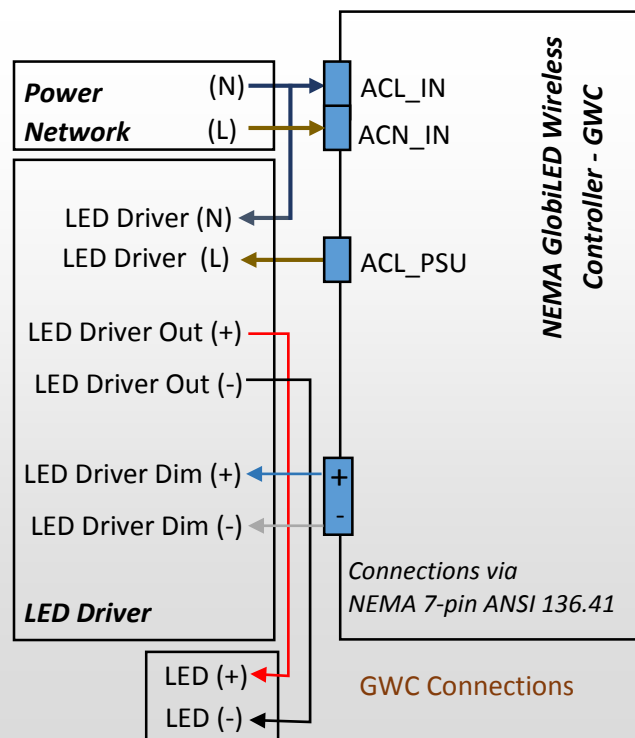# GLOBILED WIRELESS CONTROLLER - GWC

GWC Specs

○ *Equipped with:*
  - *ZigBee transceiver @ 2.4GHz*
  - *Industrial microprocessor (uC)*
  - *Real Time Clock (RTC)*
  - *Hall Effect and Temperature sensors*
○ *Power measurements (P, VA, VAR)*
○ *Energy measurements (KWh, KVAh, KVARh)*
○ *Operating hours tracking*
○ *Modes of operation set by the LMS:*
  - *On, Off, Dim, Flash*
  - *Sunrise Sunset*
  - *Fixed schedule (of 10 levels)*
○ *Fault detection*

Power Network (N) → ACL_IN
(L) → ACN_IN

LED Driver (N) ←
LED Driver (L) ← ACL_PSU

LED Driver Out (+)
LED Driver Out (-)

LED Driver Dim (+) ← +
LED Driver Dim (-) ← -

LED Driver

LED (+) ←
LED (-)

NEMA GlobiLED Wireless Controller - GWC

Connections via
NEMA 7-pin ANSI 136.41

GWC Connections

Description

The GlobiLED Wireless Controller (GWC) is attached with a nema socket 7pin ANSI C136.41 on the LED Street Lights of GlobiLED, each with a unique ID number (MAC address). The GWC is an electronic board, developed by GlobiLED, which includes a ZigBee (IEEE 802.15.4) RF transceiver and a microcontroller (uC).

GWC is connected to a Mesh network and receives commands from the Light Management Software (LMS), via the Wireless Management Node (GlobiNode). These commands are analyzed and executed by the uC of the GWC and control the functionality of the LED Street Light (mode of operation, fault diagnosis, etc).

Key Features

✓ Remote control and real-time monitoring of the LED Street Light with the use of the LMS via GlobiNode.

✓ Automatic operation of the Street Light according to a stored time schedule (mode and schedule set remotely from the LMS) which can be followed autonomously.

✓ Automatic operation of the Street Light according to the sunset-sunrise algorithm (mode set remotely from the LMS)

✓ Real-time control of the LED Street Light from the LMS via GlobiNode: on (100%)/off (0%)

✓ Flash command. Real-time set of the LED Street Light in flashing mode, in order to indicate danger or alarm

✓ Real-time dim (20~100%, min step 1%) of the LED Street Light from the LMS via GlobiNode

✓ Automatic operation of the Street Light according to dimming (10~100%) schedule (mode and schedule set remotely from the LMS). This (daily) schedule is comprised of up to 10 time-points and at each time-point the individual or group of LED Street Lights can be programmed to switch on or off automatically. The 10 time-points and the mode of operation at each time point (on or off) are dynamically configurable by the operator of the LMS.

✓ Measurement of the Street Light operating hours and its electrical and energy consumption parameters (W, PF, V, I, P, F, VA, VAR, KWh, KVAh, KVARh) with 1% accuracy. All relative information and data are transmitted based on a defined time schedule, which may be modified at any time to the LMS via Globinode. Transmit-receive data time ≤20 seconds.

✓ Automatic failure monitoring of the LED Street Light using its ID number (measurement of its electrical and energy consumption parameters). In the case of zero or reduced energy consumption (burned LED), alarms transmitted to the LMS via Globinode

✓ Automatic thermal protection of the LED Street Light

Technical Specifications

➡ Power Supply Unit: 85-264VAC, 50/60Hz input and Dual DC output 5V and 12V, Class I
➡ Power consumption: < 2W
➡ Power consumption (in Stby mode): 0.5W
➡ Transmit-receive data rate: 250Kbps
➡ Transmit power: 10mW (maximum transmit power 100mW/20 dBm)
➡ Control Interface : DALI/0-10V/1-10V/PWM
➡ Max switching/load AC current 10A
➡ Zigbee RF transceiver @ 2400MHz
➡ Operating Temperature range: -40°C ~ +80°C.
➡ Operating Humidity range: 10% ~ 90%.
➡ Surge Protection: ≥1kV L-N and ≥2kV L,N - G

CERTIFICATES

- ✓ (RED) 2014/53/EU
- ✓ LV Directive 2014/35/EU
- ✓ EMC Directive 2014/30/EU
- ✓ EN 62368-1
- ✓ EN 55032
- ✓ EN 61000-3-2
- ✓ EN 61000-3-3
- ✓ EN 61000-6-1
- ✓ EN 61000-6-3
- ✓ ETSI EN 301 489-1
- ✓ ETSI EN 301 489-17
- ✓ EN 300 328
- ✓ RoHS Directive 2011/65/EU
- ✓ WEEE Directive 2012/19/EU
- EN 60529 (IP66)

WIRELESS CONTROL SYSTEM OF GLOBILED