MechoNet™ Wireless Daylight Sensor (WDS) and Controller

No wires. No batteries. No complications.

Room-level or total building automation with daylight control on MechoNet

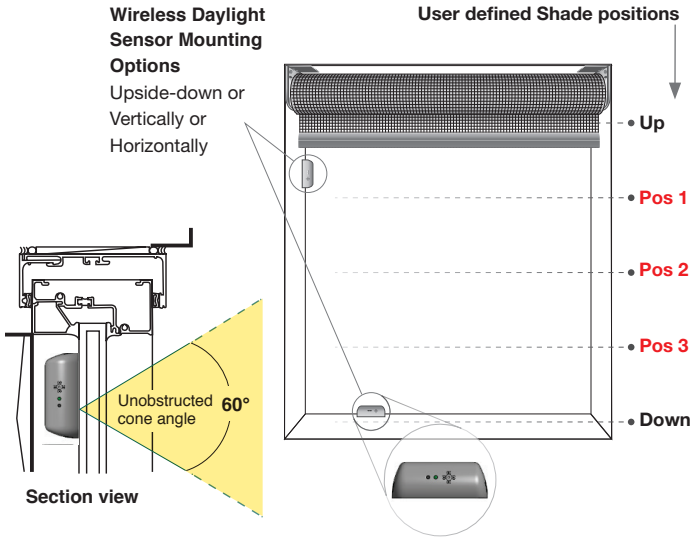
MechoSystems' Wireless Daylight Sensor with EnOcean® wireless technology monitors daylight coming through the curtainwall without the clutter and hassle of managing cables and batteries. This sustainable solution harvests energy from the sun to power its ultra-low energy internal electronics. The controller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



MechoSystems
Design with light.®

enocean®

Winner 2016
NeoCon® Innovation
HiP Honoree
WCMA, New Style Concept

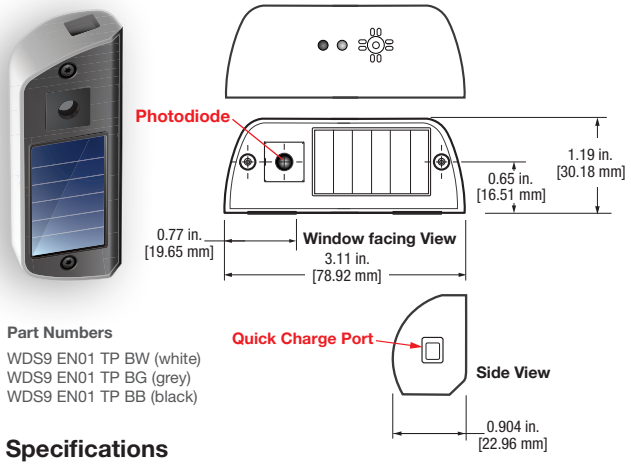
Over

MechoNet™ Wireless Daylight Sensor (WDS) and Controller

Wireless Daylight Sensor

Mounts in any direction, unobtrusively, on the mullion

Dimensions



Part Numbers

WDS9 EN01 TP BW (white)
WDS9 EN01 TP BG (grey)
WDS9 EN01 TP BB (black)

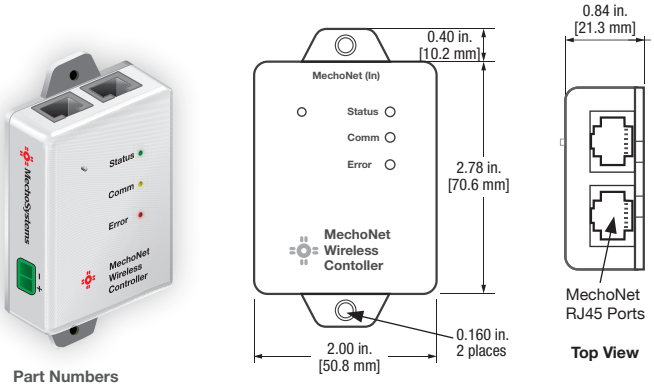
Specifications

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

MechoNet Wireless Controller

Mounts out of sight

Dimensions

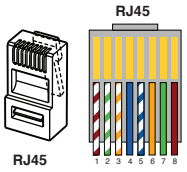


Part Numbers

MWC9 EN01 PP WH (pre-programmed)
MWC9 EN01 TP WH

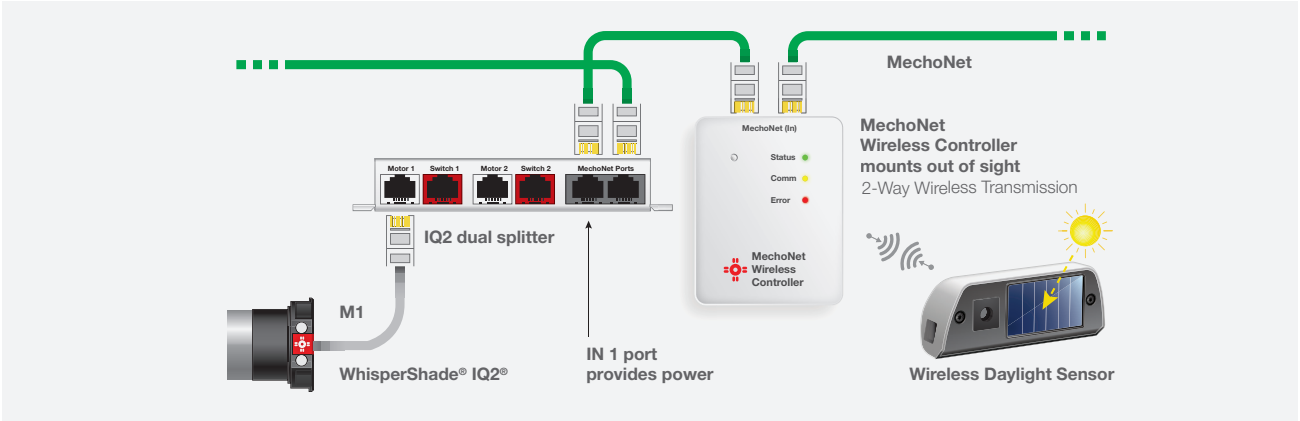
Specifications

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)

* 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.



⚠ 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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