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STEINEL DCS™ Applications for Engineers

PRESENTED BY SEAN LAFFERTY AND POURIA NIKNAM

STEINEL: The inventors' company

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We think outside the box and

Scrutinize things that are taken for granted

Providing **value-added features and functions** without the additional cost.

With technology invention in our veins, we think **without restrictions** and turn discoveries into **intelligent products** that meet the most exacting of demands.

Digital Done Better:

Smarter Solution

No Front End Needed

Easy to Install

High Value

Made by STEINEL.
Made in Europe.

STEINEL Digital Control Solution™
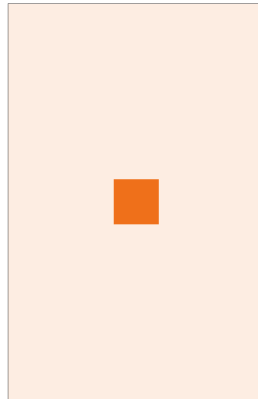## Innovative Technology

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- Smarter coverage pattern covers square rooms

- 4800 detection zones (IR Quattro HD sensor)

- Rooms require fewer sensors (Up to 4,200 sq ft of coverage per sensor)

- Commissioning apps available for iOS and Android devices

- Out of the box functionality and code compliance
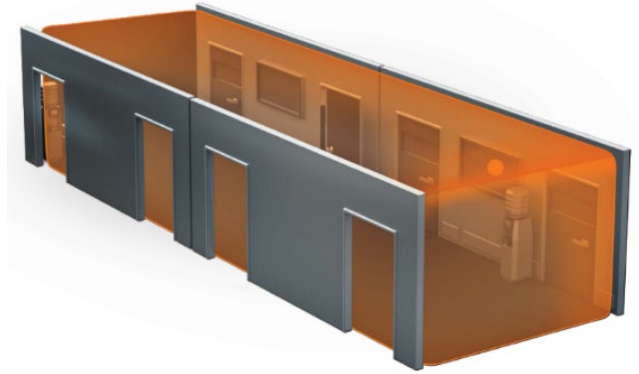
Traditional coverage   Steinel coverage
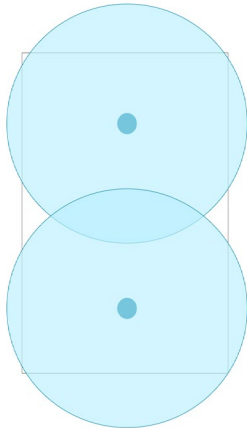
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DCS answers the demand for a COST-EFFECTIVE room controller that MAXIMIZES energy savings.

Everything you need, code-compliant out of the box.

- Digital bus for sensors, switches, photo cells
- Wireless programming
- Predefined (out of the box) & custom use case generation
- Preset or custom scenes
- 3 independent 20A relays
- Current monitoring per relay
- 3 independent 0-10V dimming zones
- Receptacle control
- Multi-zone daylighting
- Min. & max. dimming levels
- Hold off / Force off photo sensor functions
- Partial on & off
- Demand response
- Astronomic and time clock functions
- Wireless BLE mesh interconnectivity
- BMS integration via BACnet, available through the **DCS Connect** model
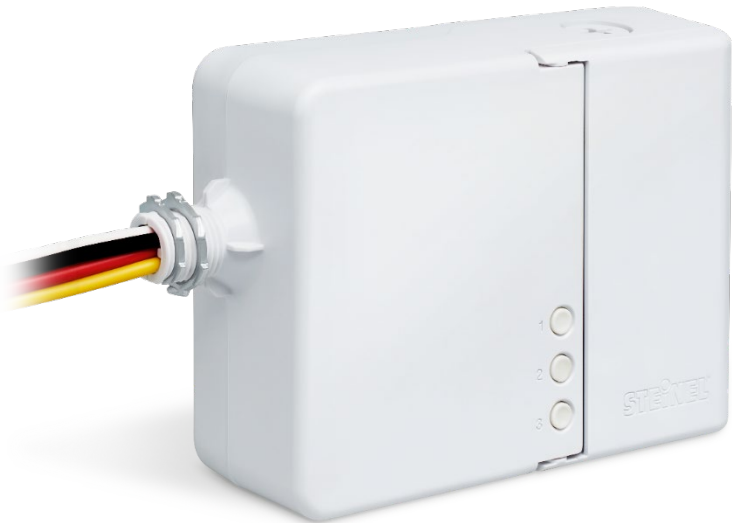
STEINEL Digital Control Solution™
Easy to Install.

1. Line voltage wires

2. Low voltage door latch

3. Test buttons

4. Low voltage terminals

5. ½" threaded nipple

6. Two lock nuts

7. Led

8. Reset button

9. RJ45 BACnet port

10. Low voltage wires

STEINEL Digital Control Solution™
Presence Detectors & Photo Sensor
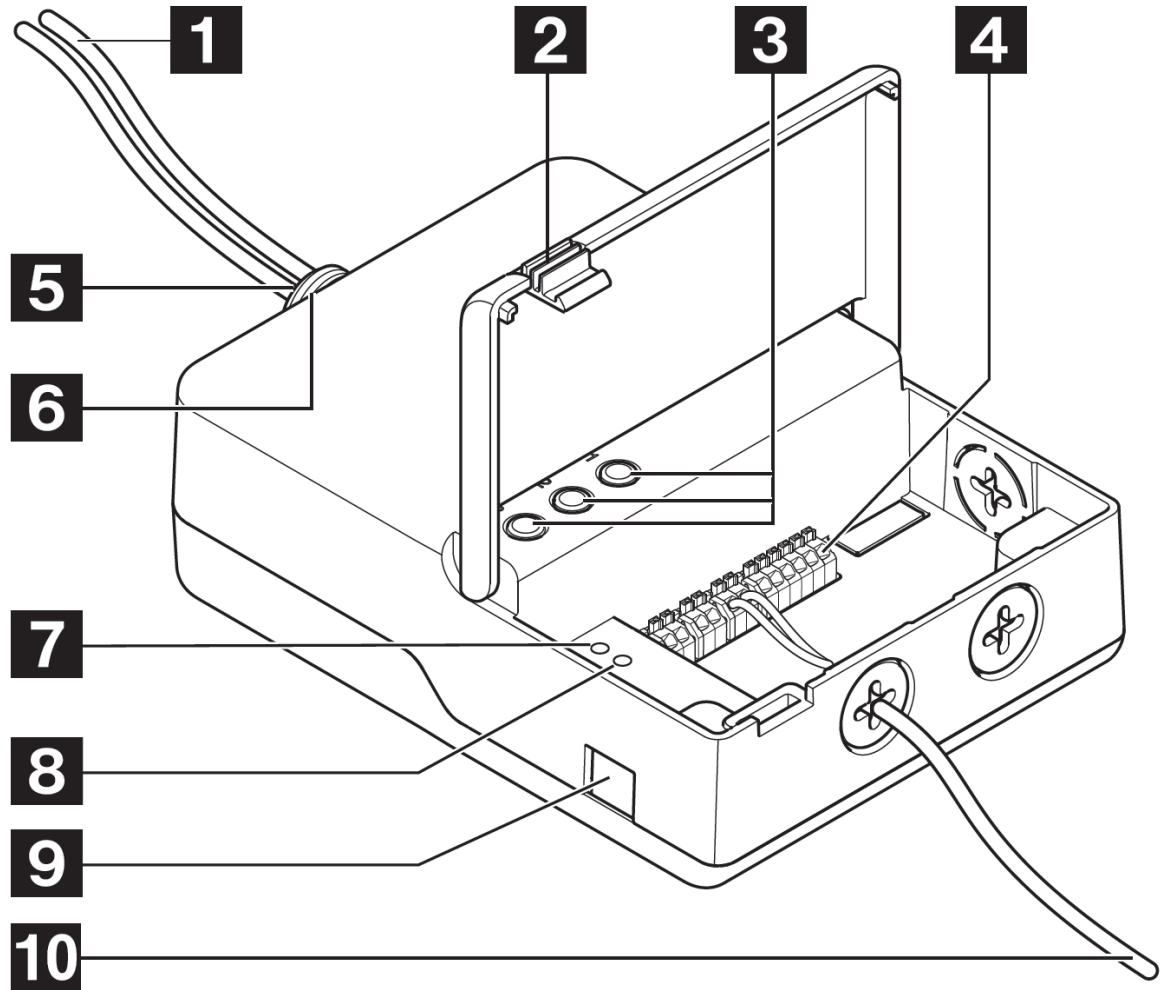
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NEW Sensors & Switches

IR Quattro SLIM XS DCS

IR Quattro Micro DCS

PS DCS

Wall switches

Digital Control Pro

IR Quattro DCS

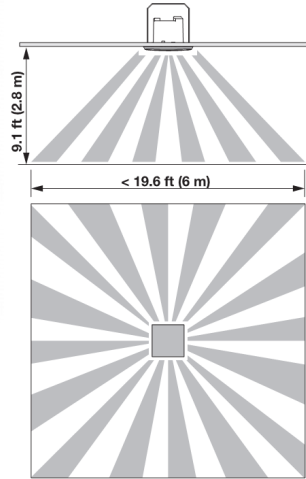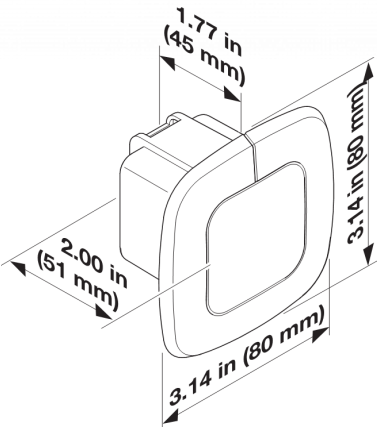IR Quattro HD DCS

US Quattro DCS

US Oneway DCS

US Hallway DCS

DT Quattro DCS

STEINEL Digital Control Solution™
## IR Quattro SLIM and Micro New Digital Sensors

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IR QUATTRO SLIM

1.77 in (45 mm)

3.14 in (80 mm)

2.00 in (51 mm)

3.14 in (80 mm)

9.1 ft (2.8 m)

< 19.6 ft (6 m)

IR QUATTRO MICRO

2.79 in (71 mm)

ø 1.69 in (43 mm)

9.1 ft (2.8 m)

~19.6 ft (6 m)

- Passive infrared presence detector
- 408 switching zones
- 6 mm low profile
- Flat lens
- Square coverage pattern
- Wireless commissioning through DCS app
- 13 x 13 ft. Presence Detection
- 19 x 19 ft. Tangential Detection
- 1-100 fc.
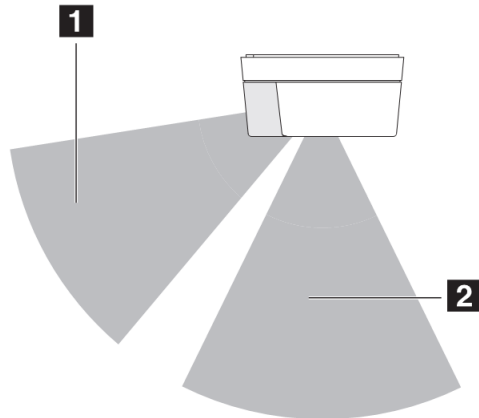- 30 sec. to 30 min. time delay
- IP 20 Rated
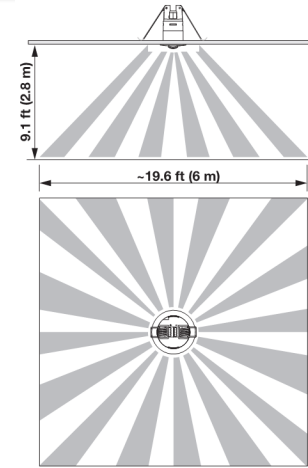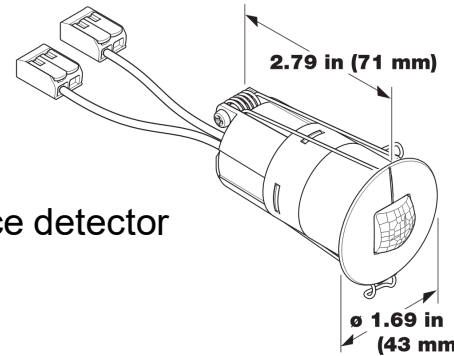
- Passive infrared presence detector
- 168 switching zones
- Micro-precision lens measures just 15 x 15 mm
- Square coverage pattern
- Wireless commissioning through DCS app
- Spring clip mounting
- 13 x 13 ft Presence Detection
- 19 x 19 ft. Tangential Detection
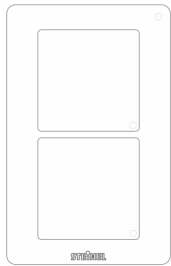- 1-100 fc.
- 30 sec. to 30 min. time delay
- IP 65 Rated

1 OL: Open Loop Control
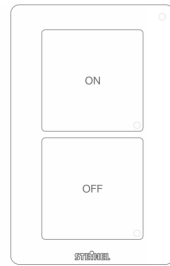2 CL: Closed Loop Control

- Bidirectional lens and two photoelectric diodes to allow for both open- & closed-loop functionality

- Digital light level range selection via the commissioning app

- OL: 3-6,000 fc, CL: 3-300 fc

- Automatic calibration that takes into consideration the unique curve of the fixtures being used in the daylighting zone

- Mounts via screws, double sided tape or ½" chase nipple and locknut

- Polarity insensitive 2 wire bus

- Up to 3 daylight zones per sensor when used in open loop function

- Wireless assignment to multiple DCS controllers via BLE group assignments
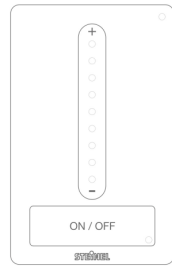
STEINEL Digital Control Solution™
NEW Digital DCS Switches

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SS2 DCS

NF1 DCS

DS1 DCS
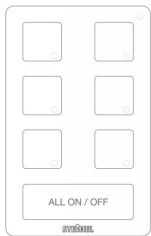

SS6 DCS

NF3 DCS

DS3 DCS

DS-SS3 DCS

SS4 DCS

NF2 DCS

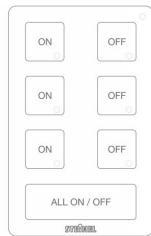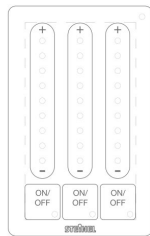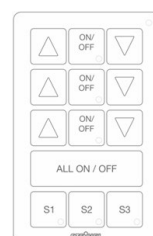DS2 DCS

10 NEW Digital Switches:

- Touch sensitive
- Glass interface (white or black)
- Polarity insensitive 2 wire bus
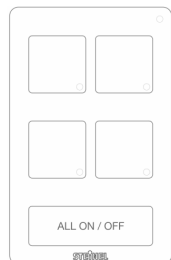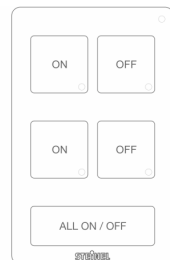- Switches are customizable with an 8-week lead time

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DCS

Fixtures

Z1

Z2

Window

PS DCS

Sensor DCS

Z1

Z2

DS2 – 2 Zone Switch

Receptacle

Z3
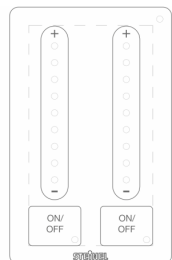
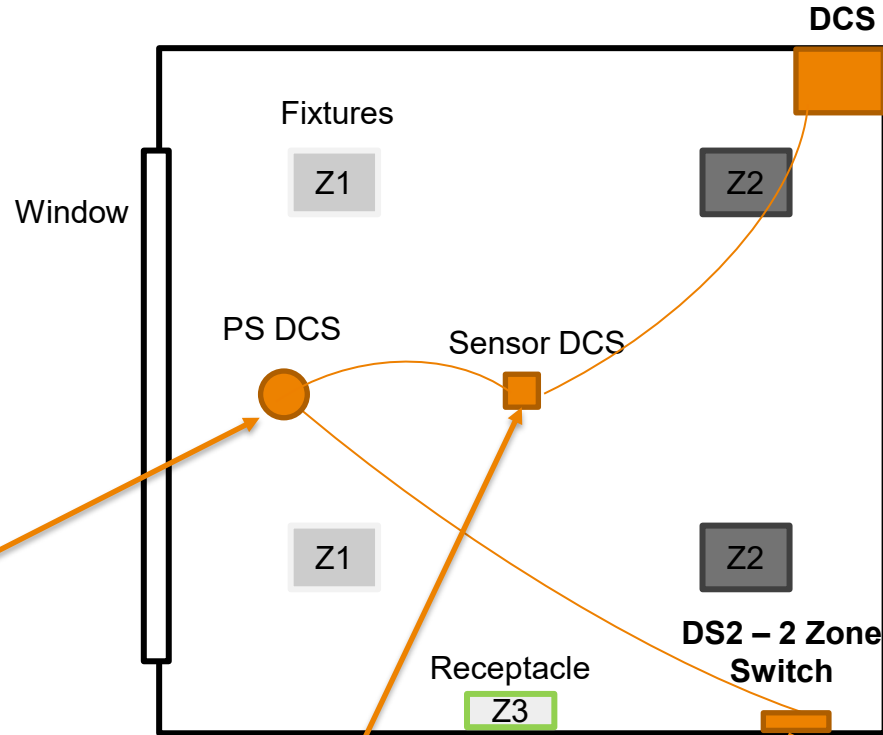**Assigned to Relay 1**
Sensor Settings:
- Open Loop Mode
- Automatic daylighting begins after 1 minute and assigns between 30 50 fc at desk level.
- Hold OFF active

Assigned to all Relays
Sensor settings:
- Time Delay: 20 min
- Sensitivity: Maximum (available only for --US and DT sensors)
- Partial ON in 50 % all loads
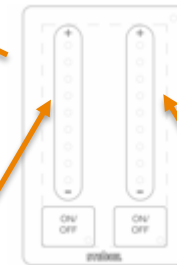
Assigned to Relay 1

Assigned to Relay 2

STEINEL Digital Control Solution™
Easy to Program.

- Bluetooth app allows ease of commissioning or changes to be made.
- Available free for both IOS and Android.
- Use cases to eliminate need for recommissioning same room type over and over.

COMMERCIAL OFFICE SPACE
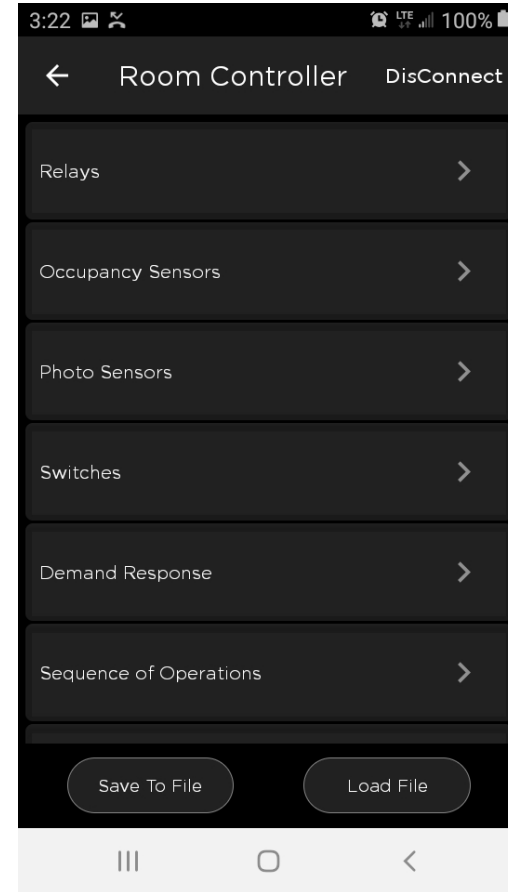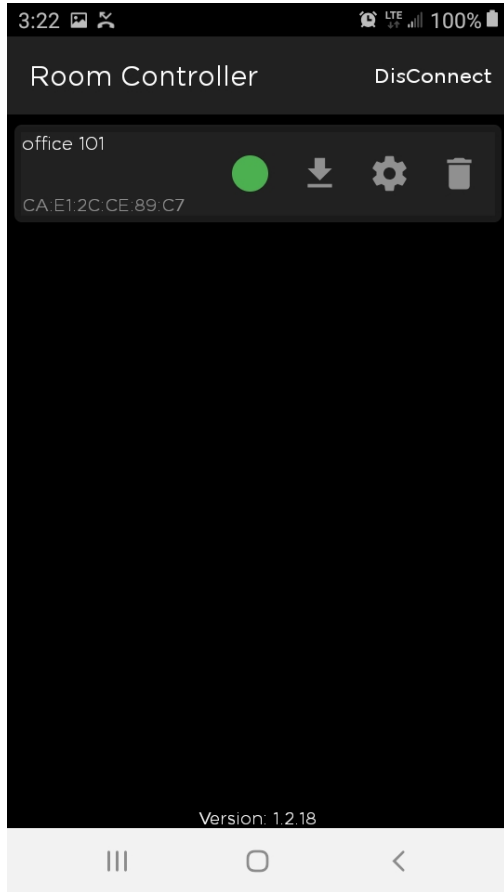
STEINEL Digital Control Solution™
Best Applications: Commercial Office Spaces

1. Sensors have built in photocells

2. Sensors allow for larger coverage pattern, using less sensors over a digital platform

3. Internal timeclock allows for time-of-day control

4. 3 independent 20A relays allow for control of three separate circuits

5. Digital platform allows for scene selection

6. 18/2 polarity insensitive installation allows for easy, hassle free installation and 3-way dimming capabilities

7. BLE commissioning app allows for easy commissioning
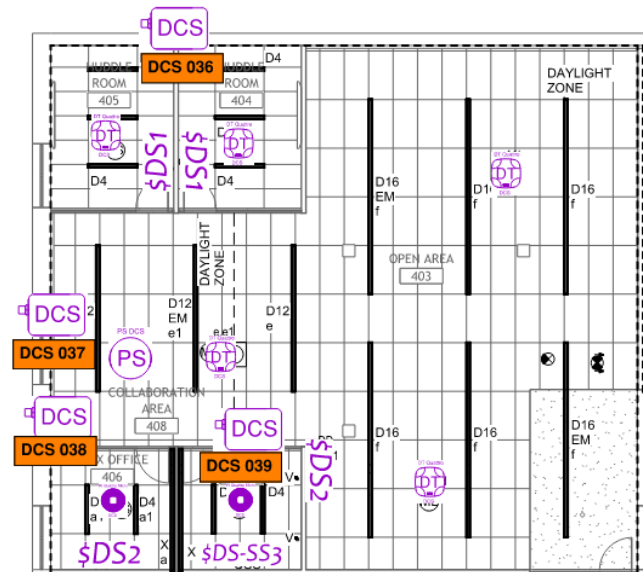
HOTELS & MULTIFAMILY UNITS

STEINEL Digital Control Solution™
Best Applications: Hotels & Multifamily Units

1. Time-of-day operation.

2. BLE mesh capabilities for additional zones of control, all from a single switch (master ON/OFF / over-ride switch)

3. Simple wiring topology utilizing the 18/2 polarity insensitive data line to all sensors and switches

4. Corridor-specific sensors (65' radial coverage) will reduce overall number of sensors

5. Multiple control zones from a single point without having to connect

RESTAURANTS

STEINEL Digital Control Solution™
Best Applications: Restaurants

1. Different times of day require different scenes/settings. The internal timeclock allows for scenes to begin/end daily at the same time without requiring any manual control/dimming.

2. Smartphone app allows end user to adjust the dimming levels of scenes at any time.

3. BLE Mesh network allows multiple DCS controllers to communicate and control multiple relays/zones.

4. Option to over-ride the sensors during non-business hours with a 2-hour time delay.

+

EXTERIOR LIGHTING

STEINEL Digital Control Solution™
Best Applications: Exterior Lighting

1. Astronomic Timeclock is built in to the DCS and allows for sunrise/sunset operation for all exterior lighting. Many cases this allows exclusion of exterior photocells.

2. The DCS has (3) 20A relays, which can control up to three zones of exterior lighting.

3. Internal timeclock can control signage lighting, to come during operational hour.
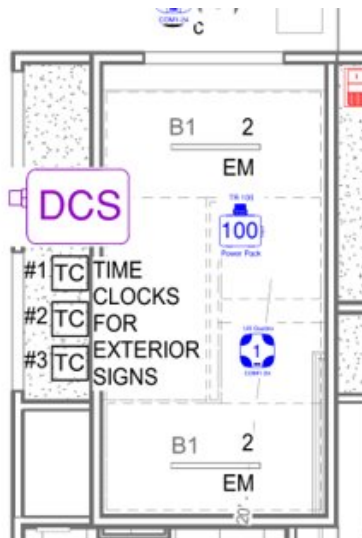
CLASSROOMS

STEINEL Digital Control Solution™
## Best Applications: Classrooms

1. 13 button all-inclusive wall switch, allows for complete control from a single wall station

2. Scene selection, 3-way dimming, BLE mesh capabilities, plug load control

3. Photocell (PS DCS) has ability to control 3 daylight zones using a single photocell

4. CCT tuning if fixtures have 0-10v as CCT control input
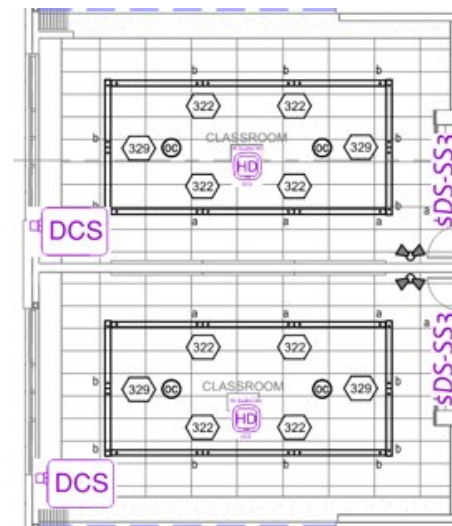
STEINEL Digital Control Solution™
Quality Products. Quality Service.
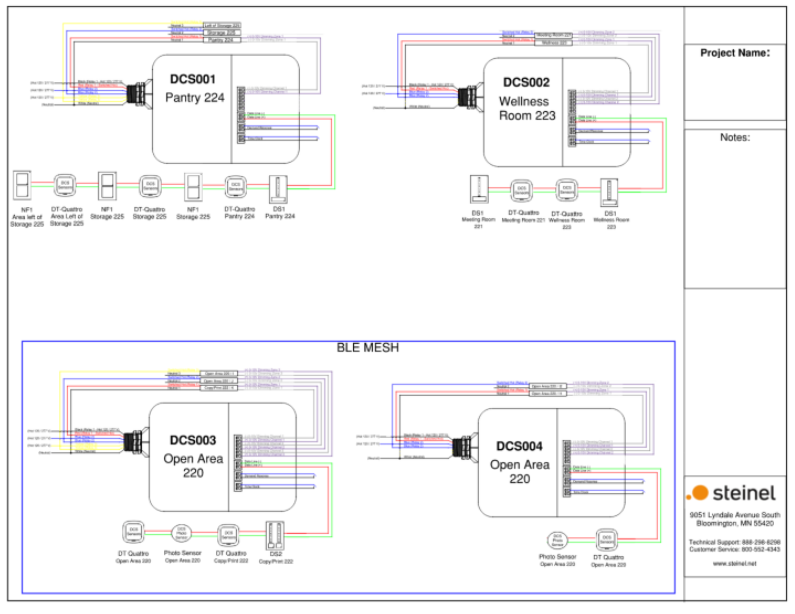
FULL SUBMITTAL PACKAGES FOR EASE OF INSTALLATION

ON-SITE OR VIRTUAL PRE-WIRE VISITS

- FREE Layouts, provided to you within 48 hours on average

- Bluebeam Revu toolboxes are available – contact us for help with layouts or quotes

- Layout review for DIY layouts provided by you

- Our Tech team provides submittals, one-line diagrams and on-site or virtual pre-wiring visits

STEINEL Digital Control Solution™
Quality Products. Quality Service.

"The Steinel DCS controllers, sensors and switches all worked as advertised. The Steinel Sales Manager was a huge help throughout the entire process. He was always available via phone/email, and came out for a pre-wiring walk through to ensure all questions and concerns were addressed up front. *Final commissioning was a breeze, and the whole floor was programmed in less than two days."*

– RTL ELECTRIC, CHANTILLY VA

STEINEL Digital Control Solution™
Easy to Install. Easy to Program.

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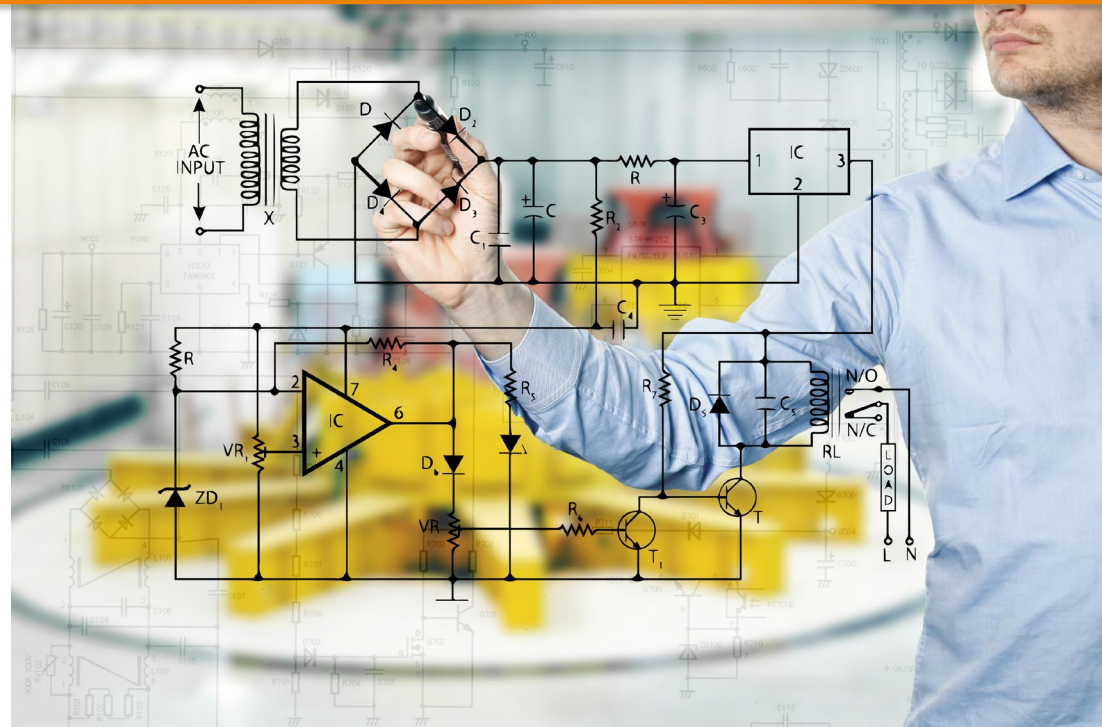**Questions about our solutions?**
tech@steinel.net
888.298.8298

Need layouts for your project?
Contact our tech team or your
Regional Sales Manager.

**Need to connect with our sales
team?**
sales@steinel.net
800.852.4343

REACH OUT TO YOUR RSM TO
SCHEDULE A DEEP DIVE ON THE
DCS FOR YOUR NEXT
APPLICATION

Thank you, Engineers!