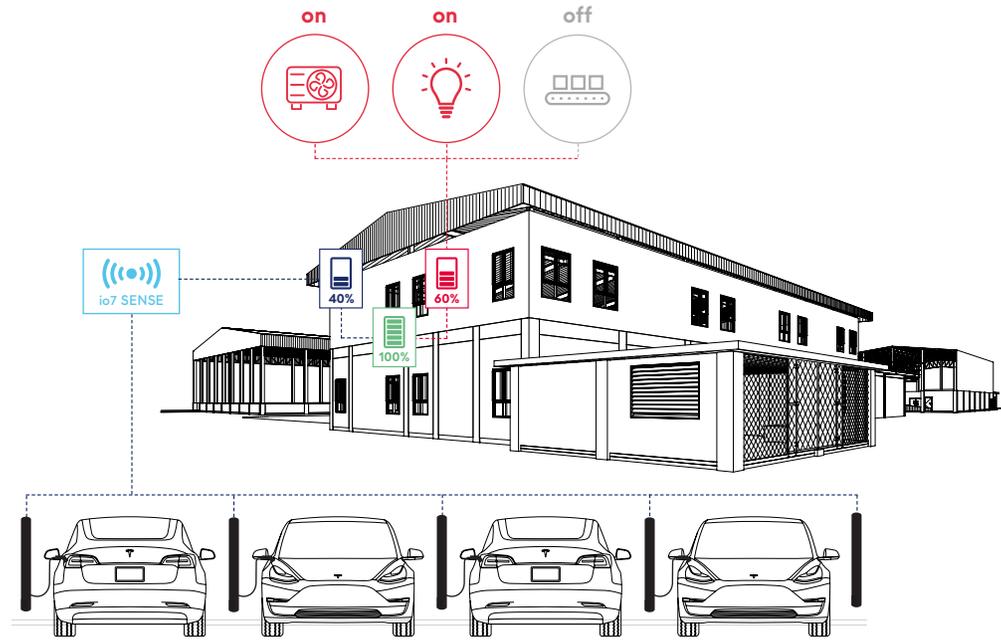




# INSTALL SCENARIOS

# LOAD MANAGEMENT



## DYNAMIC LOAD MANAGEMENT

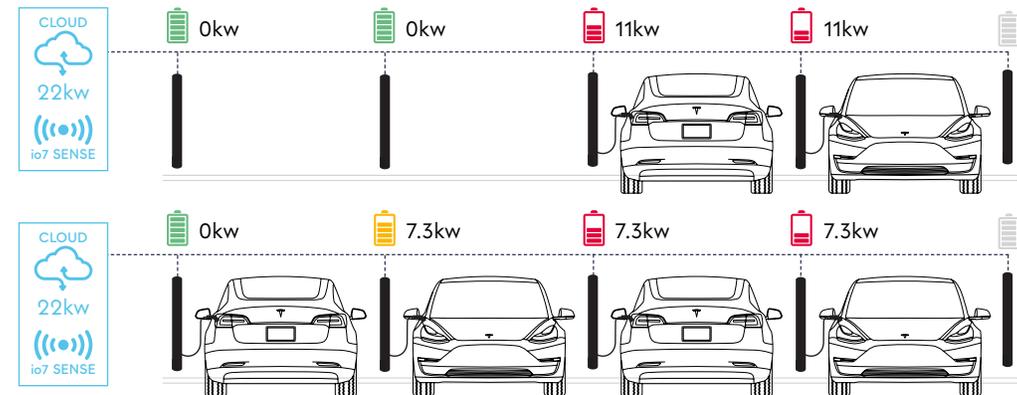
Monitors the building's energy supply and usage, calculating the power available and distributing it equally to the EV charger installation.

As the building power consumption increases e.g. heavy machinery being switched on or off, the io7 Sense will increase or decrease the power available to the EV charger installation.

Load management of EV charging equipment is designed to maximise charging speeds whilst protecting the electrical installation and building infrastructure.

## STATIC LOAD MANAGEMENT

Involves the installation of EV charging equipment on a dedicated power supply that has a known fixed power capacity. The EV chargers are designed to effectively manage this power supply by evenly distributing the load between them as more sockets are utilised. This can be done at Cloud level (using back-office software) or locally to the chargers using the io7 Sense.



## KEY INFORMATION REGARDING THE INSTALLATION SCENARIOS:

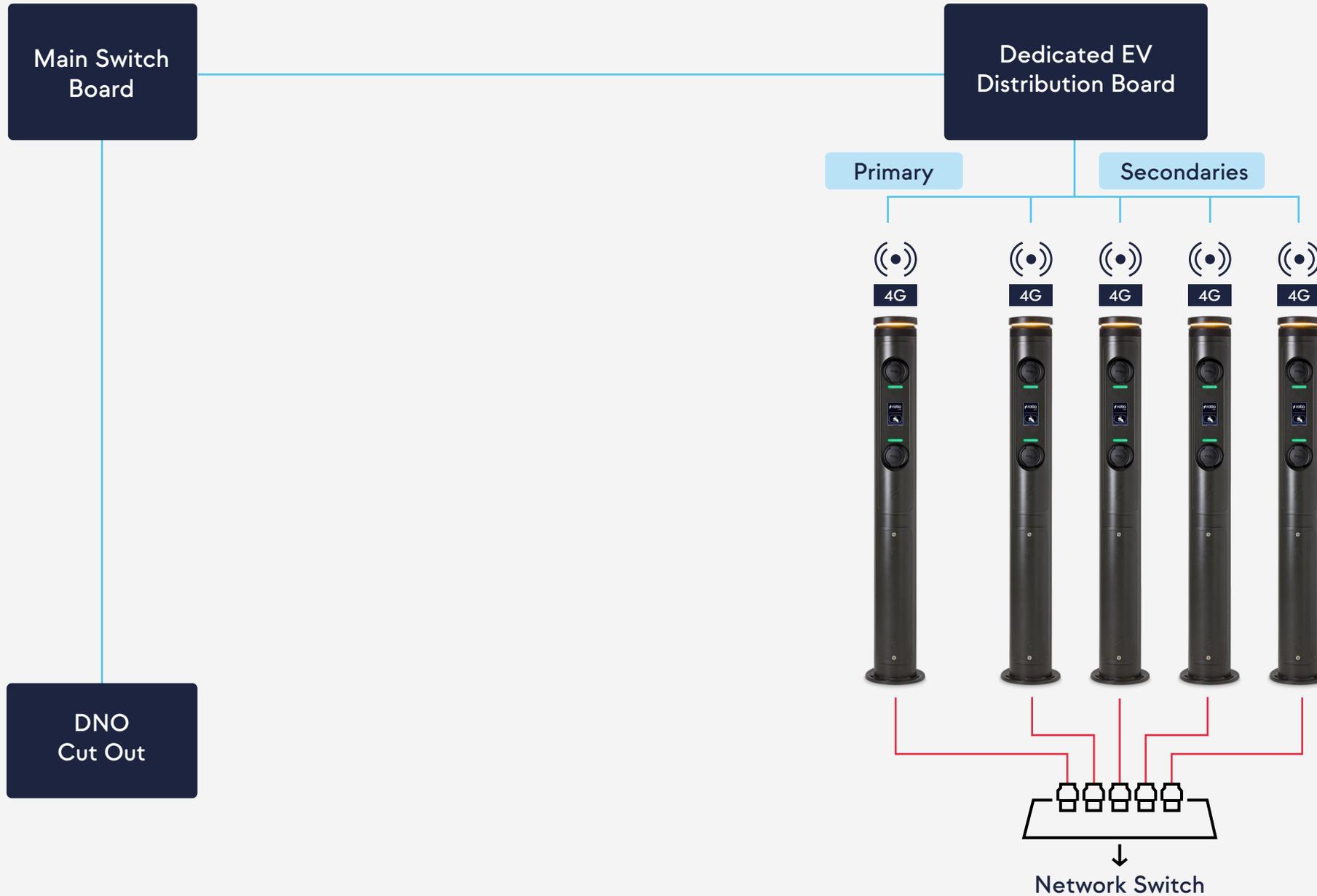
- **CAT 5/6 Cable:** Cannot be looped between io7 and io8.
- **Network Switch:** Dedicated to the charger network only, must not be connected to the building network, and is usually mounted near the main power supply.
- **Charger Connection:** Each charger connects directly to the management platform, typically via a 4G connection.
- **Load Management:** When load managing single-phase chargers across three phases on a supply, secondary chargers may be single-phase devices; however, the primary charger must be a three-phase MID unit.
- **Dynamic Load Management:** A dedicated EV distribution board is recommended; however, chargers can be fed from the main switchboard or multiple distribution boards, provided all are connected back to the same network switch.

### KEY

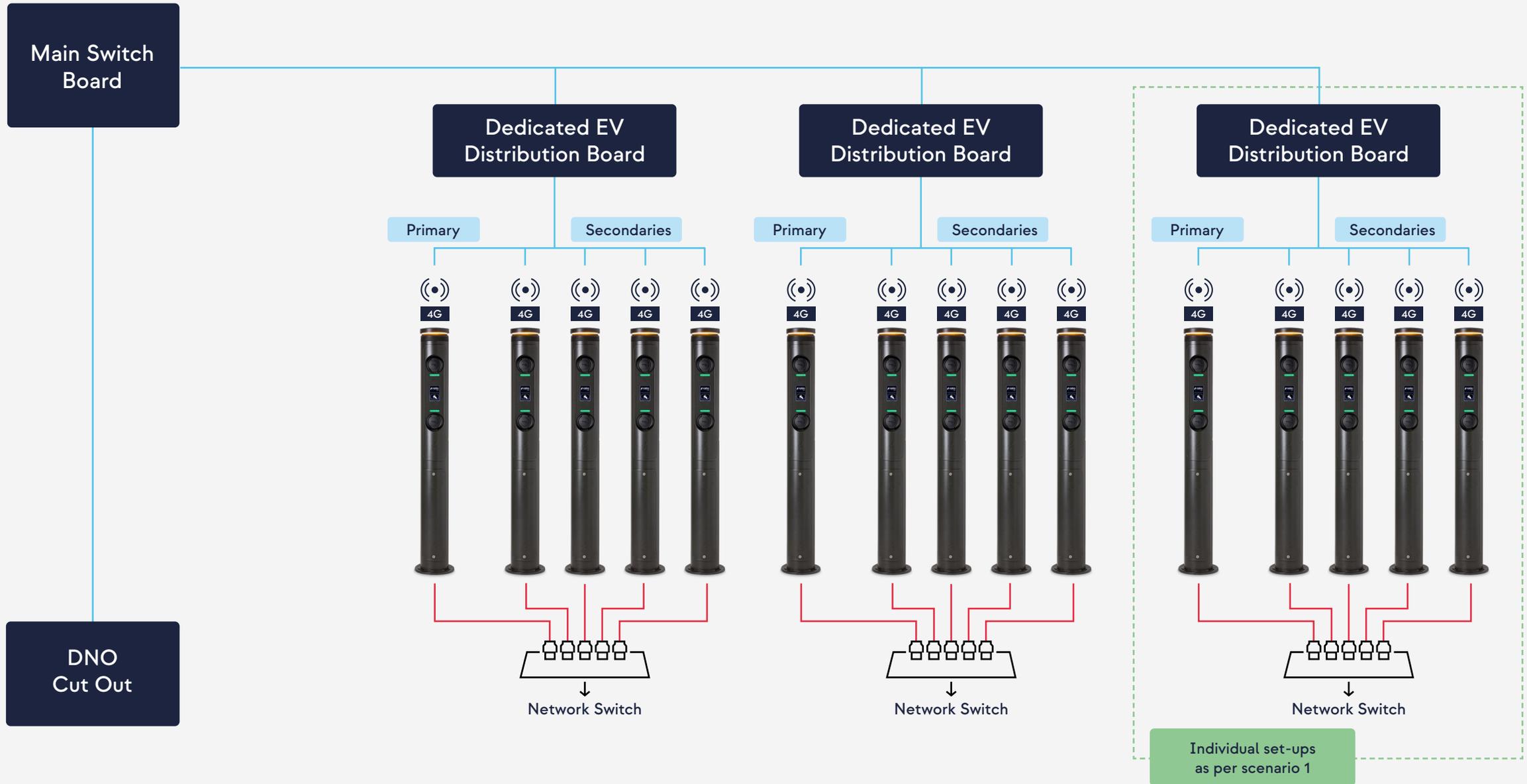
- Mains cable
- Ethernet cable
- CT Clamp



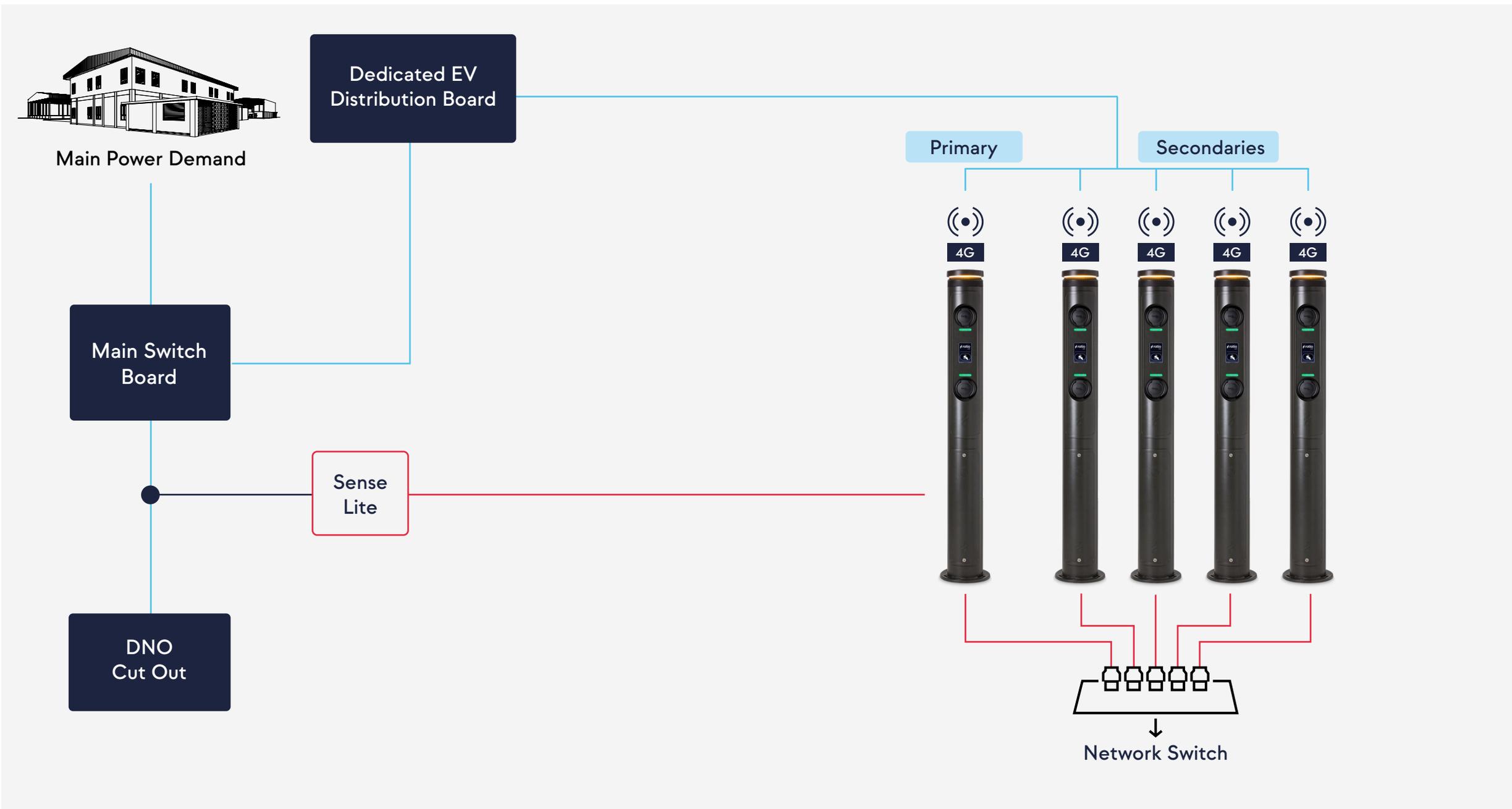
# SCENARIO 1: STATIC GROUP LOAD MANAGEMENT - MAXIMUM 5 CHARGERS



# SCENARIO 2: STATIC GROUP LOAD MANAGEMENT - MORE THAN 5 CHARGERS



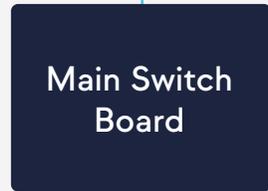
# SCENARIO 3: DYNAMIC GROUP LOAD MANAGEMENT - MAXIMUM 5 CHARGERS



# SCENARIO 4: DYNAMIC GROUP LOAD MANAGEMENT - MORE THAN 5 CHARGERS



Main Power Demand



Main Switch Board



Dedicated EV Distribution Board

Primary      Secondaries



Network Switch



Sense Lite



Sense Lite



Dedicated EV Distribution Board

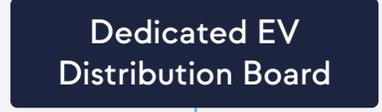
Primary      Secondaries



Network Switch



Sense Lite



Dedicated EV Distribution Board

Primary      Secondaries



Network Switch

Individual set-ups as per scenario 3

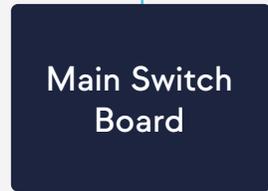


DNO Cut Out

# SCENARIO 5: DYNAMIC GROUP LOAD MANAGEMENT - MAXIMUM 50 CHARGERS



Main Power Demand



Main Switch Board



DNO Cut Out



Proxy MID Meter

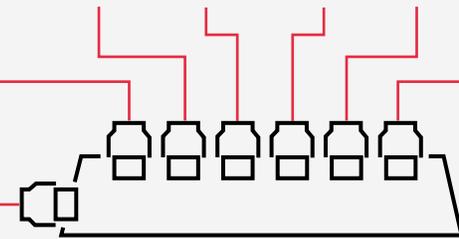


Sense Pro

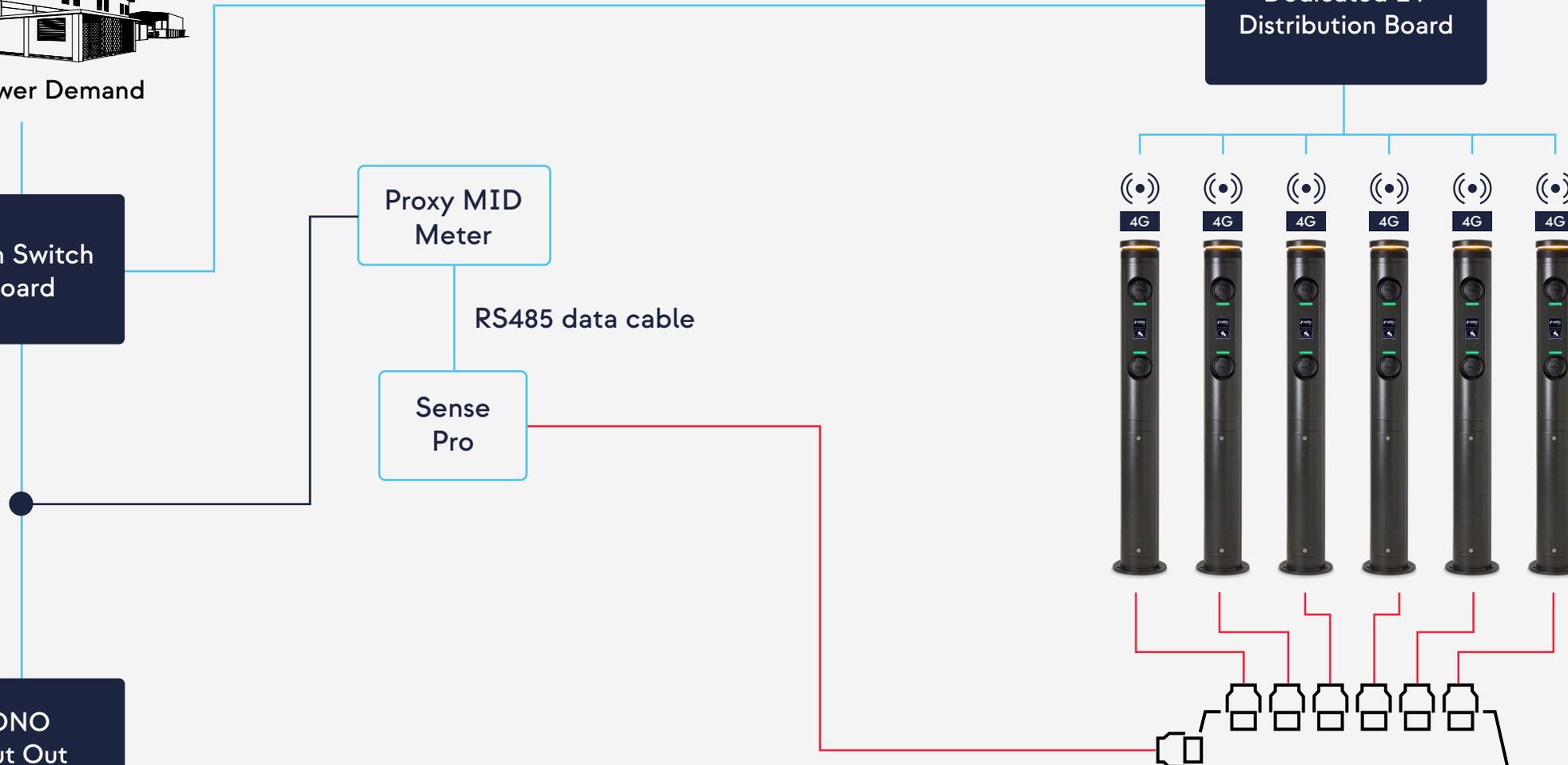
RS485 data cable



Dedicated EV Distribution Board



Network Switch





## NEED SOME ASSISTANCE?

Contact our UK based Technical Support Team on:  
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