

# Compact Monsun HC1 Installation and Commissioning

STANDALONE PACKAGE (MASTER/SLAVE)		
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Version	Date	Issuer	Approval
Compact Monsun HC1 - Installation and Commissioning V5.2.1	10.07.2018	C. R.-König	L. Bornemann

# Compact Monsun HC1 - Standalone Application

## Area of application and use

The HC1 sensor was developed for detecting people and vehicles in indoor areas. Operating the sensor in areas near to buildings or in outdoor areas is not permissible.

Application	Comment	Approval
Stairway	closed building, brick or concrete wall	Yes
Supply corridor	closed building, brick or concrete wall	Yes
Underground car park	closed building, brick or concrete wall	Yes
Car park	closed building, brick or concrete wall	Yes
Sports hall	closed building, brick or concrete wall, partition walls	No
Stairway	Open building (wind, rain etc.) and/or drywall, glass surfaces	No
Supply corridor	Open building (wind, rain etc.) and/or drywall, glass surfaces	No
Car park	Open building (wind, rain etc.) and/or drywall, glass surfaces	No

## Products

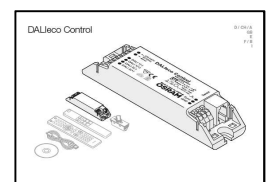
The instructions refer to the following products:

Product	Functionality	Order number
Compact Monsun LED	HC1 Master kit	5LS792HD1 4058352113189
	HC1 Slave kit	5LS792HC1 4058352113202
Compact Monsun® parking LED (Generation 3)	Compact Monsun luminaire HC1 Master	5LS724D1V44BH0D 4058352113226
	Compact Monsun luminaire HC1 Slave	5LS724D1V44BH0C 4058352113240
Master-Remote	Commissioning remote control	5LZ904307 4050737623931

## Non-permissible operation

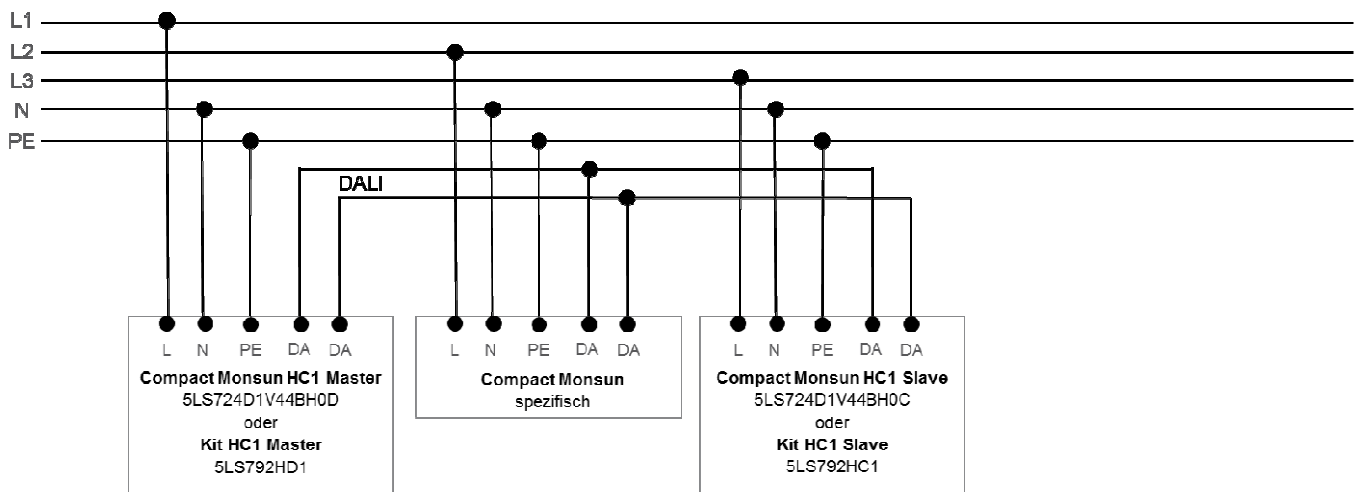
The following functions (from the DALI Eco instructions) are not approved for these products and applications.

Functionality	DALI Eco instructions	Approval
Push-button connection	see 4a, 4b, 5a, 6a	no
Sensor connection	see 5b	no
SYNC line	see 6b	no
Daylight control	-	no



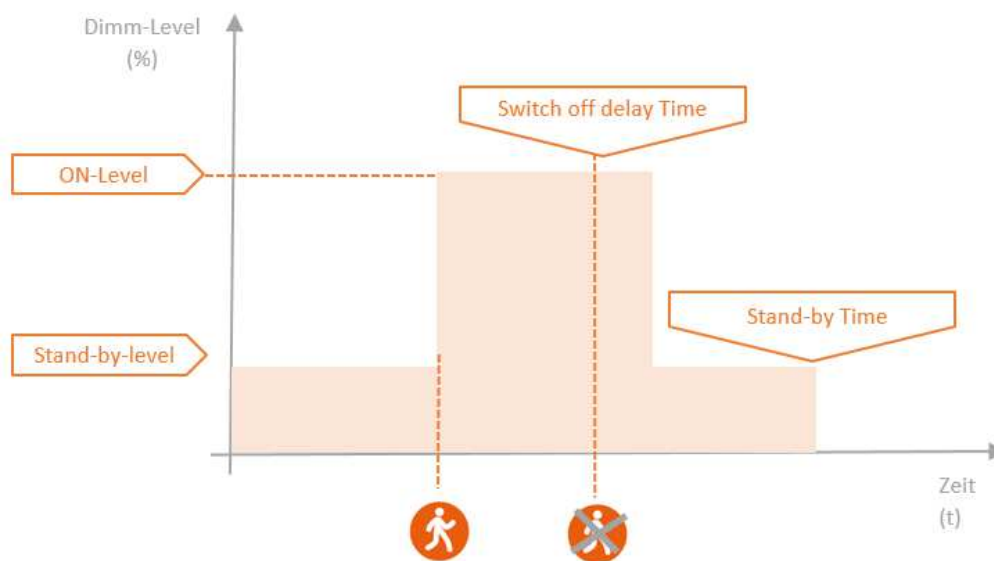
# Compact Monsun – HC1 Standalone Kit

## Out of the box - wiring



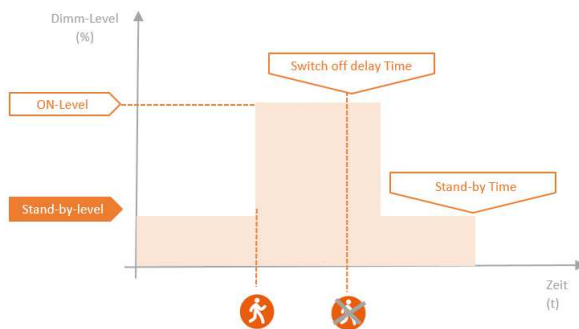
System limits		
<b>Compact Monsun HC1 Master</b> 5LS724D1V44BH0D or <b>HC1 Master kit</b> 5LS792HD1	<b>Compact Monsun HC1 Slave</b> 5LS724D1V44BH0C or <b>HC1 Slave kit</b> 5LS792HC1	<b>Compact Monsun DALI</b> specific
1	0	≤24
	1	≤22
	2	≤20
	3	≤18

## Compact Monsun HC1 - Standalone Out of the box – function



Out of the box		
Functionality	Factory setting	Possible settings
ON level	100%	dimmable
Switch-off delay time	15min	30sec, 1min, 3min, 5min, 10min, 30min, 60min
Stand-by level	OFF	10%, 30%, 50%
Stand-by time	OFF	30sec, 5min, 15min, 30min, 60min, ∞
Motion detection	MAXI range, Step 23	MINI: Steps 1...11 MIDI: Steps 12...22 MAXI: Steps 23...33
Daylight control	Daylight control deactivated - function not approved	

## Compact Monsun HC1 - Standalone Out of the box – change stand-by level



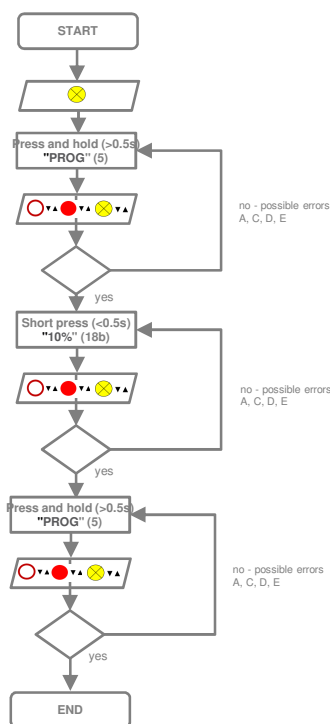
Possible settings	
Value	Key
OFF*	18a
10%	18b
30%	18c
50%	18d

**Step 1**  
Place below master luminaire

**Step 2**  
Start programming mode

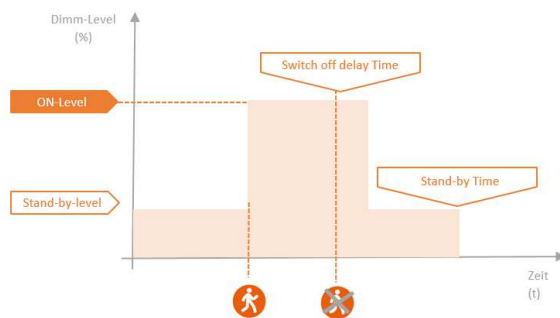
**Step 3**  
Set stand-by level

**Step 4**  
Exit programming mode

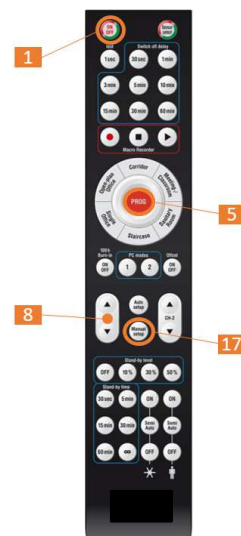
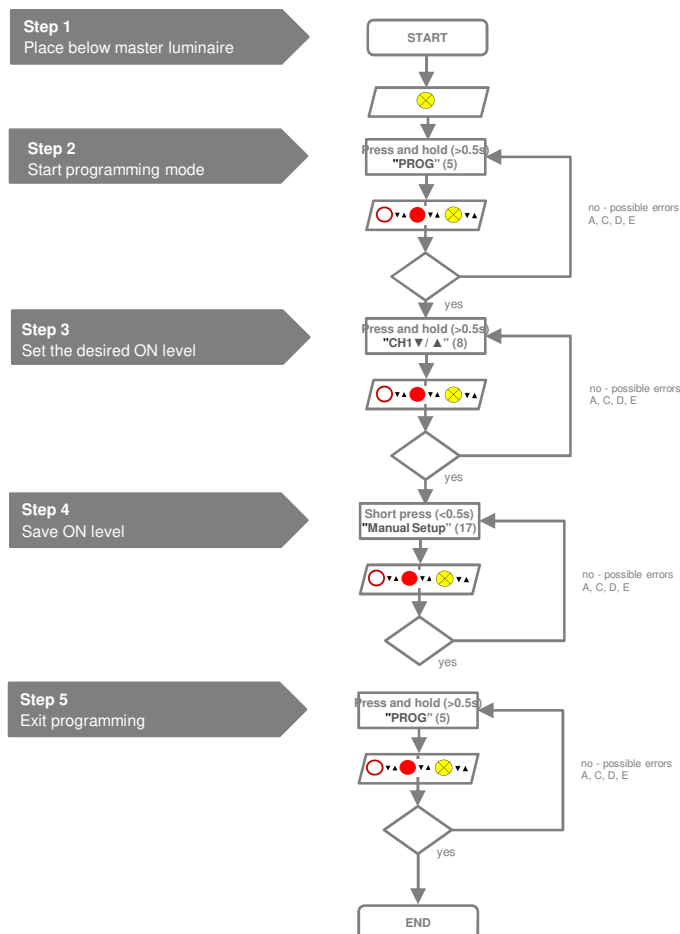


\*out of the box

## Compact Monsun HC1 - Standalone Out of the box - change ON level

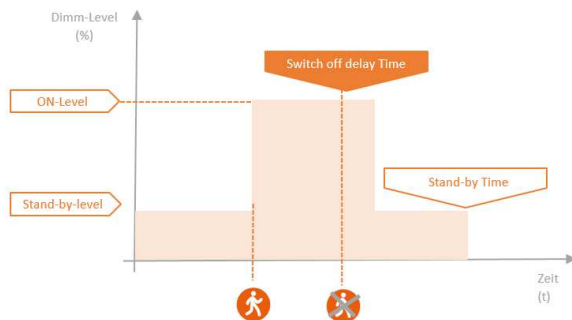


Possible settings	
Value	Key
100%*	-
any	8



\*out of the box

## Compact Monsun HC1 - Standalone Out of the box - change switch-off delay time



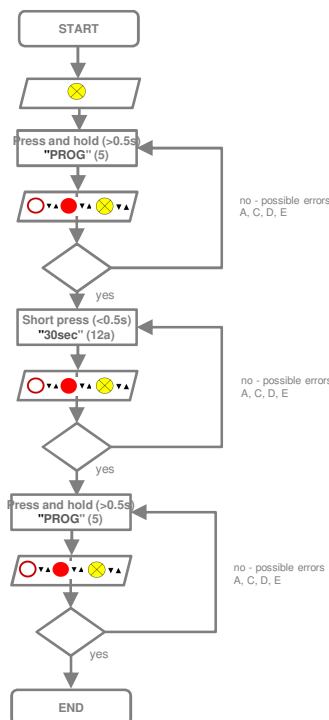
Possible settings	
Value	Key
30sec	12a
1min	12b
3min	12c
5min	12d
10min	12e
15min*	12f
30min	12g
60min	12h

**Step 1**  
Place below master luminaire

**Step 2**  
Start programming mode

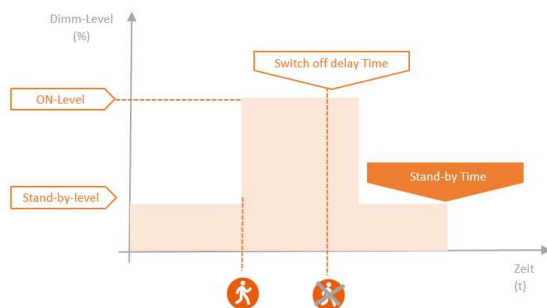
**Step 3**  
Set delay time

**Step 4**  
Save changes



\*out of the box

## Compact Monsun HC1 - Standalone Out of the box - change stand-by time



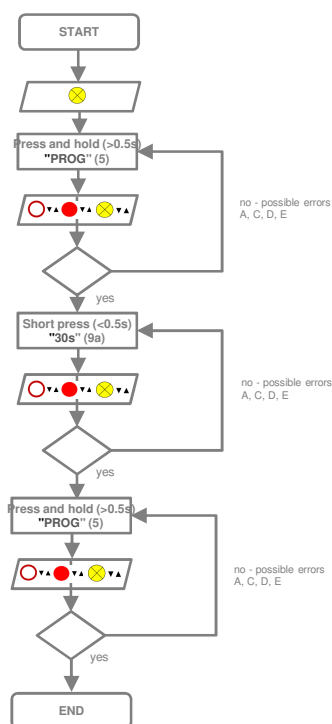
Possible settings	
Value	Key
OFF*	-
30sec	9a
5min	9b
15min	9c
30min	9d
60min	9e
∞	9f

**Step 1**  
Place below master luminaire

**Step 2**  
Start programming mode

**Step 3**  
Set stand-by time

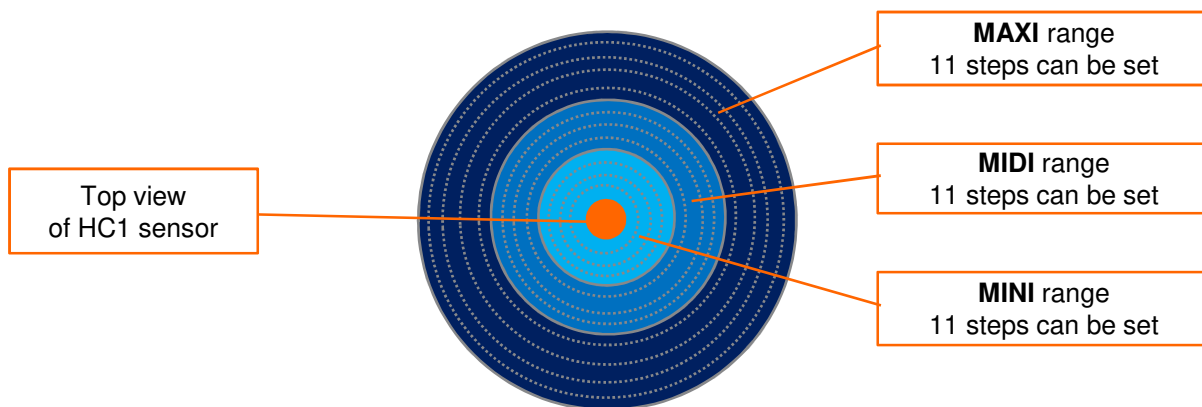
**Step 4**  
Exit programming mode



\*out of the box



## Compact Monsun HC1 - Standalone Sensor range



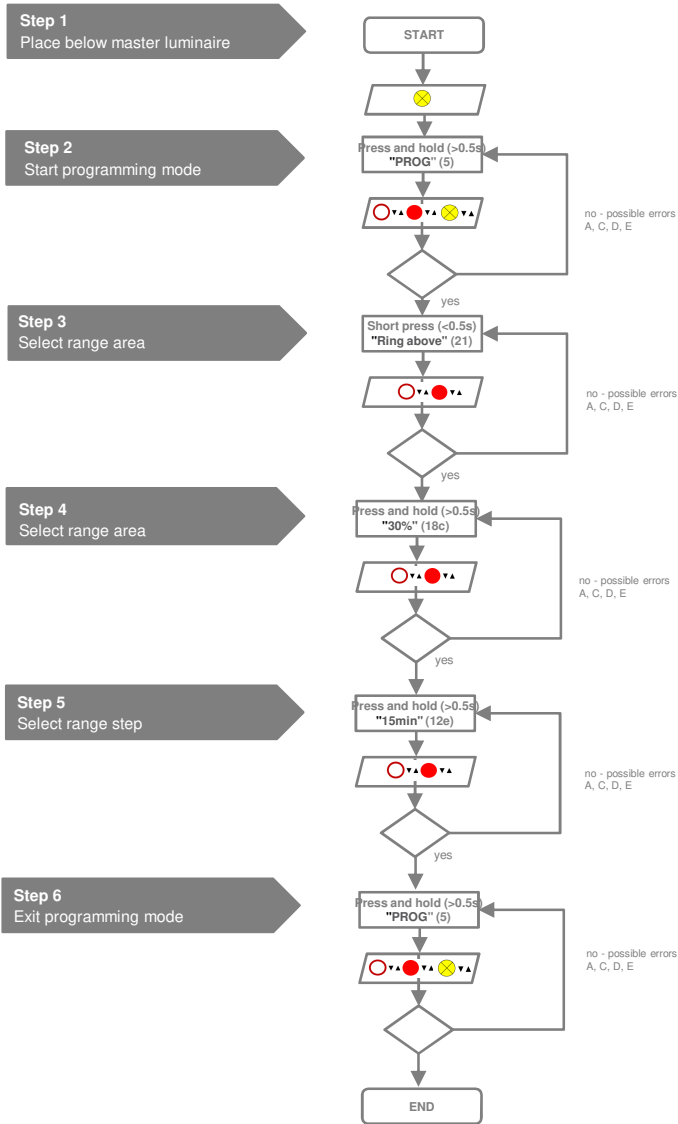
Mounting height 2m – sensor detection range (free field detection)			
Range	Range steps	Radial detection	Tangential detection
MINI	1...11	r = approx. 2...3m	r = approx. 4...6m
MIDI	12...22	r = approx. 3...5m	r = approx. 6...9m
MAXI	23*	r = approx. 5m*	r = approx. 8m*
	24...33	r = approx. 6...13m	r = approx. 10...15m

Mounting height 3m – sensor detection range (free field detection)			
Range	Range steps	Radial detection	Tangential detection
MINI	1...11	r = approx. 2...3m	r = approx. 2m
MIDI	12...22	r = approx. 3...5m	r = approx. 3...4m
MAXI	23*	r = approx. 6m*	r = approx. 7m*
	24...33	r = approx. 6...12m	r = approx. 7...15m

Mounting height 4m – sensor detection range (free field detection)			
Range	Range steps	Radial detection	Tangential detection
MINI	1...11	r = approx. 1m	r = approx. 1m
MIDI	12...22	r = approx. 3...5m	r = approx. 6...9m
MAXI	23*	r = approx. 5m*	r = approx. 7m*
	24...33	r = approx. 5...12m	r = approx. 7...15m

\*out of the box

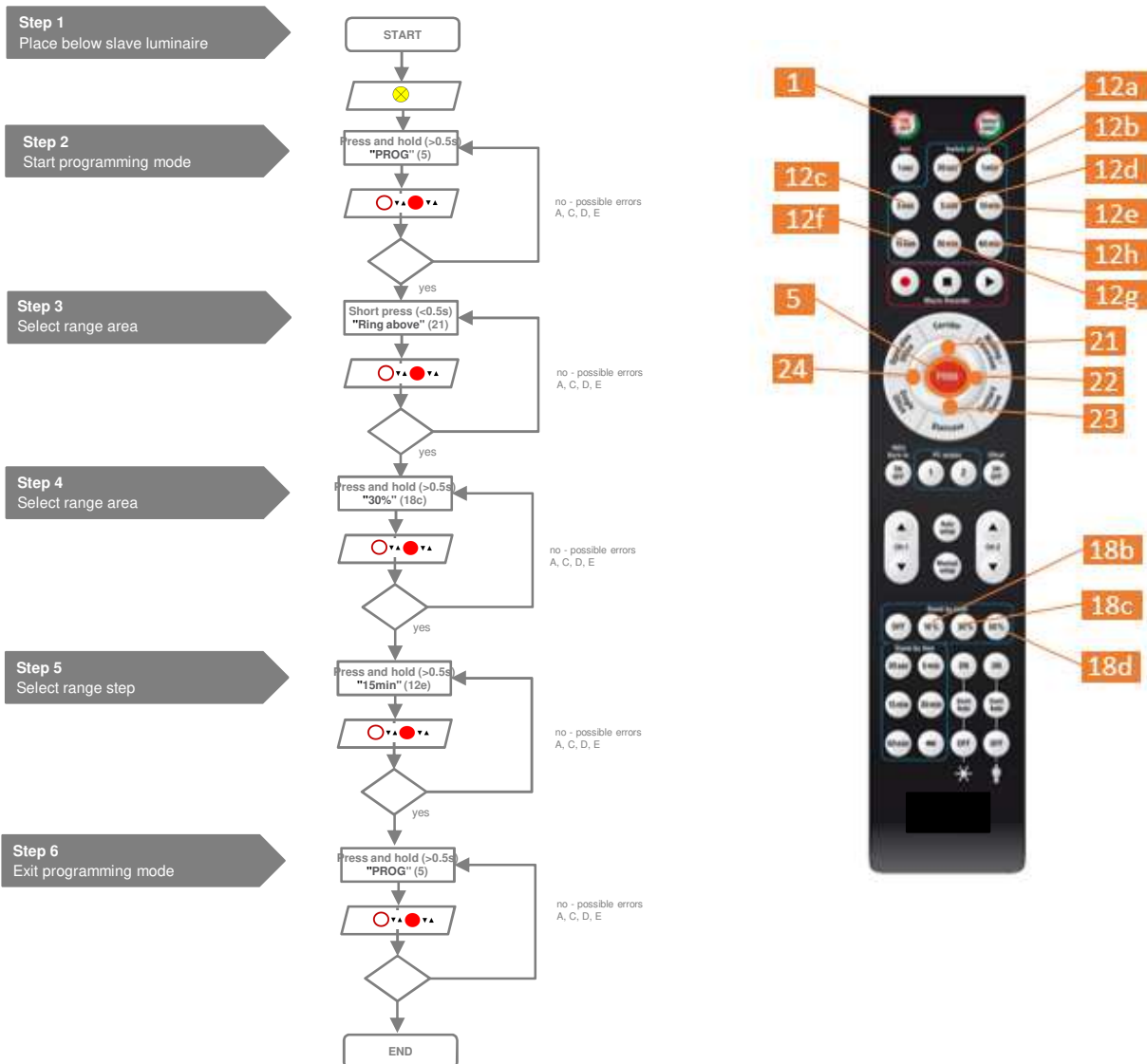
## Compact Monsun HC1 - Standalone Master Setting the sensor range



Range settings								
Range	Level	Key	Range	Level	Key	Range	Level	Key
MINI (key 18b)	1	24	MIDI (key 18c)	12	24	MAXI (key 18d)	23*	24
	2	12a		13	12a		24	12a
	3	12b		14	12b		25	12b
	4	12c		15	12c		26	12c
	5	12d		16	12d		27	12d
	6	23		17	23		28	23
	7	12e		18	12e		29	12e
	8	12f		19	12f		30	12f
	9	12g		20	12g		31	12g
	10	12h		21	12h		32	12h
	11	22		22	22		33	22

For glossary and error description see page xxx | \*out of the box

## Compact Monsun HC1 - Standalone Slave: Setting the sensor range



Range settings								
Range	Level	Key	Range	Level	Key	Range	Level	Key
MINI (key 18b)	1	24	MIDI (key 18c)	12	24	MAXI (key 18d)	23*	24
	2	12a		13	12a		24	12a
	3	12b		14	12b		25	12b
	4	12c		15	12c		26	12c
	5	12d		16	12d		27	12d
	6	23		17	23		28	23
	7	12e		18	12e		29	12e
	8	12f		19	12f		30	12f
	9	12g		20	12g		31	12g
	10	12h		21	12h		32	12h
	11	22		22	22		33	22

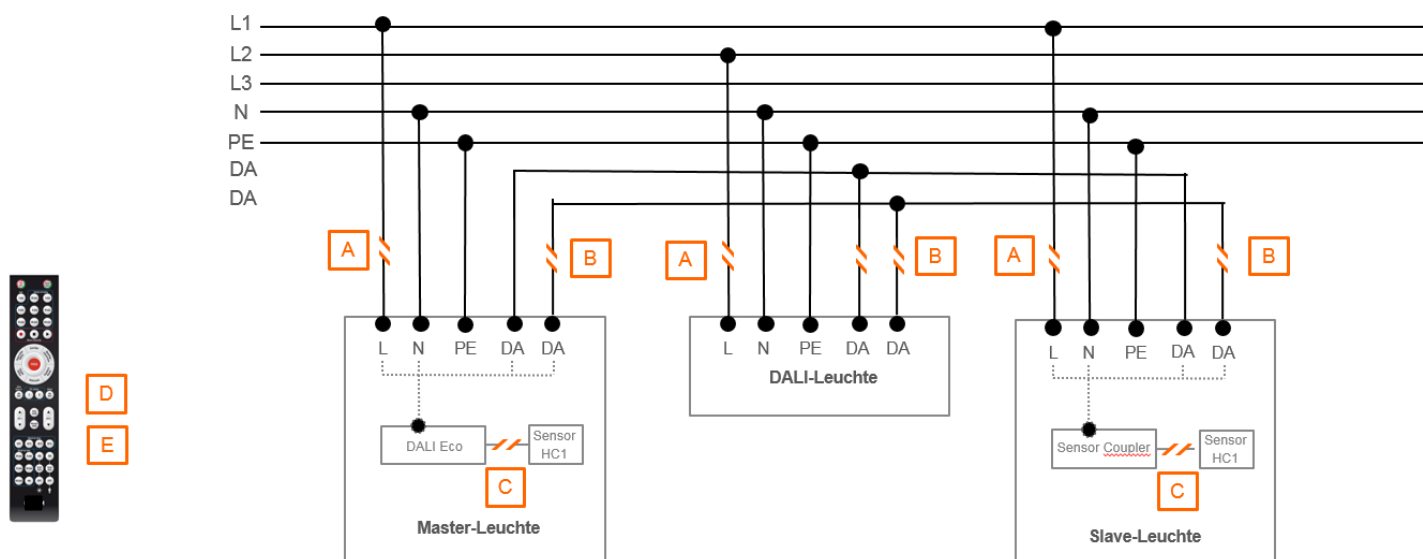
For glossary and error description see page 22 | \*out of the box

## Compact Monsun HC1 - Standalone Error search

SYSTEM REACTIONS				
Luminaire	Response		Error pattern	
Master luminaire	does not respond to movement	Master luminaire is OFF	No mains voltage (A)	
			Master luminaire via CH1 (key 8) deactivated (p. 14)	
		Master luminaire is ON	Sensor interruption (C)	
	does not respond to remote control	Master sensor does not flash red		Battery dead (E)
				IR communication (D)
				No mains voltage (A)
		Sensor interruption (C)		
is permanently ON despite no movement	Master sensor flashes green		Adjust sensor range (p. 10)	
		Master sensor does not flash	Adjust switch-off delay time (p. 7)	
DALI luminaire	DALI luminaire does not switch ON with master and slave luminaires	-	No mains voltage (A)	
		-	DALI error (B)	
Slave luminaire	does not respond to movement	Slave luminaire is OFF	Master luminaire deactivated via CH1 (key 8) (p. 14)	
	does not switch ON with master- and DALI luminaires	Slave sensor does not flash	No mains voltage (A)	
	does not switch OFF with master- and slave luminaires	Slave sensor does not flash	DALI error (B)	
	does not respond to remote control	Slave sensor does not flash red		Battery dead (E)
				IR communication (D)
				No mains voltage (A)
				Sensor interruption (C)
	is permanently ON despite no movement	Slave sensor flashes green		Adjust sensor range (p. 11)
				Detection in adjacent area (p. 20)
			Slave sensor does not flash	Adjust switch-off delay time (p. 7)
	does not respond to movement	Slave luminaire OFF		No mains voltage (A)
Slave luminaire ON			Sensor interruption (C)	
Slave sensor flashes green			DALI error (B)	

\*out of the box

## Compact Monsun HC1 - Standalone Error search



### Error pattern A - mains voltage not present

Is the power supply available on all components? => Carry out wiring test (p. 14)

### Error pattern B - DALI interruption

Is the DALI wiring in the system interrupted? => Carry out wiring test (p. 14)

Check by measuring the DALI voltage on each luminaire.

If the wiring is correct, 16VDC must be measured at each terminal.

### Error pattern C - sensor cable

Is the sensor cable between the controller and sensor not connected correctly?

Line open => LED does not flash

Line closed => LED flashes

The plug must be checked on all sides for correct seating.

### Error pattern D/E - IR communication

When using the infrared remote control, the following must be observed:

- Maximum distance 7m
- free field of vision
- Battery OK?



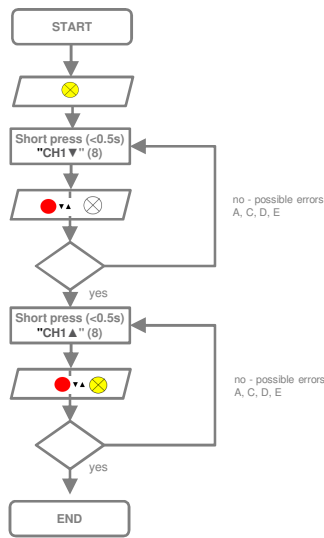
\*out of the box

## Compact Monsun HC1 - Standalone Wiring test

**Step 1**  
Place below master luminaire

**Step 2**  
Switch luminaires OFF

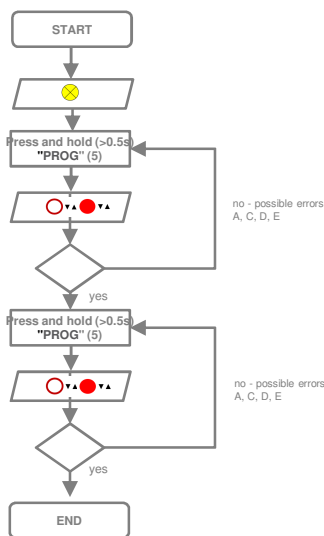
**Step 3**  
Switch luminaires ON



**Step 1**  
Place below master luminaire

**Step 2**  
Start test

**Step 3**  
Finish test



\*out of the box

# Compact Monsun HC1 - SYMPL Application

## Area of application and use

The HC1 sensor was developed for detecting people and vehicles in indoor areas. Operating the sensor in areas near to buildings or in outdoor areas is not permissible.

Application	Comment	Approval
Stairway	closed building, brick or concrete wall	Yes
Supply corridor	closed building, brick or concrete wall	Yes
Underground car park	closed building, brick or concrete wall	Yes
Car park	closed building, brick or concrete wall	Yes
Sports hall	closed building, brick or concrete wall, partition walls	No
Stairway	Open building (wind, rain etc.) and/or drywall, glass surfaces	No
Supply corridor	Open building (wind, rain etc.) and/or drywall, glass surfaces	No
Car park	Open building (wind, rain etc.) and/or drywall, glass surfaces	No

## Products

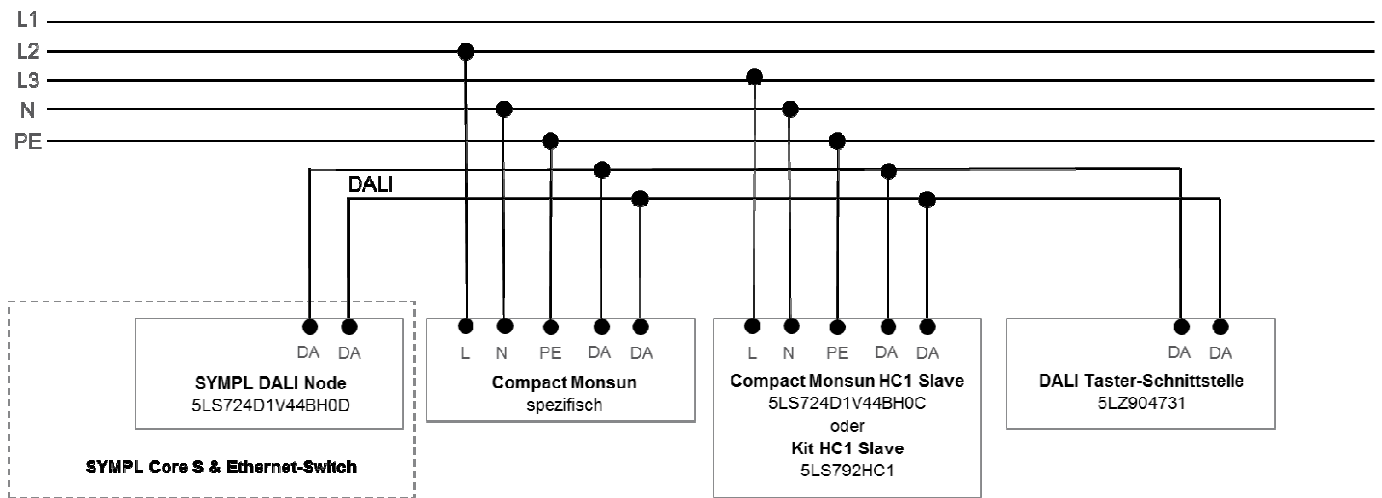
The instructions refer to the products specified in the list.

Product	Functionality	Order number
Compact Monsun LED	HC1 Slave kit	5LS792HC1 4058352113202
Compact Monsun® parking LED (Generation 3)	Compact Monsun luminaire HC1 Slave	5LS724D1V44BH0C 4058352113240
Push-button interface	Integration of customer-specific push-buttons or switches	5LZ904731 4050737059907
Master remote	Commissioning remote control	5LZ904307 4050737623931
SYMPL Core S	-	0TXAB44706 4055462146458
SYMPL DALI Node	-	0TXAB44423 4055462144102
Ethernet switch	-	0TXAA63202 4006584821297

## Use of the daylight sensor

The usability of the integrated daylight sensor depends on the spatial conditions. This can only be clarified during the commissioning process.

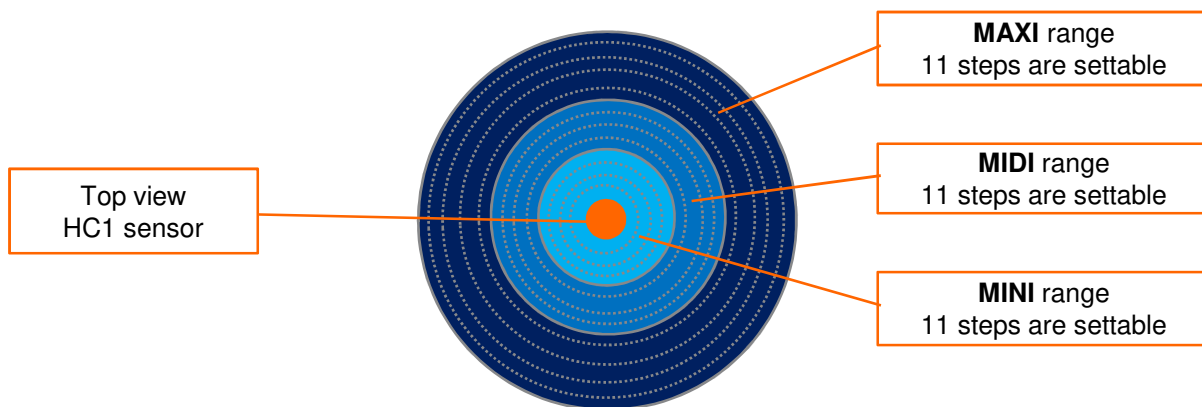
# Compact Monsun HC1 - SYMPL Wiring





# Compact Monsoon HC1 - SYMPL

## Sensor range



Mounting height 2m – sensor detection range (free field detection)			
Range	Range steps	Radial detection	Tangential detection
MINI	1...11	r = approx. 2...3m	r = approx. 4...6m
MIDI	12...22	r = approx. 3...5m	r = approx. 6...9m
MAXI	23*	r = approx. 5m*	r = approx. 8m*
	24...33	r = approx. 6...13m	r = approx. 10...15m

Mounting height 3m – sensor detection range (free field detection)			
Range	Range steps	Radial detection	Tangential detection
MINI	1...11	r = approx. 2...3m	r = approx. 2m
MIDI	12...22	r = approx. 3...5m	r = approx. 3...4m
MAXI	23*	r = approx. 6m*	r = approx. 7m*
	24...33	r = approx. 6...12m	r = approx. 7...15m

Mounting height 4m – sensor detection range (free field detection)			
Range	Range steps	Radial detection	Tangential detection
MINI	1...11	r = approx. 1m	r = approx. 1m
MIDI	12...22	r = approx. 3...5m	r = approx. 6...9m
MAXI	23*	r = approx. 5m*	r = approx. 7m*
	24...33	r = approx. 5...12m	r = approx. 7...15m

## Compact Monsun HC1 - SYMPL Slave: Setting the sensor range

**Step 1**  
Place below slave luminaire

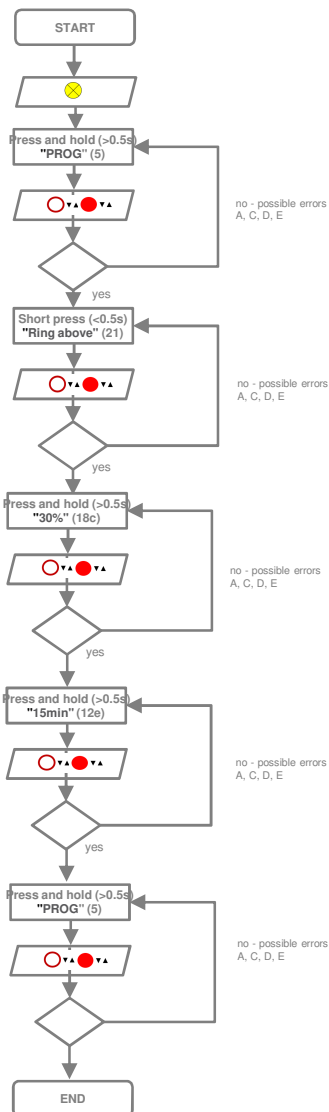
**Step 2**  
Start programming mode

**Step 3**  
Select range area

**Step 4**  
Select range area

**Step 5**  
Select range step

**Step 6**  
Exit programming mode

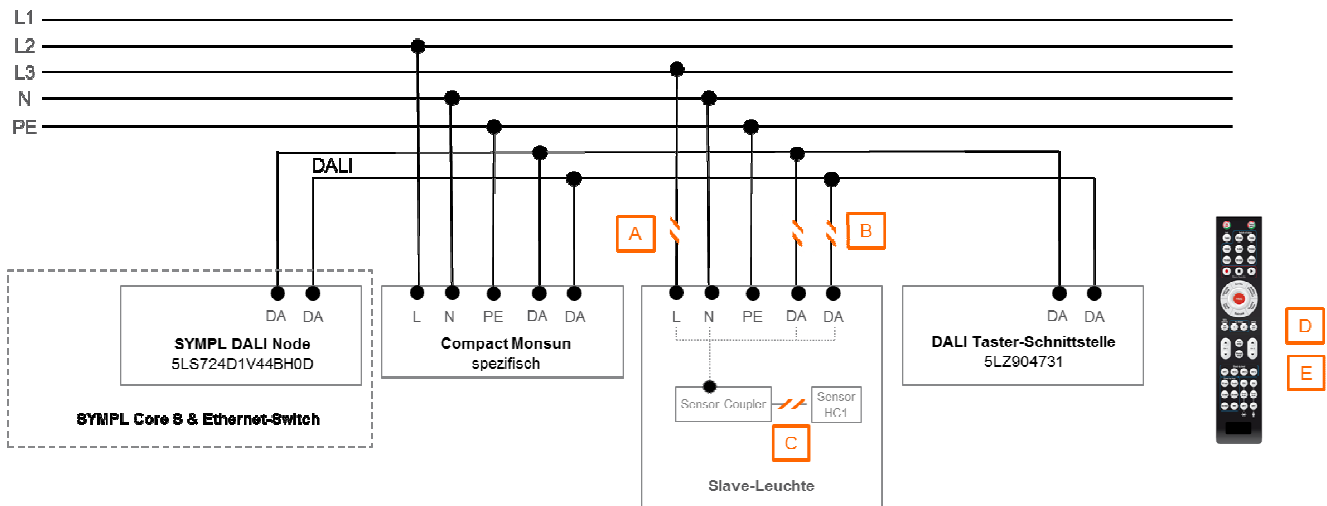


Range settings								
Range	Level	Key	Range	Level	Key	Range	Level	Key
MINI (key 18b)	1	24	MIDI (key 18c)	12	24	MAXI (key 18d)	23*	24
	2	12a		13	12a		24	12a
	3	12b		14	12b		25	12b
	4	12c		15	12c		26	12c
	5	12d		16	12d		27	12d
	6	23		17	23		28	23
	7	12e		18	12e		29	12e
	8	12f		19	12f		30	12f
	9	12g		20	12g		31	12g
	10	12h		21	12h		32	12h
11	22	22	22	33	22			

# Compact Monsun HC1 - SYMPL

## Error search

SYSTEM REACTIONS			
Luminaire	Response		Error pattern
Slave luminaire	does not switch ON	Slave sensor does not flash	No mains voltage (A)
	does not switch OFF	Slave sensor does not flash	DALI error (B)
	does not respond to remote control	Slave sensor does not flash red	Battery dead (E)
			IR communication (D)
			No mains voltage (A)
			Sensor interruption (C)
	is permanently ON despite no movement	Slave sensor flashes green	Adjust sensor range (p. 11)
		Slave sensor flashes green	Detection in adjacent area (p. 20)
		Slave sensor does not flash	Adjust switch-off delay time
	does not respond to movement	Slave luminaire OFF	No mains voltage (A)
Slave luminaire ON		Sensor interruption (C)	
Slave sensor flashes green		DALI error (B)	



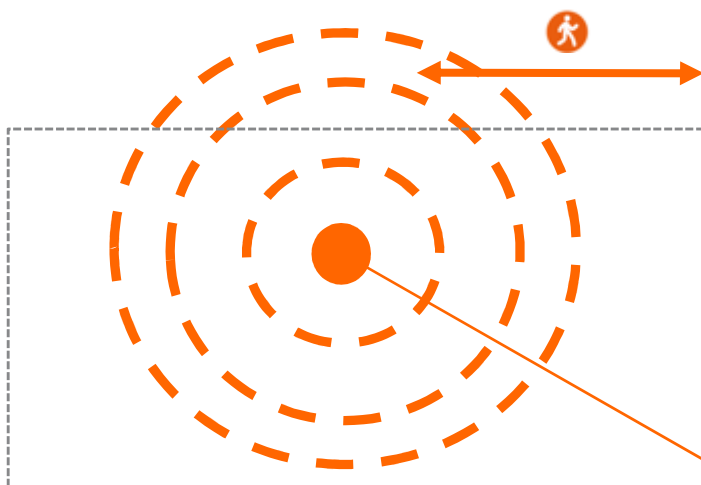
**Error pattern A - mains voltage not present**  
Is the power supply available on all components?

**Error pattern B - DALI interruption**  
Is the DALI wiring in the system interrupted?

**Error pattern C - sensor cable**  
Is the sensor cable between the controller and sensor not connected correctly?

**Error pattern D/E - IR communication**  
Maximum distance 7m | free field of view | battery OK?

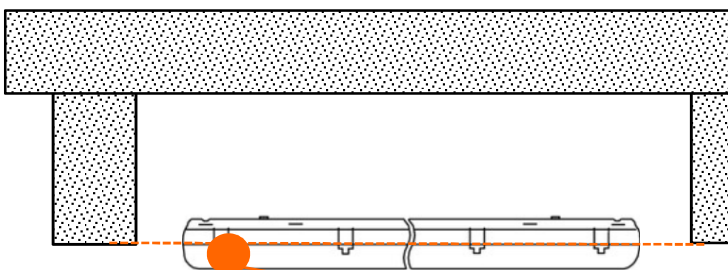
## Compact Monsun HC1 Requirements for the installation site



If the sensor range is too large, adjacent areas can also be detected. For this reason, the detection range must be adjusted on-site if necessary.

Examples:  
Tree in front of window  
Movement in adjacent areas

Top view  
HC1 sensor




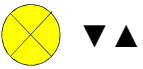



If the sensor luminaire is mounted between beams, make sure that the centre of the luminaire is slightly below the beam.

The higher the luminaire is mounted, the lower the detection range of the sensor luminaire is.

HC1 sensor

## Compact Monsun HC1 Installation and Commissioning

Reactions	
Display	Description
	HC1 sensor (cannot be seen in the luminaire) Sensor LED is red flashes 3x
	Compact Monsun Luminaire is ON
	Compact Monsun Luminaire is OFF
	Compact Monsun Luminaire flashes 1x for confirmation
	Commissioning remote control Ring is red (1) flashes continuously

# Compact Monsun HC1

## Contact partners

### Contact Partners

#### Munich Sales Region

Tegernseer Landstraße 159  
81539 München  
Tel +49 (0) 8669 – 33-11  
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#### Frankfurt Sales Region

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