

## TELEM-AGC-L for street lighting control



TELEM-AGC-L is used as LCBC (Light Control Box Controller) in smart street lighting solutions. The system is visualized by map based central user interface software.

### Features

- Autonomous control of feeder and dimming lines without need of permanent connection to control center based on internal astronomical clock and sensors
  - Dimming via extra wire or via DALI interface
  - GPRS communication via secure VPN channels
  - Integrated radio and gateway functionality for individually controlled luminaires solution
  - Interfaces for energy meters and transducers
  - Astronomical clock
  - NTP time synchronization
  - Alarms via SMS
  - Web browser interface for control and maintenance
- Various data exchange protocols via Ethernet and serial ports
  - > 10 sec. operation after power outage for sending last signals
  - Charger for external backup battery
  - Good choice for solutions where older and newer individually controlled luminaires are in same control network

### Cyber security

- Firewall functionality supporting IPtables
- Supports VPN connections: OpenVPN, IPsec, L2TP
- Secure remote connection over SSH

### Interfaces on base board

- Communication ports
  - GPRS modem
  - Optional radio network interface for luminaire controllers
  - Ethernet RJ45 connector
  - 2 x RS-232 with RJ9-4P4C connector, galvanically isolated
  - RS-485, galvanically isolated
  - 1-wire for environmental sensors
  - Photo and temperature resistor inputs
- IO connectors
  - 8 optically isolated digital inputs (wet contacts with internal supply)
  - 4 relay outputs (max 0,5 A 250 VAC; 0,25 A 220 VDC)

### Extension modules

- Module A
  - 8 optically isolated digital inputs (wet contacts with internal supply)
  - 4 relay outputs (max 0,5 A 250 VAC; 0,25 A 220 VDC)
- Module B
  - 8 optically isolated digital inputs (wet contacts with internal supply)
  - 3 relay outputs (max 0,5 A 250 VAC; 0,25 A 220 VDC)
  - DALI master interface
- Module F
  - 16 optically isolated digital inputs (wet contacts with internal supply)
  - 8 relay outputs (max 0,5 A 250 VAC; 0,25 A 220 VDC)

- Module G
  - 16 optically isolated digital inputs (wet contacts with internal supply)
  - 7 relay outputs (max 0,5 A 250 VAC; 0,25 A 220 VDC)
  - DALI master interface

#### Data communication protocols

To upper level systems	OPC UA IEC 60870-5-104 IEC 60870-5-101
To lower level devices	IEC 60870-5-101 IEC 60870-5-103 IEC 60870-5-104 Modbus-RTU Modbus-TCP IEC 62056-21 (IEC 1107)

#### Electrical characteristics of isolated inputs

Withstand to static discharge	EN 61000-4-2
Withstand to bursts, surges	EN 61000-4-4, EN 61000-4-5
Immunity to power frequency magnetic field	EN 61000-4-8
Immunity to voltage dips, variations	EN 61000-4-11

#### Radio frequency compatibility

RF emission	EN 55032
Immunity to RF fields	EN 61000-4-3, EN 61000-4-6

#### Mechanical and environmental parameters

Degree of protection	IP 30
Dimensions (W x H x D)	65 x 155 x 190 mm (with protruding parts)
Mounting	DIN rail
Ambient temperature in operation	-40...+70°C
Relative humidity	95% non-condensing

#### Power supply

Supply voltage range	230V AC
Battery connection	12 V battery for backup
Power consumption (average)	< 7 W

#### Configuration

The Telem-AGC-L is configured by Telem-GWS software tool. The lighting control rules are changed and added from central user interface.

Parts of configuration can be exported and imported to/from .csv files for using the Excel or similar spreadsheet software.

#### Order code

##### AGC-LX-XX-X

Power	A – 230 V AC
Extra communication	R – Radio; N – No
GPRS modem	4 – 4G; N – No
Extension module	A – 8 DI, 4 DO; B – 8 DI, 3 DO, DALI; F – 16 DI, 8 DO; G – 16 DI, 7 DO, DALI; N – No