

Datasheet SLC-Motion203-C

Smart Controller for Light on Demand

The SLC-Motion203-C is a Zhaga D4i-certified street light controller with an integrated PIR motion sensor. Acting as the central intelligence, the controller enables light-on-demand applications and seamlessly connects lighting assets to modern management systems. Its integrated GNSS receiver enables automatic positioning and simplified commissioning, while the built-in eSIM, provides secure remote connectivity, monitoring and gateway functionality for up to 100 luminaires.



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|---|--|
|  Remote Management
Provides real-time monitoring, management, and remote control of lighting networks via the SL-Control web platform. |  Automatic Positioning
The integrated GNSS receiver provides precise positioning and time synchronisation for automated lighting control. |
|  On-Site Management
Enables on-site configuration of lighting parameters, including dimming levels, for individual luminaires or luminaire groups. |  AstroDim
Automatically adjusts lighting profiles according to precise sunrise and sunset times at the installation location. |
|  Mesh Network
Communication is ensured through a self-organizing 2.4 GHz mesh network connecting luminaires within communication range. |  Brightness Sensor
An integrated brightness sensor enables automatic on/off control based on ambient light levels. |
|  Global Cellular Connectivity
An integrated eSIM provides worldwide cellular connectivity via LTE Cat M1, NB-IoT NB2 and EGPRS networks. |  Tilt Sensor
Integrated tilt sensing enables detection of pole movement, collision events, and changes in orientation across all axes. |
|  Gateway Function
Enables remote monitoring of up to 100 connected luminaires via a single cellular controller. |  Temperature Sensor
Integrated temperature monitoring supports predictive maintenance by identifying abnormal conditions. |
|  Over-The-Air Updates
Enables remote firmware updates for connected controllers via the SL-Control web platform. |  Motion Sensor
Motion sensors support dynamic lighting by automatically adjusting light levels when movement is detected. |

DALI Features

Application Controllers

✓ Supports DALI version-1 control gear
✓ Supports DALI-2 control gear
✓ Support for event messages from input devices
✓ Support for other application controllers on the same bus
✓ Support for Occupancy sensors (DALI part 303)
✓ Support for Light sensors (DALI part 304)
✓ Support for LED (DALI part 207)
✓ Support for Switching (DALI part 208)
✓ Support for Colour control (DALI part 209, DT8) ↳ Supports colour type Tc ↳ Supports colour type RGBWAF
✓ Supports feedback from control gear (including lamp failure feedback)
✓ Support for addressing or grouping of control gear
✓ Support for Luminaire-mounted control devices (DALI part 351) ↳ Type B
✓ Support for Luminaire data (DALI part 251)
✓ Support for Energy data (DALI part 252)
✓ Support for Diagnostics data (DALI part 253)
✓ Luminaire-mounted control devices (DALI part 351) ↳ Type A
✓ D4i certified

Connector

✓ Zhaga connector (Book 18)

Maximum Ratings

Supply Voltage	34 V DC
Current Input	60 mA
Storage Temperature	-40...+90°C

Operating Parameters

Supply Voltage Range	12 – 30 V DC typ. 24 V DC
Current Input (24 V DC)	16 – 45mA
Average Power Usage (24 V DC)	450 mW
Operating Temperature	-40...+80 °C
DALI Input Current	max: 250 mA
Protection Class	IP66
Impact Protection	IK09

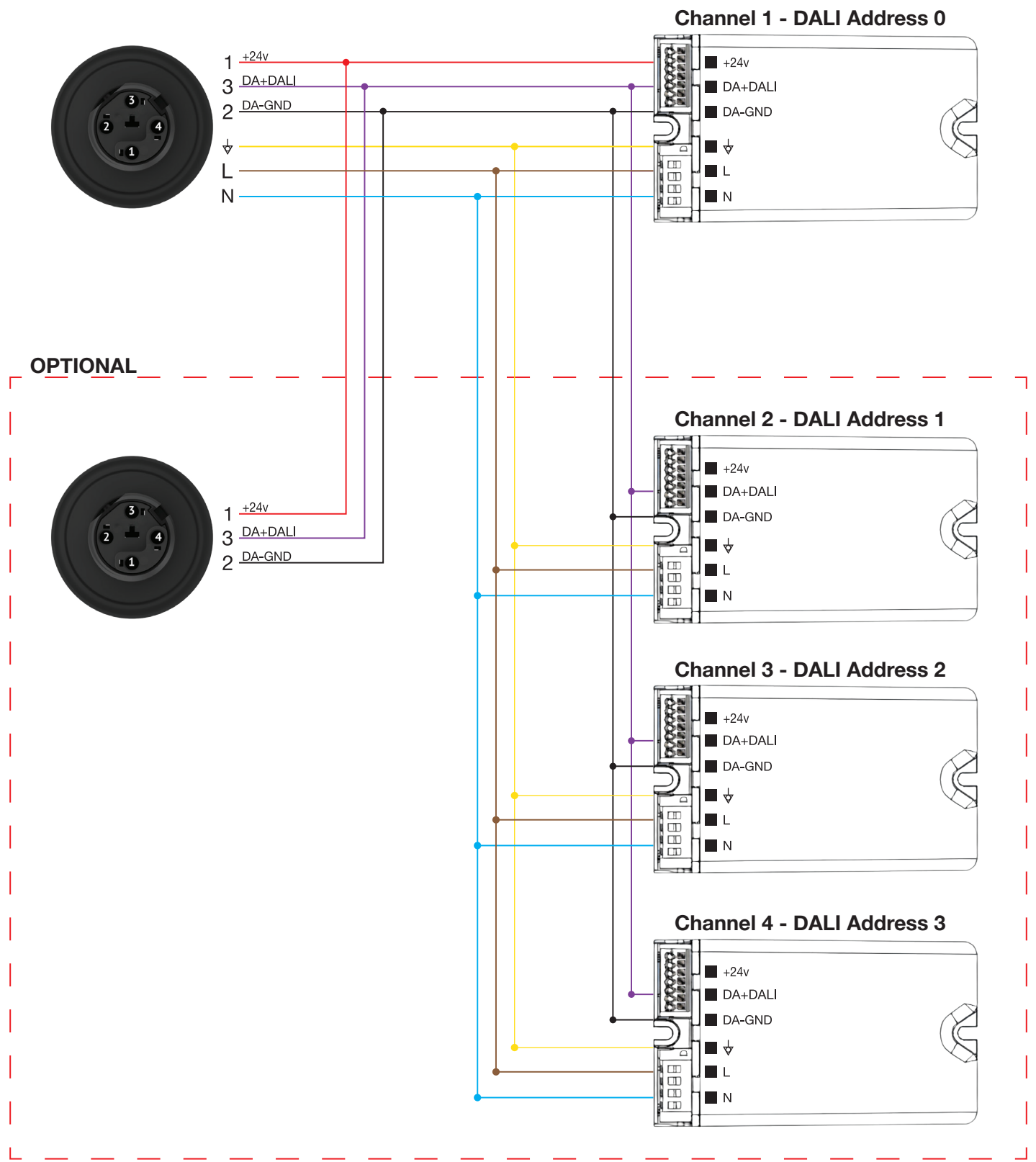
Mesh Characteristics

RF Frequency Range	2.420 – 2.480 GHz
RF Nominal Output Power	+8 dBm
Receiver Sensitivity	-100 dBm

Cellular Characteristics

Protocols	LTE Cat M1, NB-IoT NB2, EGPRS
Frequency Bands (MHz)	CAT M1: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B8 NB-IoT NB2: B1/B2/B3/B4/B5/B8/B12/B13/B18/ B19/B20/B25/B28/B66/B71/B8 EGPRS: 850/900/1800/1900 MHz

Wiring



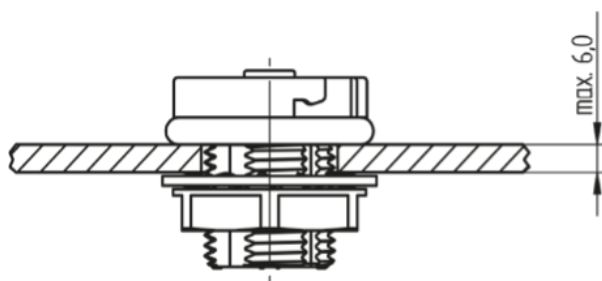
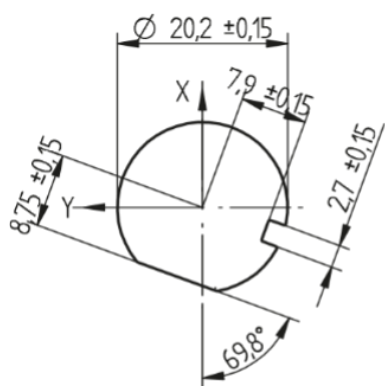
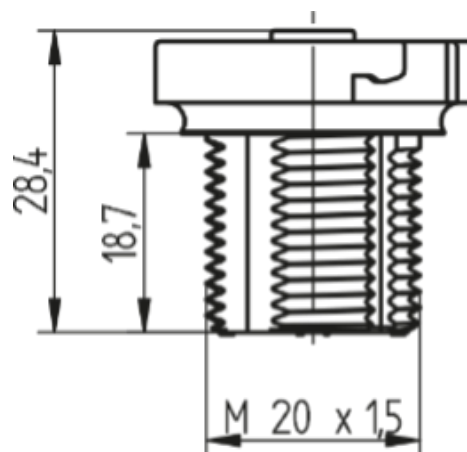
Dimensions SLC-Motion203-C

Diameter	81.50 mm
Height	54.00 mm
Weight	80 g
Dome Material	Polycarbonate
Dome Color	Transparent Smoke Grey
Base Material	PBT
Base Color	Grey



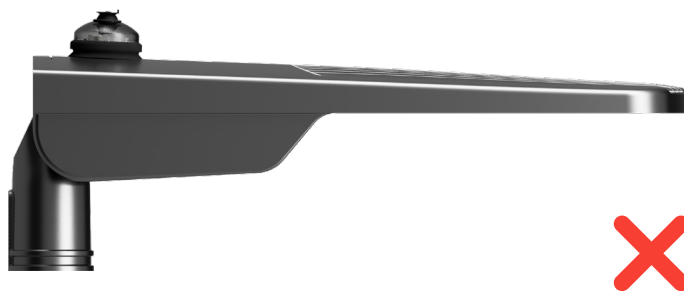
Dimensions Zhaga Connector

Diameter	30.00 mm
Height	28.40 mm
Thread Length	18.70 mm
Thread Pitch	M20 x 1.5
Material	PBT
Wire Size	20-16 AWG (0.5 - 1.5 mm²)
Mounting	Tightening torque 1.8 – 2.4 Nm (27 mm hex socket)



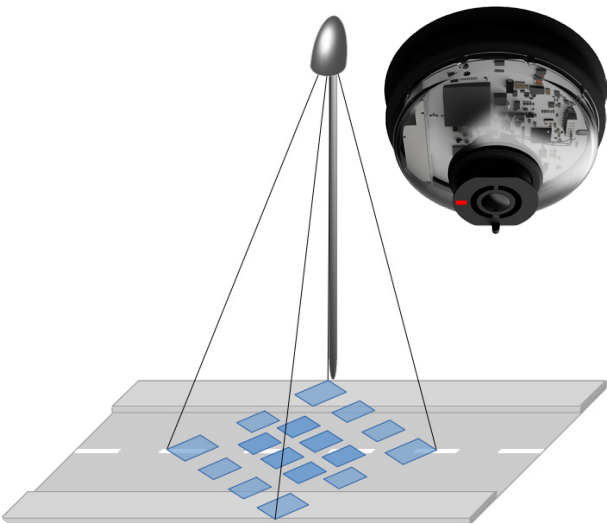
Installation

The sensor must be mounted at the bottom of the luminaire to ensure reliable motion detection.



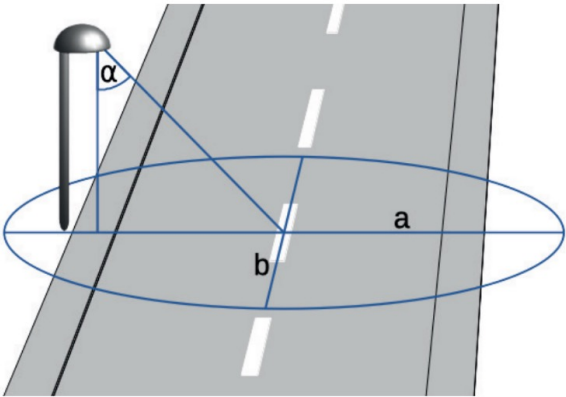
Sensor Alignment

- Align the red marker along the road.
- Position the alignment tab at the lowest point.
- Provides a 45° detection field for optimal motion detection.
- The sensor is adjustable in all directions.



Alignment Angle

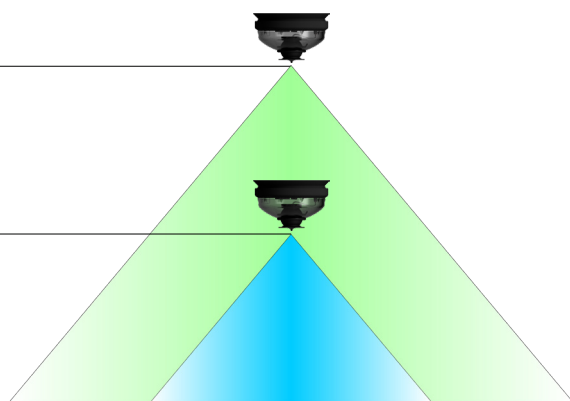
Height	Alignment angle (α)				
		0°	10°	20°	30°
5 m	A	5.7	6.0	7.5	11.8
	B	5.7	5.7	6.0	6.5
6 m	A	6.8	7.3	9.0	
	B	6.8	6.9	7.2	
7 m	A	7.9	8.5	10.5	
	B	7.9	8.0	8.4	
8 m	A	9.0	9.7		
	B	9.0	9.2		
9 m	A	10.2	10.9		
	B	10.2	10.3		
10 m	A	11.3	12.1		
	B	11.3	11.5		
11 m	A	12.4			
	B	12.4			



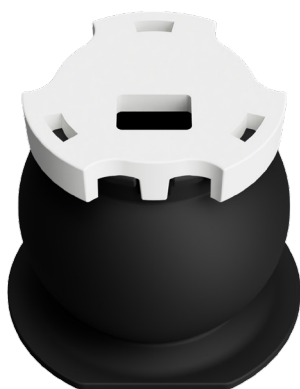
Sensor Types

High Sensitive (HS)
Height: From 6 m up to 12 m

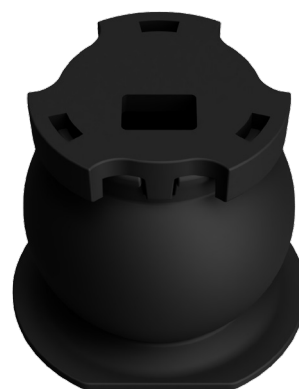
Standard (ST)
Height: From 0 m up to 6 m



**Standard (ST)
White Cover**



**High Sensitive (HS)
Black Cover**



Optional Alignment Tool

An optional alignment tool is available for easy and precise sensor alignment.



All information has been carefully checked; however, errors and technical changes are reserved.