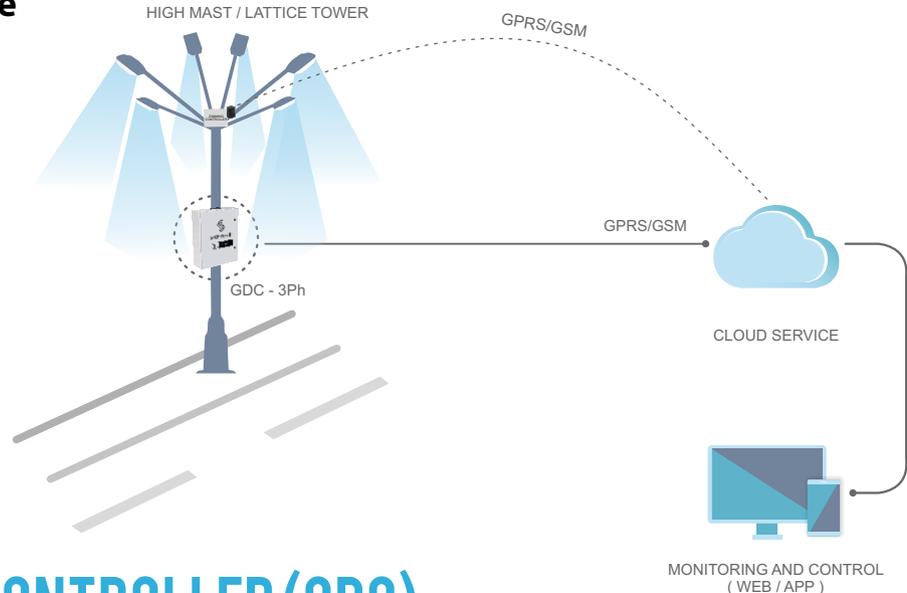


SMART STREET LIGHTING WITH GROUP DIMMING

Schnell SMART system for street lighting is designed to gain complete control over the operation, monitoring and sophisticated maintenance of group of street lights

GDC system architecture



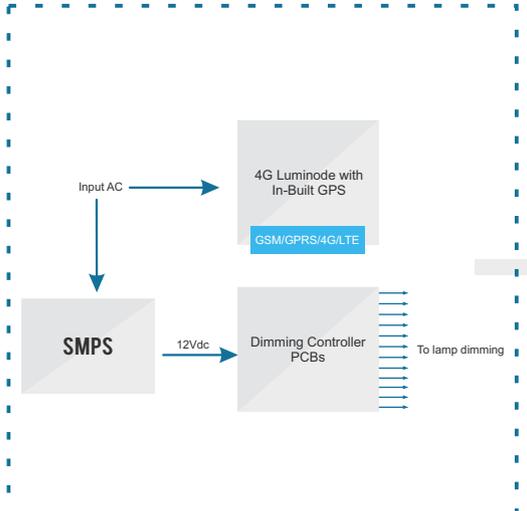
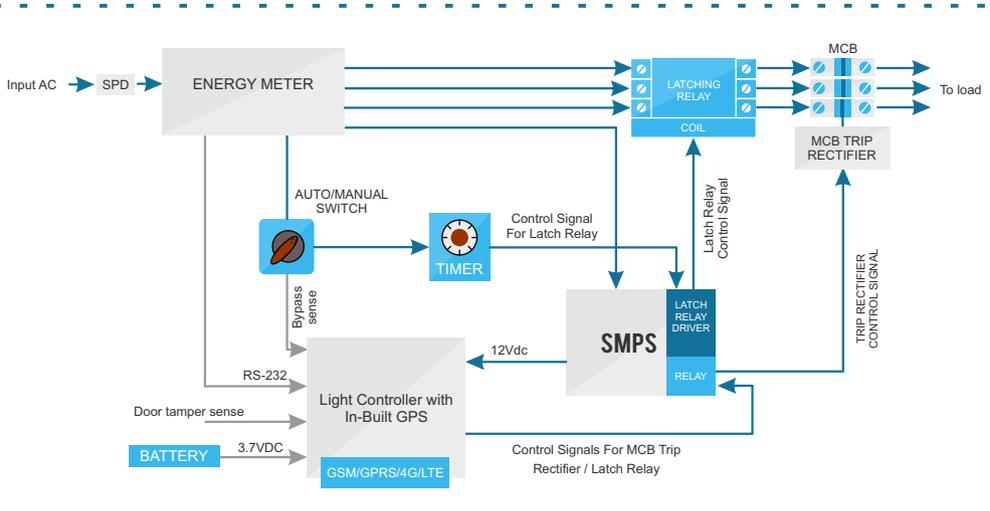
GROUP DIMMING CONTROLLER (GDC)

Group Dimming Controller (GDC) is a control panel providing a comprehensive solution for protection, control and monitoring the group of street lights. It consists a Gateway system and lamp dimming system which will communicate to the SMART web server with GSM/GPRS/4G/LTE connection. Gateway system controls the panel functionality and lamp dimming system will dim the lamp intensity. Panel has a class 1.0 energy metering unit to measure the energy consumption. Panel has an in-built GPS system for the ease of location traceability.

SALIENT FEATURES

- ◆ Protection for Over voltage, Under voltage, Over load, Short circuit
- ◆ Wide input operating voltage with in-built surge protection (40kA)
- ◆ In-built GPS
- ◆ Records and communicates power failure, energy saving, live panel status and other electrical parameters with event notification for faults
- ◆ Control & Monitor through Web & Mobile applications
- ◆ OTA (Over-The-Air) firmware update
- ◆ Electrically controlled mechanism for auto rectification of nuisance MCB Trips
- ◆ By pass function
- ◆ Dimming control for group of light (Maximum 12 Nos)

GROUP DIMMING CONTROLLER – TYPICAL LINE DIAGRAM – LATCH RELAY MODEL [3 PHASE]

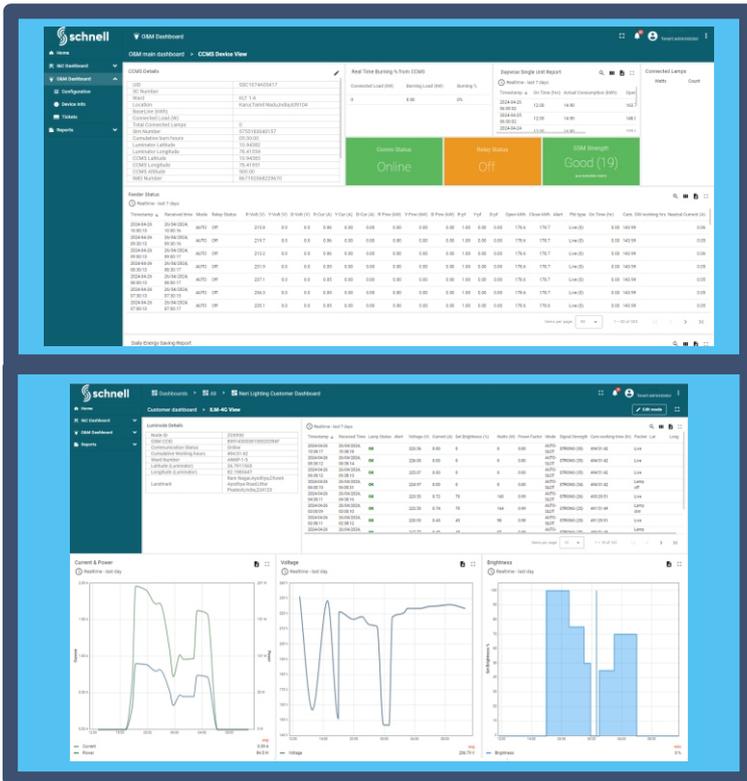


LIGHT CONTROL PANEL

DIMMING CONTROLLER

CCMS SOFTWARE

COMPLIANCE TEST REPORTS



- IEC 61000-4-4:2012
- IEC 61000-4-5:2014
- IEC 61000-4-11:2020
- CISPR 11:2015
- IEC 61000-4-6:2013
- IEC 60068-2-30
- WPC CERTIFICATION

LIGHT CONTROL PANEL TECHNICAL SPECIFICATIONS

Operating voltage range	:	185 VAC to 275 VAC, 50Hz/60Hz
Operating frequency	:	50Hz
Lamp type	:	LED
Connection type	:	3 Phase [4 wire] [panel earthing to be done separately]
Maximum load handling capacity	:	7kVA/Ph in 3 Phase
Operation mode	:	ON / OFF
Surge protection	:	CAT B [6 kV / 3 kA] [Internal Surge Protection for Electronics] CAT C [In =20kA , I _{max} = 40kA]
Metering	:	3Ph Class 1.0 IS:13779 compliant Energy Meter with DLMS protocol
Isolator switch	:	63A Load Break Switch
Lamp protection voltage level	:	*160VAC - 275VAC Per Phase L-N
Load control capacity	:	Max. 32A / Ph
Load control component	:	Latch relay with DC coil
Output protection	:	Upto 32A MCB with 10kA short circuit rating
Rectification for nuisance MCB trips	:	Automatic Rectification
Door tamper sensing	:	Yes
Firmware update over the air	:	Yes
Precision real time clock (RTC)	:	Yes
Battery back-up for power fail	:	30 minutes
Protective features	:	Short Circuit Over/Under Voltage Over Load
Enclosure	:	IP55 & IK10 CRCA enclosure
Mounting type	:	Pole Mounting Surface Mounting with Stand
Dimension (L x W x H)	:	**700 x 475 x 145 in mm
Weight	:	16 kg
Parameters measured	:	Voltage, Current, Active power, Power factor, Energy consumption, Lamp burning hours
Internal storage	:	Last 7 days telemetry data & 1 year energy consumption report
Schedule configuration	:	Predefined schedule / Astronomical clock
Functionality mode	:	Auto/Manual [6A Selector switch]
Threshold configuration	:	"Over/Under Voltage" "Over/Under Current"
Configurable parameters	:	Alarm/Protection Thersholds and Device settings*
Faults/Alarms	:	Over/Under Voltage Over/Under Current Lamp Failure Latch Failure Power Failure Meter Communication Failure
Approvals	:	NABL Lab [Functional Test EMI/EMC Test Environmental Test]



* Electrical threshold parameters like Voltage (Min/Max), Current (Min/Max), functionality parameters like slot level, RTC, scheduling (Predefined/Astronomical), live data interval time, Web server URL/Port can be configured remotely

* Configurable

** Subject to change based on the requirement

DIMMINGCONTROLLER TECHNICAL SPECIFICATIONS

Operating voltage and frequency	: 85 VAC to 440 VAC, 50Hz/60Hz
Surge protection	: Standard: 6kV/3kA Optional: 10kV / I _{max} :10kA, I _n :5kA
Lamp type	: LED
Number of dimming output	: 12
Connection type	: ANSI C136.41 NEMA type - 5 Pin & water proof connector
Configurable parameters*	: Electrical and functional parameters
Data security	: AES-128 Link Layer Security
Over-The-Air Firmware update	: Available
GPS	: Available (Inbuilt)
Real time synchronization	: Through Network / GPS
Battery (Power failure detection)	: Available (15 min)
Internal storage	: 25 events per day (Can be increased in firmware upto 50 events)
Nominal power consumption	: <15 VA
Ingress Protection Rating	: IP65
Operating Temperature Range	: -10 ° to 55 ° C
Dimensions (L x W x H)	: 280 x 280 x 130 in mm
Weight	: 2.3 kg
Certifications	: WPC Type test IP65 Surge testing IEC - 61000-4-5
Threshold configuration*	: Over Voltage Under Voltage
Parameters measured	: Voltage Lamp burning hours
Faults / Alarms	: Over Voltage Under Voltage
Dimming control interface	: 1-10V Analog Dimming
Dimming range	: 10% to 100%
Dimming steps	: Stepless
Dimming configuration*	: Predefined schedule (can be configured remotely)
Network interface	: 4G /2G
Data transfer rates - 4G / GPRS	: 8.6Mbps/85.6 kbps



* Electrical threshold parameters like Voltage (min/max), Current (min/max), Power (min/max), Minimum load value, No load value can be configured remotely from the application server. Also functional parameters like Time schedules, Photocell threshold level (optional), Lamp brightness levels, Operating mode (Auto/Manual/Test), Publish interval time, Web server URL, Port & Timestamp.

** Subject to change based on the requirement