

30ACDR1S_S4 series

30W - Single Output AC-DC Converter



AC-DC Converter

30 Watt

- ⊕ 90-264VAC/120-370VDC input voltage range
- ⊕ Over voltage category III
- ⊕ No load power consumption <0.3W
- ⊕ No fan - free air convection
- ⊕ 4000VAC isolation
- ⊕ Fits TS-35/7.5 or TS-35/15 Din rail
- ⊕ Short circuit protection (SCP)
- ⊕ Over voltage protection
- ⊕ Over current protection
- ⊕ Output voltage adjustment (by potentiometer)
- ⊕ Operating temperature -30°C up to +70°C (with derating)

Introducing our new 30ACDR1S_S4 series DIN rail power supplies — engineered for reliable performance in demanding industrial environments. The series features a wide 90–264VAC / 120–370VDC input voltage range and complies with Overvoltage Category III requirements. With no-load power consumption below 0.3W and fanless cooling by free air convection, it delivers efficient, low-maintenance operation. Designed for safety and flexibility, the 30ACDR1S_S4 series offers 4000VAC isolation, fits TS-35/7.5 and TS-35/15 DIN rails, and includes comprehensive protections such as short circuit, overvoltage, and overcurrent protection. The output voltage can be adjusted via potentiometer, and the units operate reliably in temperatures from -30°C to +70°C with derating.



Common specifications

Short circuit protection:	When there is a short circuit fault at the output terminal, the output hiccup mode protection is activated. When the short circuit fault is resolved, the power supply automatically resumes normal output.
Overload protection	110% (min.) 200% (max.) hiccup mode, when the fault is resolved, the output automatically returns to normal
Overvoltage protection	110% Vo (min.) 150%Vo (max.) constant voltage mode, when the fault is resolved, the output automatically returns to normal
Operating temperature	-30~+70°C (with derating)
Storage Temperature	-40~+85°C
Operating humidity	20%~95% RH, no condensation
Storage humidity	10%~95% RH, no condensation
Temperature coefficient	-0.03% /°C (min.), +0.03% /°C (max.) 0 ~ 50°C
MTBF (MIL-HDBK-217F)	900,000 hours
Size	90 x 58 x 35mm
Net weight	118g
Safety Standard	UL 62368-1, CAN/CSA C22.2 No. 62368-1:19, EN 62368-1 IEC 62368-1, GB 4943.1

Output specifications

Item	Operating condition	Min	Typ	Max	Units
Output voltage tolerance	All models	-2		+2	%
Line regulation	All models	-1		+1	%
Load regulation	All models	-1.5		+1.5	%
Turn on delay time	115VAC/230VAC, full load			1500	ms
Rise Time	115VAC/230VAC, full load			50	ms
Hold up time	115VAC/230VAC, full load	12			ms

Isolation specifications

Item	Operating Conditions	Min	Typ	Max	Units
Isolation and voltage resistance*	Input-output - test time 1 minute, leakage current less than 7mA	4000			VAC
Isolation impedance	Input-output - test voltage: 500VDC	100			mΩ

Note: *The minimum isolation withstand voltage of this product is 4000VAC. If higher testing standards are used, please contact our sales representative or FAE.

Input specifications

Item	Operating condition	Min	Typ	Max	Units
Input AC voltage		90		264	VAC
Rated input AC voltage		100		240	VAC
Input DC voltage		120		370	VDC
Input frequency		47		63	Hz
Maximum input current	115VAC/full load 230VAC/full load			0.9 0.45	A
Leakage current	240VAC/50Hz			0.25	mA
Inrush current	115VAC, Cold start 230VAC, Cold start		23 45		A

Example:

30ACDR1S_24S4

30 = 30Watt; AC = AC-DC; DR = Din rail; 1S = Series, 24 = 24Vout; S = Single output; 4 = 4kVAC isolation.

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EMC specifications					
EMC	EMI	Conducted Emission	EN 55032	Class B	
EMC	EMI	Radiated Emission	EN 55032	Class B	
EMC	EMI	Harmonic Current	EN 61000-3-2	Class A	
EMC	EMI	Voltage Flicker	EN 61000-3-3		
EMC	EMS	Electro-static Discharge	EN 61000-4-2	Air 8kV / contact 4kV	Criteria B
EMC	EMS	Radiated Susceptibility	EN 61000-4-3	80MHz – 1GHz 10V/m	Criteria B
EMC	EMS	Electrical Fast Transient	EN 61000-4-4	±2kV	Criteria B
EMC	EMS	Surge Immunity	EN 61000-4-5	CM ±4kV/DM ±2kV	Criteria B
EMC	EMS	Conducted Emission Immunity	EN 61000-4-6	10Vr.m.s	Criteria B
EMC	EMS	Power Frequency Magnetic Field Immunity	EN 61000-4-8	30A/m, continuity	Criteria B
EMC	EMS	Voltage Dips, Drops and Interruptions Immunity	EN 61000-4-11	100% drop, 0.5 cycles	Criteria B
				100% drop, 250 cycles	Criteria B
				30% drop, 25 cycles	Criteria B
				100% interrupt, 250 cycles	Criteria C

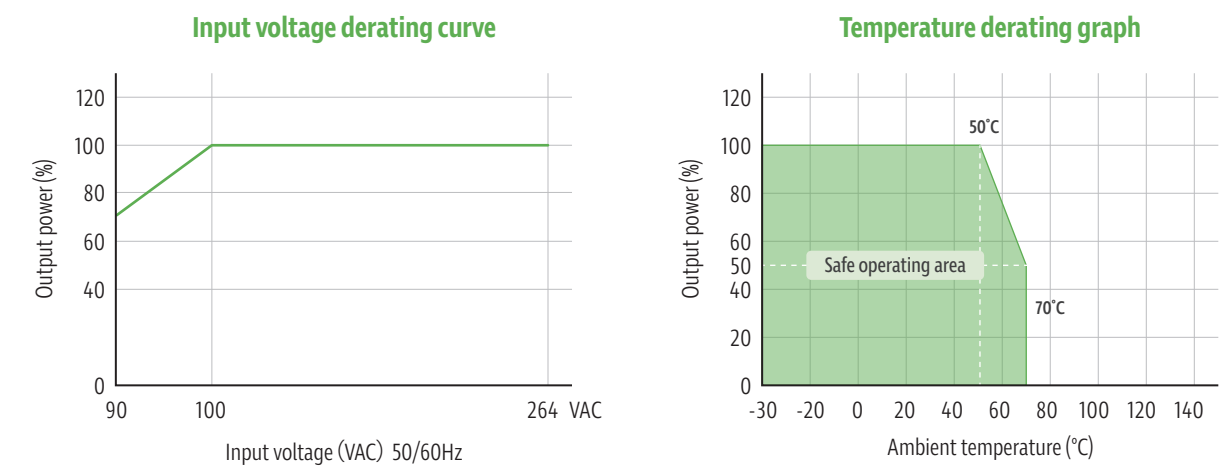
Note: The power supply is considered as a component which will be installed into a final equipment. All the EMC tests are be executed by mounting the unit on a metal plate with size 400mm*400mm*3mm. The final equipment must be re-confirmed that it still meets EMC directives.

Product Selection Guide

Cert.	Part number	Output Power (W)	Output Voltage (VDC)	Output voltage adj. range ^[3] (VDC)	Output Current (A)	Ripple and noise (mV) ^[2]	Efficiency@ 230VAC (typ.) ^[1]	Efficiency@ 115 VAC (min./typ.) ^[4]	Efficiency@ 230 VAC (min./typ.) ^[4]		
	30ACDR1S_05S4	15	5	4.5 - 5.5	0 - 3	80	82%	80%	81%	81%	82%
	30ACDR1S_12S4	24	12	10.8 - 13.8	0 - 2	120	88%	86%	87%	87%	88%
	30ACDR1S_15S4	30	15	13.5 - 18	0 - 2	120	89%	87%	88%	88%	89%
	30ACDR1S_24S4	36	24	21.6 - 29	0 - 1.5	150	89%	87%	88%	88%	89%
	30ACDR1S_48S4	36	48	43.2 - 55.2	0 - 0.75	240	90%	88%	89%	89%	90%

Note: 1. All parameters not specially mentioned are measured at rated input voltage, full load and 25°C ambient temperature.
2. Ripple & noise is measured at 20MHz of oscilloscope bandwidth (oscilloscope probe cap and ground clamp are removed)by using a 20±2cm twisted pair-wire terminated with a 47uF electrolytic capacitor and a 0.1uF high frequency capacitor that are connected in parallel at the output end.
3. Under any steady operating condition, the total output power shall not exceed the rated output power. When the output voltage is raised, the total output power cannot exceed the rated output power. When the output voltage is turned down, the output current cannot exceed the rated output current.
4. Ambient temp. 25°C (±5°C), full load
* For the product models under development, please contact our sales team or distributor for more information.

Product Characteristic Curve

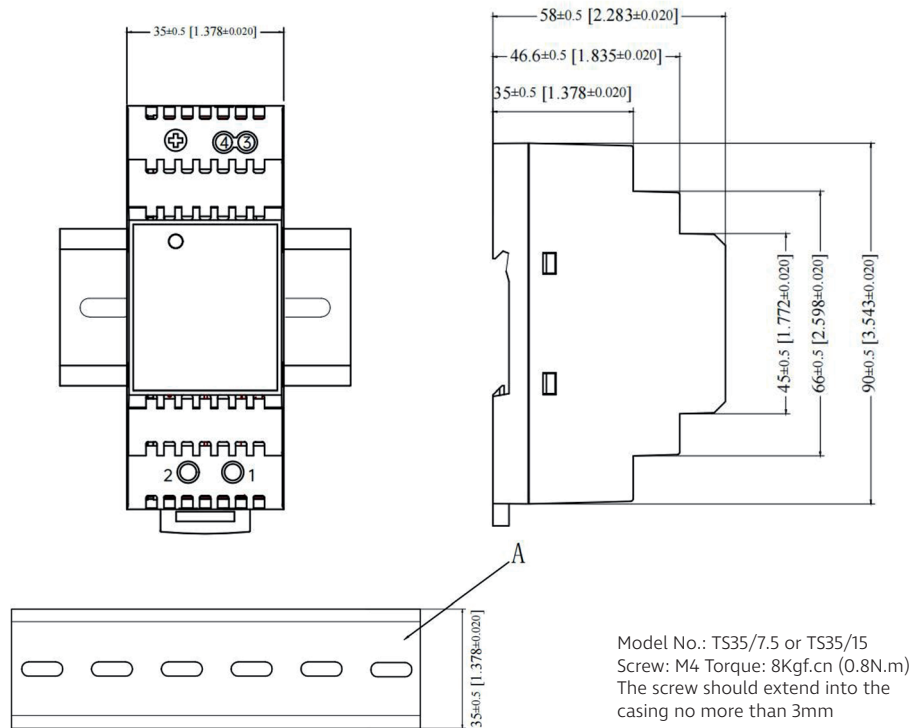


Note:
1. If you need to know more detailed test data when applying, please contact our technical support to obtain application notes for the corresponding product.
2. This product is suitable for use in natural air convection environments. If used in a closed environment, please consult our technical support personnel.

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Mechanical dimensions



Pin number	Pin	Function	Screw torque requirements
1	L	AC LINE	Screw: M2.5 Torque: 4Kgf. cn (0.4N.m)
2	N	AC NEUTRAL	
3	V+	DC output +	
4	V-	DC output -	

Note:
Unit: mm [inch]
The unmarked tolerance is: ± 0.5 [± 0.020]