

■ Features

- MEAN WELL Patent Application Number: 202330347779.4
- Interchangeable AC plugs (I-Type)
- Global certificates in multi-fields
(ITE 62368-1, Medical 60601-1, Household 60335-1, Industrial 61558-1/-2-16)
- 80~264Vac Universal AC input
- Ultra slim(28mm)
- No load power consumption< 0.075W
- Energy efficiency Level VI
- Class II power (no earth pin)
- Protections: Short circuit / Overload / Over voltage
- Pass LPS
- Extremely low leakage current <100uA
- -30°C~+70°C wide range working temperature
- Various DC plug quick adapter accessory available
(Plug kit sold sperately, please refer to : https://www.meanwell.com/upload/pdf/DC_plug.pdf)
- 3 years warranty

■ Applications

- Consumer electronic devices
- Telecommunication devices
- Office facilities
- Industrial equipments
- Medical devices
- Household devices

■ GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

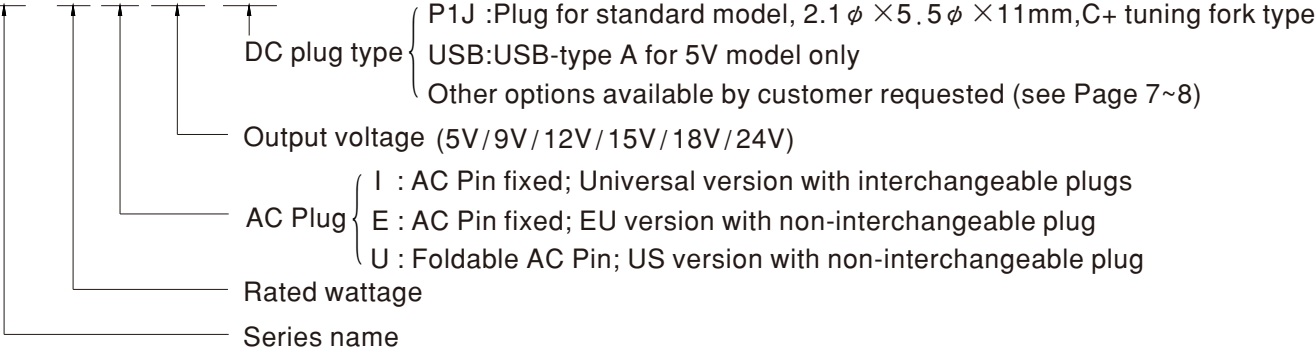
■ Description

NGE12 is a highly reliable, 12W wall-mounted style single-output green adaptor series, which is compact and convenient for carry. This product is equipped with 7 types of interchangeable AC plug (European, USA,U.K. ,Australian, China, Korea and India type) that makes it very suitable for travel use. NGE12 is a Class II power unit (no FG), accepting the input range from 80VAC to 264VAC that it can satisfy the demands for various types of electrical devices.

With the working efficiency up to 88.5% and the extremely low no-load power consumption below 0.075W, NGE12 is compliant with the latest USA energy regulation EISA 2007/DoE, Canada NRCAn,Australia and New Zealand MEPS, Korea KMEPS, EU ErP and CoC version5. The supreme feature allows the adaptor to save the energy when it is under either the operating mode or the standby mode. The entire series is approved for ITE, medical, household and industrial appliance safety regulations; moreover, it adopts the 94V-0 flame retardant plastic case that it can effectively prevent users from electric hazard.

■ Model Encoding

NGE 12 I 05 -P1J



SPECIFICATION

ORDER NO.			NGE12○05-□ □=P1J USB		NGE12○09-P1J	NGE12○12-P1J	NGE12○15-P1J	NGE12○18-P1J	NGE12○24-P1J		
			○ = I, U, E								
OUTPUT	DC VOLTAGE		Note.2		5V	9V	12V	15V	18V	24V	
	RATED CURRENT				2.4A	1.33A	1.0A	0.8A	0.83A	0.625A	
	CURRENT RANGE				0 ~ 2.4A	0 ~ 1.33A	0 ~ 1.0A	0 ~ 0.8A	0 ~ 0.83A	0 ~ 0.625A	
	RATED POWER				12W	12W	12W	12W	15W	15W	
	RIPPLE & NOISE (max.)		Note.3		60mVp-p	100mVp-p	120mVp-p	150mVp-p	180mVp-p	240mVp-p	
	VOLTAGE TOLERANCE		Note.4		±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	±3.0%	
	LINE REGULATION		Note.5		±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LOAD REGULATION		Note.6		±5.0%	±5.0%	±3.0%	±3.0%	±3.0%	±3.0%	
SETUP, RISE, HOLD UP TIME			1500ms, 30ms, 30ms / 230VAC 3000ms, 30ms, 10ms / 115VAC at full load								
INPUT	VOLTAGE RANGE		Note.7		80 ~ 264VAC 113 ~ 370VDC						
	FREQUENCY RANGE		47 ~ 63Hz								
	EFFICIENCY (Typ.)				82%	86.5%	87.5%	87%	88.5%	88.5%	
	AC CURRENT		0.4A / 115VAC 0.25A / 230VAC								
	INRUSH CURRENT (max.)		COLD START 40A / 115VAC 80A / 230VAC								
	LEAKAGE CURRENT (max.)		Touch current < 100uA (rms) @264VAC								
PROTECTION	OVERLOAD		110% ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE		115% ~ 140% rated output voltage Protection type : Clamp by zener diode								
ENVIRONMENT	WORKING TEMP.		-30 ~ +70℃ (Refer to "Derating Curve")								
	WORKING HUMIDITY		20% ~ 90% RH non-condensing								
	STORAGE TEMP., HUMIDITY		-20 ~ +85℃, 10 ~ 95% RH non-condensing								
	TEMP. COEFFICIENT		±0.03% / °C (0 ~ 45℃)								
	VIBRATION		10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes								
SAFETY & EMC (Note. 8)	SAFETY STANDARDS		CB IEC62368-1, IEC60601-1/-1-11, IEC61558-1/-2-16, IEC60335-1; UL UL62368-1, CSA C22.2 NO. 62368-1, ANSI/AAMI ES60601-1/-1-11(3.2 Version), CAN/CSA-C22.2 NO.60601-1/-1-11, ANSI/AAMI ES60601-1-11, CAN/CSA-C22.2 NO.60601-1-11(for U Type only) DEKRA BS EN/EN62368-1, BS EN/EN60601-1/-1-11, BS EN/EN61558-1/-2-16, BS EN/EN60335-1; PSE J62368-1; BSMI CNS15598-1; RCM AS/NZS 61558-1/-2-16; EAC TPTC004; CCC GB4943.1 approved. KC KC62368-1; BIS IS13252(part1):2010/IEC60950-1:2005. (Please refer to next page for more details)(NGE12○05-USB without CB/UL/DEKRA 60601-1-11)								
			WITHSTAND VOLTAGE		I/P-O/P:4000VAC						
	ISOLATION RESISTANCE		I/P-O/P:100M Ohms / 500VDC / 25℃ / 70% RH								
	EMC EMISSION		Parameter		Standard			Test Level / Note			
			Conducted emission		BS EN/EN55032(CISPR32)/EN55011, FCC Part15, CNS15936, GB/T 9254.1-2021, KC C9832			Class B			
			Radiated emission		BS EN/EN55032(CISPR32)/EN55011, FCC Part15, CNS15936, GB/T 9254.1-2021, KC C9832			Class B			
	EMC IMMUNITY		Harmonic current		BS EN/EN61000-3-2			Class A			
			Parameter		Standard			Test Level /Note			
			ESD		BS EN/EN61000-4-2			Level 3, 15KV air; Level 2, 8KV contact			
			RF field susceptibility		BS EN/EN61000-4-3			Level 2, 3V/m			
			EFT bursts		BS EN/EN61000-4-4			Level 3, 2KV			
			Surge susceptibility		BS EN/EN61000-4-5			Level 3, 1KV/L-N			
			Conducted susceptibility		BS EN/EN61000-4-6			Level 2, 3V			
			Magnetic field immunity		BS EN/EN61000-4-8			Level 1, 1A/m			
	Voltage dips, interruption		BS EN/EN61000-4-11			>95% dip 0. 5 periods, 30% dip 25 periods, >95% interruptions 250 periods					
	OTHERS	MTBF		1272.8 Khrs min. MIL-HDBK-217F (25℃) 7192.4 Khrs min. Telcordia TR/SR-332(Bellcore) (25℃)							
DIMENSION		48*28*55mm (L*W*H)									
PACKING		MAIN BODY		Type	NGE12Ixx-P1J	NGE12Ixx-USB	NGE12Exx-P1J	NGE12Exx-USB	NGE12Uxx-P1J	NGE12Uxx-USB	
				P.W.	112g	71g	127g	86g	112g	71g	
				Q'TY	96pcs	150pcs	72pcs	120pcs	96pcs	150pcs	
				G.W.	12.6kg	12.5kg	11.2kg	13.3kg	12.6kg	12.5kg	
				M'MENT	1.02CUFT	0.68CUFT	1.36CUFT	1.25CUFT	1.02CUFT	0.68CUFT	
AC PLUGS		Refer to Page 3									
DC OUTPUT CONNECTOR	PLUG		See page 7~8 ; Other type available by customer requested								
	CABLE		See page 7~8 ; Other type available by customer requested								
NOTE			1.All parameters are specified at 230VAC input, rated load, 25℃ 70% RH ambient. 2.DC voltage: The output voltage set at point measure by plug terminal & 50% load. 3.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1 μ F & 47 μ F capacitor. 4.Tolerance: includes set up tolerance, line regulation, load regulation. 5.Line regulation is measured from low line to high line at rated load. 6.Load regulation is measured from 0% to 100% rated load 7.Derating may be needed under low input voltage. Please check the derating curve for more details. 8.The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) 9.Design meet US DoE Level VII (from Docket number EERE-2020-BT-STD-0006). ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx								

■ Interchangeable AC Plug Specifically for NGE12/18/30/45/65/90 (I-Type)

Order NO.	NGE12Ixx-□ □=P1J USB (Universal Version) 							NGE12Exx-□ □=P1J USB (EU Version) 	NGE12Uxx-□ □=P1J USB (US Version) 
AC plug	Interchangeable Type (Unfoldable; AC Pin fixed)							Non-Interchangeable Type	
	EU 	US 	UK 	AU 	CN 	KR 	IN 	Unfoldable AC Pin	Foldable AC Pin
Certificate									

■ AC Plugs Accessory (Sold Separately)

MW's order NO.	Per Unit	Per Bag	Per Carton	
		Q'Ty	Q'Ty	G.W.
AC PLUG-EU4		30 pcs	300 pcs (10 bags)	5.4Kg
AC PLUG-US4		30 pcs	300 pcs (10 bags)	4.7Kg
AC PLUG-UK4		30 pcs	300 pcs (10 bags)	7.1Kg
AC PLUG-AU4		30 pcs	300 pcs (10 bags)	5.2Kg
AC PLUG-CN4		30 pcs	300 pcs (10 bags)	4.8Kg
AC PLUG-KR4		30 pcs	300 pcs (10 bags)	6.3Kg
AC PLUG-IN4		30 pcs	300 pcs (10 bags)	7.7Kg
AC PLUG-MIX4	     (Per Set)	30 pcs (5 Types*6 mixed bags)	300 pcs (5 Types*6 mixed bags) (10 bags)	5.45Kg
AC PLUG-MIX5	       (Per Set)	35 pcs (7 Types*5 mixed bags)	315 pcs (7 Types*5 mixed bags) (9 bags)	6.13Kg

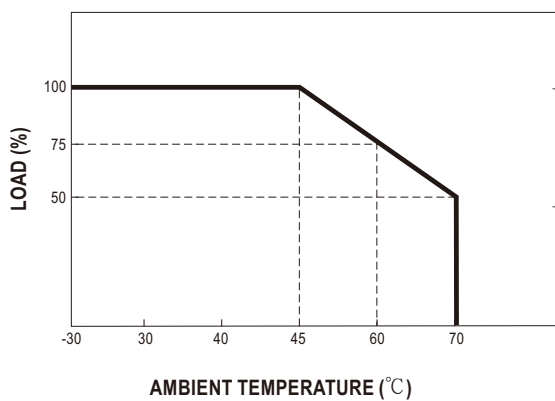
■ Interchangeable AC Plug Installation Steps (Convertible with I Type only)

Step1	Step2
	
Slide in AC converter along the guided rail between the metal prongs until it is locked in (with a “click” sound).	Check if the new plug type is stable and correct before use.

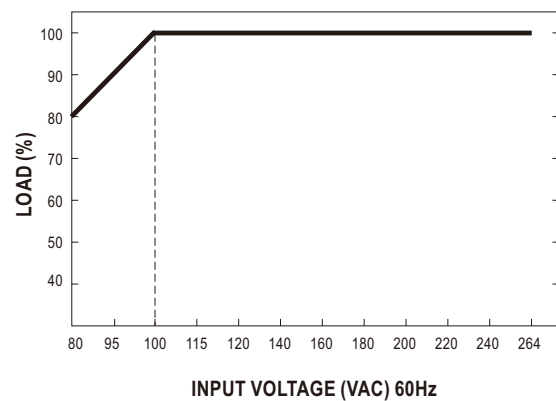
Note:

1. NGE12I main body unit and AC inlet plug should be ordered separately.
2. NGE12I needs to be used along with one of the AC inlet plug (EU,US,UK,AU,CN,KR,IN).

■ Derating Curve



■ Static Characteristics

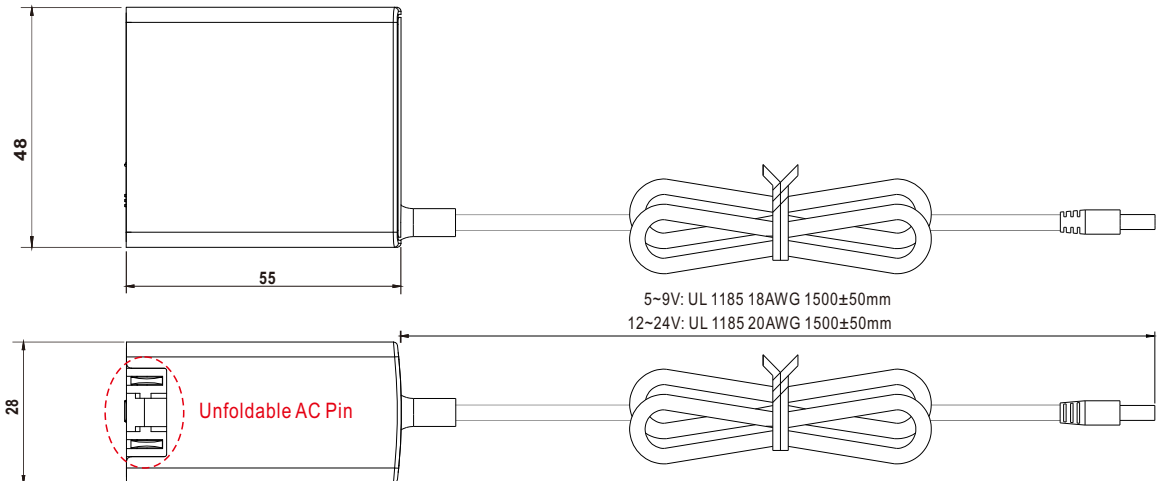


■ Mechanical Specification

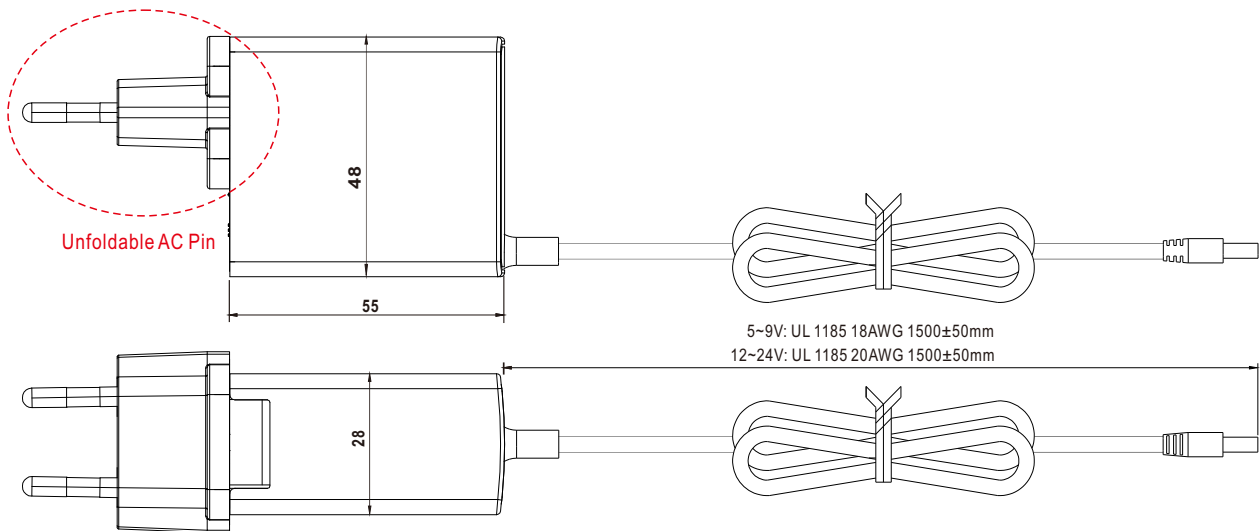
※ Cable connection

Unit:mm

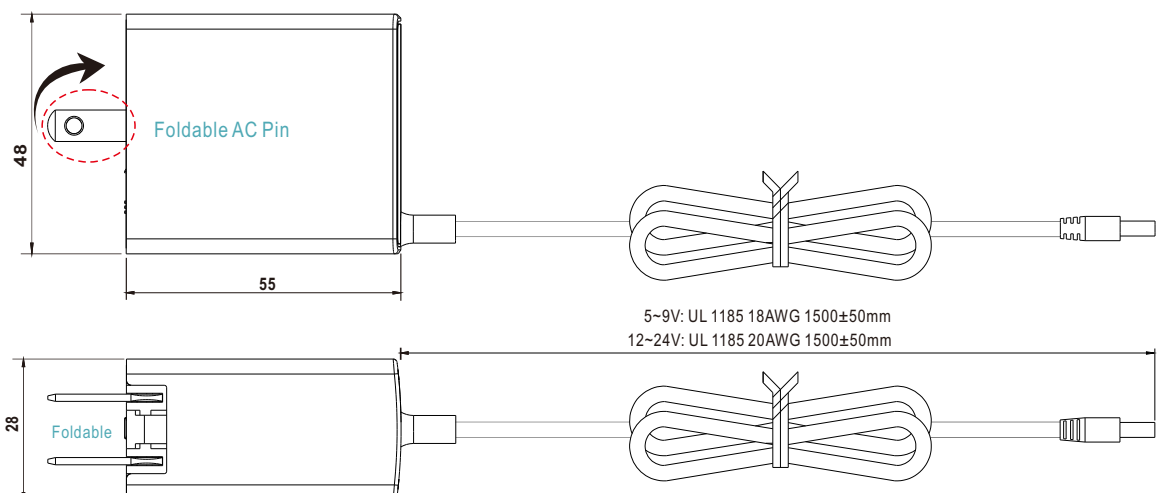
NGE12lxx-P1J (Universal Version - AC Pin fixed; With interchangeable plugs) :



NGE12Exx-P1J (EU Version - AC Pin fixed; With non-interchangeable plug) :



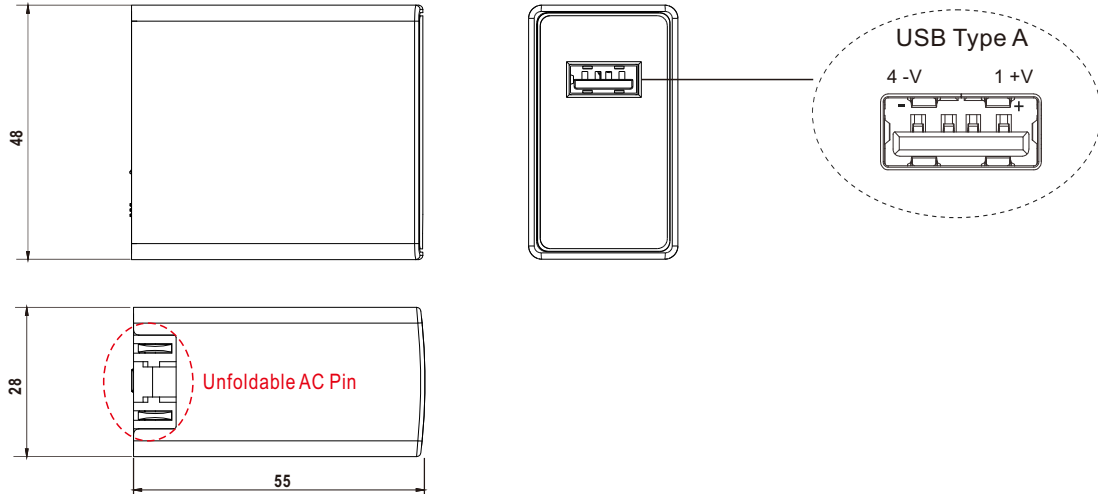
NGE12Uxx-P1J (US Version - Foldable AC Pin; With non-interchangeable plug) :



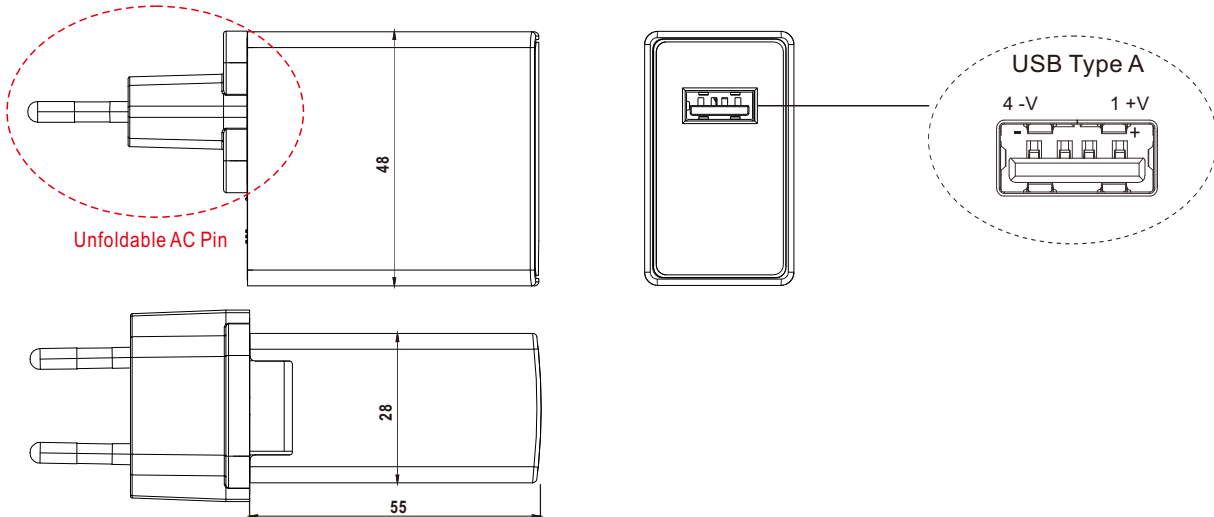
※ USB connection

NGE12I05-USB (Universal Version - AC Pin fixed; With interchangeable plugs) :

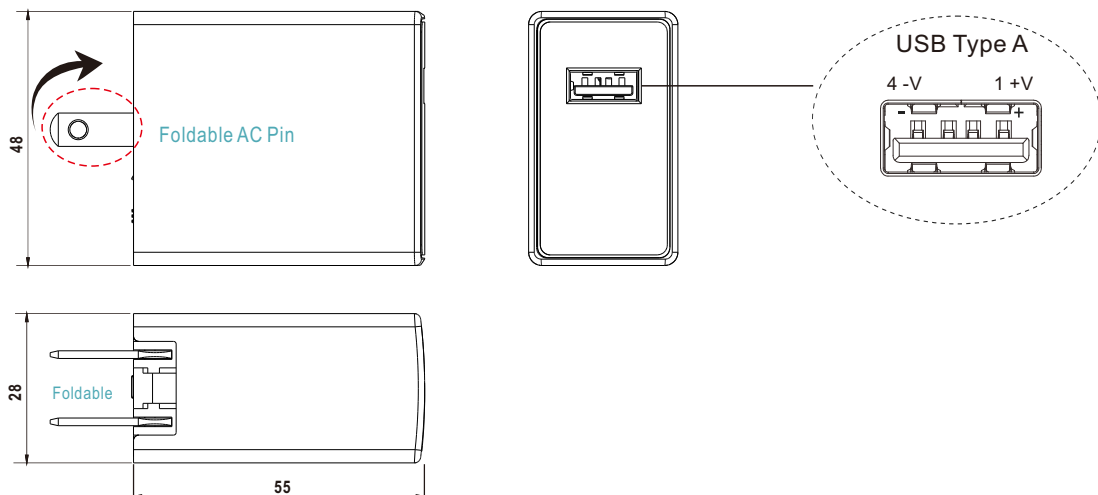
Unit:mm



NGE12E05-USB (EU Version - AC Pin fixed; With non-interchangeable plug) :



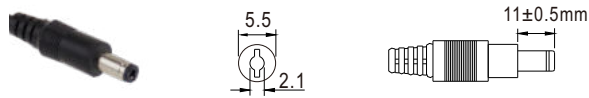
NGE12U05-USB (US Version - Foldable AC Pin; With non-interchangeable plug) :



■ DC Output Plug

◎ Standard plug: P1J

Unit:mm

P1J	Pin Assignment
	
	Outside  Inside

◎ DC plug changeable through:

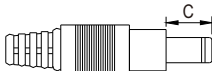
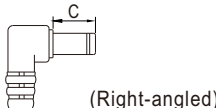
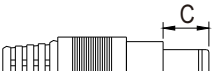
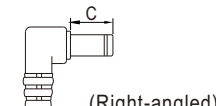
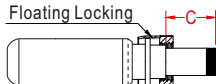
- (1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)
- (2) Quick adapter accessory (sold separately without MOQ)

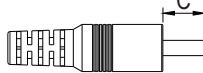
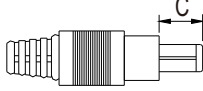
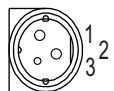
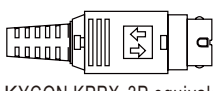
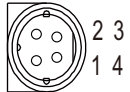
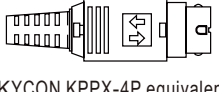
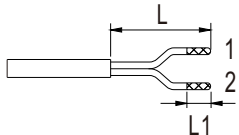
Please refer to below table and online selection guide : https://www.meanwell.com/upload/pdf/DC_plug.pdf

Example quick adapter accessory:



◎ Optional DC plug: (Available in customized cable or quick adapter)

Tuning Fork Style		Type No.	A	B	C	Quick Adapter Accessory
	 (Straight)	P1I	5.5	2.1	9.5	Available (Current rating: 7.5A max.)
		P1L	5.5	2.5	9.5	
		P1M	5.5	2.5	11.0	
	 (Right-angled)	P1IR	5.5	2.1	9.5	
		P1JR	5.5	2.1	11.0	
		P1LR	5.5	2.5	9.5	
		P1MR	5.5	2.5	11.0	
Barrel Style		Type No.	A	B	C	None
	 (Straight)	P2I	5.5	2.1	9.5	
		P2J	5.5	2.1	11.0	
		P2L	5.5	2.5	9.5	
	 (Right-angled)	P2M	5.5	2.5	11.0	
		P2IR	5.5	2.1	9.5	
		P2JR	5.5	2.1	11.0	
		P2LR	5.5	2.5	9.5	
		P2MR	5.5	2.5	11.0	
Lock Style		Type No.	A	B	C	None
	 SWITCHCRAFT original or equivalent	P2S(S761K)	5.53	2.03	12.06	
		P2K(761K)	5.53	2.54	12.06	
		P2C(S760K)	5.53	2.03	9.52	
		P2D(760K)	5.53	2.54	9.52	

Min. Pin Style	Type No.	A	B	C	Quick Adapter Accessory	
		OD	ID	L		
   EIAJ equivalent	P3A	2.35	0.7	11.0	Available (Current rating: 5A max.)	
	P3B	4.0	1.7	11.0		
	P3C	4.75	1.7	11.0		
Center Pin Style	Type No.	A	B	C	D	Available (Current rating: 7.5A max.)
		OD	ID	L	Center Pin	
   EIAJ equivalent	P4A	5.5	3.4	11.0	1.0	
	P4B	6.5	4.4	11.0	1.4	
	P4C	7.4	5.1	11.0	0.6	
Min. DIN 3 Pin with Lock (male)	Type No.	Pin Assignment				Available (Current rating: 7.5A max.)
		PIN No.	Output			
   KYCON KPPX-3P equivalent	R6B	1	+Vo			
		2	-Vo			
		3	+Vo			
Min. DIN 4 Pin with Lock (male)	Type No.	Pin Assignment				Available (Current rating: 7.5A max.)
		PIN No.	Output			
   KYCON KPPX-4P equivalent	R7B	1	+Vo			
		2	-Vo			
		3	-Vo			
		4	+Vo			
Stripped and tinned leads	Type No.	Pin Assignment				None
		PIN No.	Output			
  Length of Land L1 by request (MW's standard length, L: <u>25</u> mm, L1: <u>10</u> mm)	by customer	1 (Ribbed)	+Vo			
		2 (Letter)	-Vo			

■ Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>