



FEATURES

- Independent dimmable driver
- Up to 89 % efficiency
- Power input on stand-by < 0.5 W
- Dimming range 5 to 100 %
- Nominal life-time up to 50,000 h
- Suitable for LED lighting
- Loop in and loop out

HOUSING PROPERTIES

- Housing: polycarbonate, white
- Type of protection IP20

INTERFACES

- DALI2.0 certified
- Touch dim
- 1.2m flex & plug

FUNCTIONS

- Protective features (over temperature, short-circuit, overload, no-load, reduced surge amplification)

Warranty

- Five years for fitting

CERTIFICATION	IP RATING	DIMMABLE	DIMENSIONS(mm)

Specific technical data

Order Code	Part No.	Model No.	Output current ^④	Min. forward voltage	Max. forward voltage	Max. output power	Typ. Power consumption (at 230V, 50Hz, full load) ^{②④}	Typ. Current consumption (at 230V, 50Hz, full load) ^②
2224	2224A	ECD60WCC 1050-1400 DL3	1400 mA	30 V	42 V	59 W	67 W	300 mA
			1350 mA	30 V	42 V	57 W	64 W	290 mA
			1300 mA	30 V	42 V	55 W	62 W	280 mA
			1250 mA	30 V	42 V	53 W	59 W	267 mA
			1200 mA	30 V	42 V	50 W	57 W	256 mA
			1150 mA	30 V	42 V	48 W	54 W	246 mA
			1100 mA	30 V	42 V	46 W	52 W	235 mA
			1050 mA	30 V	42 V	44 W	50 W	224 mA

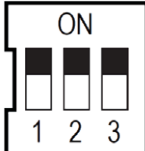


Technical data	
Rated supply voltage ^①	220 – 240 V
AC voltage range	198 – 264 V
DC voltage range	170 – 275 V
Mains frequency	0 / 50 / 60 / 100 Hz
Overvoltage protection	350 Vac, 2 h
Typ. input current (at 230 V, 50 Hz, full load) ^{②③}	265 mA
Typ. input current (at 230 V, 0 Hz, 15% dimming level) ^③	50 mA
Leakage current (at 230 V, 50 Hz, full load) ^{②③}	≤ 0.5 mA
Max. input power	67 W
Typ. efficiency (at 230 V, 50 Hz, full load) ^③	89 %
λ (at 230 V, 50 Hz, full load)	> 0.9
Typ. power input on stand-by ^④	< 0.5 W
Typ. input current in no-load operation	10 mA
Typ. input power in no-load operation	< 0.8 W
THD (at 230 V, 50 Hz, full load) ^②	< 15 %
Time to light (at 230 V, 50 Hz, full load)	< 0.8 s
Time to light (DC mode)	< 0.8 s
Switchover time (AC/DC) ^⑤	< 0.5 s
Turn off time (at 230 V, 50 Hz, full load)	<100 ms
Output current tolerance ^{②⑥}	± 6 %
Max. output current peak (non-repetitive)	≤ 1.1 output current
Output LF current ripple (< 120 Hz)	± 3 %
Max. output voltage (no-load voltage)	60 V
Dimming range	5 – 100 %
Mains surge capability (between L - N)	1 kV
Mains surge capability (between L /N- PE)	2 kV
Surge voltage at output side (against PE)	≤ 500 V
Dimensions L x W x H	303 x 64 x 32 mm
EOF1	15 %
Max Tc point	85 °C
Ambient temperature ta	-20 ... +40 °C
Admissible temperature range for storage	-40 ... +50 °C
Admissible humidity range for storage	5 ... 85 %
Note: ^① Hot plug is not allowed. ^② Valid at 100 % dimming level. ^③ Depending on the selected LED lamp the voltage of the LED lamp is 36V. ^④ Depending on the DALI traffic at the interface. ^⑤ When AC switch to DC in standby status, brightness to 15 %. ^⑥ Output current is mean value. ^⑦ Input voltage 230V.	

Wiring and connection	
Input wire cross-section	1.5 - 2.5 mm ²
Output wire cross-section	0.5 - 0.75 mm ²
Maximum allowable current to the terminal (Input)	16 A



DIP setting

Output current setting	PIN1	PIN2	PIN3	Output current	Voltage range	Max. output power
	ON	ON	ON	1400 mA	30 V-42 V	59 W
	OFF	ON	ON	1350 mA	30 V-42 V	57 W
	ON	OFF	ON	1300 mA	30 V-42 V	55 W
	ON	ON	OFF	1250 mA	30 V-42 V	53 W
	OFF	OFF	ON	1200 mA	30 V-42 V	50 W
	OFF	ON	OFF	1150 mA	30 V-42 V	48 W
	ON	OFF	OFF	1100 mA	30 V-42 V	46 W
	OFF	OFF	OFF	1050 mA	30 V-42 V	44 W

Touch dim function description

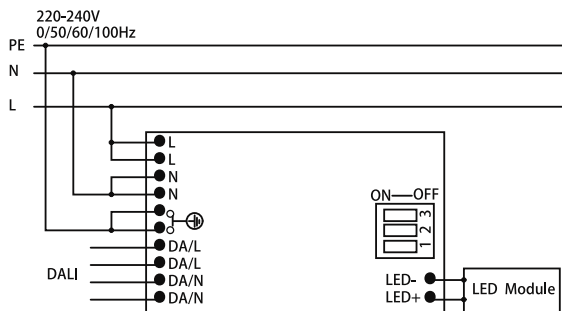
Function	Operation
Switch on/off	Short press(>0.04S ,<0.5S)
Dimming level	Medium press (>0.5S, <10S) dim up or down, dimmer direction is upward (if last dimming direction is downward) or downward (if last dimming direction is upward).
Synchronization	Long press > 10S, all the drivers synchronously switch into 37 % light level, then release the switch and medium press again to start dimming, the dimming direction would be downward.
Memorization	The driver stores all the set values when the lamps are disconnected from the power supply.

Standards

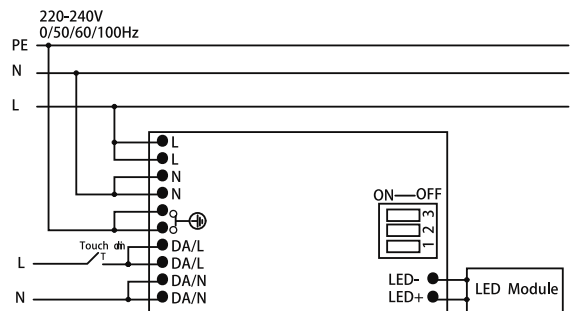
AS/NZS CISPR 15 , AS/NZS 61000-3-2, AS/NZS 61000-3-3, AS/NZS 61347-1, AS/NZS 61347-2-13, AS/NZS 62384, AS/NZS 61547, Acc. to AS/NZS 50172, Acc. to AS/NZS 60598-2-22.

Installation and Wiring Instruction

Installation Circuit diagram

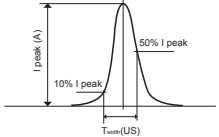


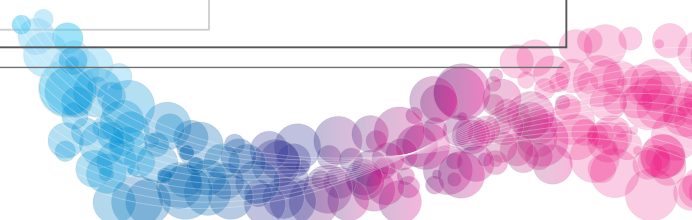
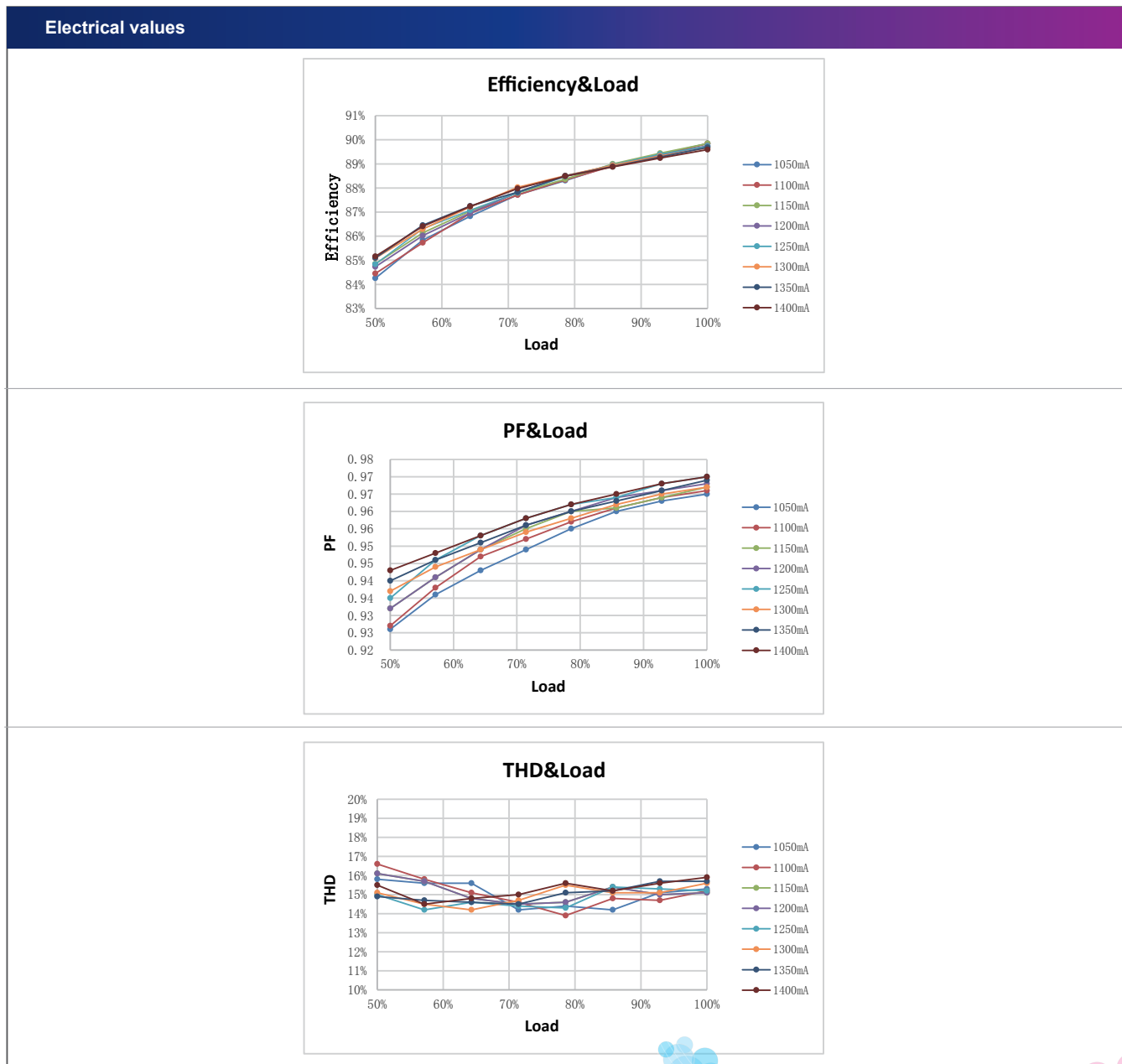
The Max length between the DALI device and the drivers is 300m.
The Max number of connections to driver is 64pcs



For parallel or series connection:
The Max length between Touch Dim and the driver is 25m.
The Max number of connections to driver is 25pcs.

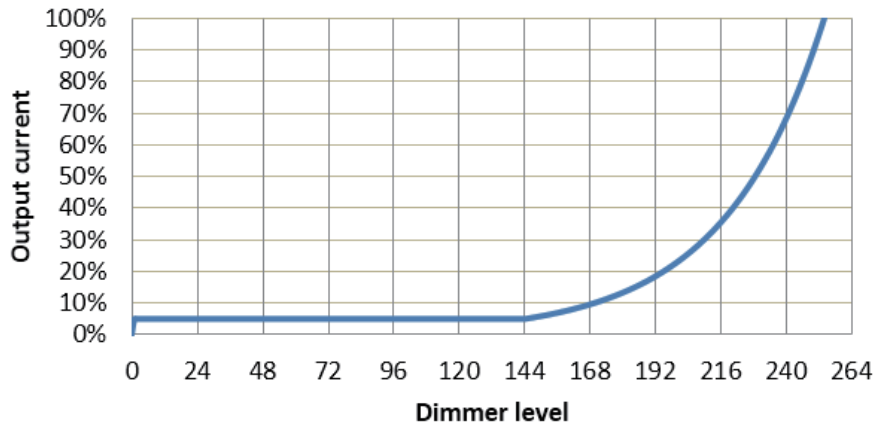
Electric insulation	DALI	Output	PE	Mains
DALI	X	Supplementary	Basic	Basic
Output	Supplementary	X	Basic	Reinforced
PE	Basic	Basic	X	Basic
Mains	Basic	Reinforced	Basic	X

Inrush current								
Model No.	I peak ⁽⁷⁾	Duration T _{width} ⁽⁷⁾	Number on single-pole power circuit breakers (CB)					Inrush current profile
			CB-type	10A	13A	16A	20A	
ECD60WCC 1050-1400 DL3	16.2 A	80.8 us	B	21 pcs	27 pcs	33 pcs	41 pcs	
			C	34 pcs	44 pcs	56 pcs	68 pcs	
Installation Ø				1.5 mm ²	1.5 mm ²	1.5 mm ²	2.5 mm ²	



Electrical profile

Dimming profile



Expected Life-time

Model No.	Ta	40 °C	45 °C
ECD60WCC1050-1400 DL3	Tc	75 °C ⑧	80 °C ⑧
	Life-time	50000 h	35000 h
Note: ⑧ Test result at max. Output voltage.			

The LED Drivers are designed for a life-time stated above under reference conditions and with a failure probability of less than 10 %.





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- Dimming range 5 to 100 %
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HOUSING PROPERTIES

- Housing: polycarbonate, white
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- Five years for fitting

CERTIFICATION	IP RATING	DIMMABLE	DIMENSIONS(mm)

Specific technical data

Order Code	Part No.	Model No.	Output current ^④	Min. forward voltage	Max. forward voltage	Max. output power	Typ. Power consumption (at 230V, 50Hz, full load) ^{②④}	Typ. Current consumption (at 230V, 50Hz, full load) ^②
2223	2223	ECD37WCC 0500-0950 DL2	950 mA	30 V	39 V	37.0 W	42.0 W	190 mA
			850 mA	30 V	39 V	33.0 W	37.5 W	170 mA
			800 mA	30 V	45 V	36.0 W	40.5 W	180 mA
			750 mA	30 V	45 V	34.0 W	38.0 W	170 mA
			700 mA	30 V	45 V	31.5 W	35.5 W	160 mA
			650 mA	30 V	45 V	29.5 W	33.0 W	150 mA
			600 mA	30 V	45 V	27.0 W	30.5 W	140 mA
			500 mA	30 V	45 V	22.5 W	26.0 W	120 mA

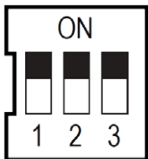


Technical data	
Rated supply voltage ^①	220 – 240 V
AC voltage range	198 – 264 V
DC voltage range	170 – 275 V
Mains frequency	0 / 50 / 60 Hz
Overvoltage protection	350 Vac, 2 h
Typ. input current (at 230 V, 50 Hz, full load) ^{②③}	190 mA
Typ. input current (at 230 V, 0 Hz, 15% dimming level) ^③	35 mA
Leakage current (at 230 V, 50 Hz, full load) ^{②③}	≤ 0.5 mA
Max. input power	42 W
Typ. efficiency (at 230 V, 50 Hz, full load) ^③	88 %
λ (at 230 V, 50 Hz, full load)	> 0.9
Typ. power input on stand-by ^④	< 0.5 W
Typ. input current in no-load operation	15 mA
Typ. input power in no-load operation	< 0.5 W
THD (at 230 V, 50 Hz, full load) ^②	< 10 %
Time to light (at 230 V, 50 Hz, full load)	< 0.7 s
Time to light (DC mode)	< 0.7 s
Switchover time (AC/DC) ^⑤	< 0.5 s
Turn off time (at 230 V, 50 Hz, full load)	<100 ms
Output current tolerance ^{②⑥}	± 6 %
Max. output current peak (non-repetitive)	≤ 1.1 output current
Output LF current ripple (< 120 Hz)	± 3 %
Max. output voltage (no-load voltage)	60 V
Dimming range	5 – 100 %
Mains surge capability (between L - N)	1 kV
Mains surge capability (between L /N- PE)	2 kV
Surge voltage at output side (against PE)	≤ 500 V
Dimensions L x W x H	200 x 64 x 32 mm
EOF1	15 %
Max Tc point	85 °C
Ambient temperature ta	-20 ... +40 °C
Admissible temperature range for storage	-40 ... +50 °C
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Note:	
① Hot plug is not allowed. ② Valid at 100 % dimming level. ③ Depending on the selected LED lamp the voltage of the LED lamp is 36V.	
④ Depending on the DALI traffic at the interface. ⑤ When AC switch to DC in standby status, brightness to 15 %. ⑥ Output current is mean value. ⑦ Input voltage 230V.	

Wiring and connection	
Input wire cross-section	0.75 - 2.5 mm ²
Output wire cross-section	0.5 - 0.75 mm ²
Maximum allowable current to the terminal (Input)	24 A



DIP setting

Output current setting	PIN1	PIN2	PIN3	Output current	Voltage range	Max. output power
	ON	ON	ON	950 mA	30 V-39 V	37.0 W
	OFF	ON	ON	850 mA	30 V-39 V	33.0 W
	ON	OFF	ON	800 mA	30 V-45 V	36.0 W
	ON	ON	OFF	750 mA	30 V-45 V	34.0 W
	OFF	OFF	ON	700 mA	30 V-45 V	31.5 W
	OFF	ON	OFF	650 mA	30 V-45 V	29.5 W
	ON	OFF	OFF	600 mA	30 V-45 V	27.0 W
	OFF	OFF	OFF	500 mA	30 V-45 V	22.5 W

Touch dim function description

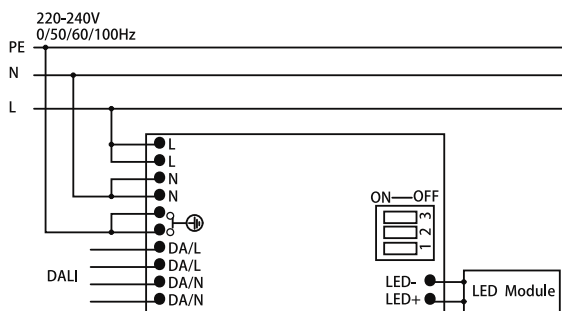
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Memorization	The driver stores all the set values when the lamps are disconnected from the power supply.

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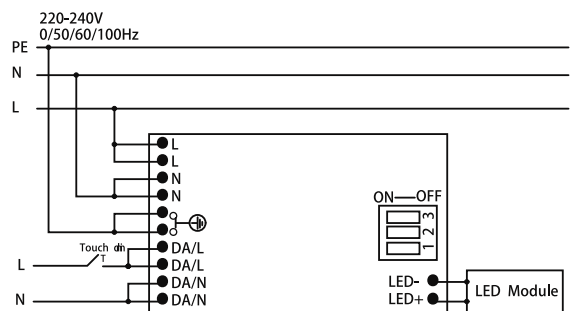
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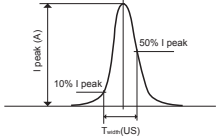


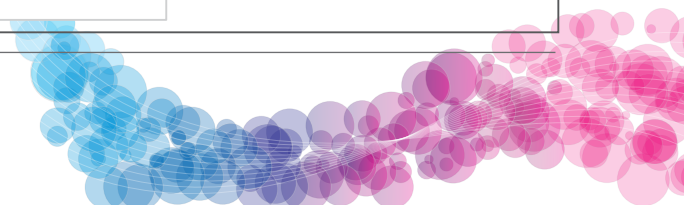
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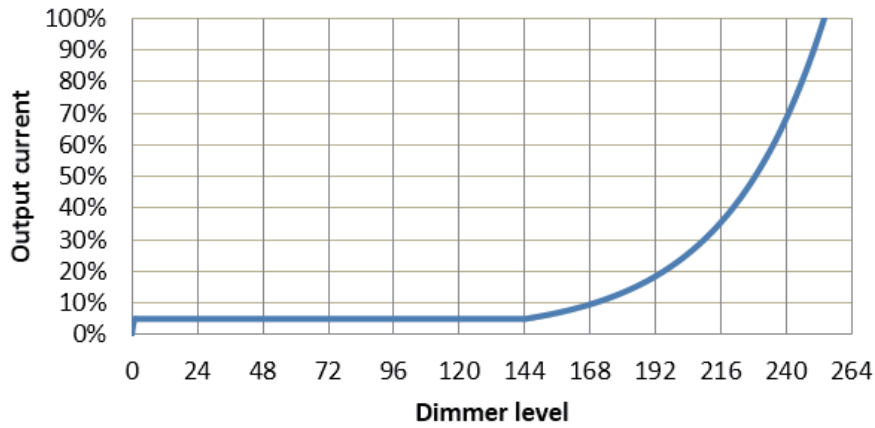
Electric insulation	DALI	Output	PE	Mains
DALI	X	Supplementary	Basic	Basic
Output	Supplementary	X	Basic	Reinforced
PE	Basic	Basic	X	Basic
Mains	Basic	Reinforced	Basic	X

Inrush current								
Model No.	I peak ^⑦	Duration T _{width} ^⑦	Number on single-pole power circuit breakers (CB)					Inrush current profile
			CB-type	10A	13A	16A	20A	
ECD37WCC 0500-0950 DL2	11 A	50 us	B	33 pcs	42 pcs	52 pcs	65 pcs	
			C	54 pcs	70 pcs	88 pcs	107 pcs	
Installation Ø				1.5 mm ²	1.5 mm ²	1.5 mm ²	2.5 mm ²	



Electrical profile

Dimming profile



Expected Life-time

Model No.	Ta	40 C	45 C
ECD60WCC1050-1400 DL1	Tc	75 C ^⑧	80 C ^⑧
	Life-time	50000 h	35000 h
Note: ^⑧ Test result at max. Output voltage.			

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