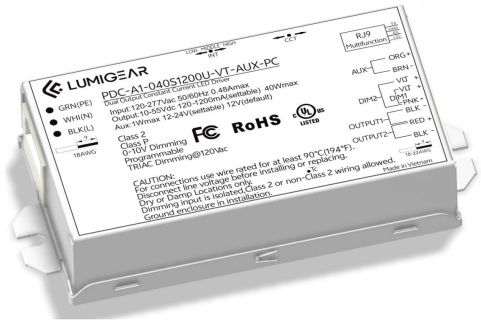
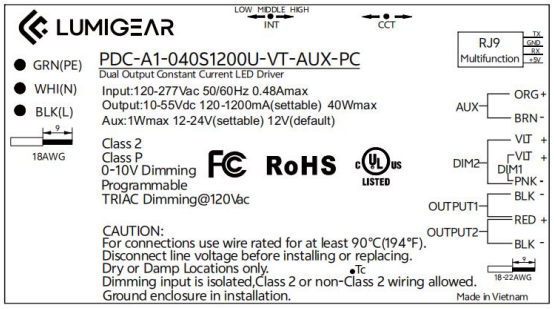
PDC-A1-040S1200U-VT-AUX-PC-A-M

40w Programmable, 1% dimming, TRIAC+0~10V, Constant Current Series





Features & Benefits

- Universal ac input voltage(120-277VAC)
- Brick form factor, metal sheet case(white)
- Triac dimming + isolated 0-10v dimming ,dim down to true 1%
- Suitable for indoor use
- Flicker free, excellent camera compatibility
- UL Class2, Class P
- Comply with IEEE1789, UL8750

Programmable feature:

- Output current, dim to off, min dimming level
- Log/linear/square dim curves
- OTP point of driver, led thermal protection, luminous decay compensation
- Output voltage of aux power
- Over load protection point
- End-of-life indicator, fade in time

Model List

Model Name	Rated Input Voltage	Max Output Power(Total)	Output Current(Total)	Rated Output Voltage	Efficiency	Dimension
PDC-A1-040S1400U-VT-AUX-PC -A-M	120-277VAC	40W max.	120-1200mA	10-55VDC	88%	127*60.3*27.5 mm 4.9×2.3×1.1 in.

Optional Function

Aux power: 12-24V programmable,1W

Built-in 3 current adjustment by INT switch

Built-in 3/4/5CCT switch

Mounting feet or stud type

Digital and analog interface ready

Approvals

TRIAC 0/1-10 V c UL us LISTED CLASS P

Model name code

PDC-A1	-	040S	1200	U	–	VT	–	AUX	-	PC	-	A	-	M
①		②	③	④		⑤		⑥		⑦		⑧		⑨

①	Series	PDL Series
②	Output power	Maximum output power: 40W
③	Output current(max)	Maximum output current: 1200mA
④	Input voltage	120-277VAC

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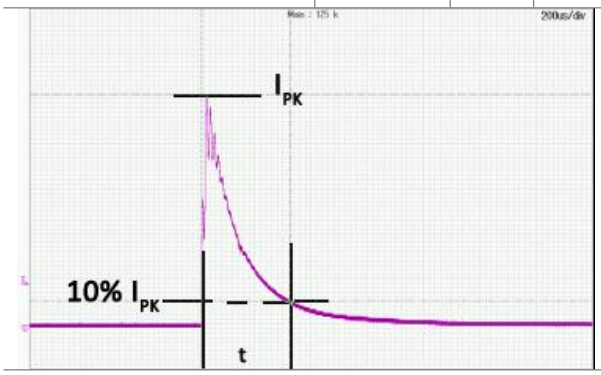
⑤	Dimming Control	Triac&0-10V
⑥	AUX	AUX: with Auxiliary source BLANK:without Auxiliary source
⑦	Programmable	USB-PC
⑧	Switch function	A: without INT and CCT Switch B:with INT Switch only C: with CCT Switch only D :with INT+CCT Switch.
⑨	Installation	M: Mounting feet BLANK:Stud type

Specification:

Parameters	Symbols	Test Conditions / Comment	Min	Typ	Max	Units
INPUT						
Input Voltage	V_{IN}		108		305	V_{AC}
Rated Input Voltage	$V_{IN\ RATED}$		120		277	V_{AC}
	$V_{IN\ RATED\_TRIAC}$	Phase Cut Dimming		120		V_{AC}
Input Frequency	f_{line}		47	50/60	63	Hz
Input Current	I_{IN}	Full Load, V_{IN} = 120V_{AC}			0.45	A
Inrush Current	I_{INRUSH}	Cold Start, V_{IN} = 277V_{AC}			35	A
Leakage Current	$I_{Leakage}$	V_{IN} = 277V_{AC} 60Hz			0.75	mA

Number of Drivers per MCB(Circuit Breaker)

MCB type	B10	C10	D10	B13	C13	D13	B16	C16	D16	B20	C20	D20
120V_{AC}	12	17	19	15	22	25	19	27	31	24	34	39
277V_{AC}	7	11	23	9	15	30	11	18	37	14	23	47



Input Voltage	Inrush Current	t(us)10%-10%
120VAC	17.1A	192
277VAC	34.0A	216
347VAC	NA	NA

General Characteristics

Power Factor	PF	20-100% load, V_{IN} = 120V_{AC}	0.9			PF
		40-100% load, V_{IN} = 277V_{AC}	0.9			
Total Harmonic Distortion	THD	20-100% load, V_{IN} = 120V_{AC}			20	%
		40-100% load, V_{IN} = 277V_{AC}			20	%
Turn On Delay Time	T_{on_delay}	Cold Start, 500-1200mA			0.5	S
		Cold Start, 120-499mA			0.75	S
Efficiency	η	Full load, V_{IN} =120VAC, I_{OUT}=900mA, Steady state	85	87		%
		Full load, V_{IN} =277VAC, I_{OUT}=900mA, Steady state	86	88		%

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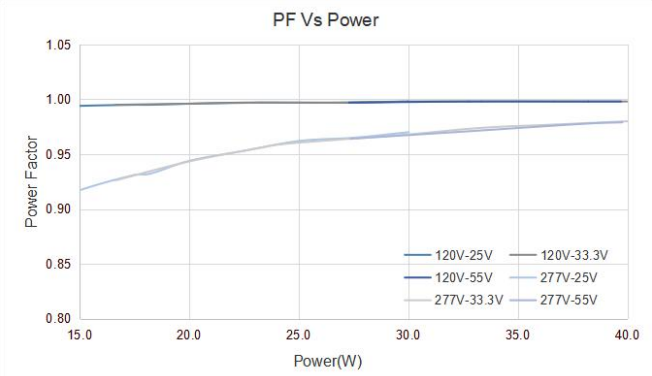
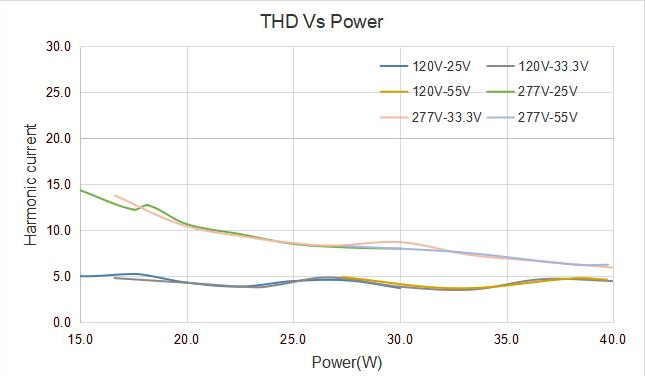
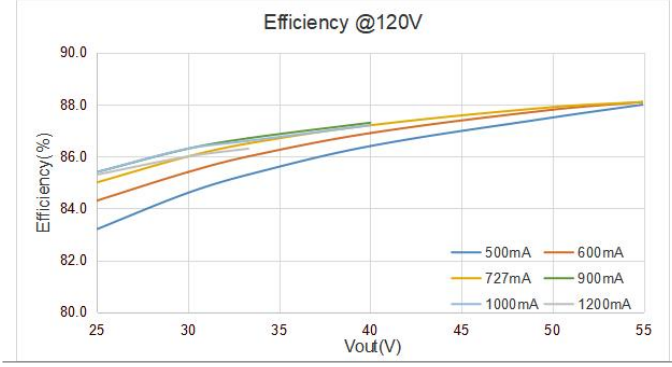
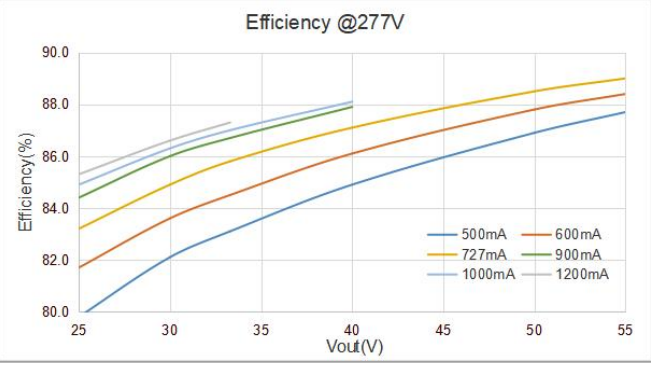


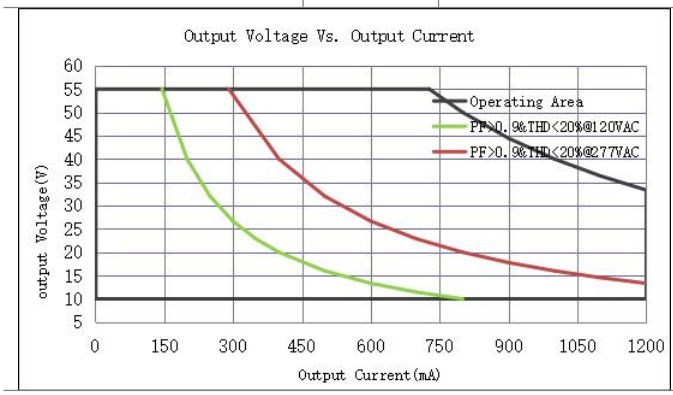






OUTPUT

Programmable Output Current	I_{OUT}		120		1200	mA
Output Current Tolerance	t	I_{OUT}=500-1200mA	-5		+5	%
		I_{OUT}=120-499mA	-7		+7	%
Default Output Current	I_{OUT}			1200		mA
Output Current Range	I_{OUT}	Amplitude Control.	1.2		1200	mA
Output Voltage	V_{OUT}		10		55	V
Output Power	P_{OUT}	See “Operating window”			40	W
Line Regulation	$V_{OUT-LINE}$				1	%
Load Regulation	$I_{OUT-LOAD}$	V_{OUT} from MIN. to MAX.			5	%
Ripple Current	$I_{OUT-RIPPLE}$	Full Load, (Iomax-Iomin)/(Iomax+Iomin)			10	%
Output Current Overshoot	$I_{OVERSHOOT}$	Turning Power ON			10	%



Programming

The driver can be programmed through RJ9.

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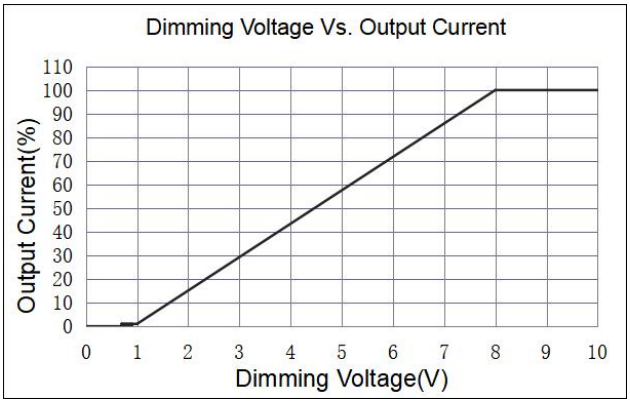
NO.	Item	Default setting
1	Output current(1mA step)	See “output ”section
2	Dim to off, Min Dimming Level	See “0~10V or Resistor Dimming” section
3	Output voltage of aux power	See “Auxiliary source” section
4	OTP point of driver	See” OTP protection” section
5	LED thermal protection	Disable
6	Luminous decay compensation	Disable
7	End-of-life indicator	Disable
8	Fade in time	Disable
9	Over load protection point	See” OLP protection” section
10	Dimming curve: Log/linear/square dim curves	See “0~10V or Resistor Dimming” section

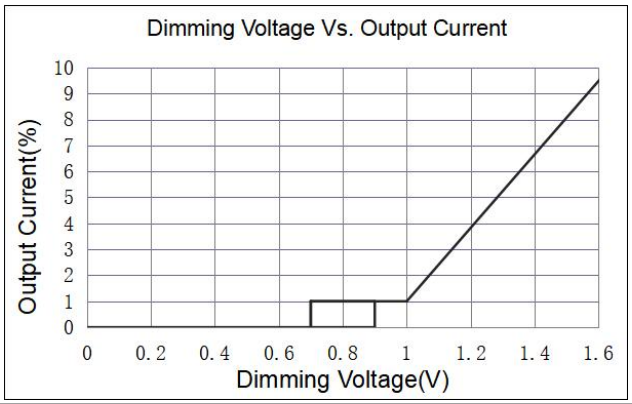
RJ9	Programming software	“LUMIGEAR Programming Tool”				
	Programming tool	“Lumigear tool box”				
	Operating voltage			5	5.5	V
	Pull up resistor	RX is pulled up to +5V		15K		Ohm
		TX is pulled up to +5V		62K		Ohm
	+5V Aux power				10	mA
Programming Interface	PGT-USB-TPAC-A					
Programming Cables	PGT-USB-RJ9					

0~10V or Resistor Dimming

The 0~10V or resistor dimming can be used to dim the output current via a standard commercial wall dimmer (0~10V_{DC}) or an external control voltage source (0~10V_{DC}) or external resistor.

Dimming Curve	Linear. please see “Dimming curve”.					
Absolute Maximum Voltage on 0~10V Pin	V_{DIM}		0		300	V_{AC}
Source Current on 0~10V Dimming Pin	I_{DIM}			200		uA
Light On	V_{DIM-on}	Programmable		0.9		V
Light Off	$V_{DIM-off}$	Programmable		0.7		V
Dimming Voltage for Full Bright	$V_{DIM-MAX}$	Programmable		8		V
Standby power	$P_{STANDBY}$	Light Off, Vin=120Vac			0.7	W





Triac Dimming

The unit is compatible With Leading-edge and Trailing-edge Dimmer.

Input Voltage	$V_{IN-TRIAC\ DIM}$			120		V_{AC}
Suggest Load Range	$P_{Suggest}$	V_{IN} = 120 V_{AC}	40		100	%

Compatible Phase Cut Dimmers

No.	Mfg.	Model	Remark	No.	Mfg.	Model	Remark
1	Lutron	MACL-153M		11	Leviton	1B34L1	
2	Lutron	LGCL-153PL		12	Leviton	IPL06	
3	Lutron	GLU12-F23622		13	Leviton	SureSlide 6633	
4	Leviton	111506		14	Leviton	IPE04	
5	Lutron	GLV-600		15	Leviton	IPL06-102	
6	Lutron	DVLV-600P		16	Lutron	DVCL-153P	
7	Lutron	MALV-600		17	Legrand	LSLV603	
8	Lutron	NT-1000		18	Legrand	RHCL453P	
9	Lutron	SLV-600P		19	Lutron	1K35O2	
10	Lutron	MA-600		20	Lutron	DV-600P	

INT(Output current) selection(Optional)

The output current can be set by the INT selection switch

Built-in INT selection switch	Programmable, Selectable 3positions, Please contact Lumigear for details

CCT selection(Optional)

Build in CCT selection switch	Settable, 3/4/5CCT , Please contact Lumigear for details

Auxiliary source(Optional)

Max.power	P_{AUX}				1	W
Voltage range	V_{AUX}	Programmable	12		24	Vdc
	$V_{AUX\_DEFAULT}$	Default voltage		12		Vdc

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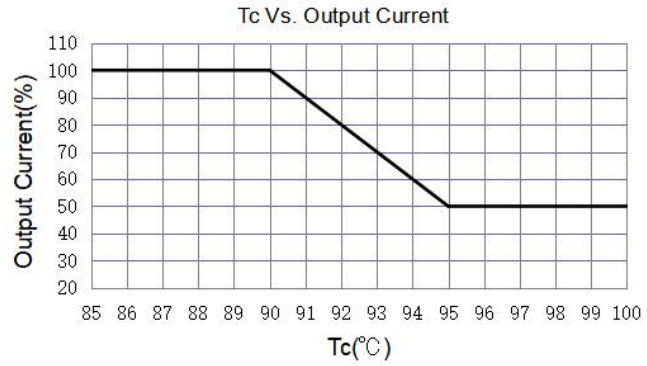
Voltage tolerance	t_{AUX}				8	%
Over load Protection	P_{OLP_AUX}	Foldback mode			1.5	W

Protection

Over Voltage Protection	V_{OVP}	The unit will recover automatically after fault conditions is removed.		60		V
Over load protection	P_{OLP}	Programmable. The output current will decrease when output power reach P_{OLP}	16		40	W
OLP tolerance	t_{OLP}		100		110	%
Over Temp. Protection	T_{OTP}	Current foldback at hotspot greater than T_{OTP}		90		℃
Short Circuit Protection	The unit will recover automatically after fault conditions is removed.					

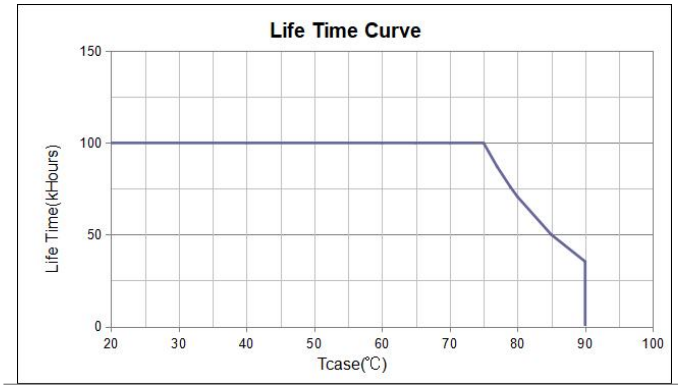


Environment

Storage Temperature	$T_{Storage}$	Humidity: 5% RH to 95% RH	-40	-	+85	℃
Ambient Operating Temperature	T_a		-30	-	+50	℃
Max. Case Temperature	T_c	Hot spot on case			90	℃
Operating Relative Humidity	H_a	Non-Condensing	10		90	%
Acoustic Noise		<One feet, under and dimming level for both 0-10V and triac.			22	db
Cooling	Convection Cooling					
IP Rating	Dry and damp UL approved					

Others

Life Time	T_{Life}	Full Load, 85℃ case temperature,	50			kHrs
MTBF	T_{MTBF}	Full Load, 25℃ ambient temperature	200			kHrs
Net Weight	W_{NET}			240		g
Warranty	5 Years Warranty at T_c ≤85℃					
Flicker	Meet JA8					



Safety Compliance

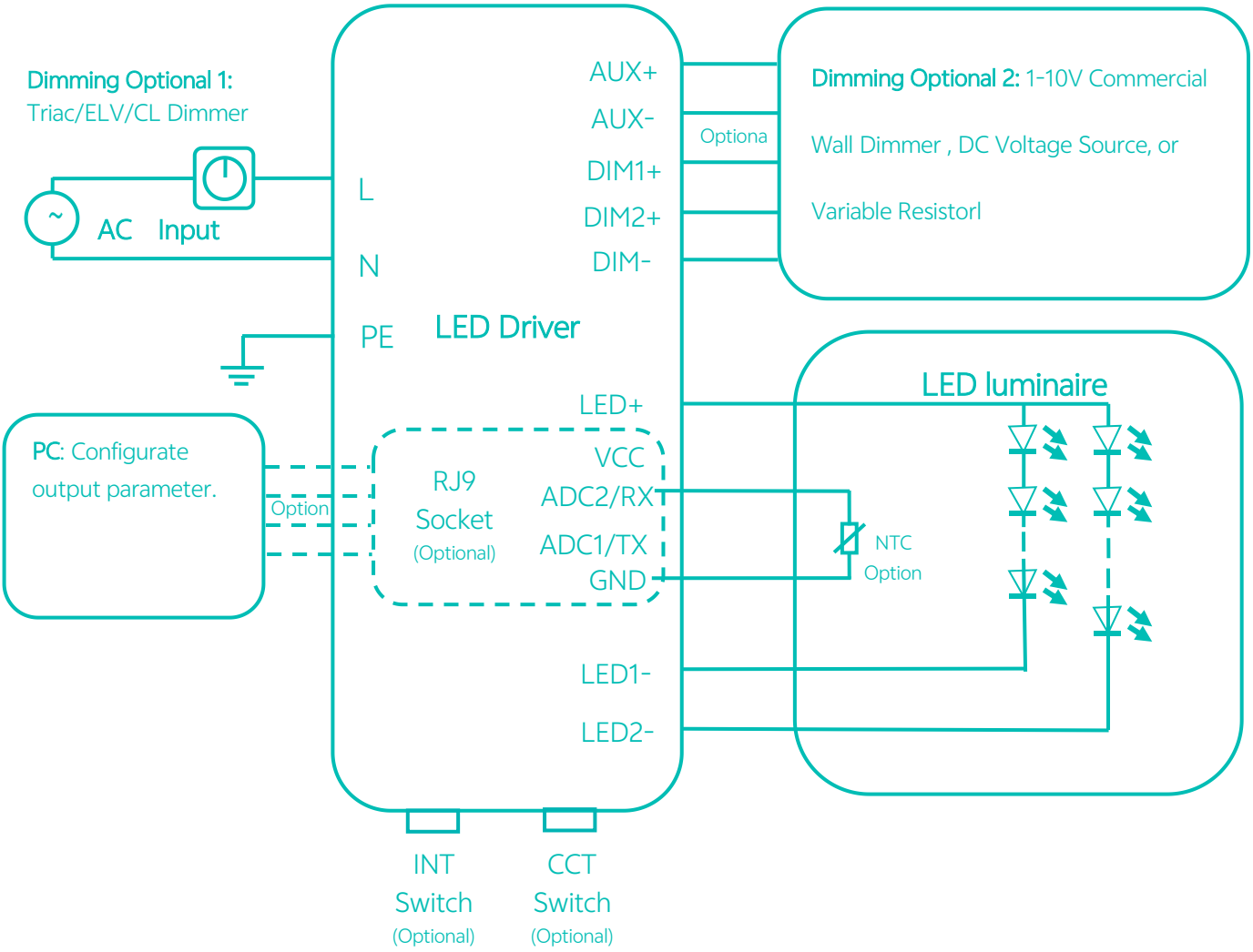
CUL/UL	UL8750, CAN/CSA-C22.2 No. 250.13
LVD	EN61347

Electromagnetic Compliance

EMC Requirements	Standard	Conditions
EMI Emissions	FCC Title 47 Part 15	Class B at 120V_{AC}, Class A at 277V_{AC}
Voltage Fluctuations and Flicker	IEC61000-3-3	
Immunity Compliance	IEC 61000-4-2	±8kV air Discharge, ±6kV Contact Discharge
	ANSI/IEEE C62.41-2002	± 2kV Common and Differential Mode, test at 2 Ω, 5 strikes/1minute interval (40 total strikes)
	ANSI/IEEE C62.41.1-2002	2.5kV Ring Wave, test at 30Ω 7 Strikes/1 minute interval, Common and Differential mode, 56 total strikes
	IEC 61000-4-11	>95% dip, 5 period; 30% dip, 25 periods; 95% reduction, 250 periods
	IEC 61000-4-4	± 2kV Direct couple to Line input, 5kHz repitition rate, 15mS duration, 300mS period. 7 coupling paths, 1 minute per path (14 total combinations)

Note: Unless otherwise specified, all the above parameters are measured at ambient temperature of 25℃ and rated voltage.

Typical Application

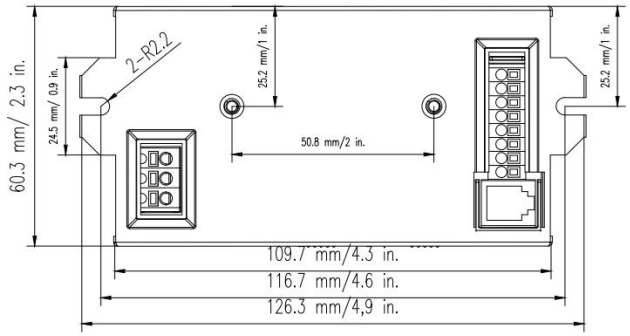


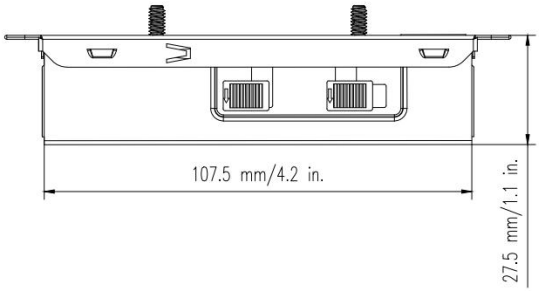
Packaging

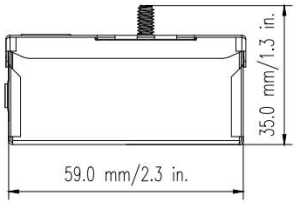
Driver quantity (pcs)	Layer	Weight (kg)	Outer dimensions of Carton L*W*H(mm)
48	6	13	L350*W325*H240

Mechanical Drawing:

S TYPE:







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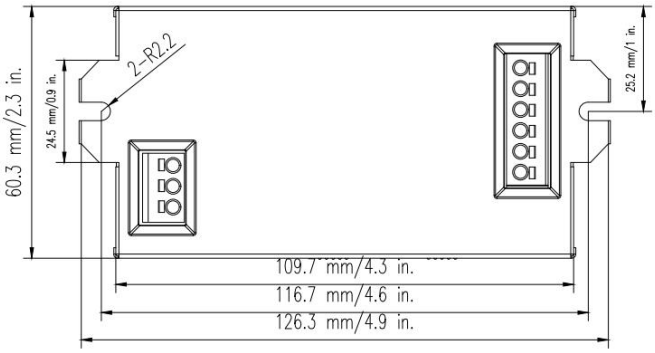

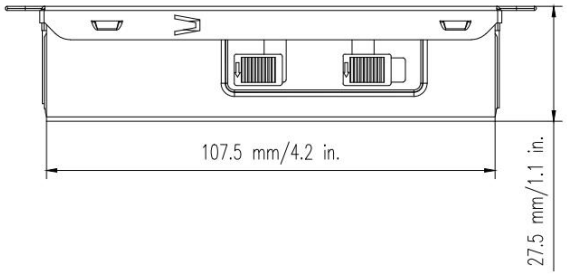

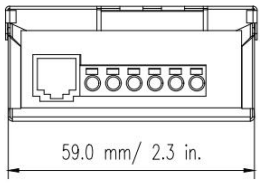

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