

Data sheet Citygrid On Pole Controller

The Citygrid On Pole controller allows for any luminaire to be incorporated into the Citygrid network. The device is mounted on the pole and connects to the luminaire by wire.



The compact and durable design allows the Citygrid On Pole to be easily mounted onto the light pole of any new or existing installation.

The On Pole controller features two sensors with patent pending detection algorithms and the angled position of the sensors ensures a wide detection range of objects in motion.

A Citygrid installation can consist of any combination of the Citygrid Controllers including the Citygrid Zhaga Controller, Citygrid Zhaga with Sensor, Citygrid On Pole Controller and the InFix24 controller.

Operation of the installation can be as standalone (non-connected) or connected to the Citygrid cloud solution using the Citygrid Gateway.

BENEFITS

- All in one design
- Retrofitting of existing installations
- Dimming control
- High performing motion sensing
- Standby power 1,2 W
- Automatic system fault detection
- Power metering built in

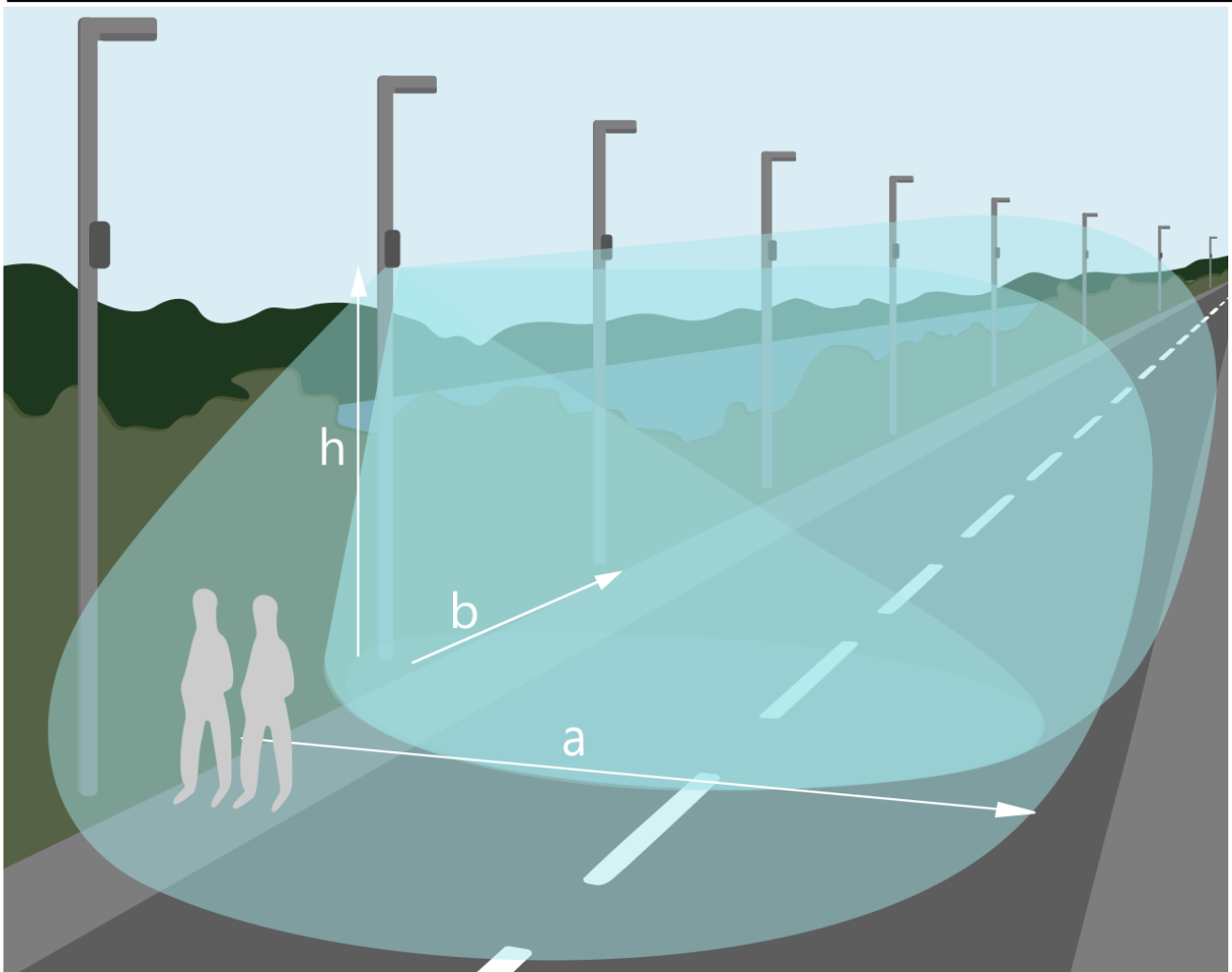
FEATURES

- DALI2 and D4i compliant
- Wireless local connectivity using 6LowPAN
- AES-128 encrypted wireless communication
- Temperature measurement
- Astronomical & real-time clock integrated
- All data stored on flash memory
- Power metering built in
- Switching of mains

MOTION DETECTION

Details	Value	Unit	Condition
Detection technology	2x PIR		Patent pending Analog detection algorithm
Recommended installation height	4 ...5	Meters	

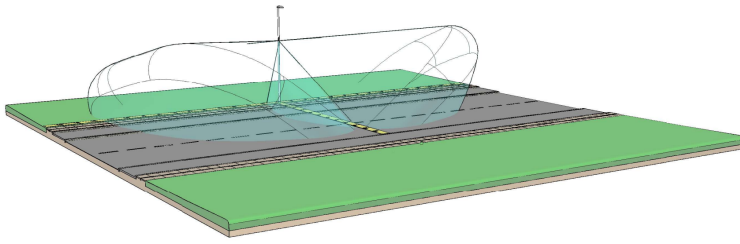
DETECTION AREA



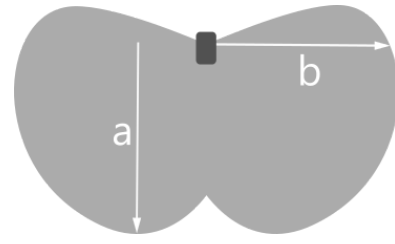
Height h	Length a	Length b	Unit
3 **	9.8*	9.8*	m
4	9.5*	9.5*	m
5	9.2*	9.2*	m
6	8.7*	8.7*	m

*The maximum detection range from the sensor is 10 meters. When the sensor is mounted higher than 6 meters the detection area at ground level shrinks slightly due to the sensor detection range. In those cases the detection lengths are measured 1 meter above the ground instead of at ground level.

** Be aware that a lower hanging unit is an easier target for vandalism. We recommend hanging the unit at 4 to 5 meters height.



Side view of detection area



Top-down view of detection area

ELECTRICAL CHARACTERISTICS - INPUT

Name	Value	Unit	Condition
Universal input voltage	86-265	V _{AC}	
Rated input frequency	47...63	Hz	
Power consumption	1,2	W	Whilst active (standby < 1W)

DIMMING & SWITCHING

Name	Value	Unit	Condition
Dimming range (Dali)	0...100	%	Minimum level dependent on the LED Driver
Dimming type	DALI 2		DALI power 10 mA
Switching capacity	3,0*	A	

* For higher load current levels, contact your local Citygrid sales representative

ON BOARD SENSING

Sensor type	Value	Unit	Condition
Temperature (measurement range)	-30 to + 90	°C	Tc –at PCB

ENERGY MEASUREMENT

Power factor range	0,1 – 1,0		
Universal input voltage range	85 – 265	V _{AC}	
Power range	5...800	W	@power factor = 1
Current range	10...3000	mA	
Accuracy above 5W load	0,2	%	Resistive load

TEMPERATURE & HUMIDITY			
Type	Value	Unit	Condition
Operational temperature	-20 to +60	°C	Ambient
Storage temperature	-30 to +80	°C	Ambient

PROTECTION			
Specification item	Value	Unit	Condition
Required external fuse	<10	A	
Isolation input to output	Class II		Reinforced
IP rating	IP67		
IK rating	IK09		Excluding sensor lenses
Mains surge immunity (differential mode)	6	kV	L-N, acc. IEC61000-4-5:2014. 2 Ω , 1,2/50 μ s, 8/20 μ s
Mains surge immunity (common mode)	6	kV	N-PE,L-PE, acc. IEC61000-4-5:2014. 12 Ω , 1,2/50 μ s, 8/20 μ s

WIRELESS COMMUNICATION			
Specification item	Value	Unit	Condition
Gateway ratio	1:128	Control unit	Maximum 500 Control units per site
Frequency Range	868,3	MHz	
Standard	IEEE 802.15.4		
Protocol	6LoWPAN		
Encryption	AES-128		
Over-the-air update	Yes		
Recommended distance between units	<200	meter	Theoretical communication distance
Maximum Range	500*	meter	

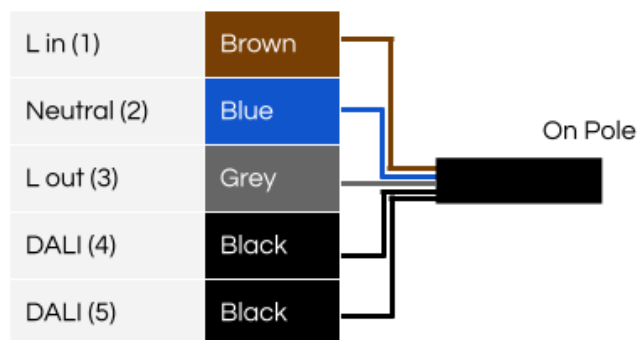
* Maximum range under ideal conditions such as RF matching, line of sight, maximum power. Actual results may vary depending on the customer's design.

ELECTRICAL CONNECTIONS

Name	Value	Unit	Condition
Input/output wire cross-section	5 x 1,0	mm ²	
	17	AWG	
Cable length	6	meter	

* The Citygrid On Pole controller outputs a maximum of 10mA of power to the DALI line.

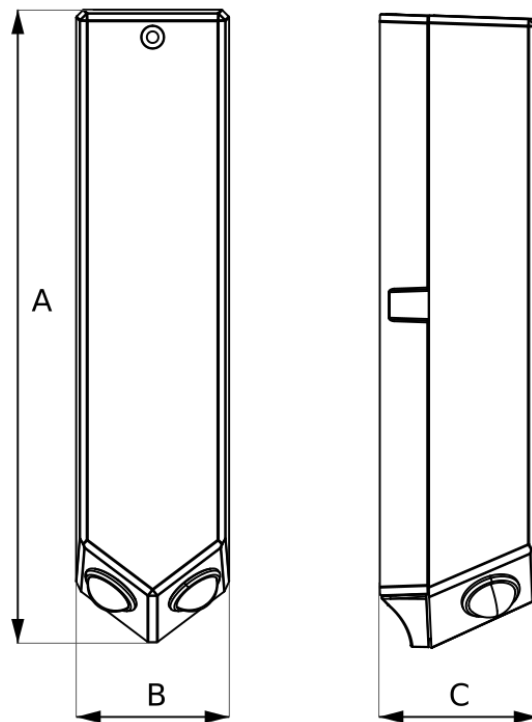
CONNECTIONS DIAGRAM



APPROVALS

Directive:	Standard:
Radio Equipment Directive (RED): 2014/53/EU	EN 301 489 -1 and EN 301 489-3
Electromagnetic Compatibility Directive (EMC): 2014/30/EU	EN 300 220-1 and EN 300 220-2
Low Voltage Directive (LVD): 2014/35/EU	EN 61547:2009 (EMC)
ENEC approved	EN 55015:2013 (EMC)
C-Tick Mark for Australia	EN 61347-2-11:2001 (LVD)
	EN 61347-1:2015 (LVD)
RoHS Directive: 2011/65/EU	EN 50581:2012

DIMENSIONS & WEIGHT			
Item	Value	Unit	Comment
A	220	mm	Height
B	55	mm	Width
C	55	mm	Depth (with pole adaptor)
Weight	1,2	kg	Including 6m cable



LOGISTIC DATA	
Specification item	Value
Product Name	Citygrid On Pole Controller
Seneco Order number	21004
Fagerhult Article number	86492
Parts	Citygrid On Pole Controller and mounting plate
Pieces per box	15
Box dimensions	
Box weight	

WARRANTY AND EXPECTED LIFETIME	
Specification item	Value
Warranty	2 years
Expected lifetime	Up to 100.000 hours of operation or 20 years since initial commissioning. Expected failure rate < 10%



CAUTION

- Avoid touching live parts!
- Do not use the Citygrid On Pole Controller with damaged housing and/or connectors!
- Do not service the Citygrid On Pole Controller when the mains voltage is connected; this includes connecting or disconnecting a LED driver.
- The Citygrid On Pole Controller should only be installed by a trained and qualified person.

Warranty and further information: www.seneco.dk

