

LDE160-26

160 W Wide Input Range DIN Rail Switching Power Supply

LDE160-26 is a wide input range DIN rail switching power supply with output power up to 160 W offering unmatched flexibility for many applications.

Its compact size, high efficiency, excellent reliability together with easy installation due to pluggable connectors makes it market leader for various industrial applications.

LDE160-26 is Class I isolation device designed to be mounted on DIN rail and installed inside a protective enclosure.



FEATURES

- Single or two phase input voltage 187 - 528 VAC
- Output voltages 26 V (fixed)
- Operating ambient temperature range -40°C to +50°C
- Efficiency 88%
- Latched overload and short-circuit protection
- Excellent field reliability record
- Designed according to EN 12015, EN 12016
- Compact size in aluminum enclosure
- Dimensions: 108.5 x 110 x 74.5 mm

APPLICATIONS

- Industrial control
- Elevator, escalators & moving walks
- Instrumentation equipment



1. MODEL SELECTION

MODEL	INPUT VOLTAGE RANGE	# OF PHASES	OUTPUT VOLTAGE	MAX OUTPUT CURRENT	EFFICIENCY	MAX OUTPUT POWER
LDE160-26	187 - 528 VAC	1 / 2	26 V	6 A	88 %	160 W

2. INPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITIONS	SPECIFICATION
AC Input Voltage	Nominal 1 / 2 phases Range	380 VAC 187 - 528 VAC
Input Frequency		47 - 63 Hz
AC Input Current	V _{in} = 187 VAC	1.8 A
	V _{in} = 380 VAC	1.0 A
	V _{in} = 380 VAC	0.8 A
Inrush Peak Current I _{2t}	Peak Current measured after 0.2 ms from main connection; 400 VAC / 50 Hz; T _a = 25°C; Cold Start	≤ 29 A 0.53 A ² s
Touch (Leakage) Current		≤ 0.8 mA
Internal Protection Fuse	Not user replaceable	8 AT
Recommended External Protection	It is strongly recommended to provide external surge arresters (SPD) according to local regulations.	Fuse 4 AT or MCB 6 A C curve

3. OUTPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITIONS	SPECIFICATION
Output Voltage (Fixed)		26 VDC
Output Current (Continuous)		6 A
Load Regulation		≤ 1.0 %
Ripple & Noise ²		≤ 150 mVpp
Hold-up Time	V _{in} = 240 VAC	≥ 20 ms
	V _{in} = 480 VAC	≥ 110 ms
Status Signals	DC OK - green LED ALARM - red LED	
Parallel Connection	Possible for redundancy (with external ORing module)	

² Ripple and Noise are measured with 20 MHz bandwidth, probe terminated with a 0.1 μF MKP parallel capacitor.

4. PROTECTIONS

PARAMETER	DESCRIPTION / CONDITIONS	SPECIFICATION
Short Circuit Protection	Short circuit peak current	25 A
Overload Protection	Latch off, Overload Limit (max. 5 s)	up to 10 A
Thermal Protection		
Over Voltage Protection	Latch off	≥ 33 VDC

5. ENVIRONMENTAL, EMC & SAFETY SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITIONS	SPECIFICATION
Operating Temperature	Start-up type tested: - 40°C, possible at Vnom with load deration.	-40 to +50 °C
Storage Temperature		-40 to +80 °C
Derating	Over 45°C	- 15 W/°C
Dissipated Power		< 25 W
Humidity	Non-condescending	5 - 95 % RH
Life Time Expectancy	Ta = 25°C, full load	77 726 (8.8) hrs (years)
MTBF	MIL-HDBK-217F at Ta = 25°C, full load	> 500 000 hrs
Overtoltage Category	EN 50178	III
Pollution Degree	IEC 60664-1	2
Isolation	Input to Output Input to Ground Output to Ground	4.2 kVDC 2.2 kVDC 0.75 kVDC
Safety Standards & Approvals	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950	
EMC Emissions	EN 55011 / CISPR 11 EN 55022 / CISPR 22 EN 61000-3-2	Class A Class A Class A
EMC Immunity	EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-11 EN 12016	Level 3 Level 3 Level 3 Level 4 Level 2
Protection Degree	EN 60529	IP20
Vibration Sinusoidal	IEC 60068-2-6	5 - 17.8 Hz: ±1.6 mm; 17.8 - 500 Hz: 2 g 2 hours / axis (X,Y, Z)
Shock	IEC 60068-2-27	30 g 6 ms, 20 g 11 ms; 3 bumps / direction, 18 bumps total

6. MECHANICAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITIONS	SPECIFICATION
Dimensions		108.5 x 110 x 74.5 mm 4.27 x 4.33 x 2.93 in
Weight		500 g
Mounting Rail	IEC 60715/H15/TH35-7.5(-15)	
Connection Terminals	Screw type header (24 - 12 AWG)	2.5 mm ²
Case Material	Aluminum	

7. PIN LAYOUT & DESCRIPTION



INPUT CONNECTION	Single phase	Two phase
	L1 = Line	L1 = Phase 1
	N = Neutral	L2 = Phase 2
	⊕ = Earth ground	⊕ = Earth ground
OUTPUT CONNECTION	+ = Positive DC	
	- = Negative DC	

8. MECHANICAL DRAWING

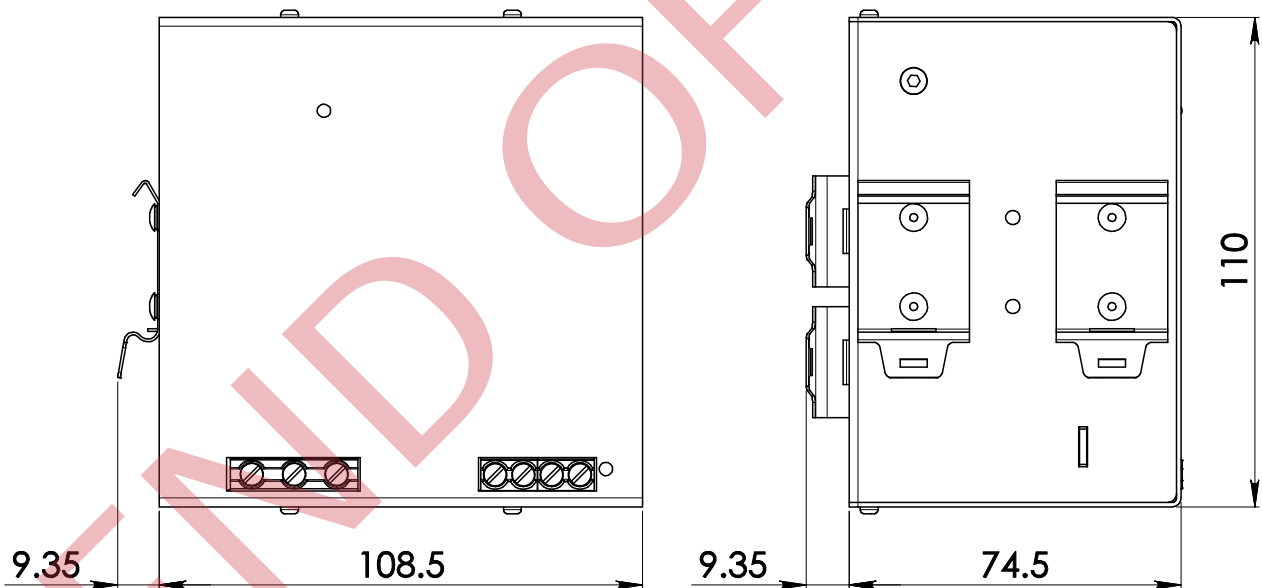


Figure 1. Mechanical Drawing

Notes:

Technical parameters are typical, measured in laboratory environment at 25°C and 400 VAC / 50 Hz, at nominal values, after minimum 5 minutes of operation. Power rating, losses, efficiency, ripple, thermal behaviour and start-up may change outside of the nominal rated input range. Contact factory for details.

NUCLEAR AND MEDICAL APPLICATIONS - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

TECHNICAL REVISIONS - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.