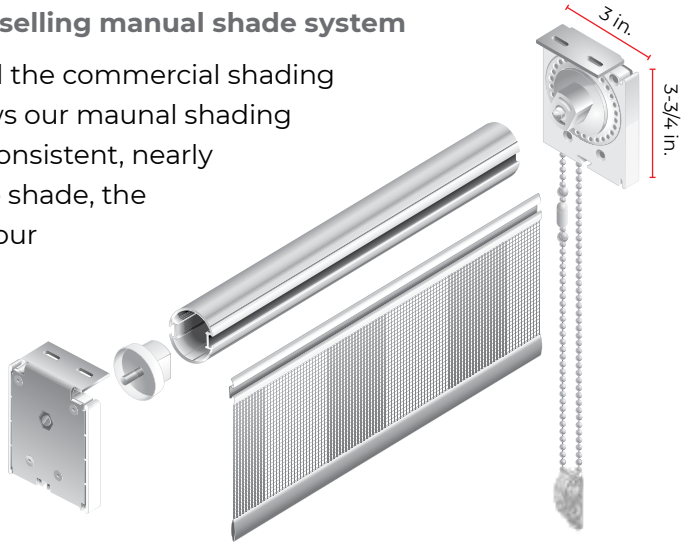


Experience the trusted performance of our best-selling manual shade system

The Mecho/5x super-powers the clutch that created the commercial shading industry. Our innovative, patented technology allows our maunal shading system to lift larger, heavier shades and provide a consistent, nearly effortless user experience. No matter the size of the shade, the pull force is within ADA standards, something that our competitors cannot say about their shades.

Mecho/5 and 5x manual shades are the only complete hardware-and-shadecloth system with a twenty-five-year Limited Warranty including 100% replacement and no depreciation over the life of the warranty.

For multi-banded applications, Mecho's adjustable shade coupler is included to speed the installation process and ensure precise, even and consistent shade heights and eliminate hembar misalignment.



When installed with EcoVeil®, EcoVeil Sheer, or AcoustiVeil shadecloth, the Mecho/5x is the only complete window-shading system with Cradle to Cradle Bronze™ certification.

Features

- Allows for larger multi-banded shades—including 5 bands—up to 360" wide*
- Allows for larger, single shades up to 180" wide to eliminate light leaks*
- Engineered for maximum lift with the least amount of effort
- Smoother, quieter, and easier operation
- Durable and built for the toughest, largest and heaviest commercial applications
- Single or double-shade bracket options
- Greater angle on shade pull chain for more versatile operation

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** dependent on fabric weight*

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MechoNet™ Network Interface (MNI)

One network. Many devices.

MNI-RJ (RJ45 Motor Ports)

IMNI 0001 TP AS

IMNI 0004 TP AS (with J-Box)

MNI-TB (Terminal Block Motor Ports)

IMNI 0002 TP AS

IMNI 0005 TP AS (with J-Box)

Features

- Four motor ports bring low-voltage, dry-contact controlled shades, blinds, and draperies to MechoNet.
- Motor ports support up-down control and positioning for up to three presets via the switch ports, IR port, serial port, and MechoNet.
- Two models (MNI-RJ and MNI-TB) simplify motor wiring options.
- Four switch ports support economical low-voltage, dry-contact control of window coverings from IQ decorator switches, RF remotes, 3rd-party keypads, and relay controllers.
- Switch ports support a variety of 1-, 2-, 3-, and 5-button positioning-control switch configurations.
- IR port provides cost-effective wireless control.
- Serial port enables two-way integration with 3rd-party systems.
- Repeater mode extends MechoNet control to another 4,000 ft. (1,219m) of cable and 250 nodes.
- SunDialer® and SolarTrac® compliant.

Product Overview

A compact communication and control hub, the MNI centralizes the interface between MechoSystems' window-covering solutions and a variety of user-interface, control, and automation options across one network, called MechoNet.

Operation

Non-MechoNet equipped motorized shades, blinds, and draperies can be unified across the network using one of the MNI's four low-voltage motor-control ports.

A diverse assortment of user-control options are available through the MNI for any window covering attached to it or the network. Switches, keypads, touchscreens, remotes, or apps can all be employed through the MNI's four dry-contact switch ports, its IR port, or its serial port.

The serial port in particular supports two-way control over RS-232 and RS-485 to 3rd-party equipment such as Savant, Vantage™, Lutron®, WattStopper® and others to enable seamless and intelligent control of window coverings with lights, HVAC, and A/V.

Furthermore, the MNI promotes modular scalability for any project, enabling growth from single room or office solutions to integrated and automated, whole-building systems.

Applications

- Automated window-covering control across MechoNet for shades, blinds, and draperies.
- Integrated window-covering, lighting, A/V, and HVAC control through RS-232 and RS-485, IR, and dry-contact.
- Scalable automation-control solutions from single office to building-wide control via SolarTrac.
- Home- or building-control projects.

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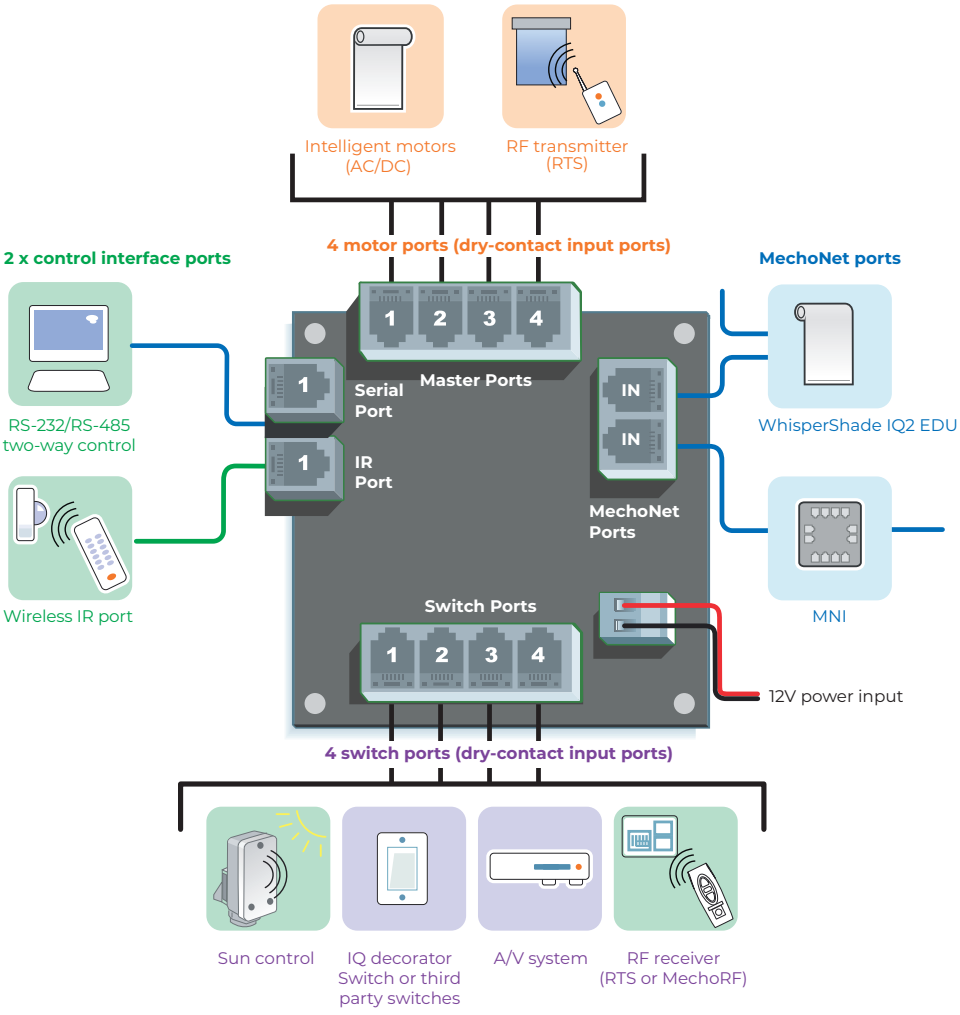
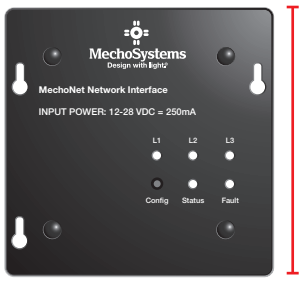
MechoNet™ Network Interface (MNI)

One network. Many devices.



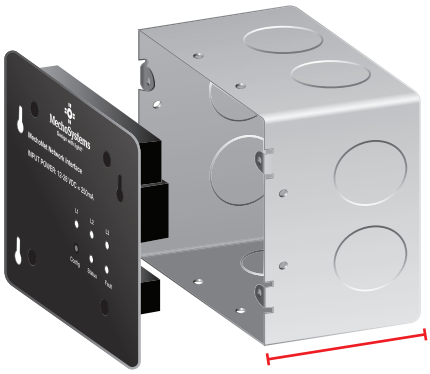
Top view



4¾ in. (120mm)

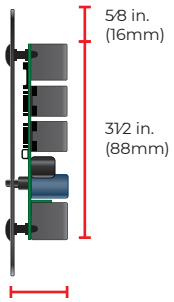
4¾ in. (120mm)

4 11/16 in. (119mm) Junction box angle view



3 in. (76mm)

Side view



5/8 in. (16mm)

3 1/2 in. (88mm)

1 in. (25mm)

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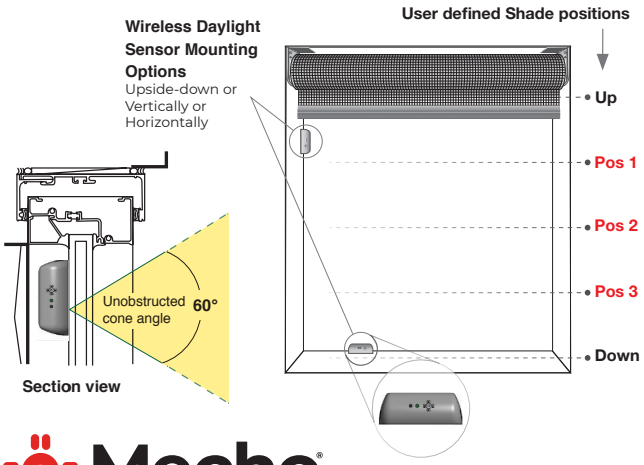
MechoNet™ WDS and Controller

No wires. No batteries. No complications.

MechoSystems' Wireless Daylight Sensor with EnOcean® wireless technology monitors daylight coming through the curtainwall without the clutter and hassle of managing cables and batteries. This sustainable solution harvests energy from the sun to power its ultra-low energy internal electronics. The controller sits on the bi-directional MechoNet communication network.

Features and benefits:

- EnOcean wireless technology.
- Controller automates 2, 3, 4 or 5 customizable stop positions.
- Each controller manages up to 16 EnOcean devices.
- Form factor: sensor nests against the mullion and is less obtrusive than a round sensor.
- Monitors daylight coming through the curtainwall.
- Sensor supports a photopic response which is sensitive to human comfort.
- Sensor requires no wires, no batteries.
- WDS is solar-powered photovoltaic (PV).
- WDS automatically converts light to energy for power.
- WDS is able to withstand millions of recharges.
- The sensor has ultra-low power requirements with reliable EnOcean-based, 2-way wireless messaging.
- Peel-and-stick sensor mounts horizontally, vertically, and upside-down on the mullion, without any screws.
- The sensor is available in white, gray, and black.
- The controller supports a night mode position allowing customized shade positions when lux levels dip below a predefined value.
- Override capability with timed automation mode return.



Applications:

- Automated shade positioning with user defined intermediate stop points based on adjustable brightness thresholds.
- Integrated window-covering, lighting, and HVAC control.
- Scalable daylight measuring of motorized window coverings to optimize comfort, views, and energy conservation.
- Stand alone system or relays sensor data up to SolarTrac® to provide local brightness control in support of whole-building automation.
- Daylight harvesting and code compliance. (e.g. LEED®, ASHRAE 90.1-2010, Title 24-2013, IECC2012, IgCC 2012)
- Targets new construction, renovation or retrofit applications for home or building control.

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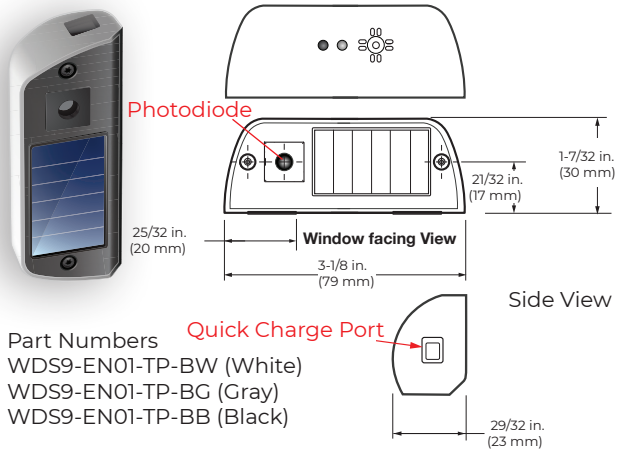
MechoNet™ WDS and Controller

No wires. No batteries. No complications.

Wireless Daylight Sensor

Mounts in any direction, unobtrusively, on the mullion

Dimensions



Part Numbers
WDS9-EN01-TP-BW (White)
WDS9-EN01-TP-BG (Gray)
WDS9-EN01-TP-BB (Black)

Specifications

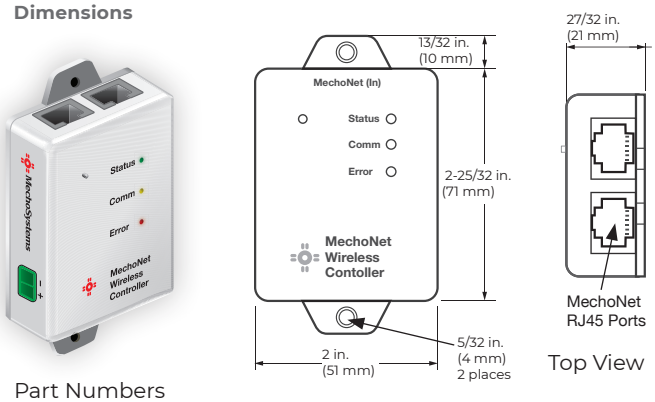
Size	3.1 in. L x 1.2 in. H x 0.9 in. D
Color	White, Gray, Black
Power	Low light solar power (PV)
Wiring	Wireless
Frequency	902 MHz, EnOcean
EnOcean Equipment Profile	A5-06-04 For Curtainwall Brightness Sensor
Wireless Range*	Maximum 80 ft. (24 m) unobstructed
Certifications	FCC part 15 Class B Compliant
Temperature	32–140°F (0–60°C)
Photosensor	Daylight spectrum, photopic
Sensitivity	0–65 klux
Photosensor FOV	Horizontal: 60 degree cone angle Up: 30 degrees; Down: 30 degrees

* Wireless signals may be impacted by metal columns, mullions, or other structures typically used in and around the curtainwall. As such, the Wireless Rocker Switch should be located as close as possible to the MechoNet Wireless Controller. For optimal performance, up to 25 ft. (8 m) is the recommended range.

MechoNet Wireless Controller

Mounts out of sight

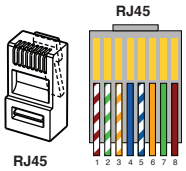
Dimensions



Part Numbers
MWC9-EN01-PP-WH (Pre-programmed)
MWC9-EN01-TP-WH

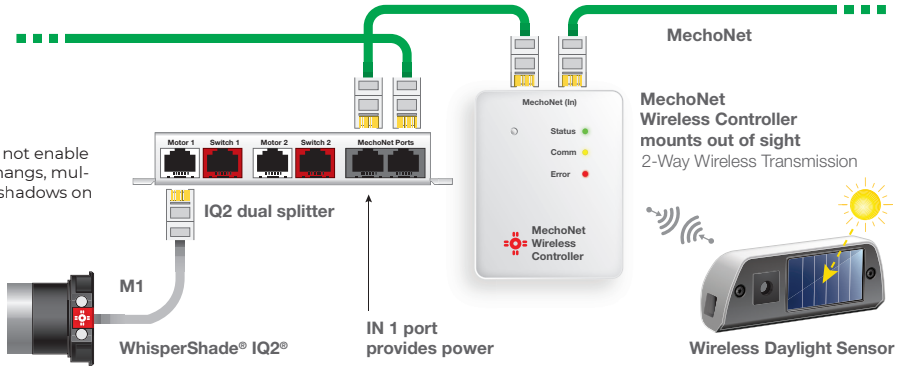
Specifications

Size	3.6 in. L x 2.4 in. H x 0.9 in. D
Color	White
Power	12–28 VDC, 100 mA, powered by MechoNet or separate power supply
Wiring	MechoNet: Cat-5/6. RJ45, 4000 ft. (1,219 m) total. 250 devices max.
Frequency	902 MHz, EnOcean
Wireless Range*	Maximum 80 ft. (24 m) unobstructed
Certifications	FCC part 15 Class B Compliant
Controls	Up to 16 Sensors or other EnOcean devices



CAT5/6 USOC Crimp		
Pin 1	Brown/White	MechoNet—Net A (NET A)
Pin 2	Green/White	Power—Motor/Controller (PWR)
Pin 3	Orange/White	Common (COM)
Pin 4	Blue	Power—Bus Supply (V+)
Pin 5	Blue/White	Common (COM)
Pin 6	Orange	Power—Bus Supply (V+)
Pin 7	Green	Common (COM)
Pin 8	Brown	MechoNet—Net B (NET B)

⚠ Make sure the mounting location does not enable building and glazing features like overhangs, mullions, louvers, or frit to obstruct or cast shadows on the sensor's field of view.



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Commercial Shade Cloth Disinfecting Information

Collection	Series	Hydrogen Peroxide	Hydrogen Peroxide / Peracetic Acid Combination	Quaternary Ammonium Compounds	Phenolic Based	Chlorine Based
AcoustiVeil	0890	approved	approved	approved	approved	approved
EcoVeil Screens	0950, 1350, 1550	approved	approved	approved	approved	approved
EcoVeil Sheer	6750, 6850	approved	approved	approved	approved	approved
EuroTwill	6000, 6200, 6450	approved	approved	approved	approved	approved
SoHo	1100, 1600, 1900	approved	approved	approved		approved
ThermoVeil	0900, 1000	approved	approved	approved	approved	approved
ThermoVeil	1300, 1500, 1700, 2100	approved		approved	approved	approved
Chelsea Blackout	0250	approved		approved	approved	approved
Classic Blackout	0700	approved		approved	approved	approved
Distinctive Blackout	0800	approved	approved	approved	approved	approved
Equinox Blackout	0100	approved		approved		approved

Testing by SGS GovMark
BIFMA HCF 8.1-2014 standard
(https://cdn.ymaws.com/www.bifma.org/resource/resmgr/standards/BIFMA_CleanGuide_6Oct14.pdf)

Disinfecting Chemicals are approved by the EPA for use against COVID-19
(https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19)

Disinfecting Chemical Names	Common Brands	Concentration
Hydrogen Peroxide	Oxivir Plus	Ready to Use
Hydrogen Peroxide / Peracetic Acid Combination	Compliance™	Ready to Use
Quaternary Ammonium Compounds	Virex	1/2 oz/Gallon
Phenolic Based	Wexcide 129	1 oz/Gallon
Chlorine Based	Oxine	1.28 oz/Gallon

NOTE: *Using non-approved or abrasive cleaning agents or methods, may result in damage to the shade. Damage caused by the use of non-approved cleaning agents or methods not listed in this document are not covered under the Mecho warranty. Please contact your customer service team member with any questions.*

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Room Darkening Channels

Guidelines and Limitations

Product	Colors
Insert guide for room-darkening channel	Black / Quaker Bronze / White
MechoShade® single channel 1-5/16 in. (33 mm) wide	Black / Clear / Quaker Bronze / White
MechoShade®/ ElectroShade® double channel 2-5/8 in. (66 mm) wide	Black / Clear / Quaker Bronze / White
ElectroShade® single channel 2-1/2 in. (63 mm) wide	Black / Clear / Quaker Bronze / White
ElectroShade® double channel 5 in.	Black / Clear / Quaker Bronze / White

MechoShade® single shade room-darkening-channel recommendations per shade band

1-5/16 in. (33 mm) MechoShade® single side channel at the drive-end or idle-end brackets

- With battens: Up to max. 10 ft. (304 cm) wide and/or max. 8 ft. (243 cm) high
- Without battens: Up to max. 7 ft. (213 cm) wide and/or max. 8 ft. (243 cm) high
- Where conditions exceed the above, use D–2.5 in. (63 mm) ElectroShade® single channel.

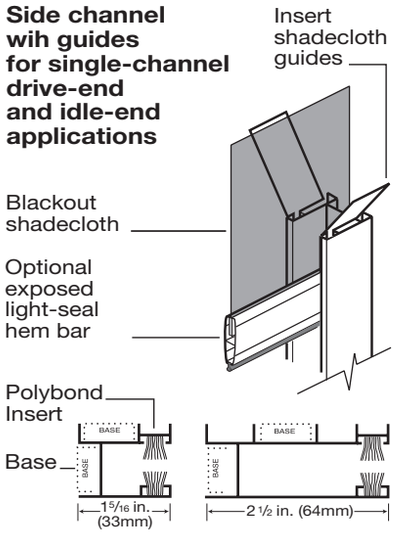
2-5/8 in. (67mm) MechoShade® double channel for the drive-end or idle-end bracket

- Without battens: Up to max. 7 ft. (213 cm) wide and/or max. 8 ft. (243 cm) high
- Where conditions exceed the above, use E–5 in. (127 mm) ElectroShade® double channel.

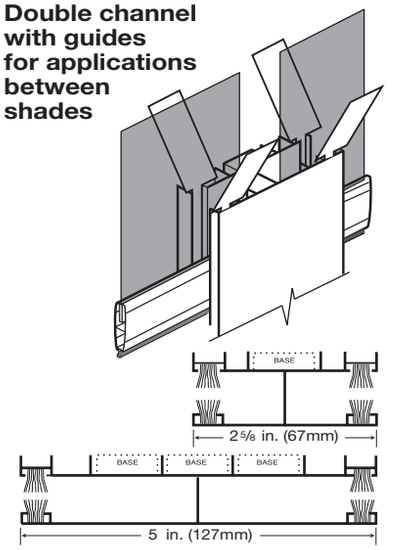
2-5/8 in. (67mm) MechoShade® double channel at the center support bracket.

- With battens: Up to max. 10 ft. (304 cm) wide and/or max. 15 ft. (457 cm) high
- Without battens: Up to max. 7 ft. (213 cm) wide and/or max. 15 ft. (457 cm) high
- Where conditions exceed the above, use F–5 in. (127 mm) ElectroShade® double channel.

Side channel wih guides for single-channel drive-end and idle-end applications



Double channel with guides for applications between shades



Note: Overall band limitations are either 15 ft. (457 cm) wide x 21 ft. (640 cm) high or the maximum sizes above, whichever is less. When evaluating a multi-banded shade, the widest shade band shall dictate the channels forz all shades. Sufficient room return air is required inside the line of the shades so that air pressure will be eliminated when doors are opened or closed. Battens may be needed in order to retain the shades in the side channel. Side channels have not been designed to resist the increased negative and/or positive air pressure, such as when doors are opened or closed. Channels must be installed in the vertical position (90° to horizontal).

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Room Darkening Channels

Guidelines and Limitations

Product	Colors
Insert guide for room-darkening channel	Black / Quaker Bronze / White
MechoShade® single channel 1-5/16 in. (33 mm) wide	Black / Clear / Quaker Bronze / White
MechoShade®/ ElectroShade® double channel 2-5/8 in. (66 mm) wide	Black / Clear / Quaker Bronze / White
ElectroShade® single channel 2-1/2 in. (63 mm) wide	Black / Clear / Quaker Bronze / White
ElectroShade® double channel 5 in.	Black / Clear / Quaker Bronze / White

ElectroShade® single and DoubleShade® room-darkening-channel recommendations per shade band

2-1/2 in. (64 mm) ElectroShade® single side channel at drive or idle-end brackets

- With or without battens: Up to max. 15 ft. (457 cm) wide and/or max. 21 ft. (640 cm) high
- Where conditions exceed the above, call MechoShade Systems Customer Service.

5 in. (127 mm) ElectroShade® double channel used with drive-end or idle-end brackets:

- With or without battens: Up to a max. 15 ft. (457 cm) wide and/or max. 21 ft. (640 cm) high
- Where conditions exceed the above, call MechoShade Systems Customer Service.

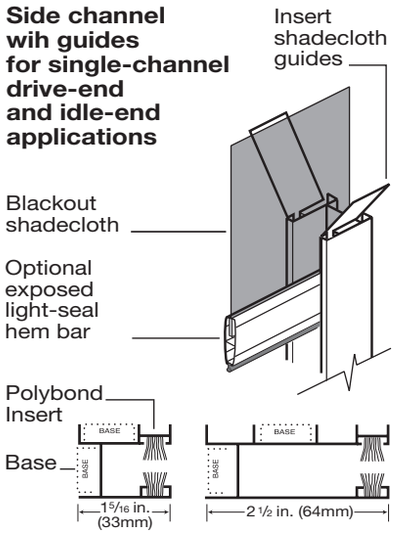
5 in. (127mm) Electro double channel at center support brackets: With or Without Battens: Up to a max. width of 15 ft. (457 cm) and/or max. height of 21 ft. (640 cm)

Special field conditions ONLY: (single and DoubleShade®)

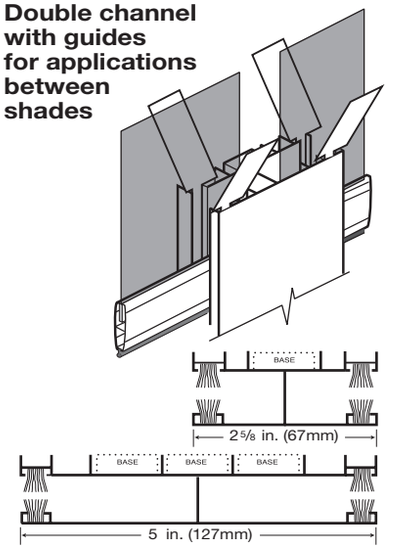
2-5/8 in. (67 mm) MechoShade®/ElectroShade® double channel at center support brackets

- With battens: Up to max. 10 ft. (304 cm) wide and/or max. 15 ft. (457 cm) high
- Without battens: Up to max. 7 ft. (213 cm) wide and/or max. 15 ft. (457 cm) high
- Where conditions exceed the above, call MechoShade Customer Service.

Side channel wih guides for single-channel drive-end and idle-end applications



Double channel with guides for applications between shades



Note: Overall band limitations are either 15 ft. (457 cm) wide x 21 ft. (640 cm) high or the maximum sizes above, whichever is less. When evaluating a multi-banded shade, the widest shade band shall dictate the channels forz all shades. Sufficient room return air is required inside the line of the shades so that air pressure will be eliminated when doors are opened or closed. Battens may be needed in order to retain the shades in the side channel. Side channels have not been designed to resist the increased negative and/or positive air pressure, such as when doors are opened or closed. Channels must be installed in the vertical position (90° to horizontal).

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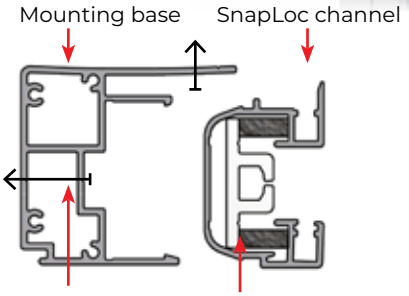
ShadeLoc® System

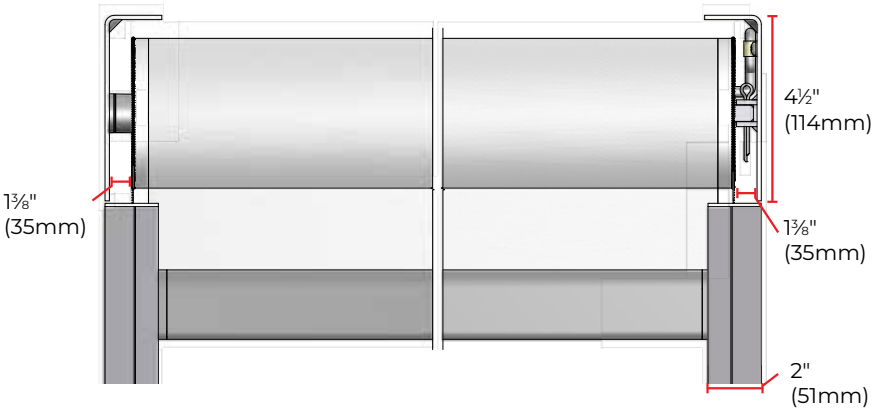
Unflappable.

ShadeLoc is a specialized side-channel assembly that captures the zippered edges of a shade band. It provides solar-shading, room-darkening, or both solutions in one installation.

The zippered shade band glides smoothly but securely within the side channels as it is raised or lowered.

This design configuration eliminates light gaps between the shadecloth and the channel. The design stabilizes the shadecloth and helps the shade bands resist impacts and stay put when room air pressure builds up. Tall, narrow shades will track better, and the need for exposed hardware (such as guide cables) will be minimized.





Key features:

- Shade bands that lock into side and center channels.
- Impact resistance.
- Tall shades that track better.
- No light gaps.
- Superior room darkening.
- Single and DoubleShade® center channels for multibanding.
- Low future maintenance costs.
- Concealed fasteners.
- Surface or jamb mounting.
- Surface or jamb mounting.
- Available with Electro®/2 SL (shown) and Electro®/1 SL brackets.
- Available colors: White(WH), Black(BK), Quaker Bronze(QB), and Clear Anodized(CA)

Bracket options	Example Shadecloth	Max. width	Max. height*
Electro/1 SL and Electro/2 SL (3.5 in./89mm tube)	0700 Series	16.5 ft. (5.03m)	13 ft. (3.96m)
	1300 Series	17 ft. (5.18m)	7 ft. (2.13m)
	6000 Series	17 ft. (5.18m)	9 ft. (2.74m)
Electro/2 Extended (3.5 in./89mm tube)	0700 Series	16 ft. (4.88m)	23 ft. (7.01m)
	1300 Series	16 ft. (4.88m)	22 ft. (6.71m)
	6000 Series	16 ft. (4.88m)	23 ft. (7.01m)
Electro/SL Double (3.5 in./89mm tube)	0700 Series	16 ft. (4.88m)	23 ft. (7.01m)
	1300 Series	17 ft. (5.18m)	12 ft. (3.66m)
	6000 Series	17 ft. (5.18m)	15.5 ft. (4.72m)

*Check with technical support for shades above 23 ft. (7.01m)

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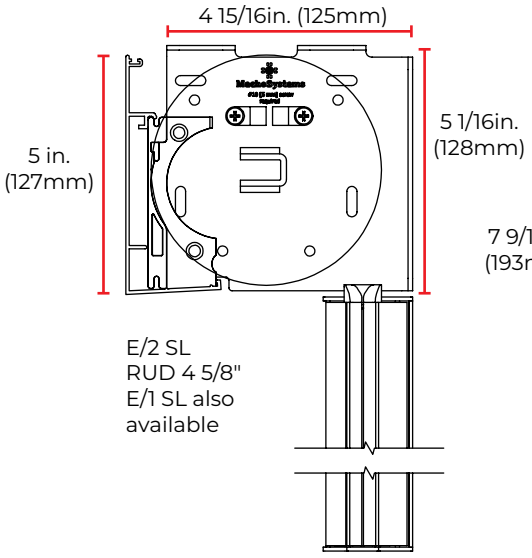
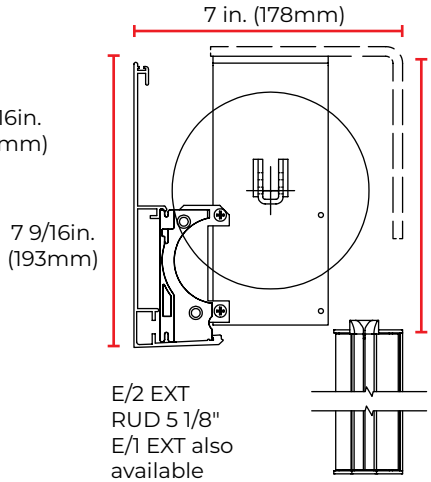
ShadeLoc® System

Unflappable.

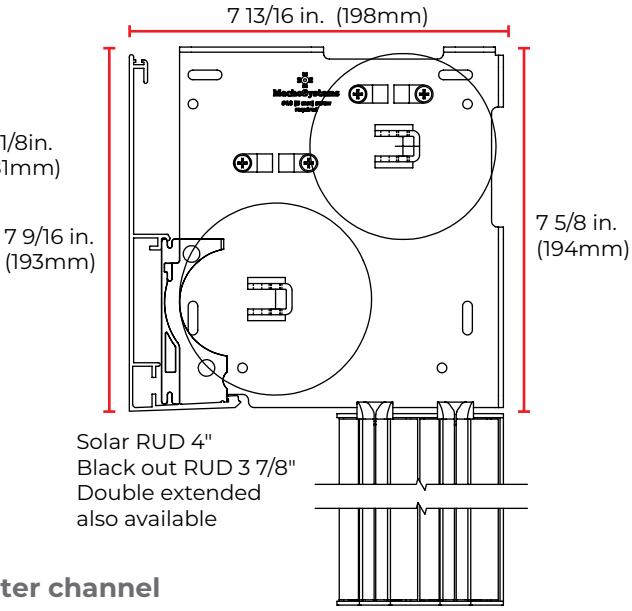
Electro®/2 SL



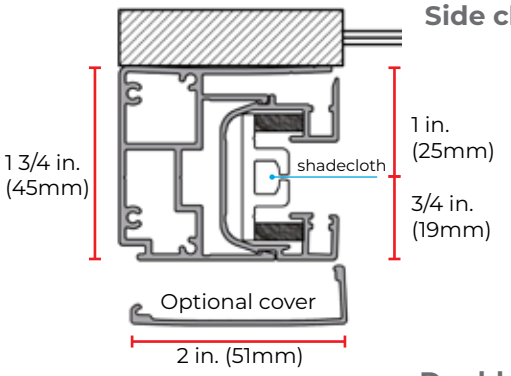
Electro®/2 Extended



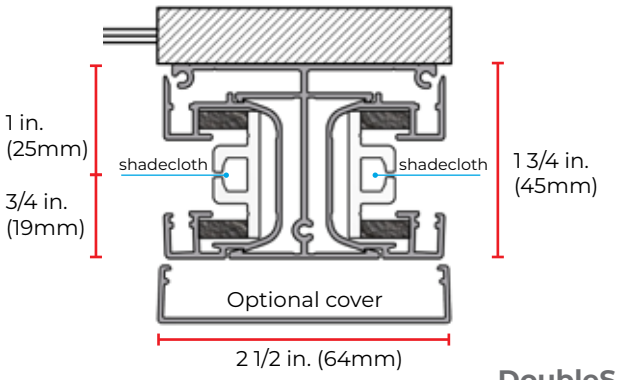
Electro®/SL Double



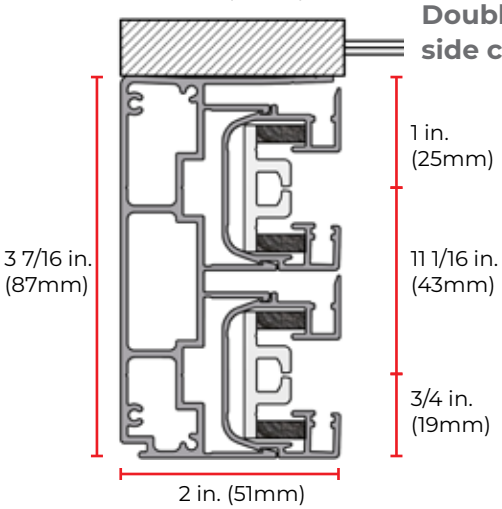
Side channel



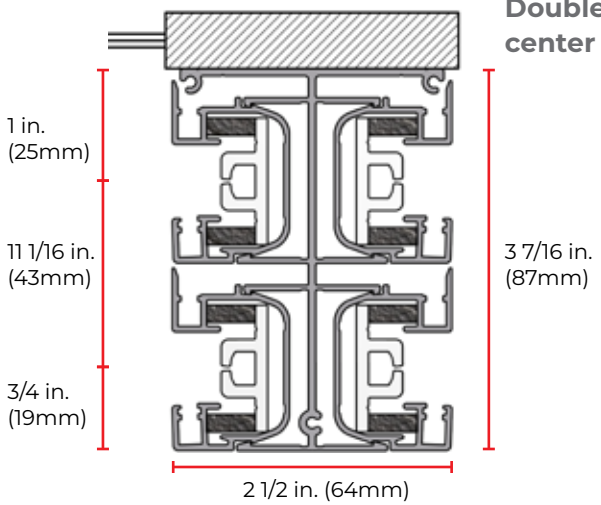
Center channel



DoubleShade side channel



DoubleShade center channel



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SolarEvaluation™

1 Solar Monitoring—SolarEvaluation

A successful, automated WindowManagement® control system requires a detailed view and analysis of the current sky on a minute-by-minute basis. The most successful systems have the ability to predict in real time the position of the sun in the sky, from sunrise to sunset, and the position of the solar ray at any point on earth or building facade. They also have, to some extent, the ability to anticipate the changing sky conditions surrounding the building under consideration. Finally, a successful system must have complete information about the current sky conditions surrounding the building.

Precise sky monitoring should not result in excessive shade or louver positioning. Hysteresis and user-defined threshold timers prevent over-reactive and distracting window-shade movement, as ever-changing sky conditions and the position and intensity of the solar ray continue being tracked in real time.

New systems in development will increase the predictive accuracy of a building's sky condition.

1.1 Solar Monitoring Systems

Two solar-monitoring methods are currently in use:
1. SolarEvaluation, which utilizes total-solar radiometers that measure +/-98% of solar radiation.
2. Daylight Measuring, which uses photometers (also called photosensors, lux sensors, or daylight sensors) that measure only the visible-light portion of the solar spectrum or 49% of total solar radiation.

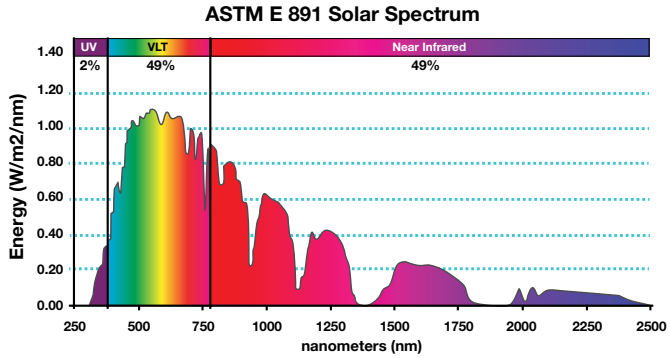
1.1.1 Radiometer and Photometer: The Difference

A radiometer measures the total ultraviolet (UV), visible light (VL), and heat (IR) portion of the solar spectrum from 0.25 to 43.0 microns, representing the light and heat that affect a building and 98% of the sun's radiant energy. According to the ASTM solar spectrum charts and graphs (see below), the measured energy of the VL (daylight) portion of the solar spectrum—that portion measured by a photometer—is approximately 49% of the total solar-energy spectrum of the sun. The solar energy measured by a radiometer represents approximately 98% of the total solar-energy spectrum of the sun.

A photometer measures the VL portion of the solar spectrum from 0.4 to 0.7 microns, 21% of UV, and 49% of the total radiation of the solar spectrum.

An effective automated system must compare a building's measured, microclimatic radiation with the ASHRAE clear-sky radiation (energy-value) curve to accurately evaluate the current sky and determine if a clear or cloudy condition exists. Another aspect is that, in most climates, there are intermittently alternating cloudy and clear conditions. The system must evaluate these clear and cloudy conditions to determine if the system should adjust to a clear or cloudy condition.

Mechos' SolarEvaluation process analyzes real-time sky data against ASHRAE's clear-sky model to provide solar protection or window-covering adjustments.



Energy Distrubition - Total Solar
UV - 2%
VLT - 49%
IR - 49%
VLT + IR = 98%

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SolarLinc™

Plug-n-play System for Touchless Room Automation

Mecho's shade automation solution scaled to bring flexibility and affordability to smaller projects like lobbies, foyers, single floor façade or even a few rooms.

Enabling a touch-free shade positioning experience, shades move according to outside conditions. Shades can also be set to move according to vacancy in the room, maintaining privacy. The possibilities are endless with this easy-to-install automation system.

High Performance

Control your shades with up to five custom positions based on brightness levels or occupancy.

Easy, Flexible Installation

With the controller connecting directly to the shade motors and sensors being wireless - you can easily install and change your automation system as your room layout or needs change.

Maintenance-Free

Mecho daylight sensors and occupancy sensors operate on sunlight, without the need to change batteries - ever.

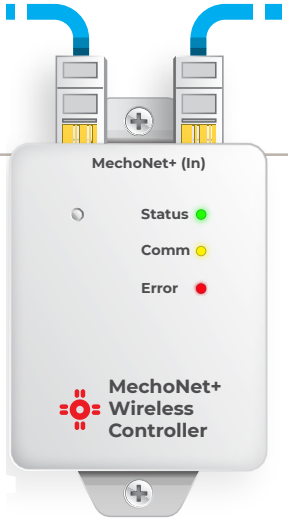
What's in the System

Sensors connect wirelessly to the Controller, and are solar powered.

Daylight Sensor
Monitors outside conditions

Occupancy Sensor
Monitors room occupancy state

At Least One Required



MechoNet+ Wireless Controller
Mounts out of sight, and controls to up-to 16 unique devices

Required

Wireless Keypads
- Paddle EnOcean
- Mecho IQ Deoflex

Override Control

Mecho
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SolarLinc™ Quick Start Guide

1. Planning

Motors

- Make sure your existing motors are either WhisperShade IQ2+ or IQ2 DC motors. If you are selecting new motors make sure they are either WhisperShade IQ2DC or IQ2+ .

Zones

- Count the zones you need for the project. Visit the SolarLinc product page for a simulation on how zones work.
- Utilize the Order Planning Sheet on the SolarLinc landing page to plan for components needed.

2. Set-Up

- Connect your MechoNet+ Wireless Controller to the network line through the splitter IN1 port.
- Pair your MechoNet+ Wireless Controller to you sensors by pressing the "pair" button on the controller and the "discovery" button on the sensor.
- Verify a successful connection by pressing the "discovery" button on the sensor 3 times. If paired correctly your shade will "wink".
- Mount the sensor using the provided sticky tape on the back of the sensors.
- Set-up steps are also shown in our Wireless Controls Quick-Tip video: mechoshade.com/webinars/#tip

3. Adjust Settings

- Use the MPS software to change Lux values settings of the daylight sensor.

LEARN MORE

mechoshade.com/solarlinc

A group of motors that moves according to set conditions is called a zone.

Note

For retrofit projects, it is recommended to keep existing zones to avoid re-wiring of motors

Note

Use at least 1 sensor per zone

Note

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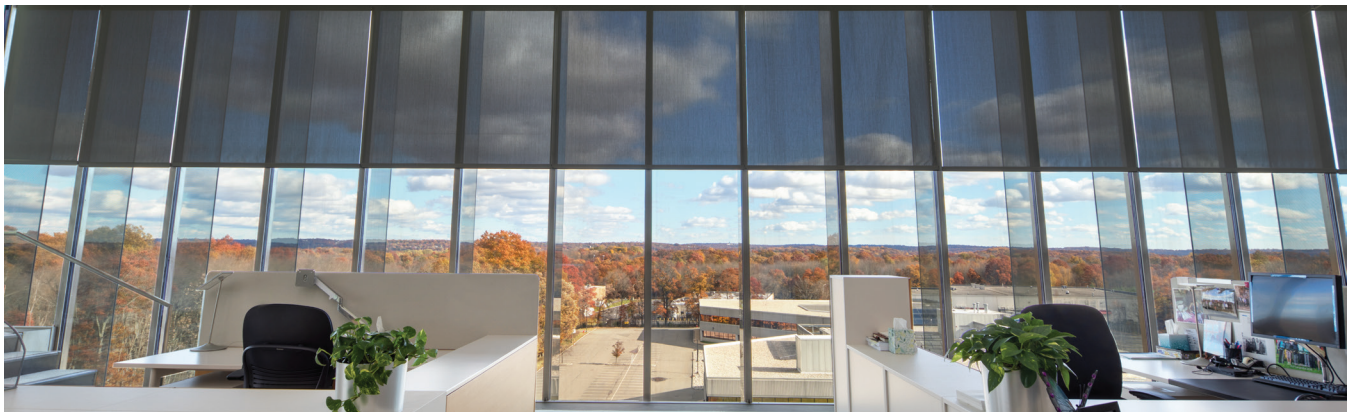
SolarTrac 4.0®

The Pinnacle of Solar Management for Optimum Performance



Mecho's state-of-the-art automated shading system has been enhanced to make shade automation easier and more efficient than ever. Designed to maximize the natural daylight in your building, increase energy efficiency across multiple glass facades, ensure occupant comfort and performance, and improve building energy management—all while preserving valuable views to the outside.

Features

- SolarTrac 4.0 adjusts shades based on proprietary algorithms that precisely predict the sun's position based on date, time, building GPS location, and glass façade orientation
- Rooftop radiometers assist to determine real-time sky conditions to adjust shades accordingly
- Precise daylight harvesting saving up to 70% in lighting costs
- Reduce solar-heat gain, which decreases demands on HVAC systems
- Alleviate solar glare to create a more comfortable, productive environment for building occupants
- SolarTrac 4.0 shade automation can help contribute to your building's LEED and WELL certification

Innovative, Technology-Driven Performance

- Self-diagnostics to alert you to potential maintenance needs
- SolarTrac 4.0 is PC-based supporting smart phone access and allowing up to 100 simultaneous users

Precise Shading Control through Automation

- SolarTrac 4.0 Incorporates an open BACNet certified system that works with all major building automation systems for peak building efficiency
- Manage 1,000 or more shade zones, with continuous minute/day/year analysis to control a comprehensive automated shading system for the entire project no matter the size
- Allows for manual override in any individual shade or shade zone based on occupant comfort preferences

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SolarTrac 4.0®

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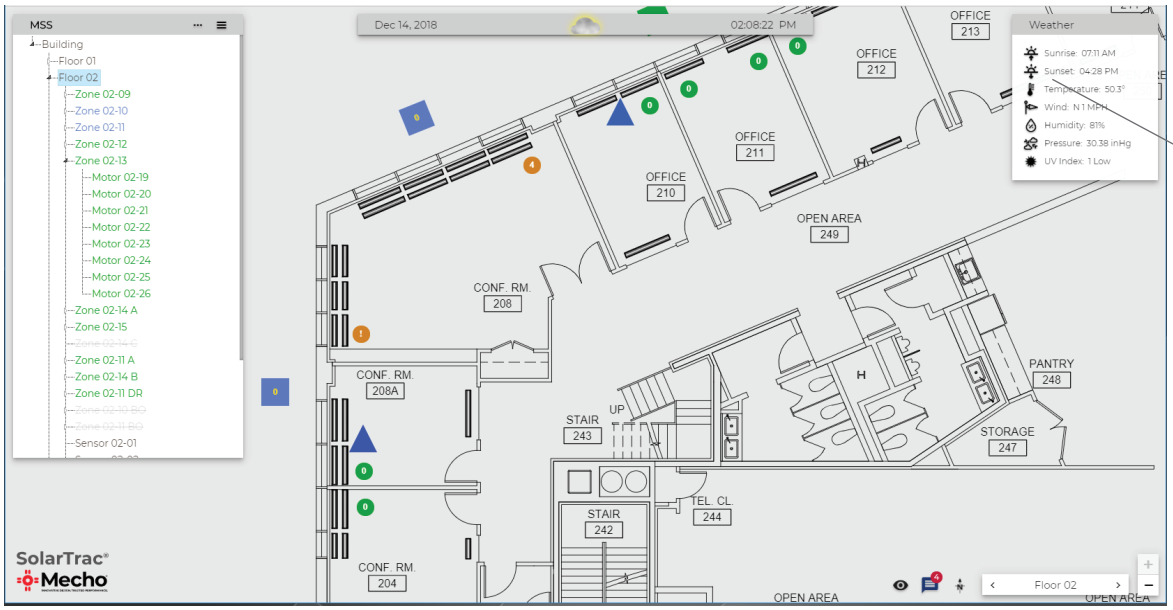

New user-friendly and intuitive icons

SolarTrac Browser Interface

- Navigate between floors, zones and shade motors to check status and override position when required.
- Interactive floor plan provides intuitive graphical access to zones and motors on each floor.
- Setup key zones for quick access viewing and service from the home screen.
- Customize configuration settings for zones and motors.
- Setup users and define access permissions and passwords.

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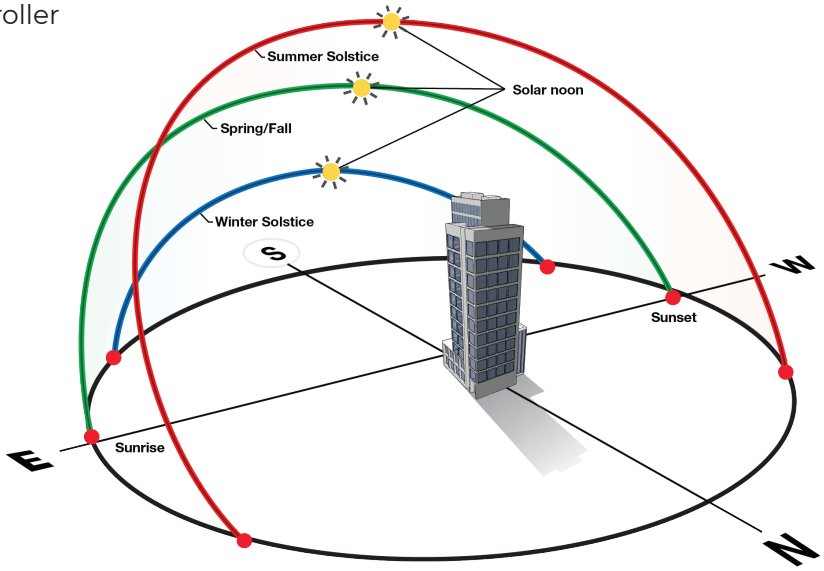
SolarTrac®

The ultimate WindowManagement® control system

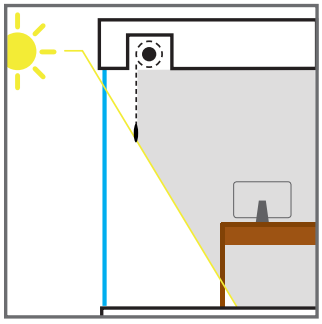
An intelligent controller that:

- Automatically and incrementally adjusts roller shades and other window treatments.
- Calculates sun angles and BTU loads on every inch of glass.
- Evaluates real-time sky conditions on a minute-by-minute basis.
- Minimizes solar-heat gain.
- Optimizes natural light and avoids glare.
- Interacts with lighting and HVAC.
- Maximizes views to the outside.
- Promotes wellness
- Fosters sustainability
- Offers optional Brightness-Override, Shadow-Override, and Reflective Modules for greater optimization.
- Facilitates peak-demand load-shedding strategies

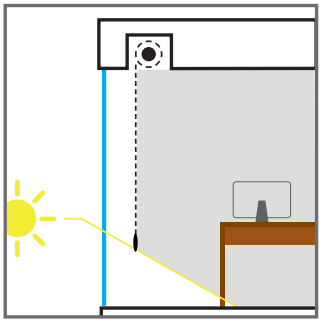


This representation shows the dynamic sun and how its light impacts a building. SolarTrac calculates and matches the ASHRAE Clear-Sky model to effectively adjust shades.

Allowable Solar Penetration

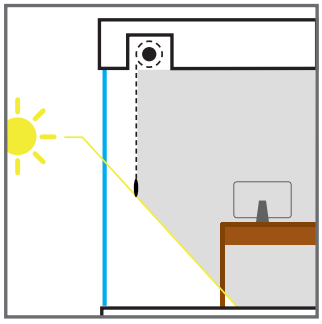


June 21
Shadecloth Position: 1



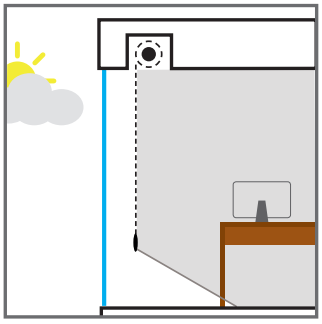
December 21
Shadecloth Position: 3

Peak solar altitudes during the year on the south elevation, 40° north latitude. SolarTrac system preset to five or more positions plus user-defined solar penetration (3 ft./91cm shown here).



March 21 / September 21
Shadecloth Position: 2

Pre-defined shade position is set for the sun angle in the spring or the fall at 5 ft./152cm.



Overcast Sky
Shadecloth Position: 3

In the glare mode, the shade provides protection from the glare of a bright sky while offering a view to the outside.

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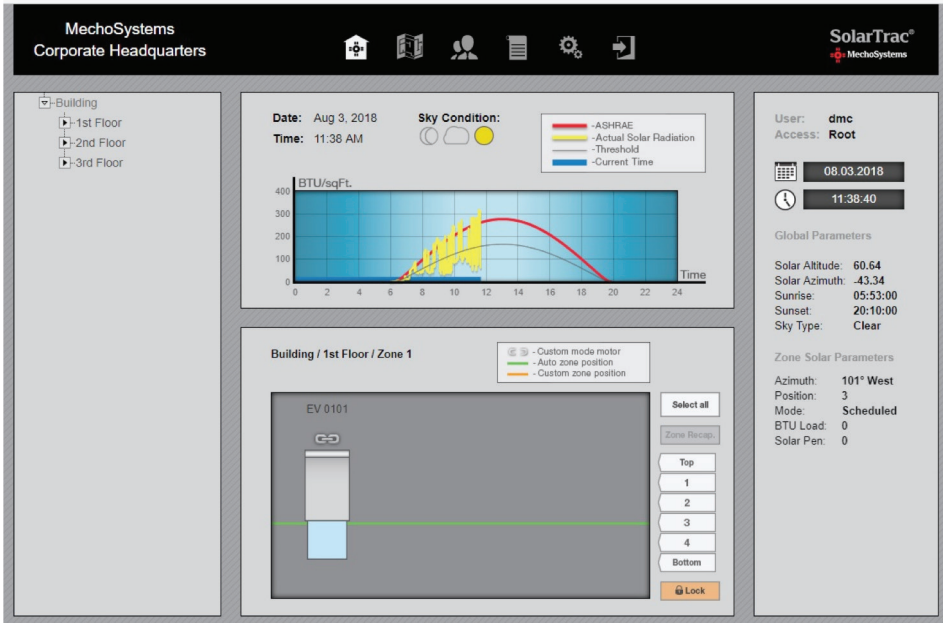
SolarTrac®

The ultimate WindowManagement® control system



SolarTrac Browser Interface

- Navigate between floors, zones and shade motors to check status and override position when required.
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SunDialer®

The economical WindowManagement® system

The intelligent controller:

- Tracks the sun and adjusts shade positions automatically based on the profile angle of the sun, allowable solar penetration from the plane of the window and sky conditions.
- Monitors real-time sky conditions over the course of the year using solar radiometers.
- Controls up to 12 zones.
- Uses window geometry and window orientation for each control zone for calculating a user-adjustable solar-penetration threshold.
- Includes an event scheduler for weekly, bi-weekly, monthly, bi-monthly, or additional timed settings.
- Data log records automation and network commands for reporting, fine tuning and troubleshooting.
- Is designed for small-scale and retrofitted projects for cost-effective solar control.

SunDialer IP Interface provides Ethernet access and a browser interface for SunDialer projects. One required (minimum) per system for remote Internet support.

Solar radiometer

12-zone SunDialer IQ® with sensor ports and SunDialer IP Interface
One IP Interface required per system

12-zone SunDialer IQ without sensor ports May be ganged for additional zones—up to four units for 48 zones

IQ Gateway supports communication between the riser and MechoNet® floor network for SolarTrac® projects

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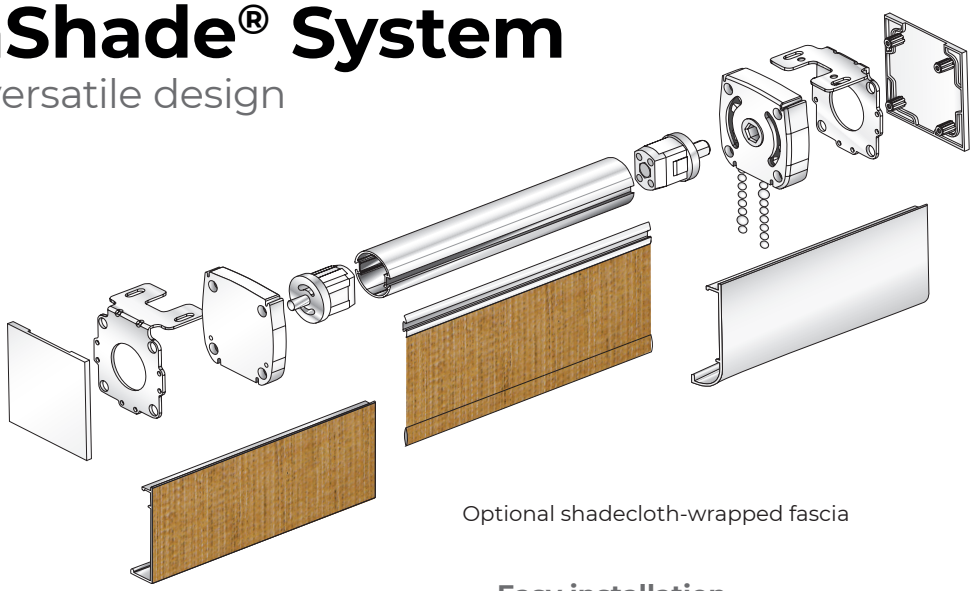
UrbanShade® System

Compact, versatile design



Optional shadecloth-wrapped fascia

Models

- Manual—smooth operation with a continuous bead chain
- Motorized—battery-powered with RTS wireless remote control
- Motorized—low voltage with wireless RTS dry-contact or RS485 network motors

Economical

- Cost effective—competitively priced

Reliability

- Sturdy—heavy-duty steel support brackets with ultra-durable composite housing
- Powerful—allows for shades up to 10 ft. (305cm) high
- Reliable—ten-year non-depreciating warranty

Design attributes

- Versatile—integrated, interchangeable components
- Flexible—universal mounting brackets for easy on-site reconfiguration
- Compact—small edge clearance to reduce light leaks
- Sleek—refined, unobtrusive profile

Easy installation

- Innovative—universal mounting brackets (wall, ceiling, or jamb)
- Adaptable—interchangeable left- and right-drive brackets
- Efficient—optional prefabricated cassette for fast installation
- Manageable—SnapLoc® mini-spline enables easy shadecloth removal and maintenance

Controls

- Simple—manual hand-operated continuous bead chain
- Interoperative—optional wireless RF/RTS or hard-wired low-voltage control
- Direct—optional dry-contact daisy-chained switch control
- Network—optional RS485 network control using MechoNet De Hub

Options

- Decorative—SnapLoc fascia as square or radius, continuous or captured, and baked-enamel finish or shadecloth-wrapped
- Room darkening—side and sill channels
- Functional—Lift-Assist Mechanism (LAM) for heavy manual shades

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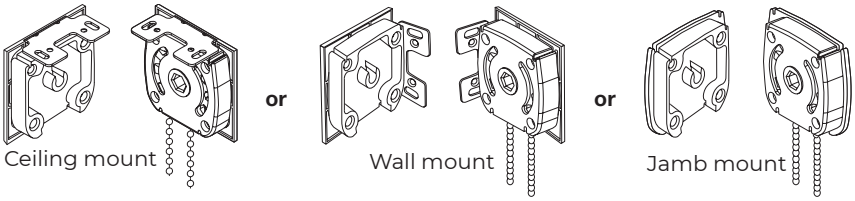
UrbanShade® System

Manual UrbanShade System

Standard shade prices include:

One pair of universal UrbanShade brackets, chain, chain retainer, shadecloth with shadecloth-covered hem bar, SnapLoc spline, and a 1.25 in. (3.18cm) or 1.375 in. (3.5cm) SnapLoc tube. Shadecloths that are railroaded are turned width for height.

Universal mounting



Standard components

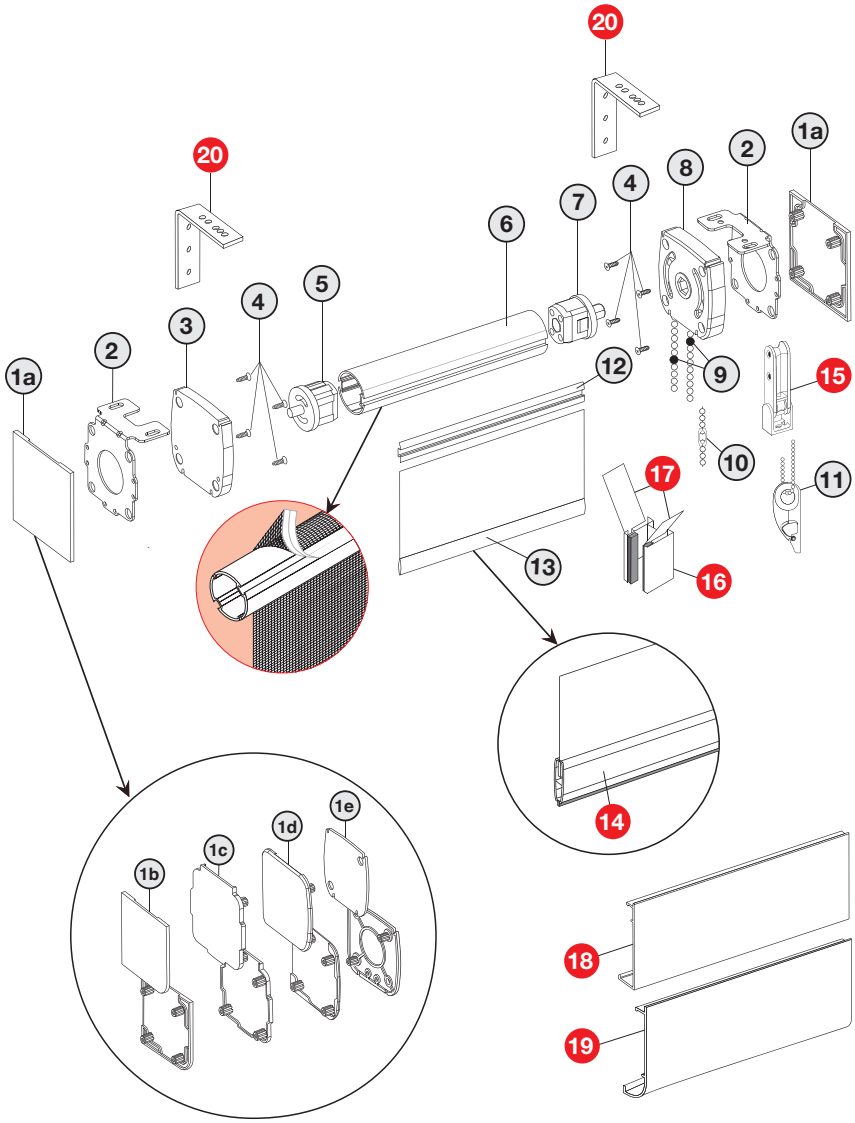
End Plate options:

1a Square Fascia Captured End Plate
1b Round Fascia Captured End Plate
1c Universal Continuous Backplate (square or round fascia)
1d No-Fascia Backplate
1e Universal Jamb-Mount Continuous End Plate (Square or Round Fascia)
2 Concealed Steel Mounting Plate
3 Idle-End Housing
4 Screws
5 Idle-End Tube Plug or LAM, if required (not shown)
6 SnapLoc Tube
7 Drive-End Tube Plug
8 Drive-End Housing for manual shades
9 Upper and Lower Bead Chain Stops for manual shades
10 Bead Chain Connector
11 Chain retainer
12 SnapLoc Mini–Spline
13 Standard Light-Seal Hem Bar

Optional accessories

14 Exposed Hem Bar with Light Seal
15 Spring-Loaded Tension Pulley Chain Retainer for manual shades
16 Room-Darkening Side Channel (single)
17 Room-Darkening Shadecloth Guides (pair)
18 SnapLoc Regular-Roll Fascia—square
19 SnapLoc Regular-Roll Fascia—radius
20 Wall-Mount Extension Bracket

Manual UrbanShade System exploded view



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UrbanShade® System

Motorized UrbanShade System

Standard shade prices include:

One pair of universal UrbanShade brackets, shadecloth with shadecloth-covered hem bar, battery-powered motor, battery pack, SnapLoc spline, and a 1.375 in. (3.5cm) SnapLoc tube. Railroaded shadecloths are turned width for height.

Standard components

End Plate options:

1a Square Fascia Captured End Plate
Round Fascia Captured End Plate
1b Universal Continuous Backplate—square or round fascia
1c No-Fascia Backplate
1d Universal Jamb-Mount Continuous End Plate—square or round fascia
2 Concealed Steel Mounting Plate
3 Idle-End Housing
4 Screws
5 Idle-End Tube Plug
6 SnapLoc Tube
7 SnapLoc Mini-Spline
8 Hem Bar—standard shadecloth-covered

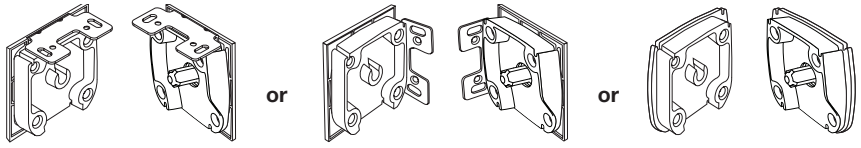
Standard motorized components

9 24V Motor
10 Drive-End Housing for motorized ElectroShades®
11 Motor Spindle
12 Battery Pack

Optional accessories

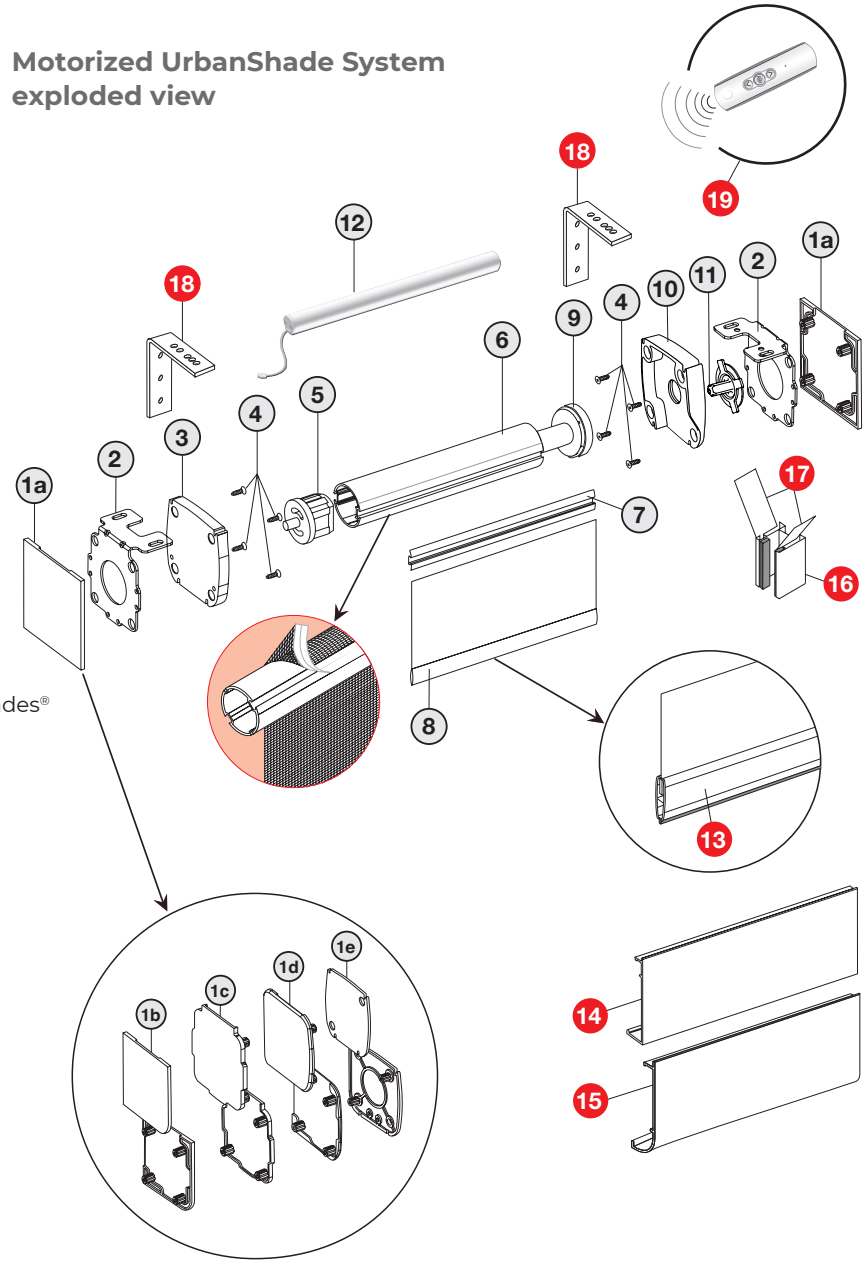
13 Exposed Hem Bar with Light Seal
14 SnapLoc Regular-Roll Fascia—square
15 SnapLoc Regular-Roll Fascia—radius
16 Room-Darkening Side Channel—single
17 Room-Darkening shadecloth Guides—pair
18 Wall-Mount Extension Bracket
19 RTS Wireless Remote

Universal mounting



Ceiling mount or Wall mount or Jamb mount

Motorized UrbanShade System exploded view



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UrbanShade® System

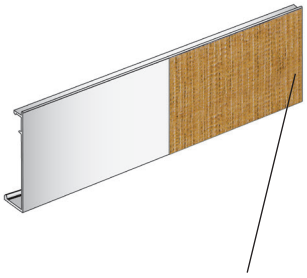
Fascia and specifications

Fascia colors:

- White (WH).
- Colonial White (CW).
- Alabaster (AL).
- Clear Anodized (CA).
- Grey (GR).
- Quaker Bronze (QB).
- Black (BK).

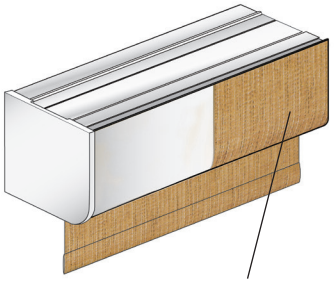
(Shadecloth-wrapped fascia will match shadecloth color, however shadecloth-wrapped end caps are not available)

Square fascia



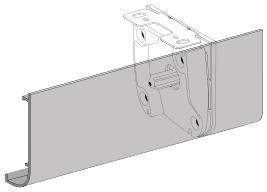
Optional shadecloth-wrapped

Radius fascia

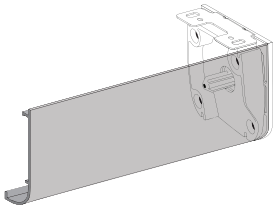


Optional shadecloth-wrapped
(Optional cassette model shown)

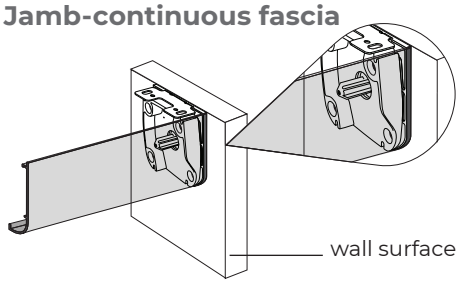
Continuous fascia



Captured fascia



Jamb-continuous fascia



Specifications

Dimensions: mounting brackets	· 2.75 in. (7cm) deep x 2.75 in. (7cm) high	
Mounting	· Wall, ceiling, or jamb mount; reconfigurable on-site; truly universal	
Bracket description	· Heavy-duty, zinc-plated, steel-encased in a high-impact, decorative matte-finish composite housing	
Roll-up diameter (RUD)	· 2.48 in. (63mm) allows shades of up to 10 ft. (305cm) or higher	
Edge Clearances	Manual: · Drive end 0.875 in. (22.2mm) · Idle end 0.688 in. (17.5mm)	Motorized: · Drive end 0.75 in. (19mm) · Idle end 0.688 in. (17.5mm)
Hardware options	· Continuous or captured end caps · Lift-Assist Mechanism (LAM) · Room-Darkening Side and Sill Channels	· Standard Shadecloth-Covered Hem Bar · Optional Universal Exposed Hem Bar
Bracket color options	· White, Grey, or Black	
Fascia profiles	· Square or radius, continuous or captured end plates, baked-enamel finish or shadecloth-wrapped	
Fascia color options	· White (WH), Clear Anodized (CA), Grey (GR), Quaker Bronze (QB), Black (BK), Colonial White (CW), Alabaster (AL)	
Lift capacity (manual shade)	· 11 lbs. (5kg) of shadecloth with Lift-Assist Mechanism (LAM)	
Maximum width, single band	· 96 in. (244cm) wide	
Motorization options	· Battery-powered motor, wireless RTS, lifting capacity is approx. 11 lbs. (5kg) · WhisperShade® low voltage, 2Nm tubular motor, wireless WhisperShade RTS, DCT, and RS-485 lifting capacity approx. 18 lbs. (8.16kg) on 1.56 in. (3.96cm) tube	
Convertible option	· Transforms the manual MechoShade with existing shadecloth and tube and by adding motor and switching, provided 1.56 in. (3.96cm) tube supplied	
DoubleShade® bracket	· Allows for two shade bands—manual or motorized systems—to be used in a low-profile and compact support bracket	
Warranty	· Ten-year non-depreciating warranty on all hardware and shadecloth · Five-year warranty on motors	

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WhisperShade® DC EDU

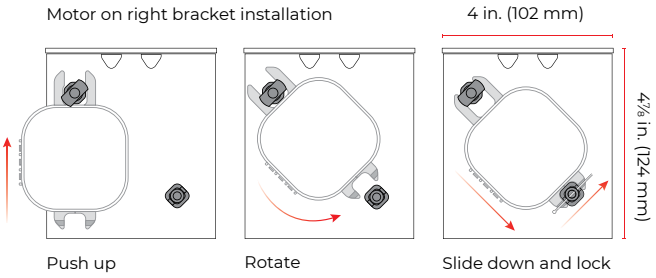
A quiet, low-voltage solution

A whisper-quiet and powerful low-voltage solution operating within the MechoNet™ window-covering control ecosystem, this EDU mounts on a new sound-absorbing bracket and offers customizable preset shade positions and rotation speed.

Electro®/2 DC bracket
Max. RUD: 4¼ in.
Bracket size: 4 x 47⁄8 in. (without fascia clip)

Features

- Industry's longest warranty (10 years), non-depreciating*
- Low-voltage power for simplified wiring (24 VDC)
- Quietest operation on the market (≤ 38 dBA)
- Largest lift capacity in its class, supporting large or multi-banded shades up to 40 lbs. on a 2.2 in. tube.
- Built-in networking capability
- MechoNet integration
- Multiple addresses
- SolarTrac® and SunDialer® automation
- Wireless or hardwired control
- Soft start and stop
- Obstacle detection when raisingthe shade
- 16 preset positions
- Variable speed control
- Minimum shade outside dimension of 333⁄4 in. wide
- For multi-banded applications, Mecho's adjustable shade coupler is included to speed the installation process and ensure precise, even and consistent shade heights and eliminate hembar misalignment.



MechoNet performance

The MechoNet two-way communication network unifies control for all window coverings, line or low voltage, across a project. WhisperShade DC wires to the MechoNet DC Power Station or MechoNet network interface (MNI) DC to support scalable solutions from office to whole-building automation.

* Please see full warranty for details.

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WhisperShade® DC EDU

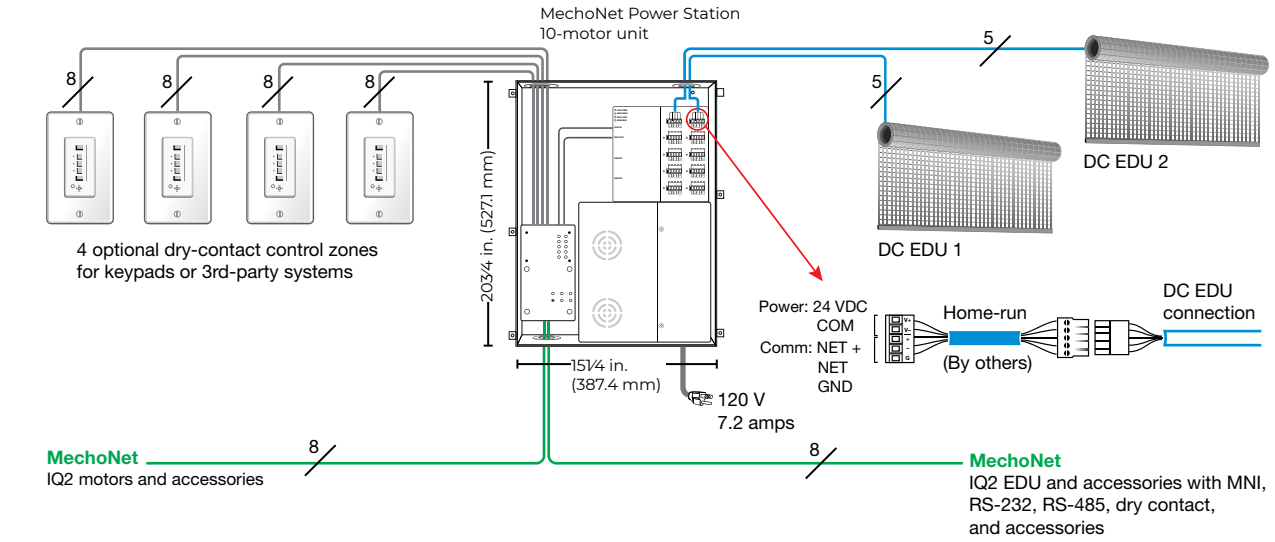
A quiet, low-voltage solution

Power: 24 VDC, 1.5 amps
Noise rating: ≤ 38 dBA (ultra quiet)
Torque rating: 5 Nm
Speed: 10–25 r.p.m. (variable)
Max. shade weight (5Nm): 2.2 in. tube up to 40.2 lbs.2.5 in. tube up to 35 lbs.

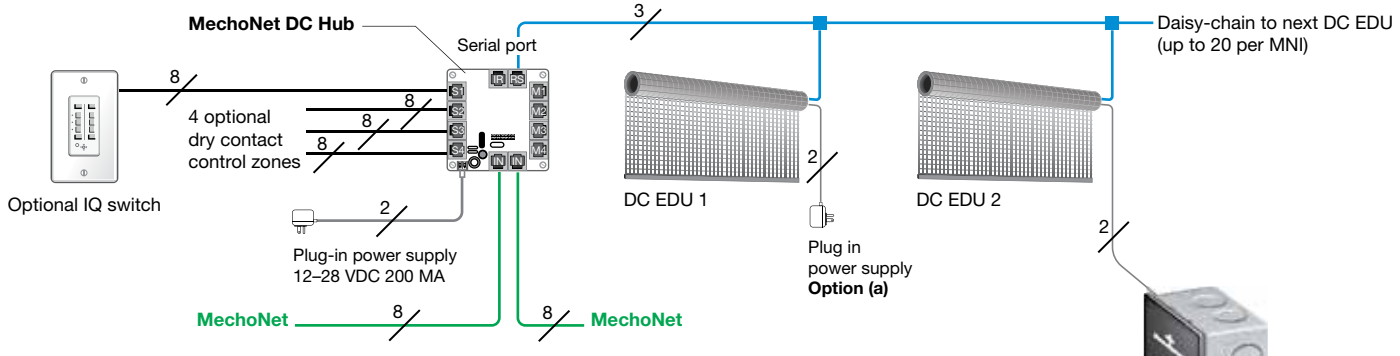
Tube sizes: 2.5 in. , 2.2 in.
Operating temperature range: 32–140° F / 0–60° C
Index protection (Enclosure) rating: IP 20 (Interior use only)
Insulation class (NEMA rating): Class 111
UL listed to UL 325 and UL 746C
Max. turns: 38

Wiring diagrams

Option 1: Centralized power supply, home-run wiring



Option 2: Local power, daisy-chain wiring



MechoNet: CAT-5/6—4,000 ft. (1,219 m) max. 250 nodes, RJ45 crimp - USOC termination

Switch: Cat 5/6, 400 ft. (121 m) max. RJ45 crimp - USOC termination

Wire type for comm: 3x22 AWG [4,000 ft. (1,219 m) max.]
Wire type for power: 2x12 AWG [540 ft. (164 m) max.] Power panel only or 2x14 AWG [240 ft. (173.2 m) max.]; 2x16 AWG [150 ft. (146 m) max.]; 18 AWG [100 ft. (130.5 m) max.]
Liberty cable 9020127 plenum rated

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Electro/1 and 2 DC Single Bracket

WhisperShade® DC Motor

Features

- Sound and vibration reduction, no metal-to-metal contact.
- Secure locking system

Shadecloth Deducts:

- Drive-end assembly: 0.875 in (22 mm)
- Center assembly: 0.875 in (22 mm)
- Idle-end assembly: - Standard: 1.188 in. (30 mm) - Recessed: 0.438 in. (11 mm)

Maximum R.U.D.

(Roll up diameter)

- 4.25 in. (108 mm)

Tubes Sizes:

- 2.2 in./56 mm diameter
- 2.5 in./63 mm diameter

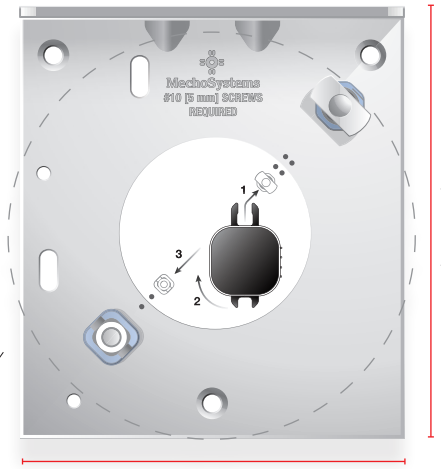
Minimum shade width:

- Recessed idle 33.75 in. (857 mm)

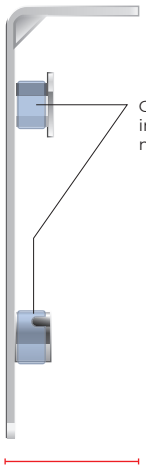
Mounting:

- 0.56 in. (14 mm) clearance required at back of bracket for EL 1/2 Single
- Ceiling or jamb (optional wall mount angle)

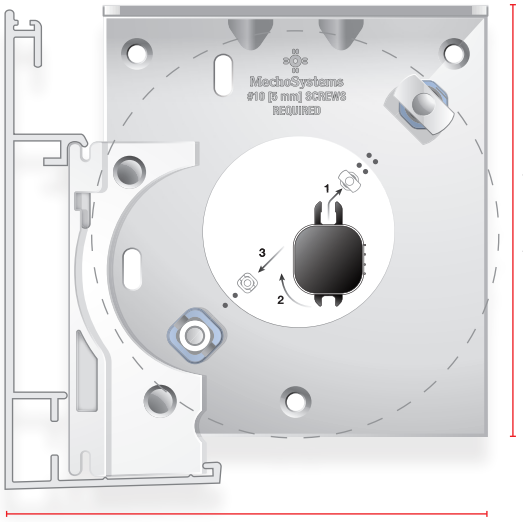
Electro/1 DC Single (left bracket) Side view



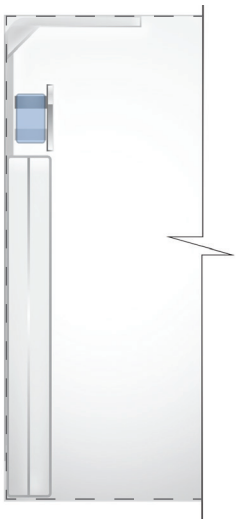
Front view



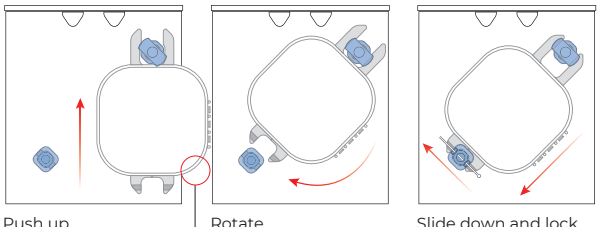
Electro/2 DC Single with fascia Side view



Front view with fascia



Motor on left bracket installation:



Shade type	Max. height 2.2 in. tube	Max. height 2.5 in. tube
Blackout	24 ft. (7.3 m)	20 ft. (6.1 m)
EuroVeil®	24 ft. (7.3 m)	20 ft. (6.1 m)
ThermoVeil®	20 ft. (6.1 m)	16 ft. (4.9 m)

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Electro/1 and 2 DC Single Bracket

WhisperShade® DC Motor

Features

- Sound and vibration reduction, no metal-to-metal contact.
- Secure locking system

Shadecloth Deducts: (no wrapping over motor head)

- Drive-end assembly: 0.875 in (22 mm)
- Center assembly: 0.875 in (22 mm)
- Idle-end assembly:- Standard: 1.188 in. (30 mm) - Recessed: 0.438 in. (11 mm)

Maximum R.U.D. (Roll up diameter)

- Blackout: 3.125 in (79 mm)
- Solar: 3.625 in (92 mm)

Tubes Sizes:

- 2.2 in./56 mm diameter
- 2.5 in./63 mm diameter

Minimum shade width:

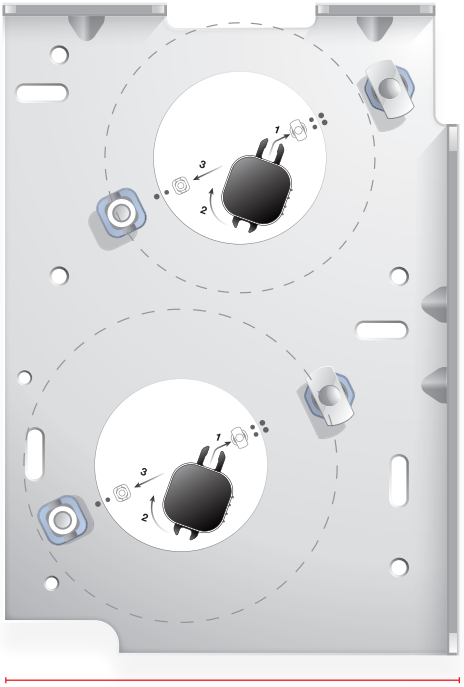
- Recessed idle 33.75 in. (857 mm)

Mounting:

- Universal (ceiling, jamb, wall)

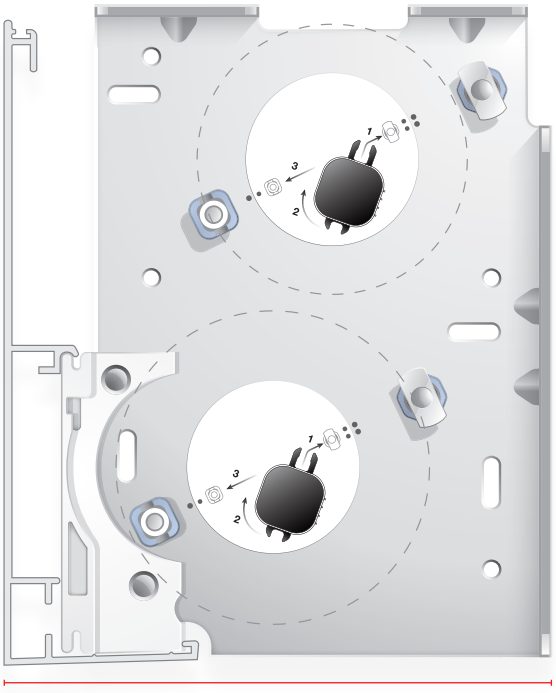
Shade type	Max. height 2.2 in. tube	Max. height 2.5 in. tube
Blackout	21 ft. (6.4 m)	17 ft. (5.1 m)
EuroVeil®	21 ft. (6.4 m)	17 ft. (5.1 m)
ThermoVeil®	15 ft. (4.5 m)	12 ft. (3.6 m)

Electro/1 DC Double (left bracket) Side view



Front view

Electro/2 DC Double with fascia Side view



Front view with fascia

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WhisperShade® IQ2-DC

Intelligent, quiet, and powerful shade control

Mecho introduces another best-in-class solution with the new, patented, WhisperShade IQ2-DC Drive Unit for our ElectroShade® systems. Mecho shading systems that incorporate the IQ2-DC are the most powerful and most advanced on the market. The IQ2-DC is ideal where ever heavy lifting power and quiet operations are required including healthcare, hospitality, corporate office, and education applications.

The IQ2-DC makes motorized shade installation easy and does not require expensive electrical components or electrician time while providing unparalleled performance and efficiency.

Just another example why we are the trusted partner for shading performance, and ensure you enjoy the reputation for quality we have earned over the last 50 years in shading.

Advanced-logic control with encoder seamlessly ties into MechoNet™ and other third-party building management systems

Intelligent

The IQ2-DC is so advanced it will even alert you to potential maintenance issues before it creates an interruption in shade functionality. No other shading system on the market can do this.

Quiet

At only 38dBA, the IQ2-DC is quieter than a whisper in a library making this the "go-to" motor where silence is required.

Powerful

Mecho's IQ2-DC has the largest lift capacity in its class, capable of lifting shades up to 600 sq. feet. This means you can lift larger single shades—or more coupled shades—with a low-voltage motor than our competition.

Features

- Obstacle detection prevents shade damage reducing the risk of unnecessary repairs, wear and tear, and downtime
- Low-voltage (24VDC) cabling for simplified, low-cost wiring and easy installation
- Only UL listed DC motor solution on the market
- Shade adjustments accurate to 1/16th of an inch
- Can be used as a standalone motor or with Mecho's SolarTrac®, SunDialer® automation systems and EnOcean wireless controllers
- Integrates with building lighting, A/V and HVAC management systems
- Easily expandable with room, floor or building level automation with built-in MechoNet™ network utilizing dry-contact and addressable RS485 control
- For multi-banded applications, Mecho's adjustable shade coupler is included to speed the installation process and ensure precise, even and consistent shade heights and eliminate hembar misalignment

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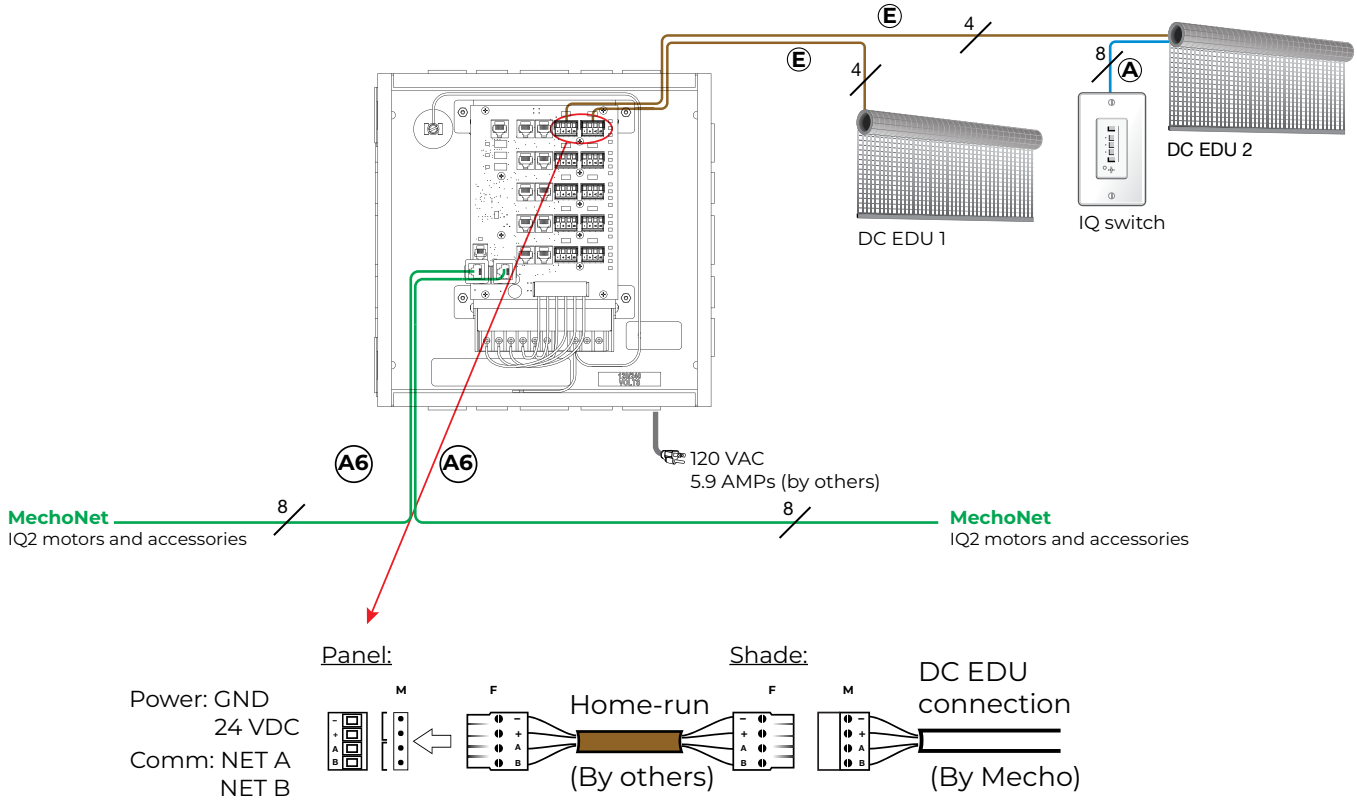
WhisperShade® IQ2-DC

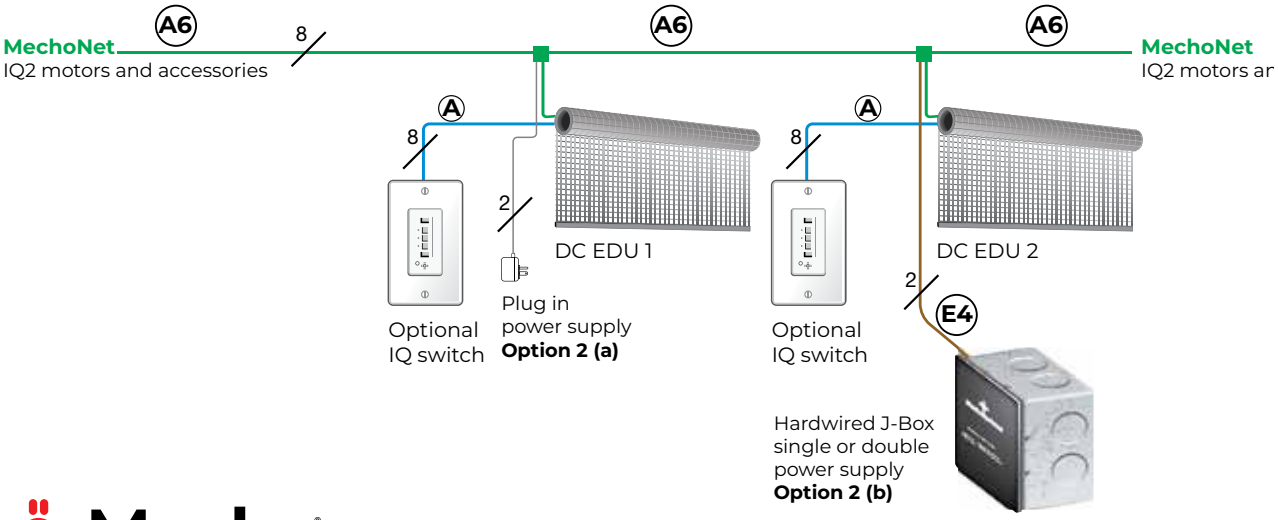
Intelligent, quiet, and powerful shade control

Wiring Diagrams

Option 1: Centralized power supply, home-run wiring



Option 2: Local power, daisy-chain wiring



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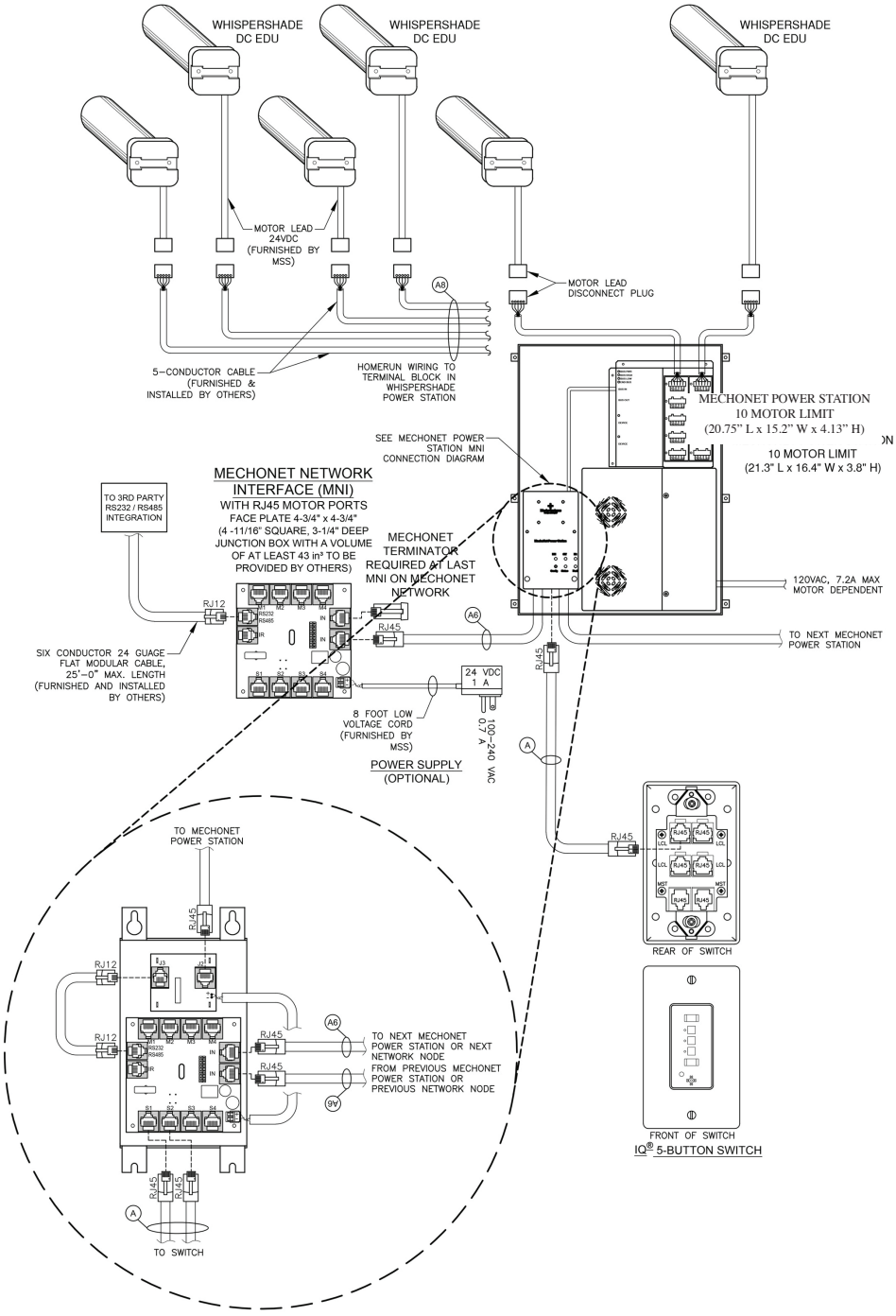
WhisperShade® DC Power Station

Wiring diagrams

Option 1: Centralized power supply, home-run wiring

MechoNet Power Station

- Steel Enclosure: L 20.75 x W 15.2 x H 4.13 in. (528 mm x 386 mm x 105 mm) with cover, 25lbs
- Power Input: 88-264 VAC, 7.2A (0.7A max per motor) load dependent Output: 24VDC, 20A (2A per motor)
- Isolated Motor Ports: 10
- Status Indicators: Power, Communication Activity, Switch Operation, Status and Fault/End
- Wiring Protection: Internal electronics prevent harm from incorrect wiring
- Automatic Termination: Each segment automatically terminates
- Mounting Options: Between studs (16 in./406mm on center) or surface-mount
- Wiring Protection: Line voltage covered and separated from low voltage
- Secure: Cover includes key lock
- Device Ports: Support adding override switches for network or plugging in network tools
- 4 Local Switch Connections can be mapped to control any shade group on the network.



MECHONET POWER STATION
MNI-DC CONNECTION DIAGRAM

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WhisperShade® DC Power Station

Wiring diagrams

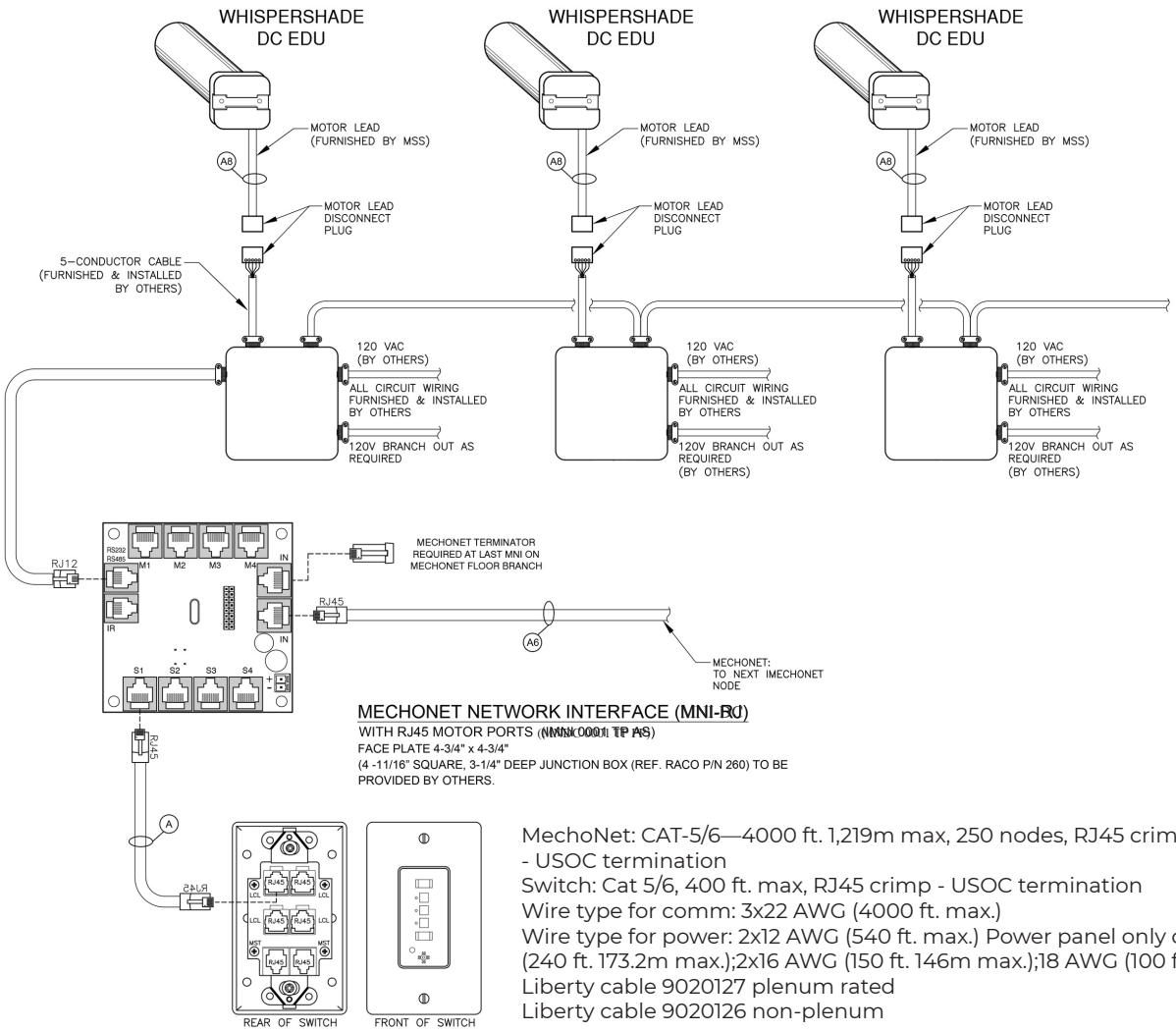
Option 2: Local power, daisy chain wiring

A. DC Plugin Supply: Features

- Powers a single DC Motor through a standardwall outlet
- Choice of power connector
- INPUT: 100-24oVAC, 40W, 50/60 Hz
  OUTPUT: 24VDC, 1.67A

B. Junction Box Power Supply (US/EU): Features

- Junction Box Power Supply (US/EU)
  INPUT: 100-240VAC, 230W, 50/60 Hz
  OUTPUT: 24VDC, 2.5A (60W)
- Fits a standard 4-11/16” US junction box or plenum wiring requirements.



MechoNet: CAT-5/6—4000 ft. 1,219m max, 250 nodes, RJ45 crimp - USOC termination
Switch: Cat 5/6, 400 ft. max, RJ45 crimp - USOC termination
Wire type for comm: 3x22 AWG (4000 ft. max.)
Wire type for power: 2x12 AWG (540 ft. max.) Power panel only or 2x14 AWG (240 ft. 173.2m max.);2x16 AWG (150 ft. 146m max.);18 AWG (100 ft. 130.5m max.)
Liberty cable 9020127 plenum rated
Liberty cable 9020126 non-plenum

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Wireless Occupancy Sensor

Daylight integration with MechoNet™

Mechos' Wireless Occupancy Sensor with 902MHz EnOcean® technology pairs with the MechoNet Wireless Controller for seamless, intelligent shading automation. This wireless automation allows for ease of use, occupant comfort, daylight control and energy managment. The sensor has the ability to integrate HVAC and lighting control.

Features

- Sustainable and sleek, low-profile design.
- Two models: 450 or 1,800 sq. ft. coverage.
- Same device can be used for occupancy or vacancy operation.
- Wireless capability employs ultra-energy efficient, industry-standard EnOcean 902MHz communications.
- Integrates wirelessly with Mechos' solutions through the MechoNet Wireless Controller.
- In vacancy mode, the integrated photovoltaic panel powers the sensor with daylight or ambient artificial light, allowing integration of lighting, shading and HVAC.
- In occupancy mode, the integrated photovoltaic panel recharges the internal battery for operation when there is no light.
- Sensitivity adjustment to prevent nuisance triggering.
- Walk test mode ensures motion range coverage.
- Ceiling-mounted with 360° angle of detection.
- Quick-start operation.

Applications

- Integrates with Mecho shades and third-party lighting, HVAC, and other daylighting systems to enhance energy efficiency.
- Dynamic shade positioning offers visibility and security by opening shades or provides privacy and energy savings by closing the shades, based on user preference or room occupancy.
- Contributes to LEED certification and complies with Title 24 and other programs.

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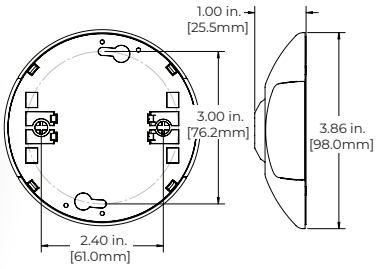
Wireless Occupancy Sensor

Daylight integration with MechoNet™

Wireless Occupancy Sensor

Surface mounted, on the ceiling

Dimensions



Part Numbers
OCC9-0450-CE-WH (A lens option)
OCC9-1800-CE-WH (B lens option)

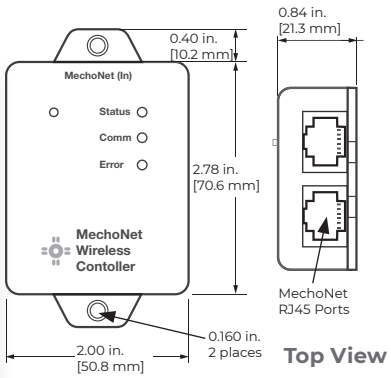
Specifications

Equipment Profile	EEP-A5-07-01
Operational Light Level	65 lux (6 fc)
Start-Up Period	< 2 minutes @ 65 lux
Power Supply	CR1632 coin cell battery
Battery life expectancy	Shelf life as defined by the battery manufacturer or 5 years, whichever occurs first.
Radio Frequency	902 MHz (U)
Antenna	Integrated whip
Transmission Range	80 ft. (24 m) - commercial office spaces (typical), up to 330 ft. (100 m) line of sight
Telegram Transmission	Vacancy - On heartbeat Occupancy - Immediately upon motion detection or heartbeat
Telegram Heartbeat	100 seconds min. - 1000 seconds max.
Inputs	Teach Button, Test Button
Detection Area	A lens — 450 sq. ft. at 8 ft. - 800 sq. ft. at 10 ft. B lens — 1,800 sq. ft. at 8 ft. - 3,000 sq. ft. at 10 ft.
Operating Temperature	14–122°F (-10–50°C)
Relative Humidity	5% to 92% RH (non-condensing)
Weight	2.4 oz (68 g)
Dimensions	3.86 in. x 1.00 in. (98 mm x 25.5 mm)
Mounting	Integrated magnets, wire bracket, screws (not supplied), double sided tape (not supplied)
Agency Listing & Compliance	FCC 15.231 - Remote Control Transmitter, IC RSS-210, CEC Title 24 Compliant

MechoNet Wireless Controller

Mounts out of sight

Dimensions

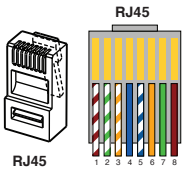


Top View

Part Number
MWC9-EN01-TP-WH

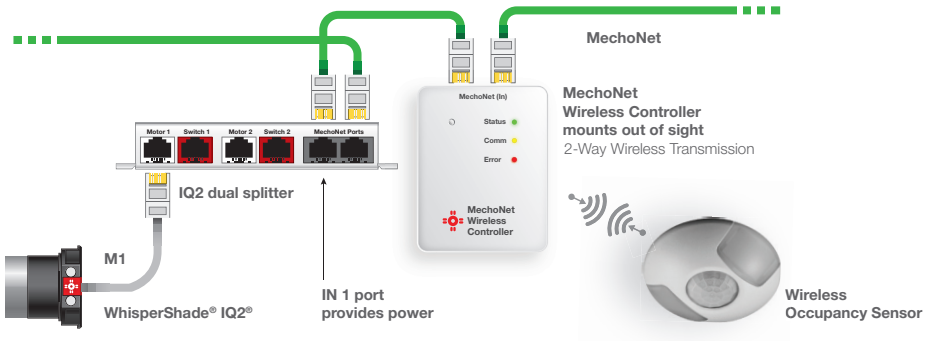
Specifications

Size	3.6 in. L x 2.4 in. H x 0.9 in. D
Color	White
Power	12–28 VDC, 100 mA, powered by MechoNet or separate power supply
Wiring	MechoNet: Cat-5/6. RJ45, 4000 ft. (1,219 m) total. 250 devices max.
Frequency	902 MHz, EnOcean
Wireless Range*	Maximum 80 ft. (24 m) unobstructed
Certifications	FCC part 15 Class B Compliant
Controls	Up to 16 Sensors or other EnOcean devices



CAT5/6 USOC Crimp		
Pin 1	Brown/White	MechoNet—Net A (NET A)
Pin 2	Green/White	Power—Motor/Controller (PWR)
Pin 3	Orange/White	Common (COM)
Pin 4	Blue	Power—Bus Supply (V+)
Pin 5	Blue/White	Common (COM)
Pin 6	Orange	Power—Bus Supply (V+)
Pin 7	Green	Common (COM)
Pin 8	Brown	MechoNet—Net B (NET B)

* Wireless signals may be impacted by metal columns, mullions, or other structures typically used in and around the curtainwall. As such, the Wireless Occupancy Sensor should be located as close as possible to the MechoNet Wireless Controller. For optimal performance, up to 25 ft. (8 m) is the recommended range.



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