2. Explanation on Specifications

1 Application and mode of operation

WARNING

Hazardous voltages are present in this electrical equipment during operation.
Non-observance of the safety instructions can result in severe personal injury or property damage.

The power supply unit is used to operate AS-i systems with integrated data link.
The unit generates a stabilized, highly constant direct current voltage of DC30V with low residual ripple.
The power supply unit operates on the basis of the primary switched-mode regulator principle.
The task of the DC/DC converter is to convert the high DC link voltage to the low output voltages.
It also performs the task of safe electrical isolation between mains circuit and output circuit.
A control IC performs all regulation and drive functions for the power-switching transistor.
This transistor is switched at a frequency of 100kHz so as to produce a stabilized square-wave AC voltage in the transformer's secondary circuit. This AC voltage is rectified and filtered in the secondary circuit.

2 Technical data

Please refer to Fig.1 for block diagram.

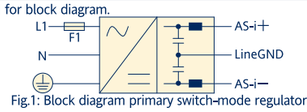


Fig.1: Block diagram primary switch-mode regulator

3 INCOMING INSPECTION, TRANSPORT AND TORAGE

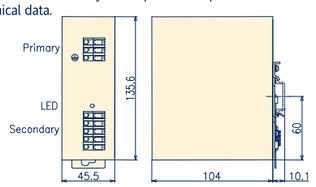
Immediately inspect the consignment for completeness and damage on receipt.
If damage has occurred, please elaborate a damage report and consult the haulage contractor.
The equipment should be transported carefully and, wherever possible, in the original packaging. Store the equipment in a dry location.

4 INSTALLATION, ASSEMBLY

WARNING

Safe operation is dependant upon proper handling and installation by qualified personnel under observance of all warnings contained in these operating instructions.
In particular the general erecting and safety regulations (e. g. DIN, VDE, EN) and regulations regarding the correct use of hoisting gear and tools and of personal protective gear shall be observed.
Non-observance can result in death, severe personal injury or substantial property damage.

The unit is designed for installation in enclosed controls and circuitry cubicles and, if wall-mounted, may be operated continually at temperatures up to the ambient temperature specified in the technical data.



The unit must be snapped onto a 35mm top-hat rail, in which case the ventilation slots must be at the top and bottom. Please refer to Fig. 2 for overall space required. Snap-in mounting to top hat rail acc. to DIN EN 50022-35×-7.5 or 35×-15

Fig. 2 : Outline dimensions

The unit is connected by means of cage-clamp terminals in accordance with the information on the rating plate .The terminals are safe from finger touch to DIN VDE 0106, Part 100.
Fig. 3 the required insulation-stripping lengths for the leads and the way of connecting a wire.
Connect the leads by operating the button to the left of the lead receptacle with a screwdriver to DIN 5264 (3.5×-0.5mm) and, at the same time, fully inserting the lead from which the insulation has been stripped to the required length beforehand.

Wire range (mm²)	Stripping length (mm)
0.08～2.5	5～6

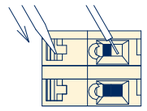


Fig. 3 : Connecting the leads

CAUTION

The insulation-stripping length shown in figure 3 shall not be exceeded since, otherwise, the clearance and creepage distances would be less than required.

DANGER

This device is designed in accordance with class I. Owing to the exposed, conductive metal housing, it may become electrically live in the event of a fault and it is thus absolutely essential that it be earthed.
Non-observance can result in death or severe personal injury.

5 OPERATION

The unit can be set a main voltage ranging from AC 100 V to AC 230 V, without any additional adjustment.
The power supply unit's output is short-circuit-proof. The unit restarts automatically after the short circuit has been eliminated.

CAUTION

Owing to the fact that the unit recovers its voltage automatically, always take precautions to prevent damage or injury from the loads, which will thus also restart automatically.
Never operate the unit under over current or shorted condition for 30 seconds or more which could result in damage or insulation failure.
There is no possibility for fire or burning.

6 SERVICING, MAINTENANCE

DANGER

Please disconnect the unit from the mains power supply and secure it to prevent it being switched back on again before starting servicing work.
Non-observance can lead to death, serious injury or substantial property damage.

Servicing and maintenance are essentially restricted to inspecting the unit for excessive dust deposits and, if necessary, cleaning it at regular intervals (e.g. once per year).

The way of removing with screwdrivers for cross recessed head screws:
Insert screwdrivers for cross-recessed head screw in the removal hole and push up it to direction of arrow A.
The way of removing with screwdrivers :
Insert screwdrivers in the removal hole and turn it to direction of arrow B.

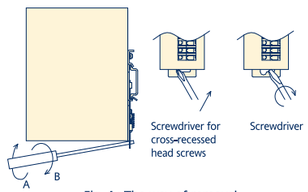


Fig. 4 : The way of removal

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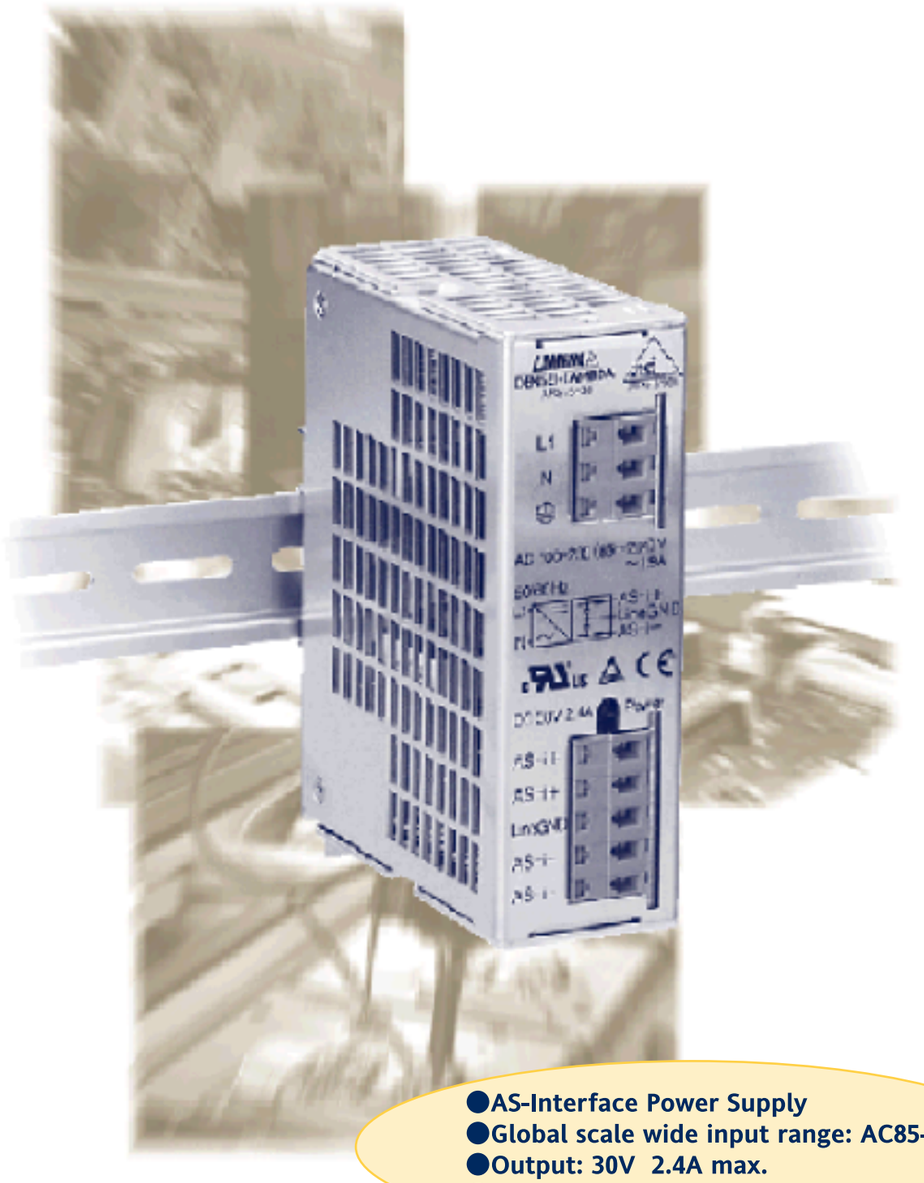
*The contents of this catalogue are subject to change without notice.

Cat.No.C410-012A
P3,000SP-NOV.2001

AS-i Power Supply

APS75-30

ZU-Nr.37901



- AS-Interface Power Supply
- Global scale wide input range: AC85-264V
- Output: 30V 2.4A max.
- DIN rail mountable type

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APS75-30 Specification

■Outline

APS75-30 was developed to meet AS-Interface (Actuator Sensor Interface) requirement.
AS-Interface is a kind of international open network for FA application as the actuator-sensor level of the architecture.
AS-Interface applies one cable only that supplies the signal and electric power stably together, so that will make cost saving and cable reduction possible.

■Feature

- ●AS-Interface Power Supply
- ●Global scale wide input range: AC85-264V
- ●Output: 30V 2.4A max.
- ●DIN rail mountable type

■Safety standard

CE	MEET	Low Voltage Directive
c UL us	APPROVE	UL1950,CSA950 (C-UL)
	APPROVE	EN60950 (TÜV)

■AS-i

	APPROVE	EN50295 (AS-i)
	APPROVE	AS-International Association(No.37901)

■EMC

EMI Radiated Emisson Noise	CONFORM	EN55011-B, EN55022-B
	CONFORM	VCCI-B
	CONFORM	FCC-B

●Immunity : Comform to EN50082-2
EN61000-4-2 (Electrostatics discharge)
EN61000-4-3 (Radiated electromagnetic field)
EN61000-4-4 (Electrical fast transient)
EN61000-4-5 (Surge)
EN61000-4-6 (Induced electromagnetic field)

■APS75-30 Specifications

(Please refer to Instruction manual before use)

ITEM \ MODEL	APS75-30
1. Nominal Output Voltage	30VDC
2. Minimum Output Current	0A
3. Maximum Output Current	2.4A
4. Maximum Output Power	72W
5. Efficiency (Typ) (*1)	80%
6. Input Voltage Range (*2)	85 ～ 264VAC
7. Input Frequency	50Hz／60Hz (47Hz～63Hz)
8. Input Current(100/200VAC)(Typ)	1.9A／1.2A (1.6A at 115VAC)
9. Inrush Current(Typ) (*3)	18A at 100VAC, 40A at 230VAC, Ta=25℃, Cold Start
10. Output Voltage Range	Fixed
11. Maximum Ripple & Noise (*4)	150m Vpp
12. Initial Setting Voltage (*1)	±1%
13. Maximum Line & Load & temperature Regulation (*5)	±2%
14. Over Current Protection (*6)	2.8A～4.8A
15. Over Voltage Protection(Typ) (*7)	115%～
16. Leakage Current (*8)	0.2mA(Typ) at 100VAC／0.45mA(Typ) at 230VAC
17. Hold-up Time (Typ) (*9)	20ms at 100VAC
18. Operating Temperature (*10)	-10℃～+50℃: 100%, +55℃: 70%
19. Operating Humidity	30%～90%RH (No dewdrop)
20. Storage Temperature	-30℃～+85℃
21. Storage Humidity	10%～95%RH (No dewdrop)
22. Cooling	Convection Cooling
23. Withstand Voltage	Input - FG: 2kVAC (20mA) , Input - Output: 3kVAC (20mA), Output - FG: 500VDC (100mA) for 1 min
24. Isolation Resistance	More than 100MΩ at 25℃ and 70%RH, Output - FG...500VDC
25. Vibration (IEC68-2-6)	Mounting DIN rail : 10Hz～55Hz, Half-wave Amplitude 0.5mm (1 hour), Mounting screw: 10Hz～55Hz, Half-wave Amplitude 1mm (1 hour)
26. Shock (IEC68-2-27)	Mounting DIN rail : 150m/s² (11ms), Mounting screw: 300m/s² (18ms)
27. Safety	Approved by UL1950, CSA950(C-UL), EN60950(TÜV), Built to meet EN50295(AS-i)
28. Conducted Emission	Built to meet EN55011-B, EN55022-B, FCC-ClassB, VCCI-B
29. Radiated Emission	Built to meet EN55011-B, EN55022-B, FCC-ClassB, VCCI-B
30. Immunity	Built to meet EN50082-2, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6
31. Impulse Noise Simulation	Noise Voltage : 2kV (Nomal, Common), pulse Width : 1us (Pulse Rise 1ns)
32. Degree of Protection (IEC529)	IP20
33. Weight(Typ.)	620g
34. Size (W×H×D)	45 × 135 × 105 mm (Refer to Outline Drawing)

=NOTES=
*1 At 100/200VAC,Ta = 25℃ and maximum output power.
*2 For cases where conformance to various safety specs (UL,CSA,EN) are required, input voltage range will be 100~230VAC(50/60Hz).
*3 Not applicable for the in-rush current to Noise Filter less than 0.2ms.
*4 Measure with JEITA RC-9131 probe, Bandwise of scope : 100MHz, and Please refer to Fig. A for measurement of ripple voltage.
*5 85~264VAC,constant load at Line Regulation. No load-full load at Load Regulation.
*6 Constant current limit with automatic recovery. Avoid to operate over load or dead short for 30seconds.
*7 OVP circuit will shutdown output, manual reset.
*8 Measure by the each measuring method of UL,CSA,EN (at 60Hz).
*9 At 100VAC maximum output current.
*10 Refer to OUTPUT DERATING CURVE (BB018-01-03_)

■ Basic Connection

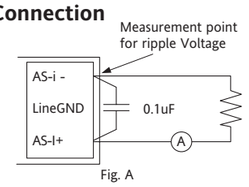
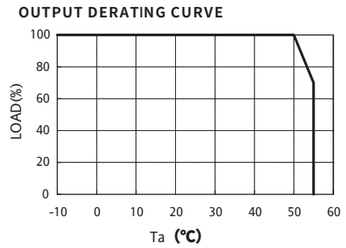
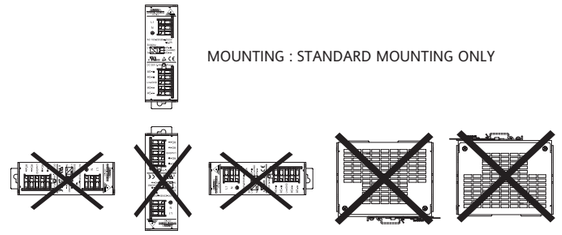


Fig. A

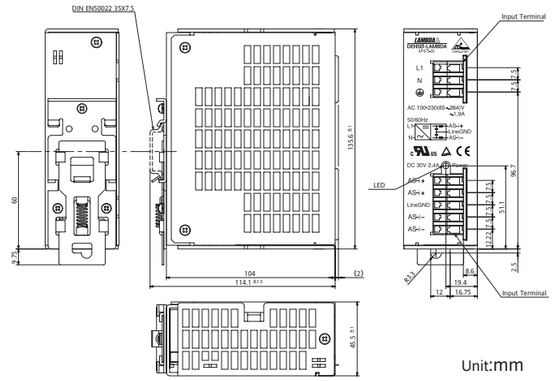
APS75-30 Derating Curve Outline drawing

■ Output Derating Curve





【APS75-30】





APS75-30 Instruction Manual

BEFORE USING THIS PRODUCT

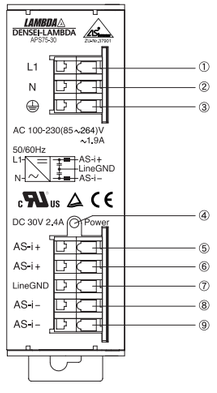
These operating instructions do not purport to cover all details or variation in equipment, nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the Purchaser**1**s purposes, the matter should be referred to the local Sales Office. The contents of these operating instructions shall not become part or modify any prior or existing agreement, commitment or relationship. The Sales Contract contains the entire obligations. The warranty contained in the contract between the parties is the sole warranty. Any statements contained herein do not create new warranties or modify the existing warranty.

DANGER
For the purpose of this operating instructions and product labels,"Danger " indicates death, severe personal injury or substantial property damage will result if proper precautions are not taken.

WARNING
For the purpose of this operating instructions and product labels,"Warning" indicates death, severe personal injury or substantial property damage can result it proper precautions are not taken.

CAUTION
For the purpose of this operating instructions and product labels,
"Caution" indicates minor personal injury or property damage can result if proper precautions are not taken.

1. Terminal Explanation



① L1 : Input terminal Live line
② N : Input terminal Neutral line
③ FG ⏚ : Frame Ground
④ POWER INDICATOR LED (Lights green during power output)
⑤ AS-i + : AS-i Output terminal
⑥ AS-i + : AS-i Output terminal
⑦ Live GND : Live ground (Isolated from input FG)
⑧ AS-i ━ : AS-i Output terminal
⑨ AS-i ━ : AS-i Output terminal