



### ■ Features

- EIB / KNX power supply with integrated choke
- Compact size with 4SU width
- Safety extra low voltage(SELV)
- Suitable for TP1-256
- 180~264VAC input
- Protections: Short circuit / Overload(short-circuit-proof) / Over voltage
- Cooling by free air convection
- Isolation class I
- LED indicator for normal operation, bus reset and bus overload
- Installed on DIN rail TS-35/7.5 or 15
- Over Voltage category III
- 100% full load burn-in test
- 3 years warranty

### ■ Applications

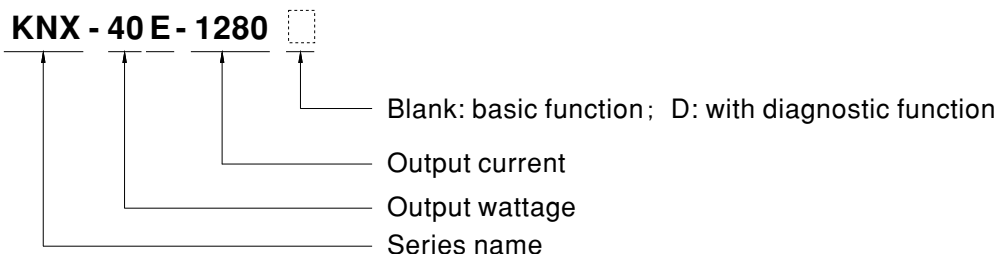
- Intelligent home control
- Modern building automation
- Lighting control
- HVAC system
- Security system
- Blinds and shutters
- Monitoring systems
- Energy management
- Alarm monitoring

### ■ Description

The KNX Power Supply KNX-40E-1280 is a 1280mA power supply with high efficiency and a small footprint of only 4SU. The device has a KNX bus choke output and an additional output for ancillary power. The -30~+70°C wide temperature operating range can meet all kinds of applications. LED indicators are used in case of normal operation, overload conditions and RESET operation. It is perfectly suitable to power up any products labeled with the KNX trademark. With over 30 years of industrial power supply experience, KNX-40E-1280 is engineered to be a reliable and safe solution for KNX bus environment.

### ■ Model Encoding

**KNX - 40 E - 1280**  

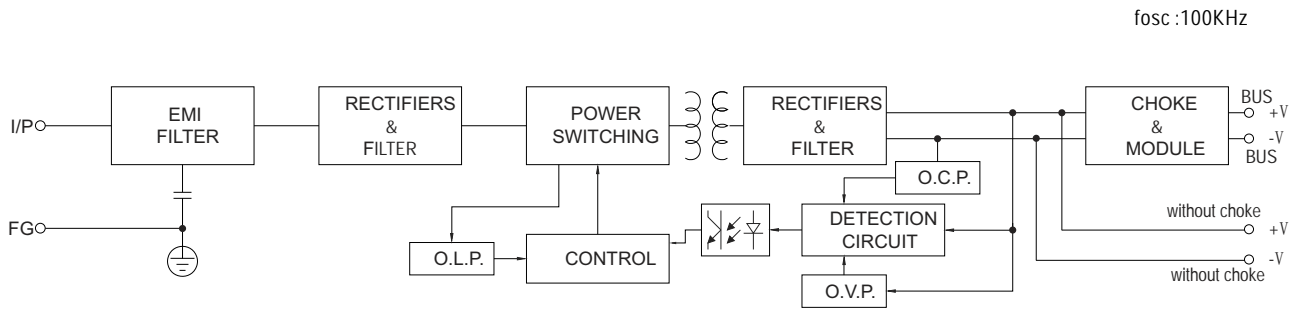




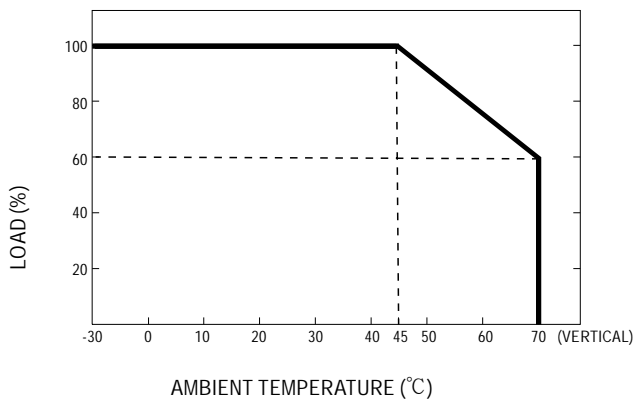
## SPECIFICATION

MODEL		KNX-40E-1280 □
OUTPUT	BUS OUTPUT VOLTAGE WITH CHOKE	Bus,30V (KNX black/red terminal block)
	DC OUTPUT VOLTAGE WITHOUT CHOKE	30V(Additional output for ancillary power)
	RATED CURRENT	1280mA
	RATED POWER	38.4W
	RIPPLE & NOISE (max.) Note.2	100mVp-p
	SHORT CIRCUIT CURRENT	2.8A
	SETUP, RISE TIME	1000ms, 50ms/230VAC at full load
	AC MAINS FAILURE BACK-UP TIME (Typ.)	200ms/230VAC at full load
INPUT	VOLTAGE RANGE	180 ~ 264VAC    176 ~ 280VDC
	FREQUENCY RANGE	47 ~ 63Hz
	EFFICIENCY (Typ.) Note.3	86%
	AC CURRENT (Typ.)	0.5A/230VAC
	INRUSH CURRENT (Typ.)	COLD START 60A(twidth=1200μs measured at 50% Ipeak)/230VAC
	LEAKAGE CURRENT	<1mA / 240VAC
PROTECTION	OVERLOAD	205 ~ 235% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed
	OVER VOLTAGE	33 ~ 35V Protection type : Hiccup mode, recovers automatically after fault condition is removed
FUNCTION	RESET	Physical button for reset the bus (Press the RESET button for at least 20 seconds to reset the KNX Bus)
	LED INDICATORS	Please refer to the "Explanation of LED Status"
	CHOKE	One integrated choke
ENVIRONMENT	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")
	WORKING HUMIDITY	20 ~ 95% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing
	VIBRATION TYPE OF PROTECTION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes
	TYPE OF PROTECTION	IP20 design
SAFETY & EMC (Note 4)	OVER VOLTAGE CATEGORY	III ,According to EN61558, EN50178,altitude up to 2000 meters
	SAFETY STANDARDS	EN61558-1,EN61558-2-16 ; EN50491-3 approved
	WITHSTAND VOLTAGE	I/P-O/P:4.2KVAC    I/P-FG:2KVAC
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG:100M Ohms / 500VDC / 25°C / 70% RH
	EMC EMISSION	Compliance to EN50491-5-2,-5-3;EN61000-3-2,-3-3
OTHERS	EMC IMMUNITY	Compliance to EN50491-5-2,-5-3 ; EN61000-4-2,3,4,5,6,8,11 , heavy industry level, criteria A
	MTBF	487.4K hrs min. Telcordia SR-332 (Bellcore)    215.6Khrs min.    MIL-HDBK-217F (25°C)
	DIMENSION	72*90*57mm (W*H*D)
	MOUNTING	35mm mounting rail according to DIN EN60715
	PACKING	0.328Kg ; 48pcs/16.4Kg/1.02CUFT
NOTE	<ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor. Measure before Choke.</li> <li>Efficiency before choke.</li> <li>The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</li> <li>The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</li> </ol>	

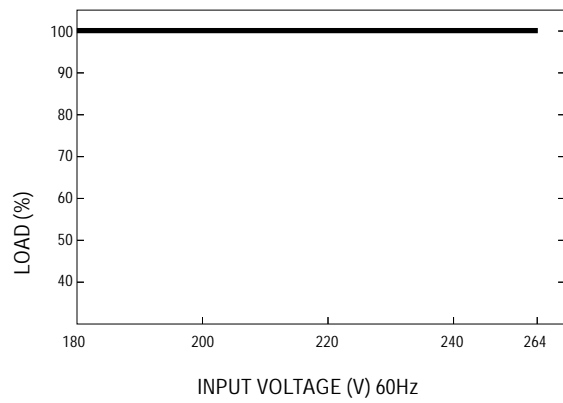
■ Block Diagram



■ Derating Curve

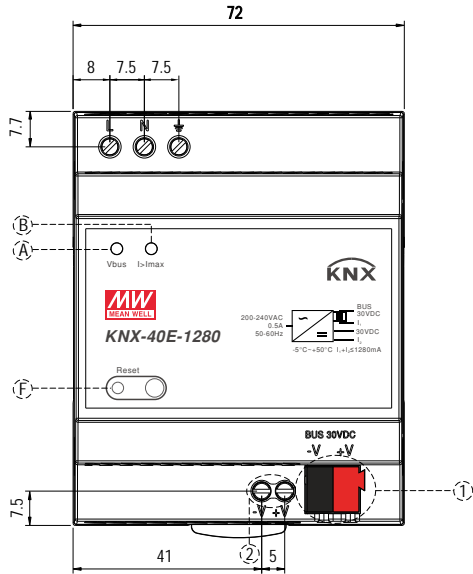


■ Static Characteristics

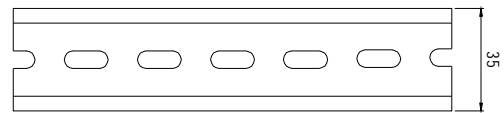
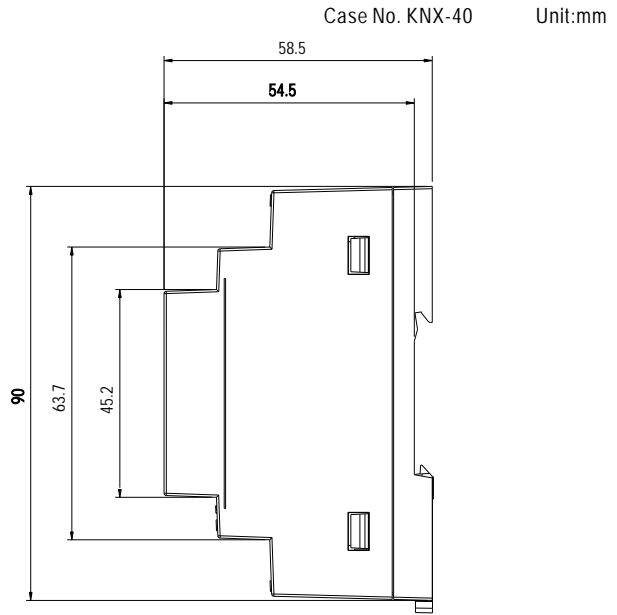


■ Mechanical Specification

※ Blank-Type

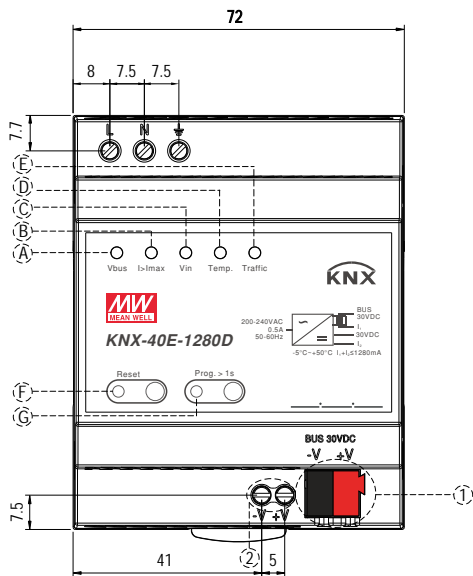


1	KNX bus terminals (Red :+, DARK-GRAY:-)
2	Ancillary power terminals

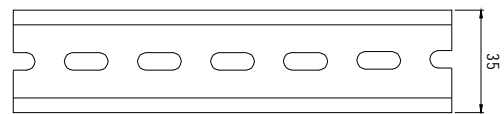
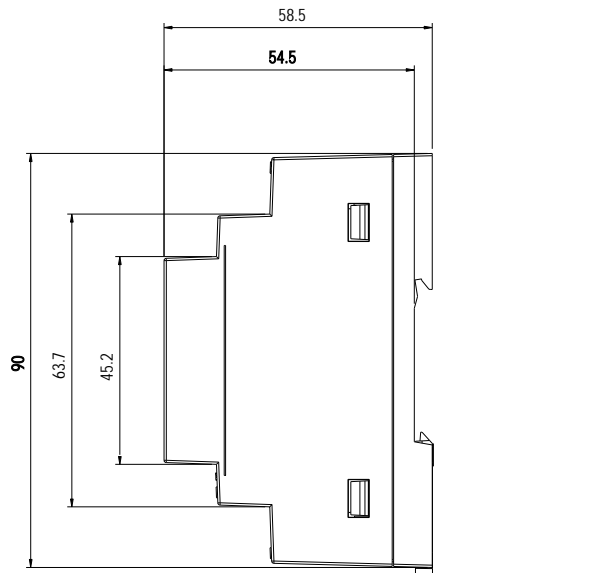


ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15

※ D-Type



1	KNX bus terminals (Red :+, DARK-GRAY:-)
2	Ancillary power terminals



ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15

■ Explanation of LED Status

Number	LED light	Color	Explanation / Range
A	Bus voltage $V_{BUS}$	Green	KNX Bus voltage is 28-31VDC
		Red	KNX Bus voltage lower than 28VDC
		Orange	KNX Bus voltage higher than 31VDC
B	Output current $I_{OUT}$	Green	Output current < 1280mA
		Orange	Output current is 1280mA-1600mA
		Red	Output current >1600 mA (Overload)
C	Input voltage $V_{IN}$	Green	Input voltage is 180V-264VAC
		Red	Input voltage is out of this range
D	Internal Temperature	Green	Internal Temperature is 0-75 °C
		Red	Internal Temperature is out of this range
E	Telegram traffic	Green	Telegram load < 80 %, indicated by blinking
		Red	Telegram load > 80 %
F	KNX Reset	Red	Device is during a KNX bus restart
G	Programming	Red	Device in Program mode

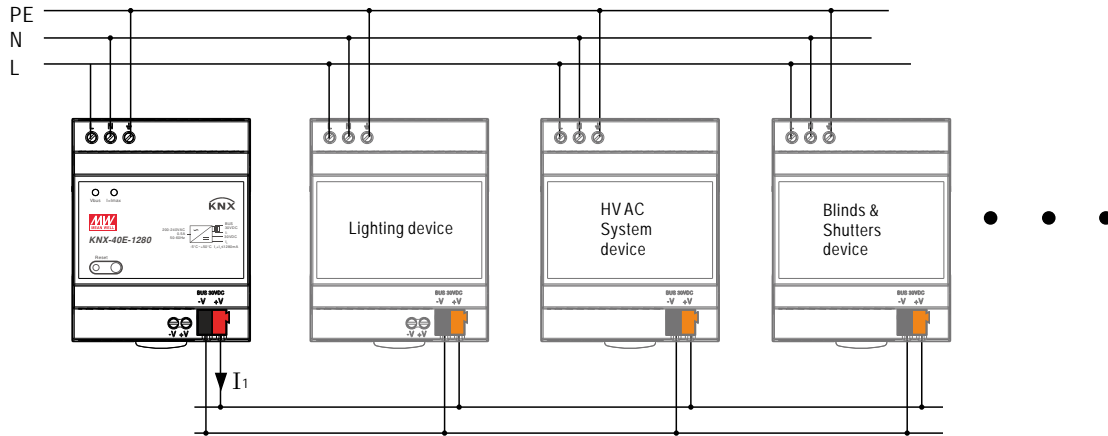
■ Configuration and Commissioning

The application program(database) can be downloaded via Online Catalogs from ETS or via <http://www.meanwell.com/productCatalog.aspx>

■ Typical application

⦿ Application 1: Powering KNX Bus Only

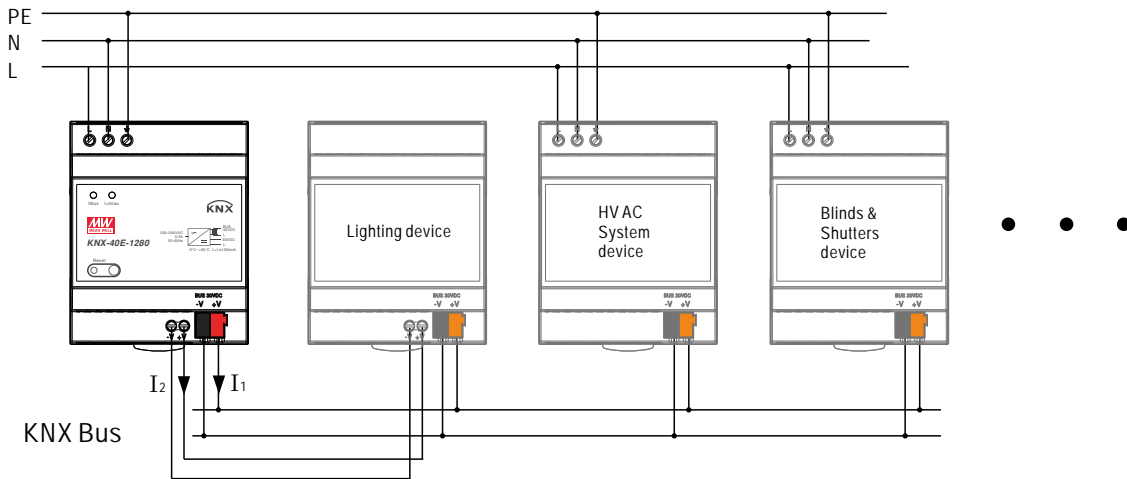
KNX Bus



Bus wiring consideration:

1. the maximum number of bus devices connected is 256 for TP1-256 topology.
2. the maximum length of a line segment is 350 m, measured along the line between the power supply and the furthest device bus.
3. the maximum distance between two bus devices cannot exceed 700 m.
4. the maximum length of a bus line is 1000 m, keeping into account all segments.
5. It is possible to connect two KNX-40E-1280 in parallel with following conditions: Two chokes installed in one line with at least 200m apart.

⦿ Application 2: Powering KNX Bus and KNX device



Note:

1. Use only ancillary output of KNX-40E-1280 to power the KNX device
2. The total current  $I_1 + I_2$  should be equal or less than 1280mA.  $I_1 + I_2 \leq 1280\text{mA}$
3. The above Bus wiring consideration is still applicable

■ Recommended Screwdriver, Wire and Torque Setting

1. Screwdriver (Width\*Thick): Slotted screwdriver 2.5\*0.4~3.5\*0.6
2. Wire: 0.5~4.0mm<sup>2</sup> solid core or 0.5~2.5mm<sup>2</sup> finely stranded
3. Torque: 0.8Nm

■ Installation Manual

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