



(ICL-28R)



(ICL-28L)



## ■ Features

- 48A inrush limiting current, 28A continuous
- 180~264VAC AC input(277VAC operational for ICL-28R)
- Integrated bypass relay, no simple NTC
- Internal thermal protection
- Installed on DIN Rail TS-35/7.5 or 15 (ICL-28R)
- -30~+70°C wide working temperature
- Over voltage category III
- Operating altitude up to 5000 meters(Note. 2)

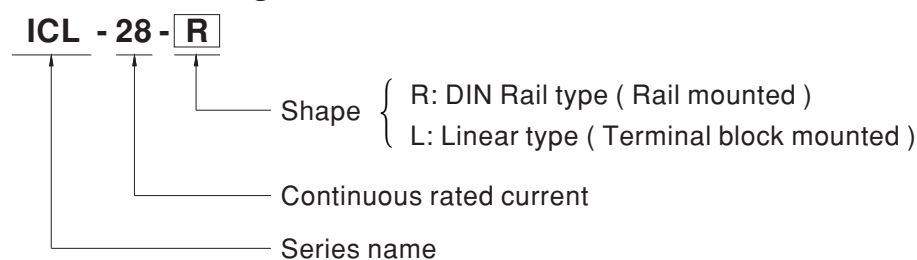
## ■ Applications

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

## ■ Description

The ICL-28 is a 28A inrush current limiter that can be used to reduce the high starting current due to capacitive load or inductive 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-28.

## ■ Model Encoding

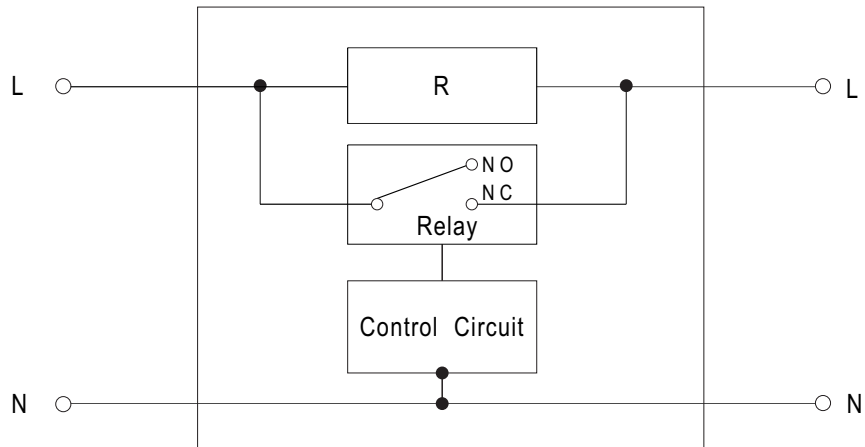




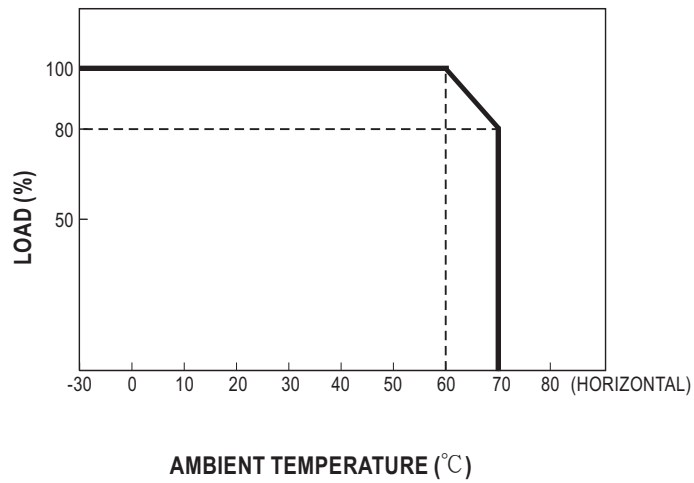
**SPECIFICATION**

<b>MODEL</b>		<b>ICL-28R</b>	<b>ICL-28L</b>		
<b>AC INPUT VOLTAGE</b>		180 ~ 264VAC(277VAC operational )	180 ~ 264VAC		
<b>AC LINE FREQUENCY</b>		47 ~ 63Hz			
<b>INRUSH CURRENT LIMITING</b>		48A			
<b>AC CONTINUOUS RATED CURRENT</b>		28A continuous			
<b>AC INPUT POWER</b>		6440VA (28A x 230VAC)			
<b>AC INPUT CONSUMPTION</b>		<2W at 264VAC, 50Hz input			
<b>INTERNAL RELAY LIMITING TIME (TON POWER ON)</b>		150 ± 50ms			
<b>INTERNAL RELAY</b>	<b>LIMITING CYCLES</b>	3 cycle / 1 min			
	<b>RELEASE TIME</b>	100±50ms			
<b>INTERNAL PROTECTION</b>		Thermal fuse protects overload and fire			
<b>ALLOWED CAPACITIVE LOAD</b>		6000 μ F max.			
<b>WORKING TEMP.</b>		-30 ~ +70°C (Refer to "Derating Curve")			
<b>WORKING HUMIDITY</b>		20 ~ 90% RH non-condensing			
<b>STORAGE TEMP.</b>		-40 ~ +85°C			
<b>TEMP. COEFFICIENT</b>		± 0.03%/°C (0 ~ 60°C) RH non-condensing			
<b>VIBRATION</b>		10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6			
<b>OPERATING ALTITUDE</b>	<b>Note. 2</b>	5000 meters			
<b>OVER VOLTAGE CATEGORY</b>		III; According to IEC62368-1; altitude up to 5000 meters			
<b>POLLUTION DEGREE</b>		2			
<b>SAFETY STANDARDS</b>		IEC62368-1(LVD)			
<b>SAFETY &amp; EMC (Note.3)</b>	<b>EMC EMISSION</b>	<b>Parameter</b>	<b>Standard</b>	<b>Test Level / Note</b>	
		Conducted	EN55032	Class B	
		Radiated	EN55032	Class B	
		Harmonic Current	EN61000-3-2	Class A	
		Voltage Flicker	EN61000-3-3	-----	
	<b>EMC IMMUNITY</b>	EN55024, EN55035, EN61000-6-2			
		<b>Parameter</b>	<b>Standard</b>	<b>Test Level / Note</b>	
		ESD	EN61000-4-2	Level 3, 8KV air; Level 2, 4KV contact, criteria A	
		Radiated Susceptibility	EN61000-4-3	Level 3, criteria A	
		EFT/Burest	EN61000-4-4	Level 3, criteria A	
		Surge	EN61000-4-5	Level 4, 2KV/L-N, criteria A	
		Conducted	EN61000-4-6	Level 3, criteria A	
		Magnetic Field	EN61000-4-8	Level 4, criteria A	
		Voltage Dips and interruptions	EN61000-4-11	> 95% dip 0. 5 periods, 30% dip 25 periods, > 95% interruptions 250 periods	
<b>MTBF</b>	1601.76K hrs min. MIL-HDBK-217F (25°C)		1626.62K hrs min. MIL-HDBK-217F (25°C)		
<b>DIMENSION</b>	52.5*90*54.5mm (L*W*H)		175*42*24mm (L*W*H)		
<b>PACKING</b>	0.16Kg; 80pcs/13.8Kg/1.27CUFT		0.155Kg; 84pcs/14Kg/0.91CUFT		
<b>NOTE</b>	<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>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> <li>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 <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</li> </ol>				

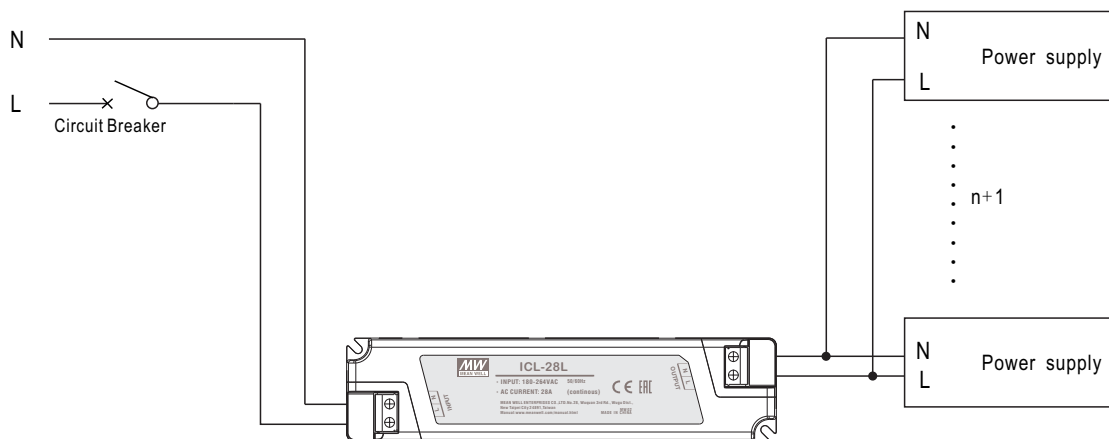
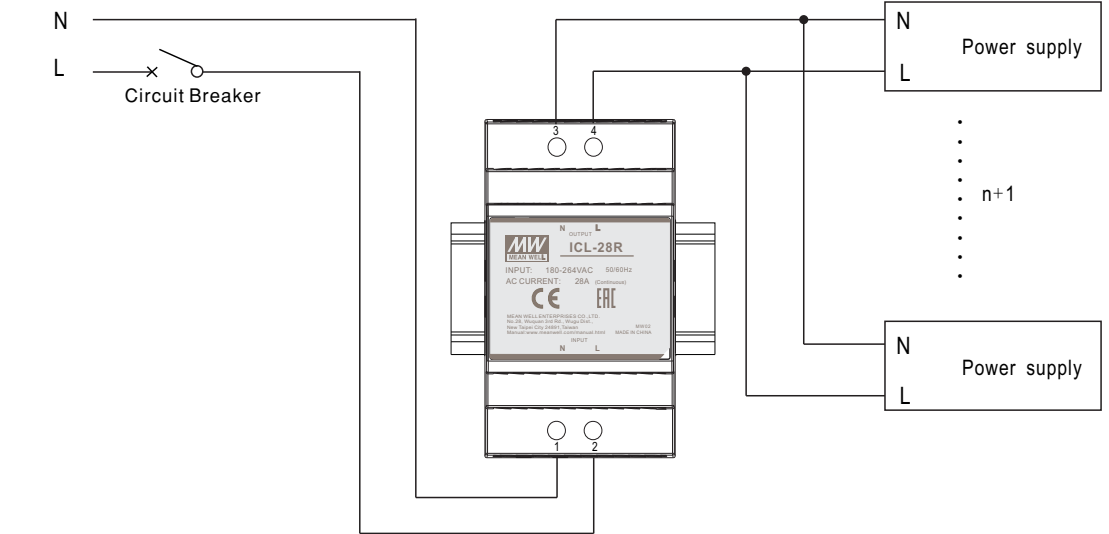
■ BLOCK DIAGRAM



■ Derating Curve



## APPLICATION DIAGRAM

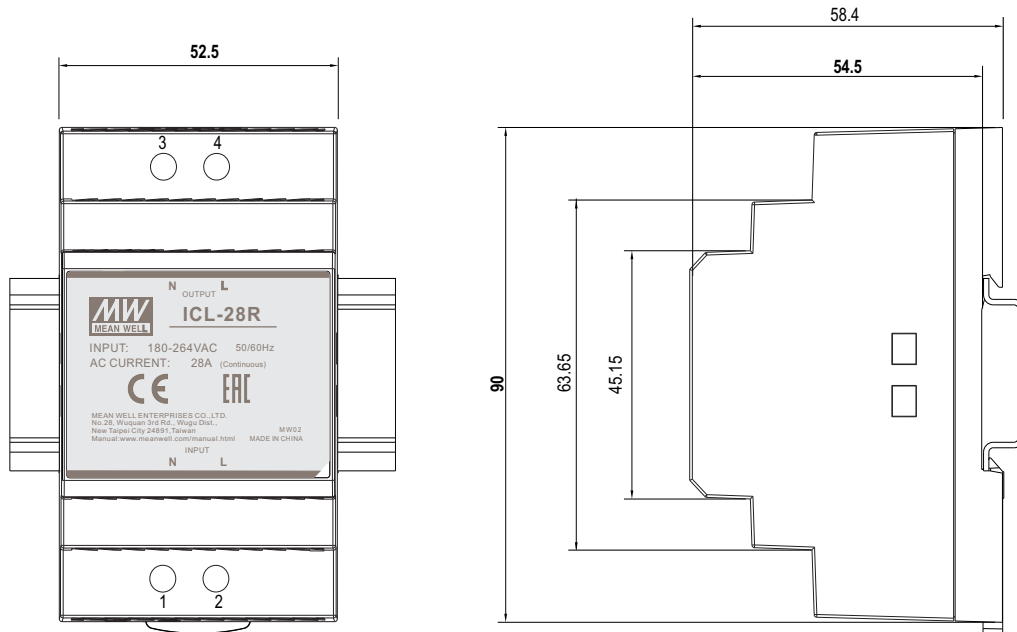


※ How many power supplies can be connected behind ICL-28R/ICL-28L?  
Please refer to : <http://www.meanwell.com/manual.html>

## MECHANICAL SPECIFICATION

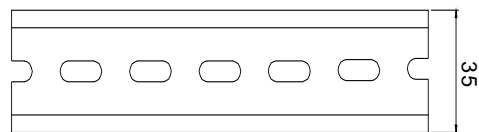
### ICL-28R(DIN Rail type)

Case No. ICL-28R Unit:mm



Terminal Pin No. Assignment

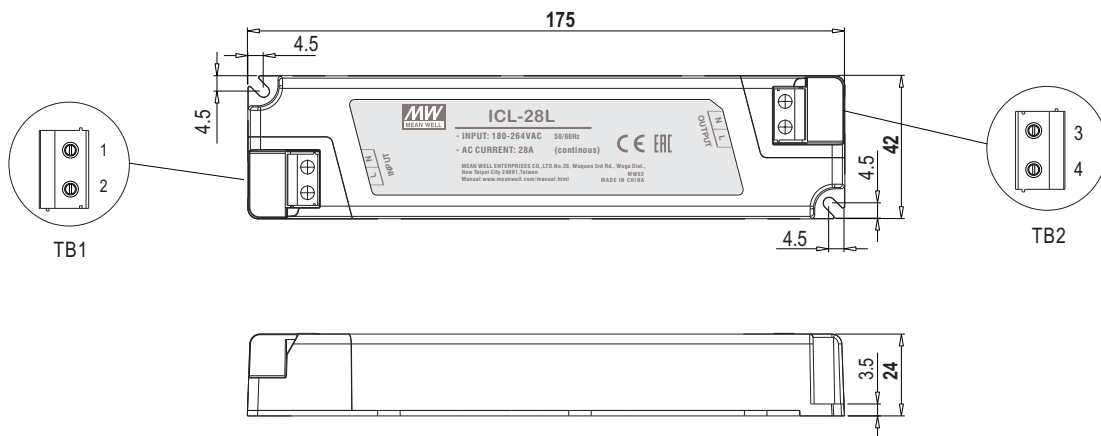
Pin No.	Assignment	Pin No.	Assignment
1	AC/N Input	3	AC/N Output
2	AC/L Input	4	AC/L Output



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

### ICL-28L(Linear type)

Case No. PLM-40 Unit:mm



Terminal Pin No. Assignment (TB1, TB2)  
SWITCHLAB MB422-750 equivalent

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