

LED Driver Linear non-SELV Fixed DIP Switch 20W-150W

Product description

- Constant current LED driver
- Fixed current output, adjustable by DIP Switch
- Built-in type, for class I luminaire
- Safety according to EN 61347-1, 61347-2-13
- Performance according to EN 62384
- Harmonic current emission according to EN 61000-3-2
- Immunity according to EN 61547
- Non-isolated (non-SELV) versions
- Low output ripple current - high quality of light
- Long lifetime - 100 000 hours
- Metal housing
- Optimized for indoor MST LED modules
- Drivers 100 and 150W are Made in Europe

PRELIMINARY DATA



Ordering codes

	Product name	Ordering code
20W	LED Driver 20W 25-75V 0.2-0.35A DS-L168	1010 120 14546
40W	LED Driver 40W 40-130V 0.2-0.35A DS-L168	1010 120 14646
60W	LED Driver 60W 80-200V 0.2-0.35A DS-L210	1010 120 14746
80W	LED Driver 80W 80-230V 0.2-0.55A DS-L210	1010 120 14846
100W	LED Driver 100W 80-200V 0.35-0.7A DS-L280	1010 120 13546
150W	LED Driver 150W 130-270V 0.35-0.7A DS-L280	1010 120 13646

Electrical data

Specification item	Unit	20W	40W	60W	80W	100W	150W
Rated input voltage range	[V]	220...240	220...240	220...240	220...240	220...240	220...240
Rated input current ¹	[A]	0.105	0.195	0.29	0.385	0.47A	0.69A
Rated input power ¹	[W]	23	43.5	64	86	106	158
Rated input frequency	[Hz]	50/60	50/60	50/60	50/60	50/60	50/60
Power factor ¹	[-]	0.95	0.97	0.96	0.97	0.99	0.99
Total harmonic distortion ¹	[%]	≤15	≤15	≤15	≤15	≤8	≤8
Efficiency ¹	[%]	87	91	92	94	94	95
Output voltage range ²	[V]	25...75	40...130	80...200	80...230	80...200	130...270
Maximum output voltage U-OUT	[V]	250	250	250	250	250	340
Output current range ²	[A]	0.2/0.25/0.3/0.35	0.2/0.25/0.3/0.35	0.2/0.25/0.3/0.35	0.2/0.25/0.3/0.35/ 0.4/0.45/0.5/0.55	0.35/0.4/0.45/0.5/ 0.55/0.6/0.65/0.7	0.35/0.4/0.45/0.5/ 0.55/0.6/0.65/0.7
Output current tolerance	[%]	±7.5	±7.5	±7.5	±7.5	±7.5	±7.5
Output power range	[W]	5...20	13...40	20...60	30...80	32...100	65...150
Current ripple (LF) ³	[%]	≤5	≤5	≤5	≤5	≤2	≤2
PstLM	[-]	≤1	≤1	≤1	≤1	≤1	≤1
SVM	[-]	≤0.4	≤0.4	≤0.4	≤0.4	≤0.4	≤0.4
Dimmable	[-]	no	no	no	no	no	no
Control method	[-]	DIP Switch	DIP Switch	DIP Switch	DIP Switch	DIP Switch	DIP Switch

¹ at 230V, 50Hz, full load² see operating window³ ripple = peak / average; ≤120 Hz

Lifetime

Specification item	Unit	20W	40W	60W	80W	100W	150W
Lifetime (max 10% failures)	[h]	100 000 at 65°C 50 000 at 75°C	100 000 at 70°C 50 000 at 80°C	100 000 at 70°C 50 000 at 80°C	100 000 at 70°C 50 000 at 80°C	100 000 at 70°C 50 000 at 80°C	100 000 at 70°C 50 000 at 80°C

Temperature measured at Tc point

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Wiring (solid wire only)

Specification item	Unit	Value
Wire cross section	[mm ²]	0.5...1.5
Strip length	[mm]	7.5

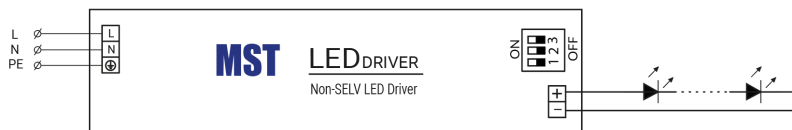
Wiring and output current setting for LED Driver 20W, 40W, 60W



I LED [mA]	DIP Switch		Remark
	PIN1	PIN2	
200	OFF	OFF	
250	OFF	ON	
300	ON	OFF	
350	ON	ON	Default setup



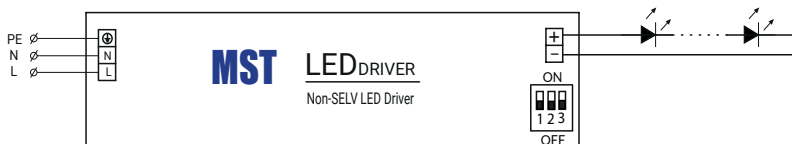
Wiring and output current setting for LED Driver 80W



I LED [mA]	DIP Switch			Remark
	PIN1	PIN2	PIN3	
200	OFF	OFF	OFF	
250	OFF	OFF	ON	
300	OFF	ON	OFF	
350	OFF	ON	ON	
400	ON	OFF	OFF	
450	ON	OFF	ON	
500	ON	ON	OFF	
550	ON	ON	ON	Default setup



Wiring and output current setting for LED Driver 100W, 150W



I LED [mA]	DIP Switch			Remark
	PIN1	PIN2	PIN3	
350	ON	ON	ON	
400	ON	ON	OFF	
450	ON	OFF	ON	
500	ON	OFF	OFF	
550	OFF	ON	ON	
600	OFF	ON	OFF	
650	OFF	OFF	ON	
700	OFF	OFF	OFF	Default setup

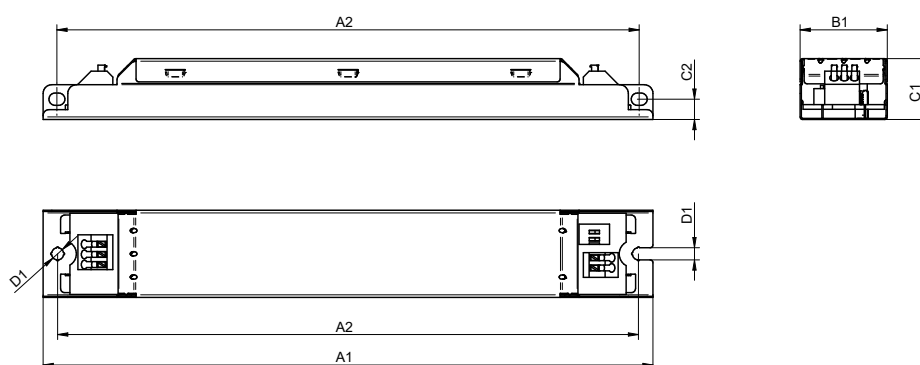


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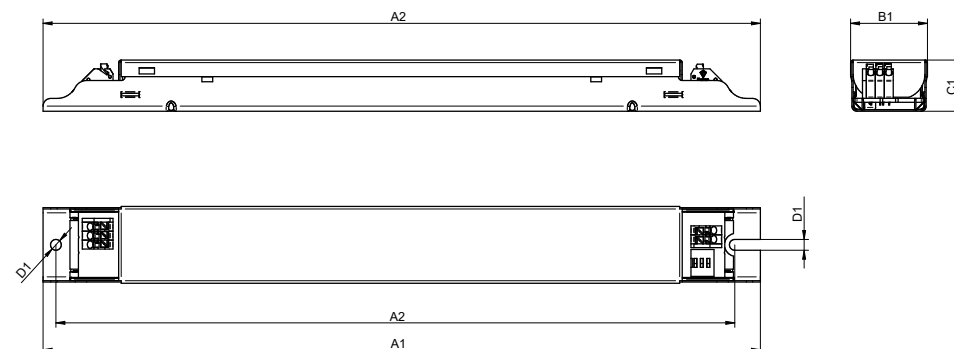
Mechanical

Specification item	Unit	20W	40W	60W	80W	100W	150W
Length (A1)	[mm]	168	168	210	210	280	280
Width (B1)	[mm]	30	30	30	30	30	30
Height (C1)	[mm]	21	21	21	21	21	21
Fixing hole diameter (D1)	[mm]	4.2	4.2	4.2	4.2	4.2	4.2
Fixing hole distance (A2)	[mm]	158	158	200	200	265	265
Weight	[g]	96	110	137	150	220	225
Ingress protection	[-]	IP20	IP20	IP20	IP20	IP20	IP20

20W-80W



100W-150W



Temperature & humidity

Specification item	Unit	20W	40W	60W	80W	100W	150W
Ambient temperature	[°C]	-30...+60	-30...+60	-30...+60	-30...+60	-20...+50	-20...+50
Tcase	[°C]	80	85	90	90	80	80
Relative humidity (non-condensing)	[%]	10...95	20...95	20...95	20...95	10...90	10...90
Storage ambient temperature	[°C]	-30...+80	-30...+80	-30...+80	-30...+80	-25...+85	-25...+85
Storage relative humidity (non-condensing)	[%]	10...95	10...95	10...95	10...95	10...90	10...90

Surge immunity

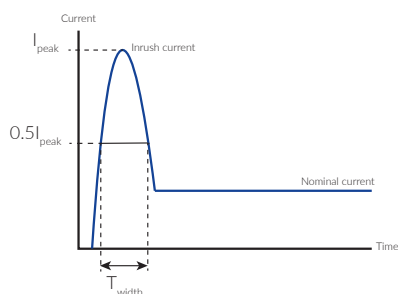
Specification item	Unit	20W	40W	60W	80W	100W	150W
Mains surge immunity - differential mode	[kV]	1	1	1	1	1	1
Mains surge immunity - common mode	[kV]	2	2	2	2	2	2
Surge voltage at output side (against PE)*	[kV]	≤2.5	≤2.5	≤2.5	≤2.5	≤2.5	≤2.5

* common mode

LED Driver Linear non-SELV Fixed DIP Switch 20W-150W

Inrush current

Specification item	Unit	20W	40W	60W	80W	100W	150W
Inrush current I_{peak}	[A]	20	32	45	60	40	50
Inrush current T_{width}	[μs]	175	190	200	180	220	220



Maximum number of drivers

Type of circuit breaker	Unit	20W	40W	60W	80W	100W	150W
B10	[pcs]	23	13	9	8	9	7
B16	[pcs]	37	21	14	12	15	12
B25	[pcs]	58	33	22	19	23	18
C10	[pcs]	39	22	15	13	15	11
C16	[pcs]	62	35	24	20	24	17
C25	[pcs]	97	55	37	31	38	27

Measurements of inrush and continuous current were taken at rated input voltage. Calculations are based on ABB series S200 circuit breakers as reference. The values shown in the table above are for guidance purpose only. Actual values may differ due to installation environment and used MCBs.

Protections / Approvals

Specification item	20W-80W	100W-150W
Open load protection	yes	yes
Short circuit protection	yes	yes
Over temperature protection	yes	no
Approval marks	CE / ENEC / UKCA	CE / ENEC / UKCA

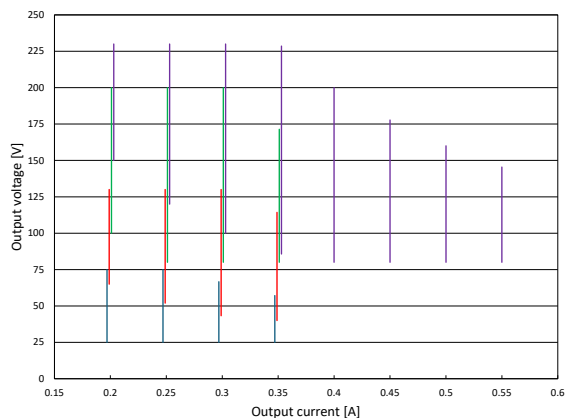
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- LED Driver 40W 40-130V 0.2-0.35A DS-L168
- LED Driver 60W 80-200V 0.2-0.35A DS-L210
- LED Driver 80W 80-230V 0.2-0.55A DS-L210

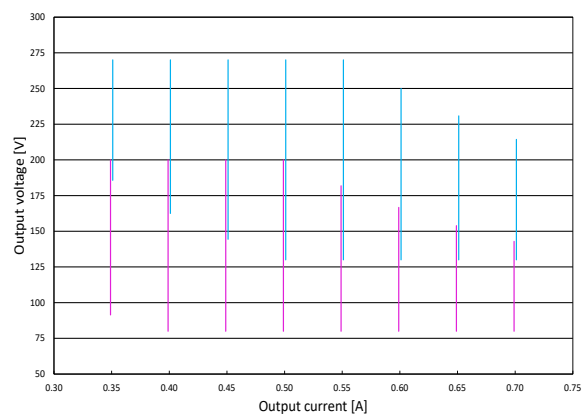
- LED Driver 100W 80-200V 0.35-0.7A DS-L280
- LED Driver 150W 130-270V 0.35-0.7A DS-L280

Operating window

Typical values

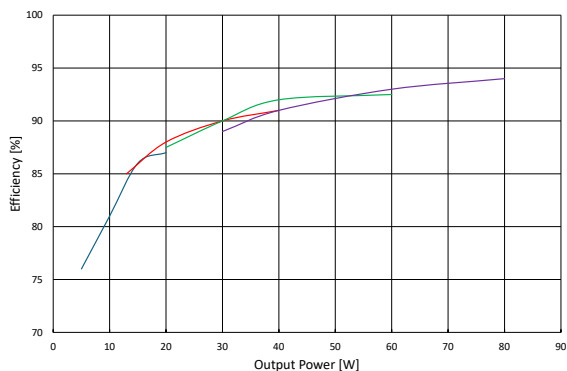


Typical values

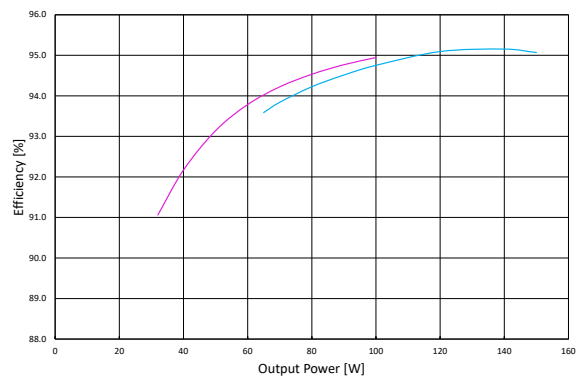


Efficiency vs output power

Typical values

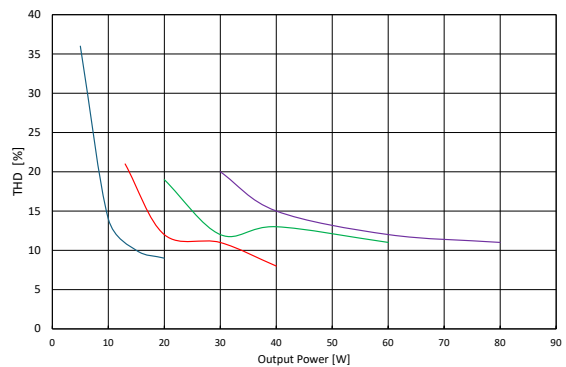


Typical values

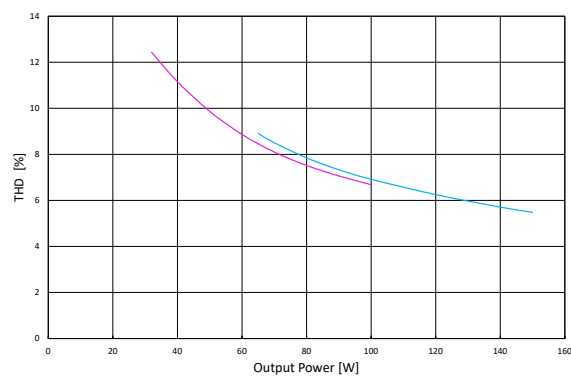


THD vs output power

Typical values



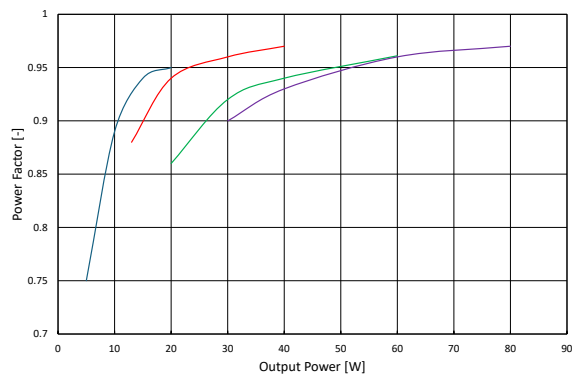
Typical values



LED Driver Linear non-SELV Fixed DIP Switch 20W-150W

Power factor vs output power

Typical values



Typical values

