MEAN WELL ICL-16R Inrush Current Limiter Installation Guide

Contents

MEAN WELL ICL-16R Inrush Current Limiter

Features

- 23A inrush limiting current, 16A continuous
- 180~264VAC AC input
- Integrated bypass relay, no simple NTC
- Internal thermal protection
- Installed on DIN Rail TS-35/7.5 or 15 (ICL-16R)
- -30~+70°C wide working temperature
- 3 years warranty

Applications

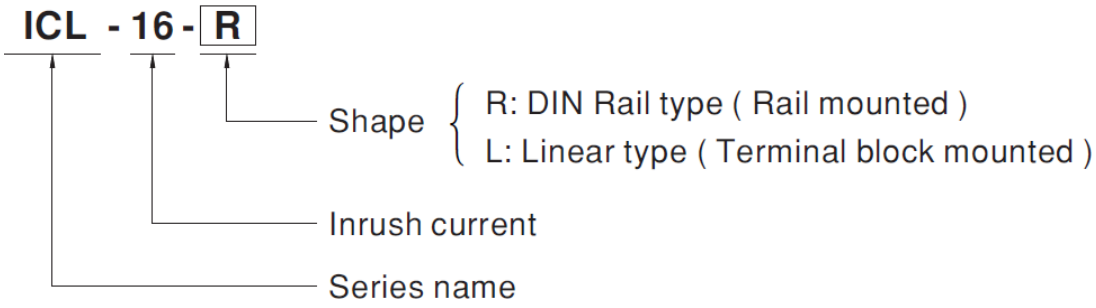
- Allow connecting multiple power supply at same line
- Allows smaller and faster Circuit Breaker
- Capacitive load
- Protects against unintended trigger of Circuit Breaker

GTIN CODE
MW Search: **https://www.meanwell.com/serviceGTIN.aspx**

Description

The ICL-16 is a 16A inrush current limiter that can be used to reduce the high starting current due to capacitive load causing the circuit breaker to be false triggered. Several power supplies can be installed on the same AC line after the implementation of an ICL-16.

Model Encoding



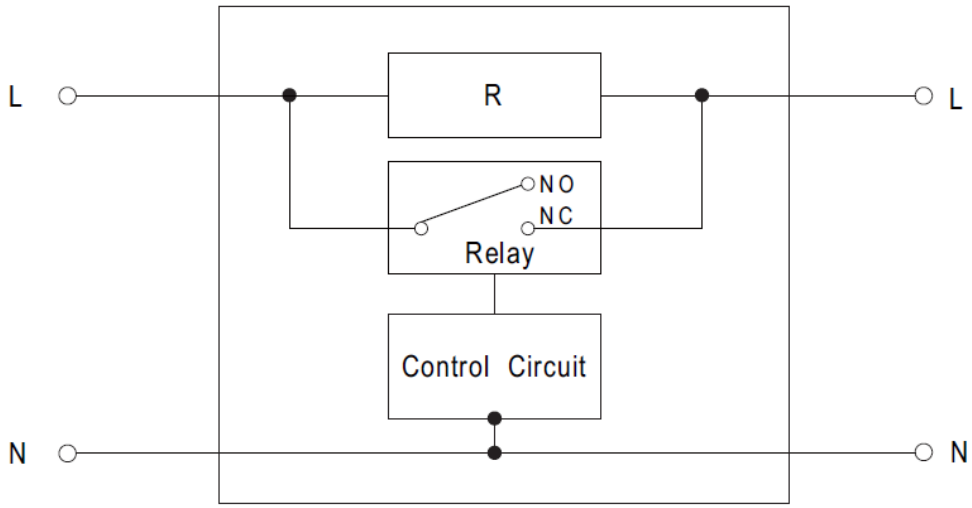
SPECIFICATION

MODEL		ICL-16R		ICL-16L
AC INPUT VOLTAGE		180 ~ 264VAC		
AC LINE FREQUENCY		47 ~ 63Hz		
INRUSH CURRENT LIMITING		23A		
AC CONTINUOUS RATED CURRENT		16A continuous		
AC INPUT POWER		3680VA (16A x 230VAC)		
AC INPUT CONSUMPTION		<1.5W at 264VAC,50Hz input		
INTERNAL RELAY LIMITING TIME (TO N POWER ON)		300±50ms		
INTERNAL RELAY	LIMITING CYCLES	PSU Set up time <250ms	PSU Set up time 250 ~ 350ms	PSU Set up time >350ms
		1 cycle / 5 min	1 cycle / 1 min	5 cycle / 1 min (>1500ms per cycle)
	RELEASE TIME	500±50ms		
INTERNAL PROTECTION		Thermal fuse protects overload and fire		
ALLOWED CAPACITIVE LOAD		2500μF max.		
WORKING TEMP.		-30 ~ +70℃		
WORKING HUMIDITY		20 ~ 90% RH non-condensing		
STORAGE TEMP.		-40 ~ +85℃		
TEMP. COEFFICIENT		±0.03%/℃ (0 ~ 50℃) RH non-condensing		
		10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes;		

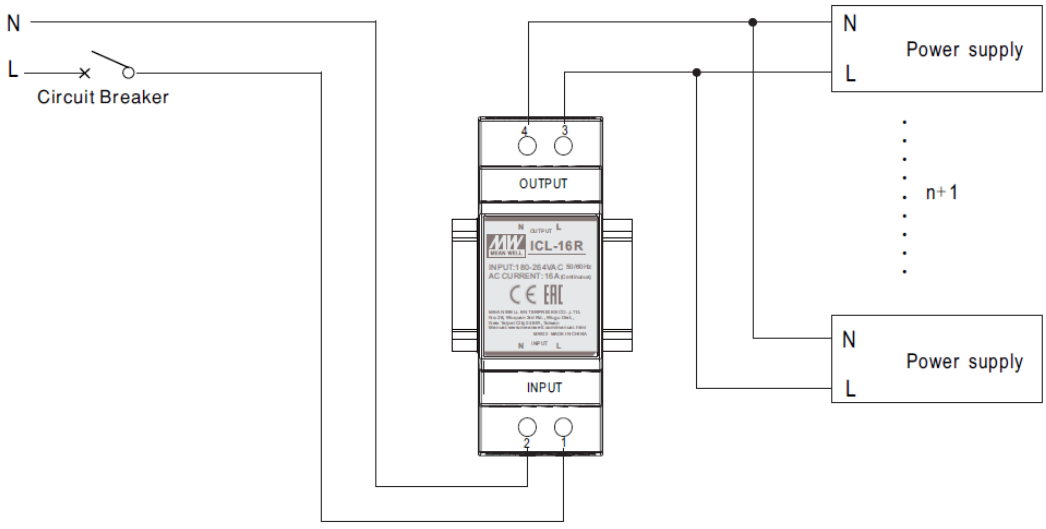
VIBRATION		Mounting: Compliance to IEC60068-2-6		
OPERATING ALTITUDE (NOTE 2)		5000 meters		
OVER VOLTAGE CATEGORY		Ⅲ; According to IEC62368-1; altitude up to 5000 meters		
POLLUTION DEGREE		2		
SAFETY STANDARDS		LVD BS EN/EN62368-1 approved		
SAFETY & EMC (**Note.3**)	**EMC EMISSION**	**Parameter**	**Standard**	**Test Level / Note**
		Conducted	BS EN/EN55032	Class B
		Radiated	BS EN/EN55032	Class B
		Harmonic Current	BS EN/EN61000-3-2	Class A
		Voltage Flicker	BS EN/EN61000-3-3	——-
	EMC IMMUNITY	BS EN/EN55035,BS EN/EN61000-6-2		
		Parameter	**Standard**	**Test Level /Note**
		ESD	BS EN/EN61000-4-2	Level 3, 8KV air; Level 2, 4KV contact, criteria A
		Radiated Susceptibility	BS EN/EN61000-4-3	Level 3, criteria A
		EFT/Burest	BS EN/EN61000-4-4	Level 3, criteria A
		Surge	BS EN/EN61000-4-5	Level 4,2KV/L-N, criteria A
		Conducted	BS EN/EN61000-4-6	Level 3, criteria A
		Magnetic Field	BS EN/EN61000-4-8	Level 4, criteria A
		Voltage Dips and interruptions	BS EN/EN61000-4-11	95% dip 0.5 periods, 30% dip 25 periods, 95% interruptions 250 periods
MTBF		7229.0K hrs min. Telcordia SR-332 (Bellcore) ; 2157.3K hrs min. MIL-HDBK-217F (25℃)	7217.9K hrs min. Telcordia SR-332 (Bellcore) ; 2113.8K hrs min. MIL-HDBK-217F (25℃)	
DIMENSION		35*90*54.5mm (L*W*H)	175*42*24mm (L*W*H)	
PACKING		0.116Kg; 96pcs/12.2Kg/1.04CUFT	0.132Kg; 98pcs/14Kg/1.04CUFT	

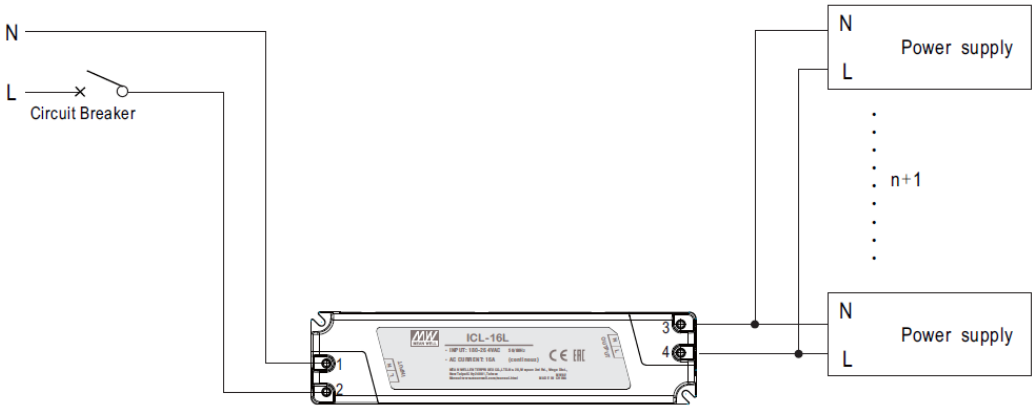
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load a nd 25℃ of ambient temperature. 2. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1 000m with fan models for operating altitude higher than 2000m(6500ft). 3. The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives. For guidanc e 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**) ※ Product Liability Disclaimer For detailed information, please refer to **https://www.me anwell.com/serviceDisclaimer**.aspx

BLOCK DIAGRAM



APPLICATION DIAGRAM



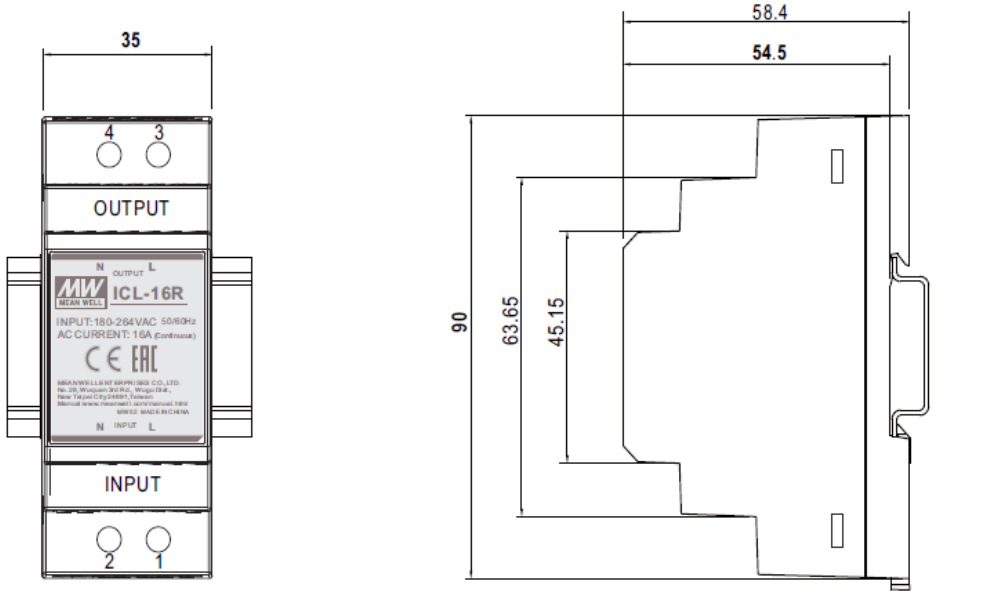


How many power supplys can be connected behind ICL-16R/ICL-16L. Please refer to: **http://www.meanwell.com**.

MECHANICAL SPECIFICATION

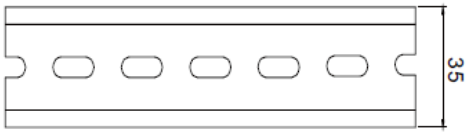
(Unit: mm , tolerance ± 1mm)

Case No.ICL-16R



Terminal Pin No. Assignment

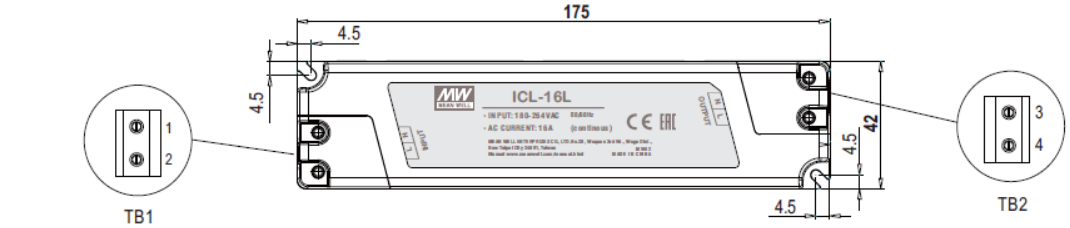
Pin No.	Assignment	Pin No.	Assignment
1	AC/L Input	3	AC/L Output
2	AC/N Input	4	AC/N Output

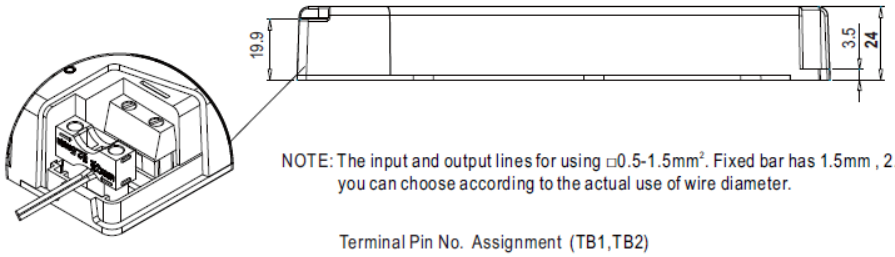


ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15

ICL-16L(Linear type)

(Unit: mm , tolerance ± 1mm) Case No.PLM-40





NOTE: The input and output lines for using □0.5-1.5mm². Fixed bar has 1.5mm , 2.0mm , 2.5mm , 3.0mm four grooves, you can choose according to the actual use of wire diameter.

Terminal Pin No. Assignment (TB1,TB2)
SWITCHLAB MB312-750 equivalent

Pin No.	Assignment	Pin No.	Assignment
1	AC/N Input	3	AC/N Input
2	AC/L Input	4	AC/L Input

File Name:ICL-16-SPEC 2024-10-30.

Documents / Resources

	MEAN WELL ICL-16R Inrush Current Limiter [pdf] Installation Guide ICL-16R, ICL-16L, ICL-16R Inrush Current Limiter, ICL-16R, Inrush Current Limiter, Current Limiter, Limiter

References

- ltd.no
- User Manual