



(NGE65I)



(NGE65E)



(NGE65U)

User's Manual



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(30mm)**
- 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

Description

NGE65 is a highly reliable, 65W 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. NGE65 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 92% and the extremely low no-load power consumption below 0.075W, NGE65 is compliant with the latest USA energy regulation EISA 2007/DoE, Canada NRCAN, Australia and New Zealand MEPS, Korea KMEPS, EU ErP and CoC version 5. 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 65 I 12 -P1J

- DC plug type { P1J: Plug for standard model, 2.1 ϕ $\times$ 5.5 ϕ $\times$ 11mm, C+ tuning fork type
Other options available by customer requested (see Page 6~7)
- Output voltage (5V/9V/12V/15V/18V/24V/48V)
- AC Plug { I : AC Pin fixed; Universal version with interchangeable plugs
E : AC Pin fixed; EU version with non-interchangeable plug
U : Foldable AC Pin; US version with non-interchangeable plug
- Rated wattage
- Series name

Applications

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

GTIN CODE

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



Über die gesetzliche Gewährleistung hinausgehenden Garantieangaben sind Herstellergarantien.

65W AC-DC Reliable Wall-mounted Interchangeable Type Green Adaptor **NGE65 series**

SPECIFICATION		NGE65○05-P1J	NGE65○09-P1J	NGE65○12-P1J	NGE65○15-P1J	NGE65○18-P1J	NGE65○24-P1J	NGE65○48-P1J
		○ = I, U, E						
OUTPUT								
DC VOLTAGE	Note.2	5V	9V	12V	15V	18V	24V	48V
RATED CURRENT		6A	5.96A	4.88A	4.34A	3.62A	2.71A	1.36A
CURRENT RANGE		0 ~ 6A	0 ~ 5.96A	0 ~ 4.88A	0 ~ 4.34A	0 ~ 3.62A	0 ~ 2.71A	0 ~ 1.36A
RATED POWER		30W	53.6W	58.5W	65.1W	65.1W	65W	65.2W
RIPPLE & NOISE (max.)	Note.3	100mVp-p	100mVp-p	120mVp-p	150mVp-p	180mVp-p	240mVp-p	240mVp-p
VOLTAGE TOLERANCE	Note.4	±6.0%	±5.0%	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%
LINE REGULATION	Note.5	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
LOAD REGULATION	Note.6	±6.0%	±5.0%	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%
SETUP, RISE, HOLD UP TIME		1500ms, 50ms, 30ms / 230Vac			3000ms, 50ms, 10ms / 115Vac at full load			
INPUT								
VOLTAGE RANGE	Note.7	80 ~ 264Vac 113 ~ 370Vdc						
FREQUENCY RANGE		47 ~ 63Hz						
EFFICIENCY (Typ.)		84%	89%	90%	90%	91%	92%	92%
AC CURRENT		1.5A / 115Vac 0.8A / 230Vac						
INRUSH CURRENT (max.)		COLD START 50A / 115Vac 100A / 230Vac						
LEAKAGE CURRENT (max.)		Touch current < 100uA (rms) @264Vac						
PROTECTION								
OVERLOAD		110% ~ 150% rated output power						
		Protection type : 5~24V Hiccup mode, recovers automatically after fault condition is removed. 48V Shut down and latch off o/p voltage, re-power on to recover.						
OVER VOLTAGE		110% ~ 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 ~ 40℃)						
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 62368-1; EAC TPTC004;						
	CCC	GB4943.1 approved.						
WITHSTAND VOLTAGE	KC	KC62368-1;						
	BIS	IS13252(part1):2010/IEC60950-1:2005.						
			(Please refer to next page for more details)					
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	
	Harmonic current	Note.9	BS EN/EN61000-3-2					Class A
EMC IMMUNITY	Parameter	Standard					Test Level /Note	
	ESD	BS EN/EN61000-4-2					Level 4, 15KV air; Level 4,8KV 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 2, 3A/m	
	Voltage dips , interruption	BS EN/EN61000-4-11					>95% dip 0. 5 periods, 30% dip 25 periods, >95% interruptions 250 periods	
OTHERS								
MTBF		682.2 Khrs min. MIL-HDBK-217F (25℃)		5852.4 Khrs min.		Telcordia TR/SR-332(Bellcore) (25℃)		
DIMENSION		62*30*65mm (L*W*H)						
PACKING	MAIN BODY	196g; 60pcs/ 13.4Kg / 0.94CUFT for NGE65Ixx/Uxx-P1J			211g; 45pcs/ 11.4Kg / 1.06CUFT for NGE65Exx-P1J			
	AC PLUGS	Refer to Page 3						
DC OUTPUT CONNECTOR								
PLUG		See page 6~7 ; Other type available by customer requested						
CABLE		See page 6~7 ; 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.Test harmonic current at 85% load.								
10.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								



65W AC-DC Reliable Wall-mounted Interchangeable Type Green Adaptor **NGE65 series**

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

Order NO.	NGE65lxx-P1J (Universal Version) 							NGE65Exx-P1J (EU Version) 	NGE65Uxx-P1J (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



65W AC-DC Reliable Wall-mounted Interchangeable Type Green Adaptor **NGE65 series**

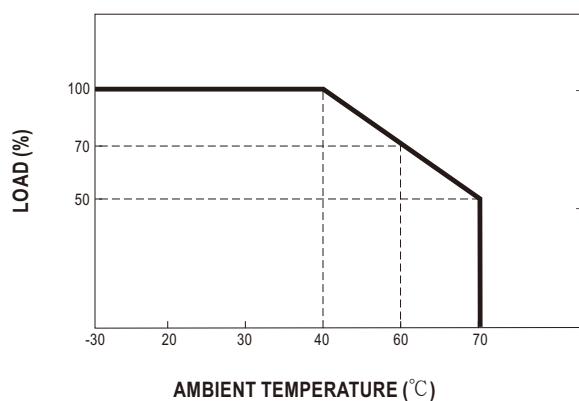
■ Interchangeable AC Plug Installation Steps (Convertible with I Type only)

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.

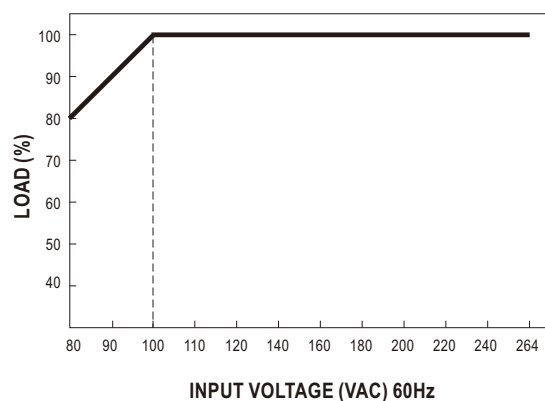
Note:

1. NGE65I main body unit and AC inlet plug should be ordered separately.
2. NGE65I needs to be used along with one of the AC inlet plug (EU,US,UK,AU,CN,KR,IN).

■ Derating Curve



■ Static Characteristics





65W AC-DC Reliable Wall-mounted Interchangeable Type Green Adaptor **NGE65 series**

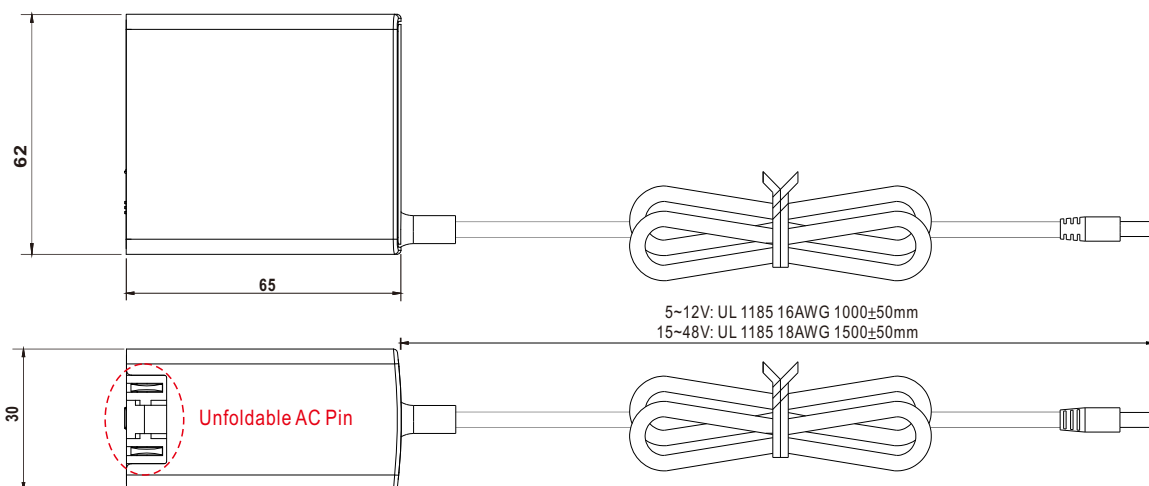
■ Mechanical Specification

(Unit: mm , tolerance ± 1 mm)

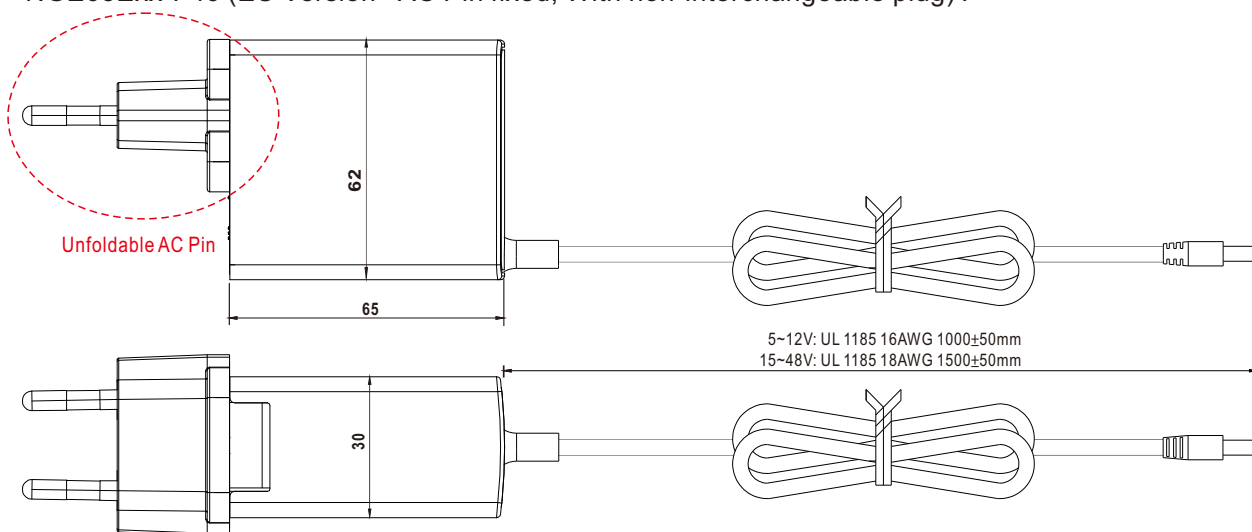
Case No. NGE65

※ Cable connection

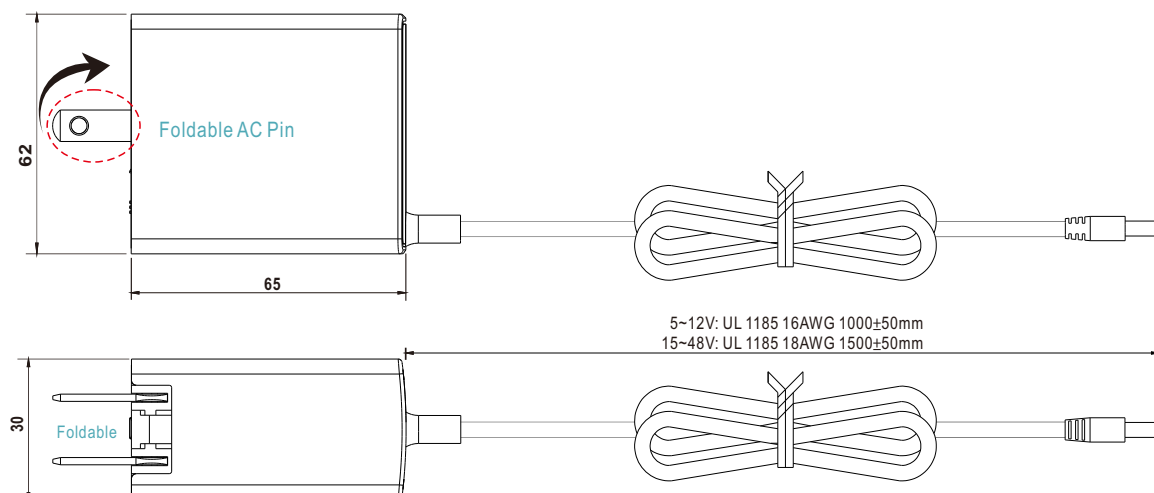
NGE65lxx-P1J (Universal Version - AC Pin fixed; With interchangeable plugs) :



NGE65Exx-P1J (EU Version - AC Pin fixed; With non-interchangeable plug) :



NGE65Uxx-P1J (US Version - Foldable AC Pin; With non-interchangeable plug) :



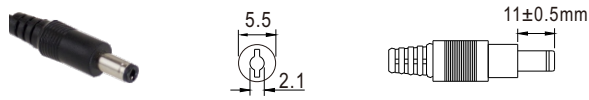


65W AC-DC Reliable Wall-mounted Interchangeable Type Green Adaptor **NGE65 series**

■ DC Output Plug

◎ Standard plug: P1J

Unit:mm

P1J	Pin Assignment
	
	Outside  Inside

◎ DC plug changeable through:

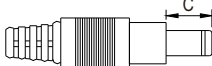
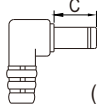
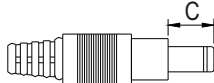
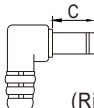
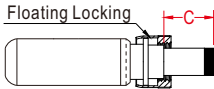
- (1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)
- (2) Quick adapter accessory (sold separately without MOQ)

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

Example quick adapter accessory:

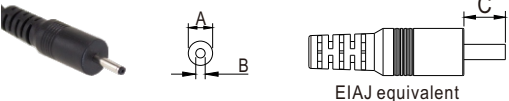
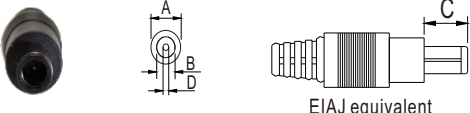
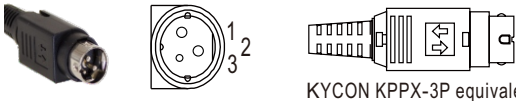
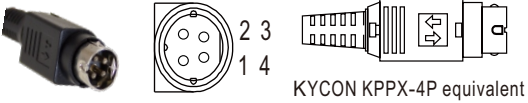
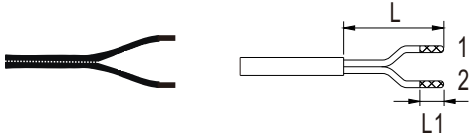


◎ Optional DC plug: (Available in customized cable or quick adapter)

Tuning Fork Style		Type No.	A OD	B ID	C L	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 OD	B ID	C L	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 OD	B ID	C L	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	



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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	
		OD	ID	L	Center Pin	
 EIAJ equivalent	P4A	5.5	3.4	11.0	1.0	Available (Current rating: 7.5A max.)
	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				
		PIN No.	Output			
 KYCON KPPX-3P equivalent	R6B	1	+Vo			Available (Current rating: 7.5A max.)
		2	-Vo			
		3	+Vo			
Min. DIN 4 Pin with Lock (male)	Type No.	Pin Assignment				
		PIN No.	Output			
 KYCON KPPX-4P equivalent	R7B	1	+Vo			Available (Current rating: 7.5A max.)
		2	-Vo			
		3	-Vo			
		4	+Vo			
Stripped and tinned leads	Type No.	Pin Assignment				
		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			None
		2 (Letter)	-Vo			

■ Installation Manual

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