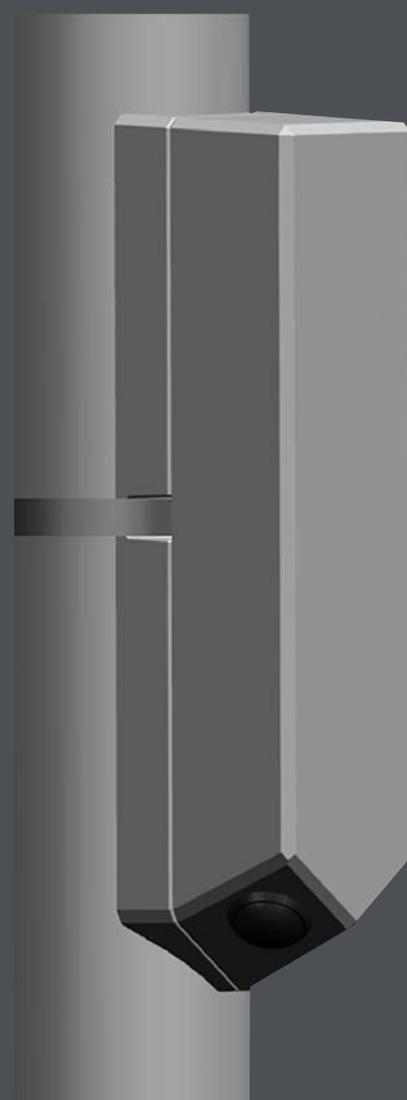


**we-ef**

**WE-EF LEUCHTEN**

**Eco Step Dim® Motion  
Motion Box  
Manual  
2019**

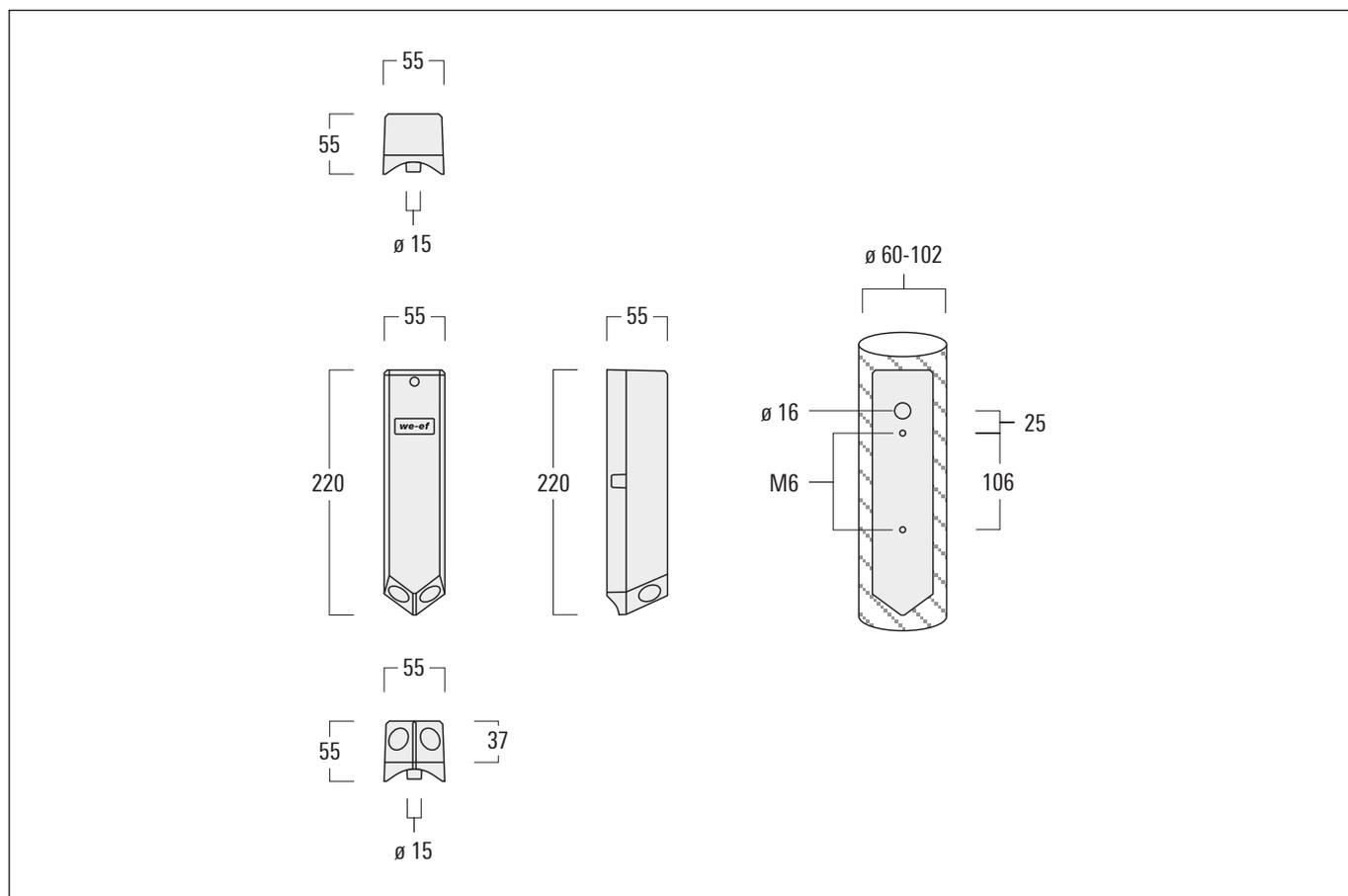


The Eco Step Dim® Motion Box is the 'all-in-one' device that can transform existing luminaires it into an intelligent lighting system. The compact and durable design allows the Eco Step Dim® Motion Box to be easily installed.

A site can consist of up to 500 units. Operation of the site can be stand-alone or connected to a cloud solution using the WE-EF Gateway.

## Features

- Two motion sensors (passive infrared) for light control and dimming
- Voltage, current, power and power factor metering
- Astronomical & real-time clock integrated (with Gateway or GPS sensor only)
- Data stored on a flash memory
- Detection of faulty luminaires
- Standby power <1W
- Control output: DALI
- Wireless interconnection between controllers
- Accelerometer and temperature measurement
- AES-128 data encryption
- GPS sensor (optional)

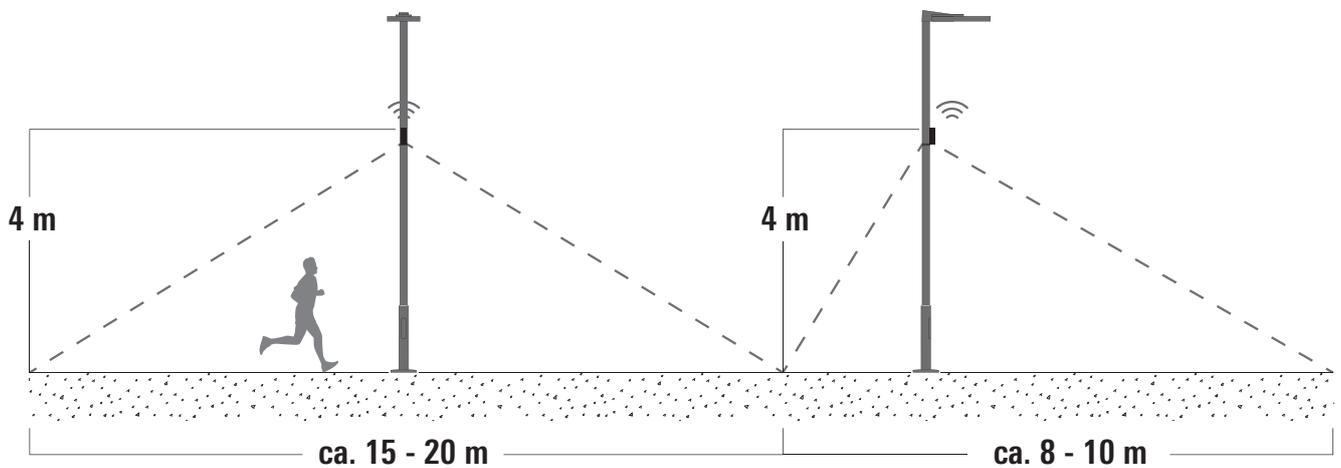
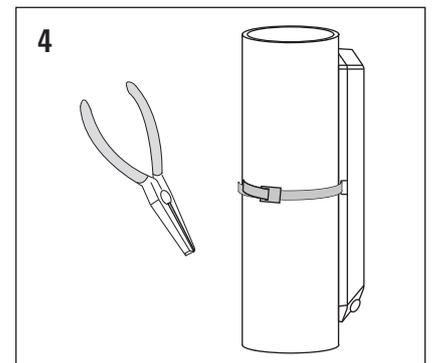
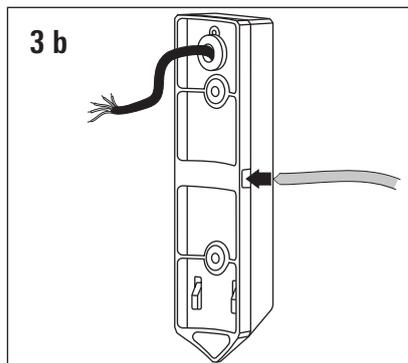
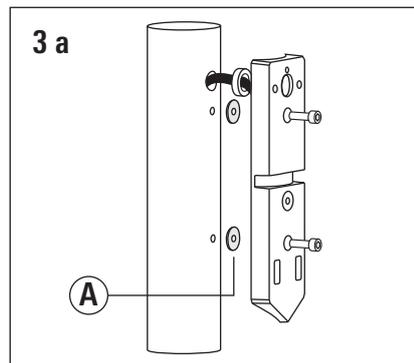
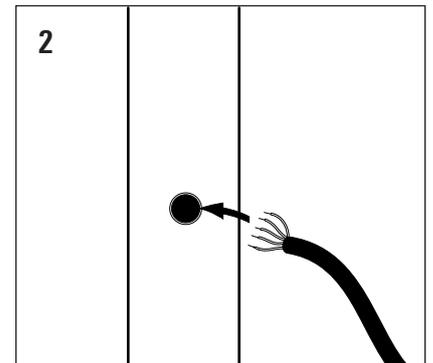
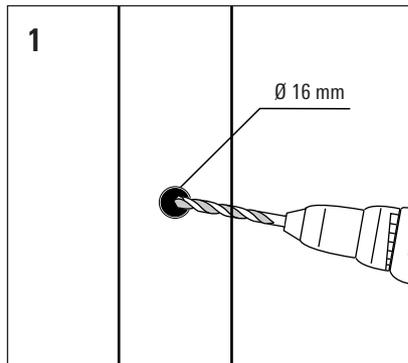
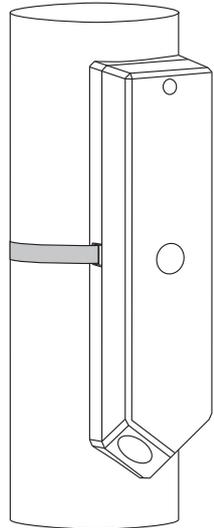
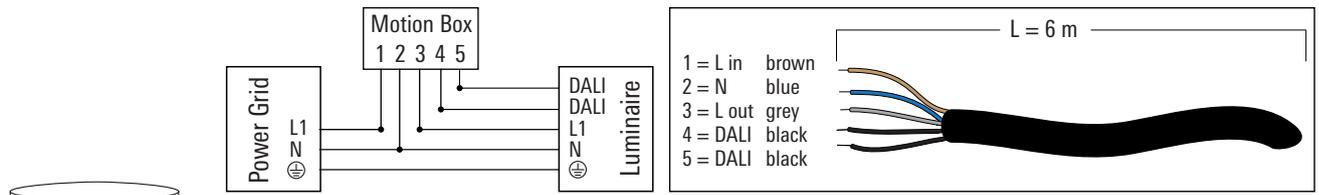


Fixing with screws – Fig 3 a

Pole diameter	number of spacer (A)
Ø 60 mm	–
Ø 76 mm	2
Ø 89 mm	3
Ø 102 mm	4

Technical specifications subject to change.

Pole Mounting Installation



**Electrical Characteristics – Input**

Specification item	Value	Unit	Condition
Universal input voltage	85-265	VAC	
Rated input frequency	47...63	Hz	
Power consumption	0,5-3	W	Active with output on (luminaire powered)

**Electrical Characteristics – Dimming**

Specification item	Value	Unit	Condition
Lamp switching capability up to	3,0*	A	
Dimming range	10...100	%	
Dimming type	1-10V & DALI		

\* For higher load current levels, please contact WE-EF.

**Sensor**

Specification item	Value	Unit	Condition
Infrared passive (2)	10*20	meter	under optimal conditions

**PCB Sensors**

Specification item	Value	Unit	Condition
Accelerometer	±16	g	1g = 9.81 m/s <sup>2</sup>
GPS (position, day and time)	Global Position	Decimal degrees	(in preparation)
Temperature (measurement range)	-30 to + 90	°C	

**Temperature & Humidity**

Specification item	Value	Unit	Condition
Operational temperature	-25 to +60	°C	Ambient
Storage temperature	-30 to +80	°C	Ambient
Relative humidity	10-90	%	Non-condensing. For use up to 2000m above sea level

**Protection**

Specification item	Value	Unit	Condition
Required external fuse	<10	A	
Isolation input to output	Class II		Reinforced
IP rating	IP67		
IK rating	IK08		

**Wires**

Specification item	Value	Unit	Condition
input/output wire cross-section	5 x 1,0	mm <sup>2</sup>	Live in, Neutral, Line out, Dali+, Dali
	17	AWG	
	6	meter	

**Wireless Communication**

Specification item	Value	Unit	Condition
Gateway ratio	1:500	piece	Maximum 500 Control units per site
Frequency Range	868	MHz	
Standard	802.15.4	IEEE	
Protocol	6LowPAN		
Security	AES-128		
Wireless update	Yes		
Recommended distance between units	<100	meter	
Maximum Range	500*	meter	Theoretical communication distance

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

**Energy Measuring**

Specification item	Value	Unit	Condition
Power factor range	0.1 - 1.0		
Power factor range	85-265	V	
Power range	5...800	W	@power factor = 1
Current range	10...3000	mA	
Accuracy over 5 Watt	1	%	Resistive load

**Surge Protection**

Specification item	Value	Unit	Condition
Mains surge protection (Differential mode)	6 kV	L-N, acc. IEC61000-4-5:2014. 2Ω, 1,2/50μs, 8/20 μs	
Mains surge protection (Common mode)	6 kV	N-PE,L-PE, acc. IEC61000-4-5:2014. 12Ω, 1,2/50μs, 8/20 μs	

**Purchasing Data**

Specification item	Value
Product Name	Eco Step Dim® Motion Box
Order number	400-0361
Pieces per box	1
Packaging dimensions	320 x 320 x 80 mm
Packaging weight	1,5 kg

**Approvals**

Directive	Standard
Radio Equipment Directive (RED): 2014/53/EU	EN 301 489-3 (RED-EMC)
Electromagnetic Compatibility Directive (EMC): 2014/30/EU	EN 300 220-2 (RED)
Low Voltage Directive (LVD): 2014/35/EU	EN 61547:2009 (EMC)
	EN 55015:2013 (EMC)
	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	Length
B	55	mm	Height (with pole adaptor)
C	55	mm	Width
Weight	0,6	kg	(weight without cable, 1,2 kg with 6 m cable)

**Caution**

- Avoid touching live parts.
- Do not use the Eco Step Dim® Motion Box with damaged housing.
- Do not use the Eco Step Dim® Motion Box with damaged wiring.
- Do not service the Eco Step Dim® Motion Box when the mains voltage is connected; this includes connecting or disconnecting a LED driver.
- The Eco Step Dim® Motion Box should only be installed by the manufacturer or trained personal.

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**LIGHT**<sup>®</sup>