

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-A1-055S1500U-V-AUX-PC-A-M	120-277VAC	55W max.	150-1500mA	10-55VDC	89%	127*60.3*27.5 mm 5*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  CLASS P

Model name code

PDC-A1	=	055S	=	1500	=	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: 55W
③	Output current(max)	Maximum output current: 1500mA
④	Input voltage	120-277VAC

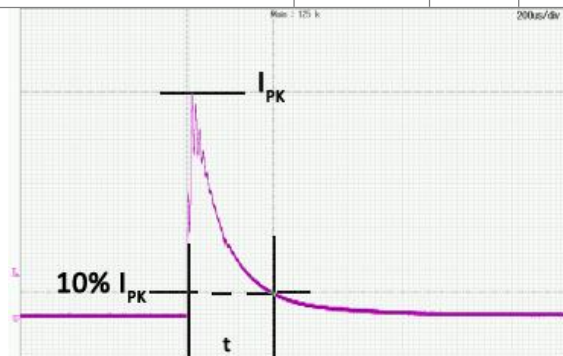
⑤	Dimming Control	Triac&0-10V
⑥	AUX	AUX: with Auxiliary source BLANK:without Auxiliary source
⑦	Programmable	USB-PC
⑧	Switch function	A: without INT and CCT Switch B:with INT Switch only C: with CCT Switch only D :with INT+CCT Switch.
⑨	Installation	M: Mounting feet BLANK:Stud type

Specification:

Parameters	Symbols	Test Conditions / Comment	Min	Typ	Max	Units
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INPUT

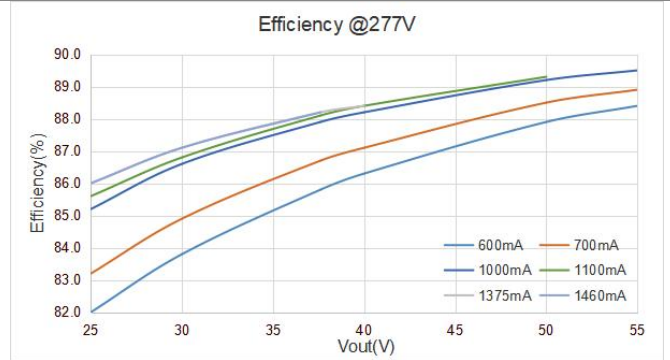
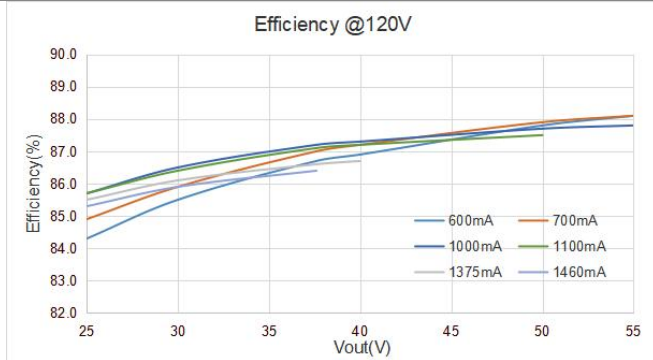
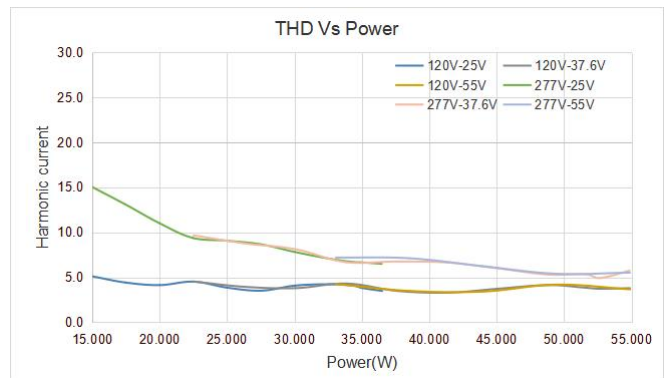
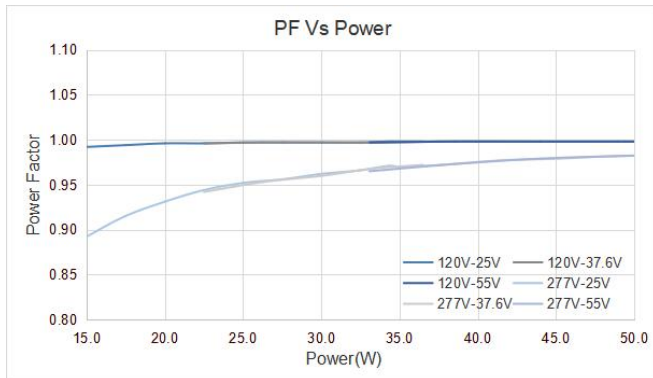
Input Voltage	V_{IN}		108		305	V_{AC}							
Rated Input Voltage	$V_{IN\,RATED}$		120		277	V_{AC}							
	$V_{IN\,RATED\,TRIAC}$	Phase Cut Dimming		120		V_{AC}							
Input Frequency	f_{line}		47	50/60	63	Hz							
Input Current	I_{IN}	Full Load, $V_{IN} = 120V_{AC}$			0.6	A							
		Full Load, $V_{IN} = 277V_{AC}$			0.24	A							
Inrush Current	I_{INRUSH}	Cold Start, $V_{IN} = 277V_{AC}$			45	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}	11	12	14	14	16	19	17	20	23	22	25	29
	277V _{AC}	5	9	19	7	12	25	9	15	31	11	19	39



Input Voltage	Inrush Current	t(us)10%-10%
120VAC	17.1A	192
277VAC	40.8A	236
347VAC	NA	NA

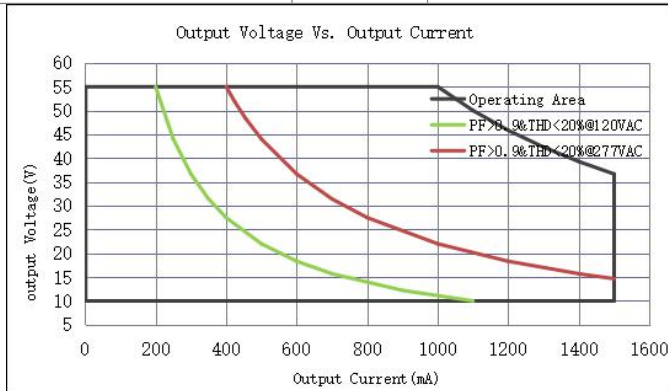
General Characteristics

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, $I_{OUT}=600-1500mA$		0.5	S
		Cold Start, $I_{OUT}=150-599mA$		0.75	S
Efficiency	η	Full load, $V_{IN}=120V_{AC}$, $I_{OUT}=1100mA$, Steady state	85	87	%
		Full load, $V_{IN}=277V_{AC}$, $I_{OUT}=1100mA$, Steady state	87	89	%



OUTPUT



Programmable Current	Output	I_{OUT}		150		1500	mA
Output Current Tolerance	t	I_{OUT}	$I_{OUT}=600-1500mA$	-5		+5	%
			$I_{OUT}=150-599mA$	-7		+7	%
Default Output Current		I_{OUT}			1500		mA
Output Current Range		I_{OUT}	Amplitude Control.	1.5		1500	mA
Output Voltage		V_{OUT}		10		55	V
Output Power		P_{OUT}	See "Operating window"			55	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, $(I_{max}-I_{min})/(I_{max}+I_{min})$			10	%
Output Current Overshoot		$I_{OVERSHOOT}$	Turning Power ON			10	%



Programming

The driver can be programmed through RJ9.

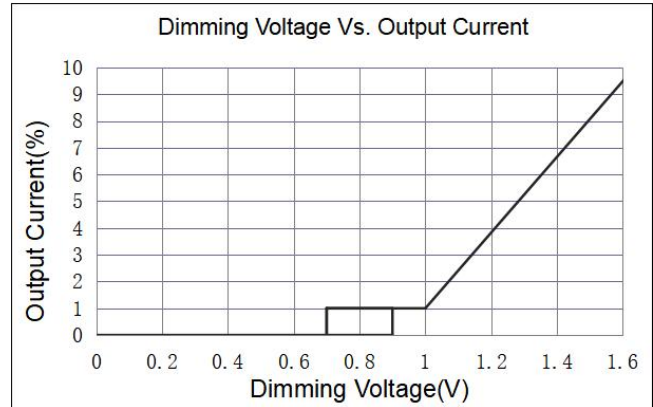
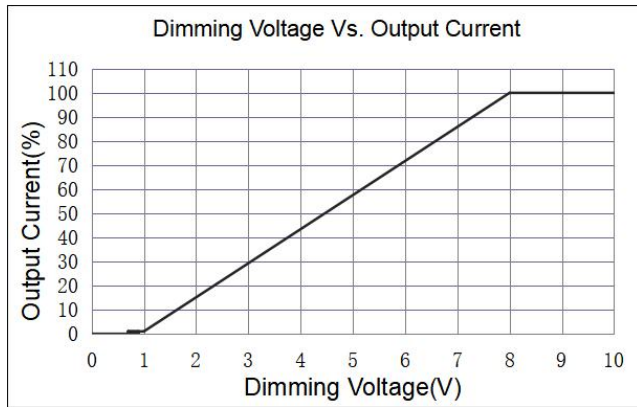
NO.	Item	Default setting
1	Output current(1mA step)	See "output "section
2	Dim to off, Min Dimming Level	See "0~10V or Resistor Dimming" section
3	Output voltage of aux power	See "Auxiliary source" section
4	OTP point of driver	See" OTP protection" section
5	LED thermal protection	Disable
6	Luminous 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 3 positions, Please contact Lumigear for details
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CCT selection(Optional)

Build in CCT selection switch	Settable, 3/4/5CCT , Please contact Lumigear for details
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Auxiliary source(Optional)

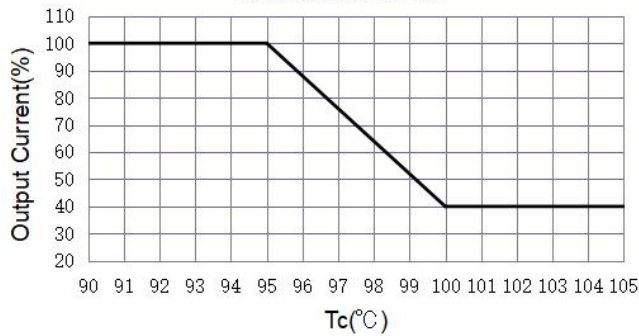
Max.power	P_{AUX}			1	W
Voltage range	V_{AUX}	Programmable	12	24	Vdc
	$V_{AUX_DEFAULT}$	Default voltage		12	Vdc

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}	22		55	W
OLP tolerance	t_{OLP}		100		110	%
Over Temp. Protection	T_{OTP}	Current foldback at hotspot greater than T_{OTP}		95		°C
Short Circuit Protection	The unit will recover automatically after fault conditions is removed.					

Tc Vs. Output Current

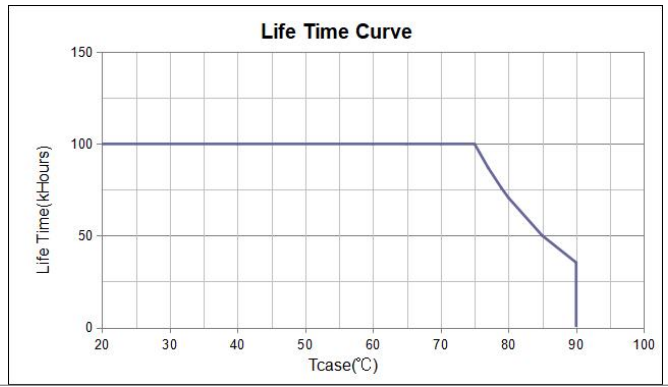


Environment

Storage Temperature	$T_{Storage}$	Humidity: 5% RH to 95% RH	-40	-	+85	°C
Ambient Operating Temperature	T_a		-30	-	+50	°C
Max. Case Temperature	T_c	Hot spot on case			90	°C
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°C case temperature,	50			kHrs
MTBF	T_{MTBF}	Full Load, 25°C ambient temperature	200			kHrs
Net Weight	W_{NET}			255		g
Warranty	5 Years Warranty at $T_c \leq 85^\circ\text{C}$					
Flicker	Meet JAB					



Safety Compliance

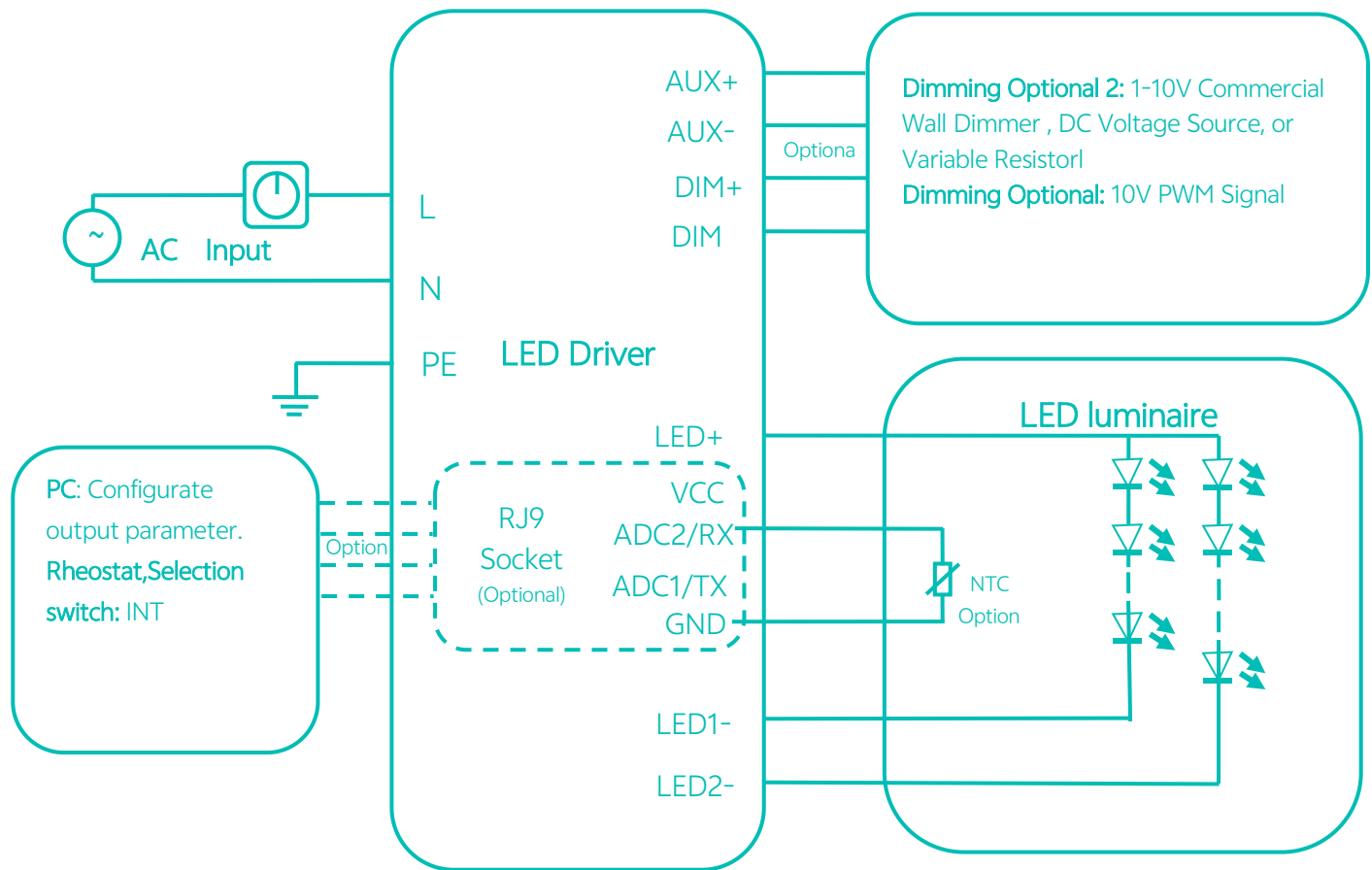
CUL/UL	UL8750, CAN/CSA-C22.2 No. 250.13
LVD	EN61347

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 (56 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 repetition 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°C and rated voltage.

Typical Application

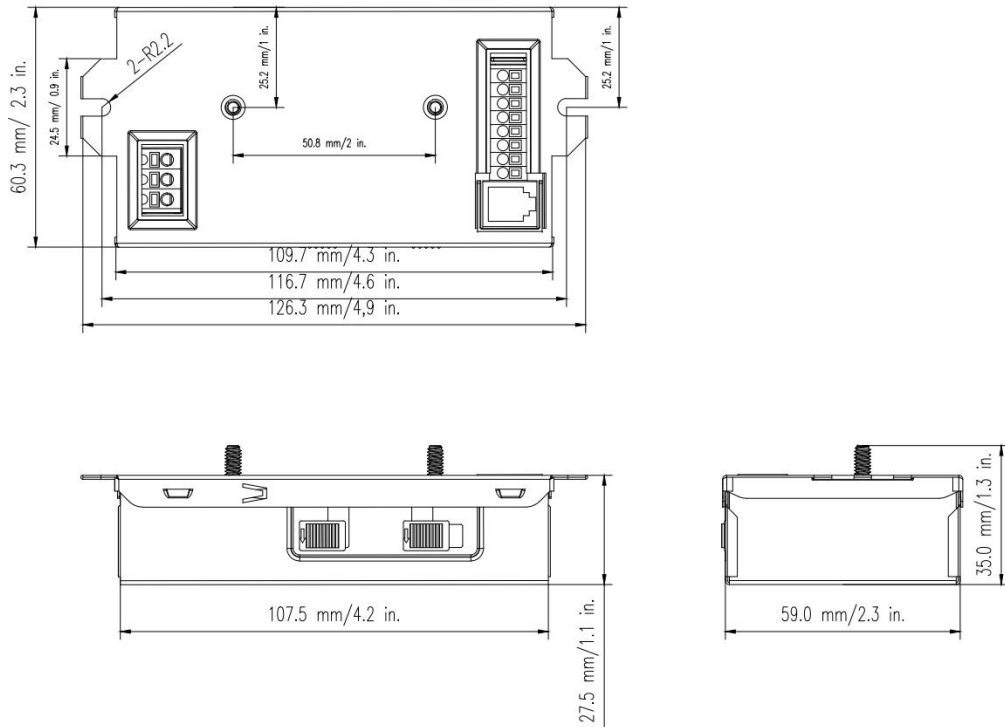


Packaging

Driver quantity (pcs)	Layer	Weight (kg)	Outer dimensions of Carton L*W*H(mm)
48	6	13	L365*W340*H270

Mechanical Drawing:

S TYPE:



M TYPE:

