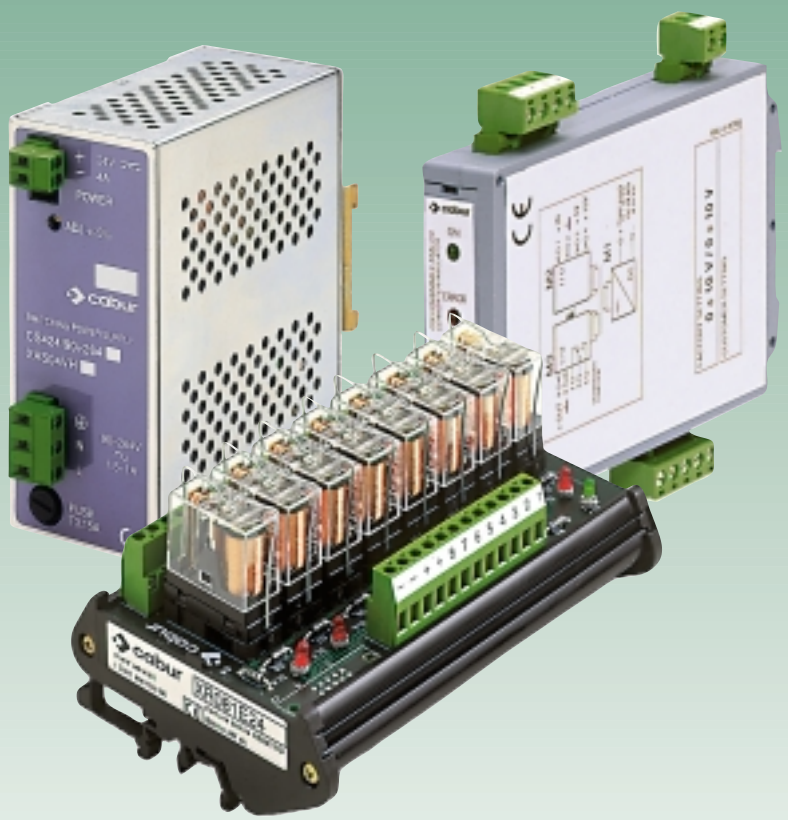
General Catalogue

Electronic Products



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GENERAL NOTES

LENGTH OF CONDUCTOR PEELING: 9 mm, model with fixed terminals; 6 mm, model with pluggable terminals.

COOLING: distance the power supply units 2 cm from adjacent equipment and at least 5 cm from other equipment on the upper and lower sides. At a room temperature **>45°C** and constant supply at 100%, reduce the current supplied by calculating: **-0 ...A for °C over 45°C**. The item of data **-0 ...A** is given for each model in the specifications. Max. room temperature 60°C with constant current supplied, reduced as indicated. We recommend to assemble with vertical dissipators (guide in horizontal position).

NOTES FOR CS SERIES SWITCHING POWER SUPPLY UNITS WITH 90-264 Vac / 110 - 220 Vdc SINGLE-PHASE INPUT

ASSEMBLY: the power supply units are equipped with an EN 50.022 guide fitting. For a better (assembly) stability of the CS2024/90-264 models (and version P), we recommend attaching the guide to the panel, also in the point where the power supply unit is to be mounted.

REDUNDANT PARALLEL AND PARALLEL CONNECTION: the models with the letter **P** in the initials and code are supplied as standard with the output protection diode for redundant parallel and parallel connection.
We recommend regulating to the same voltage (tolerance + 10mV) the outputs of all the power supply units, applying the same calibration load, before connecting them in parallel. Use power supply units of the same model. If two power supply units not provided with an internal diode (standard versions) have to be connected in parallel, the connection shown in Figure 1 has to be carried out.

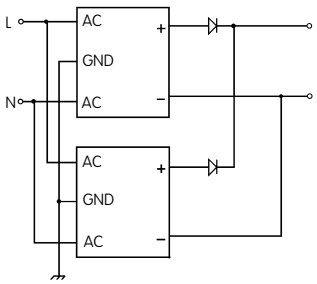


figure 1

CONNECTION IN SERIES of two power supply units: this is possible by connecting a diode in anti-parallel to the output of each power supply unit, dimensioned to withstand the max. current of the power supply unit (see Figure 2).

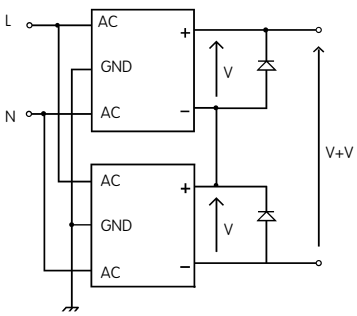


figure 2

POWER FAIL SIGNAL in models CS1224/90-264, CS2024/90-264; max. 20mA/24Vdc open collector output.
HIGH (open) status when the line voltage is OK. LOW status signal pulse (closed) 2-4 ms before the output drops below 15 Vdc. The signal PF is used to save or enable programs in microprocessor systems or as a line failure signal. To remote the signal PF, use an opto-isolator (see Figure 3).

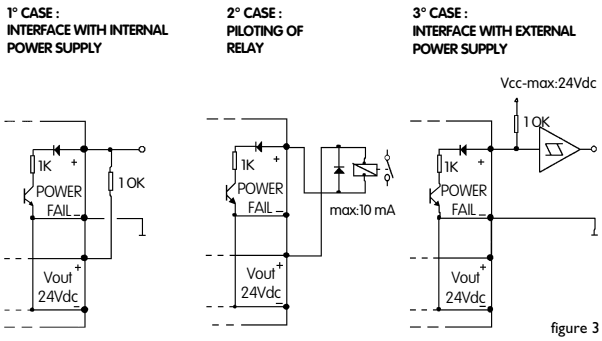


figure 3

POWER GOOD SIGNAL in the models CS624/90-264p, CS1224/90.264p, CS2024/90264P: NO2 A /24 Vdc clean contact output, closed with 24 Vdc output OK; open with: zero output due to line failure, or fault in power supply, or short circuit/overload in output.

POWER SUPPLY WITH 110 Vdc BATTERIES possible on all models in accordance with the following indications: **with 110 Vdc power supply, reduce the output current by 25%; minimum voltage 100 Vdc; observe the polarities of the input connections indicated:**
CS624/90-264 (also version P):
connect the positive pole to the terminal **L**
CS1224/90-264 (also version P):
connect the positive pole to the terminal **N**
CS2024/90-264 (also version P):
connect the positive pole to the terminal **L**

In the models CS224/90-264(P) and CS424/90-264 (P) the polarity of connection to the terminals L and N is indifferent.

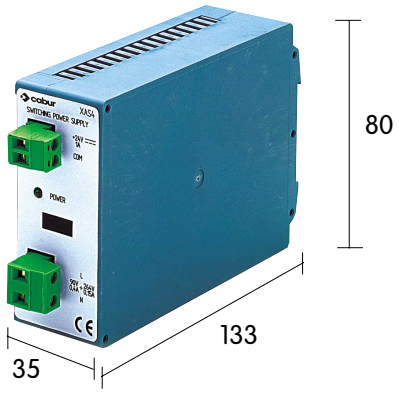
NOTES FOR POWER SUPPLY UNITS WITH TRANSFORMER SECONDARY INPUT

ISOLATION: this series of power supply units is not isolated.
TYPE OF USE: they are suitable for use in **PELV** (one pole of the Protective Extra Low Voltage earthed) and **SELV** (Safety Extra Low Voltage, no pole earthed). **The transformer used must have double or reinforced isolation in accordance with CEI 14.6 / EN 60742.**
In the case of use in **PELV** circuits, only earth one pole of the 24 Vdc of the power supply unit. In the case of use in **SELV** circuits, do not earth the input earth terminal.
The earthing of a pole of the transformer secondary and 24 Vdc of the power supply unit would damage the latter.

OUTPUT		INPUT	TYPE OF TECNOLOGY	ITEM	PAGE
VOLTAGE	CURRENT	VOLTAGE			
±12 Vdc	2x0.5 A	90÷264 Vac / 110 Vdc	switching	CS5	110
±15 Vdc	2x0.5 A	90÷264 Vac / 110 Vdc	switching	CS6	110
5 Vdc	1 A	90÷264 Vac / 110 Vdc	switching	CS1	108
12 Vdc	1 A	90÷264 Vac / 110 Vdc	switching	CS2	108
15 Vdc	1 A	90÷264 Vac / 110 Vdc	switching	CS3	109
24 Vdc	1 A	24 ÷ 25 Vac	linear	AL24327/1A	121
24 Vdc	1 A	90÷264 Vac / 110 Vdc	switching	CS4	109
24 Vdc	2 A	20 Vac	filtered	AR2624/2A	123
24 Vdc	2.5 A	22÷30 Vac	switching	CS224/24	115
24 Vdc	2.5 A	90÷264 Vac / 110 Vdc	switching	CS224/90-64	111
24 Vdc	4 A	20 Vac	filtered	AR2624/4A	123
24 Vdc	4 A	22÷30 Vac	switching	CS424/24	115
24 Vdc	4 A	25÷27 Vac	linear	CL424/24	121
24 Vdc	4 A	115 Vac	linear	CL424/115	117
24 Vdc	4 A	230 Vac	linear	CL424/230	117
24 Vdc	4 A	90÷264 Vac / 110 Vdc	switching	CS424/90-264	111
24 Vdc	6 A	20 Vac	filtered	AR2624/6A	124
24 Vdc	6 A	22÷30 Vac	switching	CS624/24	116
24 Vdc	6 A	25÷27 Vac	linear	CL624/24	122
24 Vdc	6 A	115 Vac	linear	CL624/115	118
24 Vdc	6 A	230 Vac	linear	CL624/230	118
24 Vdc	6 A	90÷264 Vac / 110 Vdc	switching	CS624/90-264N	112
24 Vdc	6 A	90÷264 Vac / 110 Vdc	switching	CS624/90-264P	112
24 Vdc	6 A	400 Vac	linear	CL624/400	119
24 Vdc	10 A	20 Vac	filtered	AR2624/10A	124
24 Vdc	10 A	25÷27 Vac	linear	CL1024/24	122
24 Vdc	10 A	115 Vac	linear	CL1024/115	119
24 Vdc	10 A	230 Vac	linear	CL1024/230	120
24 Vdc	10 A	400 Vac	linear	CL1024/400	120
24 Vdc	10 A	3x380/400/420 Vac	filtered	RDRKN10K	126
24 Vdc	12 A	22÷30 Vac	switching	CS1224/24	116
24 Vdc	12 A	90÷264 Vac / 110 Vdc	switching	CS1224/90-264	112
24 Vdc	12 A	90÷264 Vac / 110 Vdc	switching	CS1224/90-264P	112
24 Vdc	12 A	3 x 340÷500 Vac	switching	CS12/400	114
24 Vdc	12 A	3 x 340÷500 Vac	switching	CS12/400S	114
24 Vdc	15 A	20 Vac	filtered	AR2624/15A	125
24 Vdc	16 A	3x380/400/420 Vac	filtered	RDRKN16K	126
24 Vdc	20 A	90÷264 Vac / 110 Vdc	switching	CS2024/90-264	113
24 Vdc	20 A	90÷264 Vac / 110 Vdc	switching	CS2024/90-264P	113
24 Vdc	20 A	3 x 340÷480 Vac	switching	CS20/400	114
24 Vdc	20 A	3 x 340÷480 Vac	switching	CS20/400S	114
24 Vdc	20 A	3x380/400/420 Vac	filtered	RDRKN20K	126
24 Vdc	25 A	3x380/400/420 Vac	filtered	RDRKN25K	126
24 Vdc	30 A	3x380/400/420 Vac	filtered	RDRKN30K	126
24 Vdc	40 A	3x380/400/420 Vac	filtered	RDRKN40K	126
24 Vdc	60 A	3x380/400/420 Vac	filtered	RDRKN60K	126

SINGLE PHASE SWITCHING POWER SUPPLY

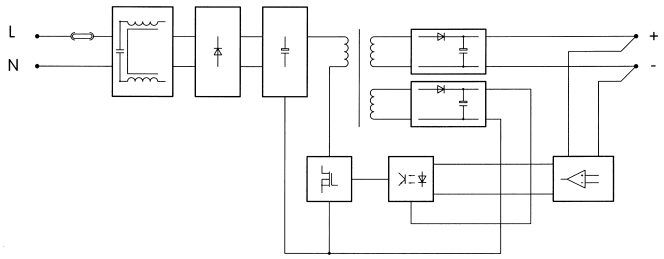
- Input voltage 90÷264 Vac / 110 Vdc
- Compact dimension
- IP 30 protection degree
- Low noise
- DIN rail mounting



Note

The measure of depth includes the encumbrance of the clamps and the attack to the rail.

Block diagram

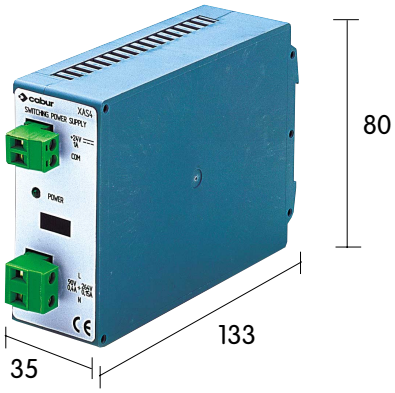


Applications

The CABUR switching power supply units of the CS series are designed and developed for industrial uses where safety, ease of use and reliability are essential. These units comply with the parameters set out by the Low Voltage Directive.
The low working temperature at full power with 45°C room temperature combined with the use of first quality components ensure high reliability and duration. CABUR switching power supply units comply with EMI standards. The CS series with 90 – 264 Vac input has no ignition problems at full load even with 100 Vac mains voltage and is therefore suitable for critical supply mains. This series is very compact and has an IP30 degree of protection against incidental contacts according to IEC529. All the functions are located on the front panel and marked with IEC symbols, which makes its use very simple, even on site.

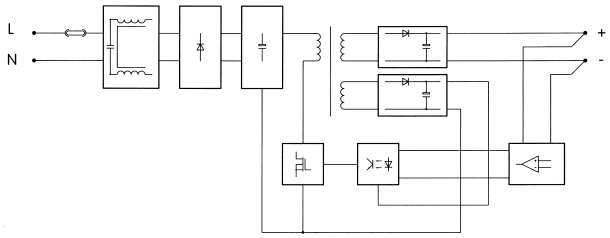
Ordering information

	CS1 Cod. XAS1	**CS2** Cod. XAS2
Input Technical Data		
Rated voltage	90 ÷ 264 Vac / 110 Vdc	90 ÷ 264 Vac / 110 Vdc
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at Iout max	88mA at 120 Vac - 33mA at 230 Vac ± 10%	220mA at 120 Vac - 77mA at 230 Vac ± 10%
Inrush current at cold start at 230 Vac	< 20 A	< 20 A
Current with short circuit in out	200 mA max.	200 mA max.
Power factor	> 0.6 full load	> 0.6 full load
Protection fuse	T 0.8 A (inside mounted)	T 0.8 A (inside mounted)
Output Technical Data		
Voltage	5 Vdc adjustable 0 ÷ +5%	12 Vdc adjustable 0 ÷ +5%
Maximum current	1.2 A	1.2 A
Continuous current	1 A	1 A
Load regulation	< 1.5%	< 1.5%
Ripple at Iout max	< 50 mV peack to peack	< 50 mV peack to peack
Hold up time	> 100 ms at 230 Vac, > 20 ms at 120 Vac	> 100 ms at 230 Vac, > 20 ms at 120 Vac
Overload/short circuit protection	Hiccup circuit, auto reset	Hiccup circuit, auto reset
Output signal	–	–
Parallel connection	possible with external protection diode	possible with external protection diode
APPROVALS	c UL us LISTED, CSV IMQ	c UL us LISTED, CSV IMQ
General Technical Data		
Efficiency	≥ 87% at 230 Vac, ≥ 85% at 115 Vac	≥ 87% at 230 Vac, ≥ 85% at 115 Vac
Operating temperature	-10 +60°C, -0.015 A/°C over 45°C	-10 +60°C, -0.015 A /°C over 45°C
Input / output isolation	3 kVac /60 s	3 kVac /60 s
Input / ground isolation, Output / ground isolation	> 1.5 KVac /60 s 0.5 kVac /60 s	> 1.5 kVac /60 s 0.5 kVac /60 s
Protection degree	IP 30	IP 30
Standards / Approvals	IEC950, EN 60950, UL1950, UL508C	IEC950, EN 60950, UL1950, UL508C
EMC standards	EN 50081-1, EN 50082-2	EN 50081-1, EN 50082-2
Surge immunity	EN61000-4-2, EN61000-4-4	EN61000-4-2, EN61000-4-4
Connection terminal blocks	terminal blocks 2.5 mm², pluggable	terminal blocks 2.5 mm², pluggable
Housing material	polyamide UL94V-0	polyamide UL94V-0
Approximative weight	~ 0.3 kg	~ 0.3 kg
Mounting information	vertical on rail, allow 20 mm spacing between adjacent components	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail		
standard EN 50.022	**PR/3/AC - PR/3/AS**	**PR/3/AC - PR/3/AS**
standard EN 50.035	–	–



Block diagram

(1) with an input of 110 Vdc, riduce the output current to 25%

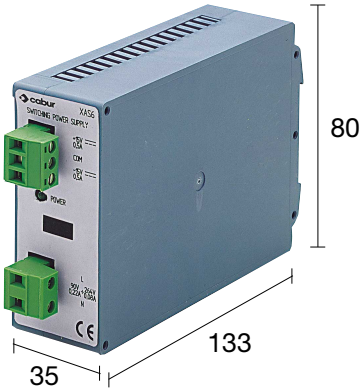


Ordering information

	CS3 Cod. XAS3	**CS4** Cod. XAS4
Input Technical Data		
Rated voltage	90 ÷ 264 Vac / 110 ÷ 220 Vdc (1)	90 ÷ 264 Vac / 110 Vdc (1)
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at Iout max	240mA at 120 Vac - 88mA at 230 Vac ± 10%	440mA at 120 Vac - 165mA at 230 Vac ± 10%
Inrush current at cold start at 230 Vac	< 20 A	< 20 A
Current with short circuit in out	200 mA max.	200 mA max.
Power factor	> 0.6 full load	> 0.6 full load
Protection fuse	T 0.8 A (inside mounted)	T 0.8 A (inside mounted)
Output Technical Data		
Voltage	15 Vdc adjustable 0 ÷ +5%	24 Vdc adjustable 0 ÷ +5%
Maximum current	1.2 A	1.2 A
Continuous current	1 A	1 A
Load regulation	< 1.5%	< 1.5%
Ripple at Iout max	< 50 mV peack to peack	< 50 mV peack to peack
Hold up time	> 100 ms at 230 Vac, > 20 ms at 120 Vac	> 100 ms at 230 Vac, > 10 ms at 120 Vac
Overload/short circuit protection	Hiccup circuit, auto reset	Hiccup circuit, auto reset
Output signal	–	–
Parallel connection	possible with external protection diode	possible with external protection diode
APPROVALS		
General Technical Data		
Efficiency	≥ 87% at 230 Vac, ≥ 85% at 115 Vac	≥ 87% at 230 Vac, ≥ 85% at 115 Vac
Operating temperature	-10 +60°C, -0.02A/°C over 45°C	-10 +60°C, - 0.033 A/°C over 45°C
Input / output isolation	3 kVac /60 s	3 kVac /60 s
Input / ground isolation, Output / ground isolation	> 1.5 kVac /60 s 0.5 kVac /60 s	> 1.5 kVac /60 s 0.5 kVac /60 s
Protection degree	IP 30	IP 30
Standards / Approvals	IEC950, EN 60950, UL1950, UL508C	IEC950, EN 60950, UL1950, UL508C
EMC standards	EN 50081-1, EN 50082-2	EN 50081-1, EN 50082-2
Surge immunity	EN61000-4-2, EN61000-4-4	EN61000-4-2, EN61000-4-4
Connection terminal blocks	terminal blocks 2.5 mm², pluggable	terminal blocks 2.5 mm², pluggable
Housing material	polyamide UL94V-0	polyamide UL94V-0
Approximative weight	~ 0.3 kg	~ 0.3 kg
Mounting information	vertical on rail, allow 20 mm spacing between adjacent components	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail		
standard EN 50.022	**PR/3/AC - PR/3/AS**	**PR/3/AC - PR/3/AS**
standard EN 50.035	–	–

SINGLE PHASE SWITCHING POWER SUPPLY

- Input voltage 90÷264 Vac / 110 Vdc
- Compact dimension
- IP 30 protection degree
- Low noise
- DIN rail mounting

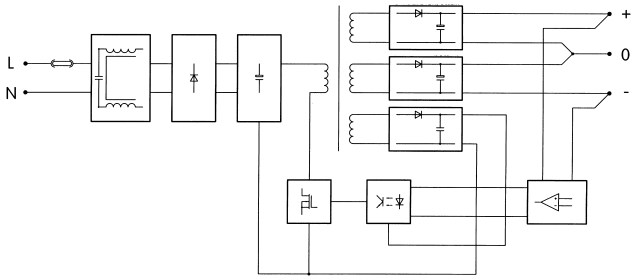


Note

The measure of depth includes the encumbrance of the clamps and the attack to the rail.

(1) with an input of 110 Vdc, riduce the output current to 25%

Block diagram



Applications

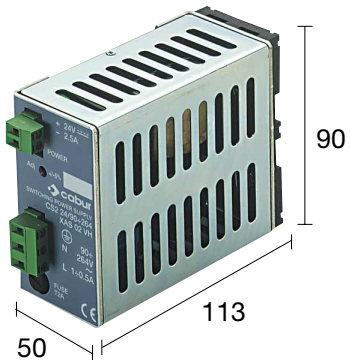
The CABUR switching power supply units of the CS series are designed and developed for industrial uses where safety, ease of use and reliability are essential. These units comply with the parameters set out by the Low Voltage Directive.
The low working temperature at full power with 45°C room temperature combined with the use of first quality components ensure high reliability and duration. CABUR switching power supply units comply with EMI standards. The CS series with 90 – 264 Vac input has no ignition problems at full load even with low mains voltage and is therefore suitable for critical supply mains. This series is very compact and has an IP30 degree of protection against incidental contacts according to IEC529. All the functions are located on the front panel and marked with IEC symbols, which makes its use very simple, even on site.

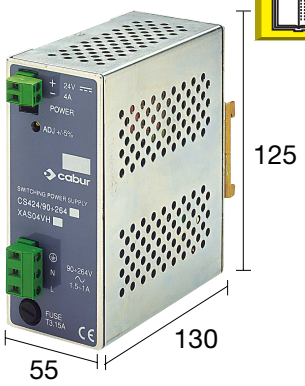
Ordering information

	CS5 Cod. XAS5	**CS6** Cod. XAS6
Input Technical Data		
Rated voltage	90 ÷ 264 Vac / 110 Vdc (1)	90 ÷ 264 Vac / 110 Vdc (1)
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at Iout max	220mA at 120 Vac - 77mA at 230 Vac ± 10%	240mA at 120 Vac - 88mA at 230 Vac ± 10%
Inrush current at cold start at 230 Vac	< 20 A	< 20 A
Current with short circuit in out	200 mA max.	200 ms max.
Power factor	> 0.6 full load	> 0.6 full load
Protection fuse	T 0.8 A (inside mounted)	T 0.8 A (inside mounted)
Output Technical data		
Voltage	±12 Vdc adjustable 0 ÷ +5%	±15 Vdc adjustable 0 ÷ +5%
Maximum current	2 x 0.6 A	2 x 0.6 A
Continuous current	2 x 0.5 A	2 x 0.5 A
Load regulation	< 1.5%	< 1.5%
Ripple at Iout max	< 50 mV peack to peack	< 50 mV peack to peack
Hold up time	> 100 ms at 230 Vac, > 10 ms at 120 Vac	> 100 ms at 230 Vac, > 10 ms at 120 Vac
Overload/short circuit protection	Hiccup circuit, auto reset	Hiccup circuit, auto reset
Output signal	–	–
Parallel connection	possible with external protection diode	possible with external protection diode
APPROVALS		
General technical data		
Efficiency	≥ 87% at 230 Vac, ≥ 85% at 115 Vac	≥ 87% at 230 Vac, ≥ 85% at 115 Vac
Operating temperature	-10 +60°C, -0.033 A/°C over 45°C	-10 +60°C, -0.033 A/°C over 45°C
Input / output isolation	3 kVac /60 s	3 kVac /60 s
Input / ground isolation, Output / ground isolation	> 1.5 kVac /60 s 0.5 kVac /60 s	> 1.5 kVac /60 s 0.5 kVac /60 s
Protection degree	IP 30	IP 30
Standards / Approvals	IEC950, EN 60950, UL1950, UL508C	IEC950, EN 60950, UL1950, UL508C
EMC standards	EN 50081-1, EN 50082-2	EN 50081-1, EN 50082-2
Surge immunity	EN61000-4-2, EN61000-4-4	EN61000-4-2, EN61000-4-4
Connection terminal blocks	terminal blocks 2.5 mm², pluggable	terminal blocks 2.5 mm², pluggable
Housing material	polyamide UL94V-0	polyamide UL94V-0
Approximative weight	~ 0.3 kg	~ 0.3 kg
Mounting information	vertical on rail, allow 20 mm spacing between adjacent components	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail standard EN 50.022 standard EN 50.035	**PR/3/AC - PR/3/AS** –	**PR/3/AC - PR/3/AS** –

SINGLE PHASE SWITCHING POWER SUPPLY

- Input voltage 90÷264 Vac / 110 Vdc
- Functions and description on the frontal panel
- Suited for SELV and PELV



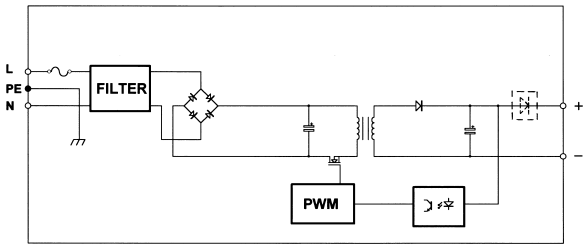


Note

The measure of depth includes the encumbrance of the clamps and the attack to the rail.

(1) with an input of 110 Vdc, riduce the output current to 25%

Block diagram



Applications

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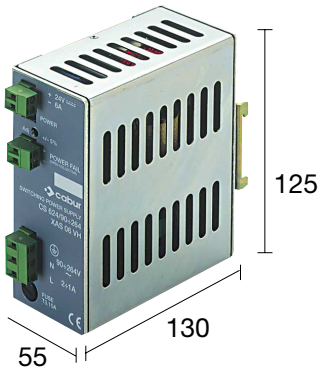
The low working temperature at full power with 45°C operating temperature combined with the use of first quality components ensure high reliability and duration. CABUR switching power supply units comply with EMI standards. The CS series with 90 – 264 Vac input has no ignition problems at full load even with low mains voltage and is therefore suitable for critical supply mains. This series is very compact and has an IP30 degree of protection against incidental contacts according to IEC529. All the functions are located on the front panel and marked with IEC symbols, which makes its use very simple, even on site.

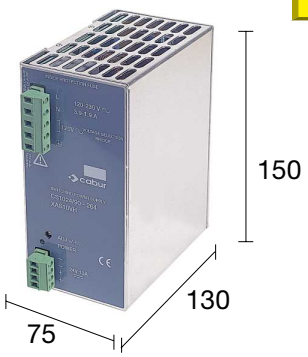
Battery charger
These units can be used also to charge batteries while powering the load. To this purpose, CABUR has developed a module with the necessary diodes and resistance.
CSBC for power supply from 1 to 6 A

Version	Ordering information	
Standard version	**CS224/90-264** Cod. XAS02VH	**CS424/90-264** Cod. XAS04VH
With integral diode	- -	- -
Input Technical Data		
Rated voltage	90 ÷ 264 Vac / 110 Vdc (1)	90 ÷ 264 Vac / 110 Vdc (1)
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at Iout max	1.1 A at 120 Vac - 0.6 A at 230 Vac ± 10%	1.5 A at 120 Vac - 0.8 A at 230 Vac ± 10%
Inrush current at cold start at 230 Vac	< 20 A	< 20 A
Current with short circuit in out	< 0.2 A	< 0.2 A
Power factor	> 0.6 full load	> 0.6 full load
Protection fuse	T 2 A	T 3 A
Output Technical data		
Voltage	24 Vdc adjustable ± 5%	24 Vdc adjustable ± 5%
Maximum current	3.5 A	6 A
Continuous current	2.5 A	4 A
Load regulation	< 1 %	< 1 %
Ripple at Iout max	< 100 mV peack to peack	< 100 mV peack to peack
Hold up time	> 50 ms at 230 Vac, > 12 ms at 90 Vac	> 50 ms at 230 Vac, > 12 ms at 90 Vac
Overload/short circuit protection	Hiccup circuit, auto reset	Hiccup circuit, auto reset
Output signal	–	–
Parallel connection	possible with external protection diode	possible with external protection diode
APPROVALS	c UL us LISTED, CSV IMQ	c UL us LISTED, CSV IMQ
General technical data		
Efficiency	≥ 87% at 230 Vac, ≥ 85% at 115 Vac	≥ 87% at 230 Vac, ≥ 85% at 115 Vac
Operating temperature	-10 +60°C, -0.08 A/°C over 45°C	-10 +60°C, -0.13 A/°C over 45°C
Input / output isolation	3 kVac /60 s	3 kVac /60 s
Input / ground isolation,	1.5kVac /60 s	1.5kVac /60 s
Output / ground isolation	0.5 kVac /60 s	0,5 kVac /60 s
Protection degree	IP 20	IP 20
Standards / Approvals	IEC950, EN 60950, UL1950, UL508C	IEC950, EN 60950, UL1950, UL508C
EMC standards	EN 50081-1 , EN50082-2	EN 50081-1 , EN50082-2
Surge immunity	EN61000-4-2, EN61000-4-4	EN61000-4-2, EN61000-4-4
Connection terminal blocks	terminal blocks 2.5 mm², pluggable	terminal blocks 2.5 mm², pluggable
Housing material	metallic	metallic
Approximative weight	~ 0.5 kg	~ 0.6 kg
Mounting information	vertical on rail, allow 20 mm spacing between adjacent components	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail		
standard EN 50.022	**PR/3/AC - PR/3/AS**	**PR/3/AC - PR/3/AS**
standard EN 50.035	–	–

SINGLE PHASE SWITCHING POWER SUPPLY

- Input voltage 90÷264 Vac / 110 Vdc
- With PFC (Power Factor Corrector)
- Functions and description on the frontal panel
- Suited for SELV and PELV
- Available in parallelable version



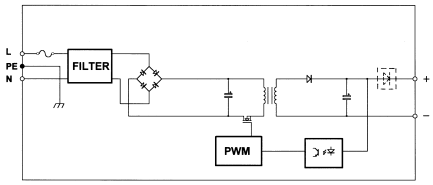


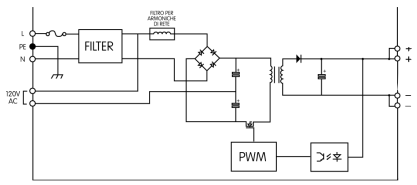
Note

The measure of depth includes the encumbrance of the clamps and the attack to the rail.

(1) Version with output protection diode for parallel connection.
(2) Version without Power Fail signal .
(3) With an input of 110 Vdc, riduce the output current to 25%

Block diagram





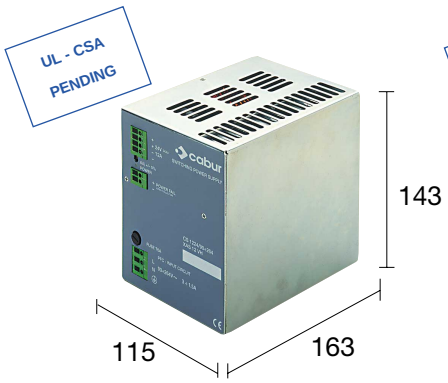
Applications

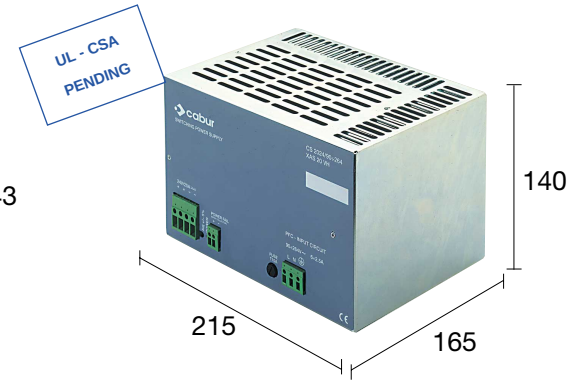
The CABUR switching power supply units of the CS series are designed and developed for industrial uses where safety, ease of use and reliability are essential. These units comply with the parameters set out by the Low Voltage Directive.
The low working temperature at full power with 45°C operating temperature combined with the use of first quality components ensure high reliability and duration. CABUR switching power supply units comply with EMI standards. The CS series with 90 – 264 Vac input has no ignition problems at full load even with low mains voltage and is therefore suitable for critical supply mains. This series is very compact and has an IP30 degree of protection against incidental contacts according to IEC529. All the functions are located on the front panel and marked with IEC symbols, which makes its use very simple, even on site.

Battery charger
These units can be used also to charge batteries while powering the load. To this purpose, CABUR has developed a module with the necessary diodes and resistance.
CSBC for power supply from 1 to 6 A

Version	Ordering information	
Standard version	**CS624/90-264N** Cod. XAS06VHN (2)	**CS1024/120-230** Cod. XAS10VH
With integral diode	**CS624/90-264P** Cod. XAS06VHP (1)	- -
Input Technical Data		
Rated voltage	90 ÷ 264 Vac / 110 Vdc (3)	120 - 230 Vac (3) range 90÷132/187÷264 Vac
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at Iout max	2.1 A at 120 Vac - 1.2 A at 230 Vac ± 10%	3.5 A at 120 Vac - 1.8 A at 230 Vac ± 10%
Inrush current at cold start at 230 Vac	< 30 A	< 30 A at 120 Vac - < 30 A at 230 Vac
Current with short circuit in out	< 0.3 A	< 0.25 A
Power factor	> 0.6 full load	> 0.75
Protection fuse	T 3.15 A	T 5 A
Output Technical Data		
Voltage	24 Vdc adjustable ± 5%	24 Vdc adjustable ± 5%
Maximum current	8 A	11 A
Continuous current	6 A	10 A
Load regulation	< 1 %	< 1 %
Ripple at Iout max	< 100 mV peack to peack	< 100 mV peack to peack
Hold up time	> 50 ms at 230 Vac, > 12 ms at 90 Vac	> 100 ms at 230 Vac, > 30 ms at 100 Vac
Overload/short circuit protection	Hiccup circuit, auto reset	Hiccup circuit, 1.1 In auto reset
Output signal	standard version : –	standard version : -
	"P" version: NO contact 2 A / 24 Vdc	"P" version : -
Parallel connection	standard version : possible with external diode	standard version : possible with external diode
	"P" version: already predisposed	"P" version : -
APPROVALS	c UL us LISTED, CSV IMQ	*UL, CSA pending*
General technical Data		
Efficiency	≥ 85% at 230 Vac, ≥ 80% at 115 Vac	≥ 88% at 230 Vac, ≥ 86% at 120 Vac
Operating temperature	-10 +60°C, -0.2 A/°C over 45°C	-10 +60°C, -0.3 A/°C over 45°C
Input / output isolation	3 kVac /60 s	3 kVac /60 s
Input / ground isolation, Output / ground isolation	1.5kVac /60 s 0.5 kVac /60 s	1.5kVac /60 s 0.5 kVac /60 s
Protection degree	IP 20	IP 20
Standards / Approvals	IEC950, EN 60950, UL1950, UL508C	IEC950, EN 60950
EMC standards	EN 50081-1 , EN50082-2	EN 50081-1, EN50082-2, EN61000-3-2,3
Surge immunity	EN61000-4-2, EN61000-4-4	EN61000-4-2, EN61000-4-4, EN61000-4-5
Connection terminal blocks	terminal blocks 2.5 mm², pluggable	terminal blocks 2.5 mm², pluggable
Housing material	metallic	metallic
Approximative weight	~ 0.73 kg	~ 1.05 kg
Mounting information	vertical on rail, allow 20 mm spacing between adjacent components	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail		
standard EN 50.022	**PR/3/AC - PR/3/AS**	**PR/3/AC - PR/3/AS**
standard EN 50.035	–	–

cabur





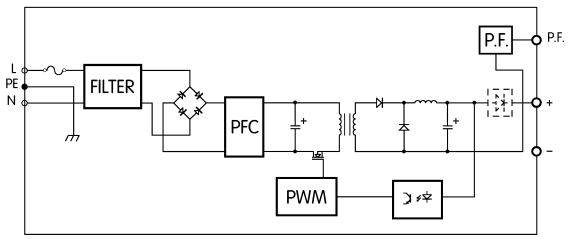
Note

The measure of depth includes the encumbrance of the clamps and the attack to the rail.

(1) Version with output protection diode for parallel connection.

(2) With an input of 110 Vdc, riduce the output current to 25%

Block diagram



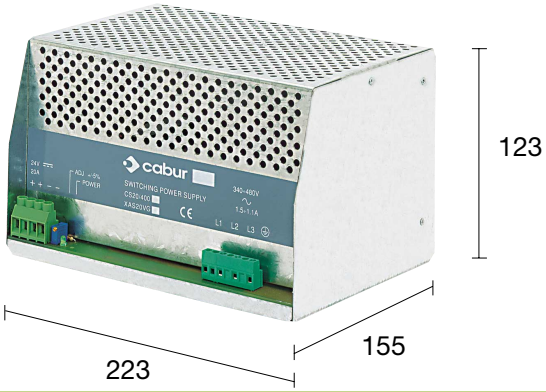
Ordering information

	CS1224/90-264 Cod. XAS12VH **CS1224/90-264P** Cod. XAS12VHP (1)	**CS2024/90-264** Cod. XAS20VH **CS2024/90-264P** Cod. XAS20VHP (1)
Input Technical Data		
Rated voltage	90 ÷ 264 Vac / 110 Vdc (2)	90 ÷ 264 Vac / 110 Vdc (2)
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at Iout max	3A at 120 Vac - 1.6 A at 230 Vac ± 10%	5 A at 120 Vac - 2.5 at 230 Vac ± 10%
Inrush current at cold start at 230 Vac	< 30 A	< 40 A
Current with short circuit in out	< 0.3 A	< 0.7 A
Power factor	> 0.97 full load with **PFC**	> 0.95 full load with **PFC**
Protection fuse	T 6 A	T 10 A
Output Technical Data		
Voltage	24 Vdc adjustable ± 5%	24 Vdc adjustable ± 5%
Maximum current	14.4 A	24 A
Continuous current	12 A	20 A
Load regulation	< 1 %	< 1%
Ripple at Iout max	< 100 mV peack to peack	< 200 mV peack to peack
Hold up time	> 100 ms at 230 Vac, > 20 ms at 90 Vac	> 100 ms at 230 Vac, > 20ms at 90 Vac
Overload/short circuit protection	Costant current 1.1 x In, auto reset	Costant current 1.1 x In, auto reset
Output signal	standard version : Power Fail (open coll.20 mA)	standard version : Power Fail (open coll.20 mA)
Parallel connection	"P" version : NO contact 2 A / 24 Vdc	"P" version : NO contact 2 A / 24 Vdc
	standard version : possible with external diode	standard version : possible with external diode
	"P" version : already predisposed	"P" version : already predisposed
APPROVALS	*UL, CSA pending*	*UL, CSA pending*
General technical Data		
Efficiency	≥ 85% at 230 Vac, ≥ 80% at 115 Vac	≥ 83% at 230 Vac, ≥ 80% at 115 Vac
Operating temperature	-10 +60°C, -0.4 A/°C over 45°C	-10 +60°C, -0.66 A/°C over 45°C
Input / output isolation	3 kVac /60 s	3 kVac /60 s
Input / ground isolation,	1.5kVac /60 s	1.5kVac /60 s
Output / ground isolation	0.5 kVac /60 s	0.5 kVac /60 s
Protection degree	IP 20	IP 20
Standards / Approvals	IEC950, EN 60950	IEC950, EN 60950
EMC standards	EN 50081-1, EN50082-2, EN61000-3-2,3	EN 50081-1, EN50082-2, EN61000-3-2,3
Surge immunity	EN61000-4-2, 4, EN61000-4-5	EN61000-4-2, 4, EN61000-4-5
Connection terminal blocks	terminal blocks 2.5 mm^2, fixed	terminal blocks , IN 2.5 mm^2, OUT 4 mm^2, fixed
Housing material	metallic	metallic
Approximative weight	~ 2.5 kg	~ 3.8 kg
Mounting information	vertical on rail, allow 20 mm spacing between adjacent components	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail		
standard EN 50.022	**PR/3/AC - PR/3/AS**	**PR/3/AC - PR/3/AS**
standard EN 50.035	–	–

THREE PHASE SWITCHING POWER SUPPLY

- Phase failure protected
- Undervoltage protected
- Fast transient protected
- Auto or manual reset version
- Input and output EMI filters
- Can be used as battery charger

UL - CSA PENDING



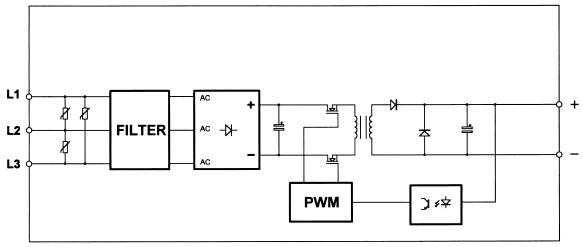
Note

The measure of depth includes the encumbrance of the clamps and the attack to the rail.

(1) Version with manual reset after short circuit, the reset happens OFF commuting and therefore ON the input voltage.

(2) In the version with manual reset the overload and short circuit protection intervenes with 1s. of delay.

Block diagram



Applications

In this series of power supply units, Cabur offers the safety "S" version in which, in the event of a short circuit on the 24 Vdc line, the output voltage is not restored automatically but instead via a deliberate reset operation. This feature makes them suitable for applications in which the risk linked to accidental start-up is to be avoided, as indicated by the standard EN 60204-1 under point 9.2.3. The internal circuit for blocking the power supply is tripped within a definite time, controlled by the power supply unit itself according to the characteristic curve of the overload and short circuit protection with additional safety of the block compared to external circuits whose functioning cannot be predicted with certainty.

Version

Standard version
With manual reset

Ordering information

CS12/400	Cod. XAS12VG	**CS20/400**	Cod. XAS20VG
CS12/400S	Cod. XAS12VGS (1)	**CS20/400S**	Cod. XAS20VGS (1)

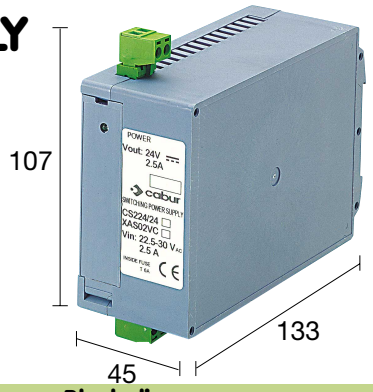
Input Technical Data		
Rated voltage	min. 340 Vac, max. 500 Vac	min. 340 Vac, max. 500 Vac
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at Iout max	≤ 1.5 A every phase	≤ 1.5 A every phase
Inrush current at cold start at 230 Vac	≤ 20 A	≤ 20 A
Current with short circuit in out	≤ 0.5 A	≤ 0.5 A
Protection fuse	T 3 A to install externally	T 3 A to install externally

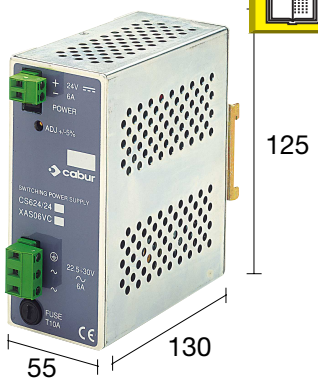
Output Technical data		
Voltage	24 Vdc adjustable ± 5%	24 Vdc adjustable ± 5%
Maximum current	14 A	24 A
Continuous current	12 A	20 A
Load regulation	< 1 %	< 1 %
Ripple at Iout max	< 100 mV peack to peack	< 100 mV peack to peack
Hold up time	> 12 ms a 400 Vac	> 12 ms a 400 Vac
Overload/short circuit protection	1.1 In, costant current, automatic reset (2)	1.1 In, costant current, automatic reset (2)
Output signal	–	–
Parallel connection	possible with external protection diode	possible with external protection diode
APPROVALS	*UL, CSA pending*	*UL, CSA pending*

General Technical Data		
Efficiency	≥ 88% at 400 Vac	≥ 88% at 400 Vac
Operating temperature	-10 +60°C, -0.4 A /°C over 45°C	-10 +60°C, -0.66 A /°C over 45°C
Input / output isolation	3 kVac /60 s	3 kVac /60 s
Input / ground isolation, Output / ground isolation	1.5 kV 0.5 kV	1.5 kV 0.5 kV
Protection degree	IP 20	IP 20
Safety standards	EN 60950, IEC950	EN 60950, IEC950
EMC standards	EN 55081-1, EN 50082-2	EN 55081-1, EN 50082-2
Surge immunity	EN 61000-4-2, EN 61000-4-4	EN61000-4-2, EN61000-4-4
Connection terminal blocks	terminal blocks, IN 2.5 mm^2, OUT 4 mm^2	terminal blocks, IN 2.5 mm^2, OUT 4 mm^2
Housing material	metallic	metallic
Approximative weight	~ 1.9 kg	~ 2.4 kg
Mounting information	vertical on rail, allow 20 mm spacing between adjacent components	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail		
standard EN 50.022	**PR/3/AC - PR/3/AS**	**PR/3/AC - PR/3/AS**
standard EN 50.035	–	–

SWITCHING POWER SUPPLY WITH INPUT 22÷30 Vac

- Standard input voltage 24 Vac
- Dissipated power inferior to 10%
- Overload/short circuit protection with automatic restore
- Input protection fuse
- Compact designe save panel space

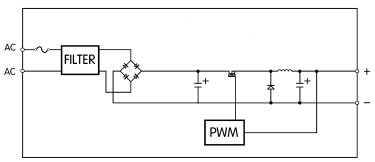


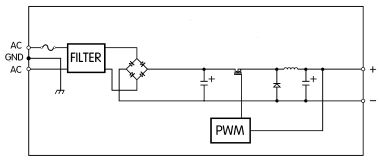


Note

The measure of depth includes the encumbrance of the clamps and the attack to the rail.

Block diagram





Applications

The CABUR power supply units series CS .../24 with 22 - 30 Vac input allow transformers with standard secondary voltage of 24 Vac to be used, more economical and more readily available than transformers with special voltages.

They are suitable for use in SELV and PELV circuits. In PELV circuits, in which one safety low voltage pole has to be earthed, taking care not to earth the secondary winding of the transformer too, but only one pole, normally the negative, of the 24 Vdc output of the power supply effectively used as control voltage.

The earthing together of a pole of the secondary of the transformer and a pole of the 24 Vdc of the power supply unit would inevitably damage the power supply unit itself.

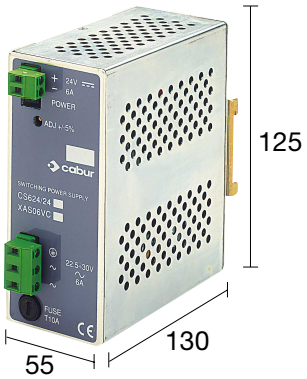
The purpose of the earthing connection is to discharge the interference trapped by the input filter and must be as short as possible.

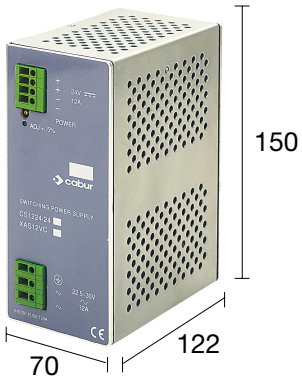
Do not connect the earth terminal in SELV circuits.

The input and output of the power supply units in the CS .../24 series are not isolated. The safety isolation function is therefore assigned to the external transformer which has to conform with the standard CEI 14-6 and/or EN60742.

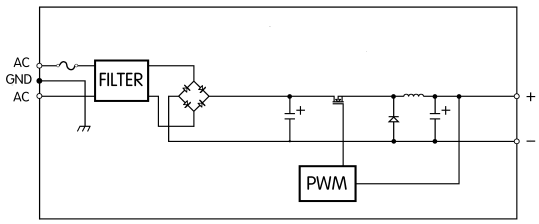
Ordering information

	CS224/24 Cod. XAS02VC	**CS424/24** Cod. XAS04VC
Input Technical Data		
Voltage	22 ÷ 30 Vac	22 ÷ 30 Vac
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at Iout max.	2.8 A	4.6 A
Protection fuse	T 5 A (inside mounted)	T 10 A
Output Technical data		
Voltage	24 Vdc adjustable ± 5%	24 Vdc adjustable ± 5%
Maximum current	3.5 A	6 A
Continuous current	2.5 A	4 A
Load regulation	< 1 %	< 1 %
Ripple at Iout max	< 100 mV peack to peack	< 100 mV peack to peack
Hold up time	> 15 ms	> 15 ms
Overload/short circuit protection	Hiccup circuit, auto reset	Hiccup circuit, auto reset
Output signal	–	–
Parallel connection	–	–
General Technical Data		
Efficiency	≥ 90%	≥ 90%
Operating temperature	- 10 +60°C, - 0.08 A / °C over 45°C	- 10 +60°C, - 0.13 A / °C over 45°C
Input / output isolation	–	–
Input / ground isolation, Output / ground isolation	0.5 kVac / 60 s	0.5 kVac / 60 s
Protection degree	IP 20	IP 20
EMC standards	EN 50081-1, EN 50082-2	EN 50081-1, EN 50082-2
Surge immunity	varistor - 4.5 kA 8/20 in input	varistor - 4.5 kA 8/20 in input
Connection terminal blocks	terminal blocks 2.5 mm², pluggable	terminal blocks 2.5 mm², pluggable
Housing material	polyamide UL94V-0	metallic
Approximative weight	~ 0.5 kg	~ 0.65 kg
Mounting information	vertical on rail, allow 20 mm spacing between adjacent components	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail		
standard EN 50.022	**PR/3/AC - PR/3/AS**	**PR/3/AC - PR/3/AS**
standard EN 50.035	–	–





Block diagram

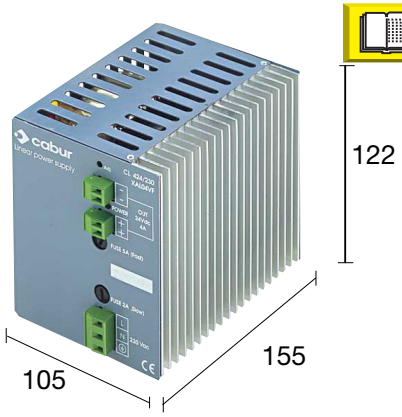


Ordering information

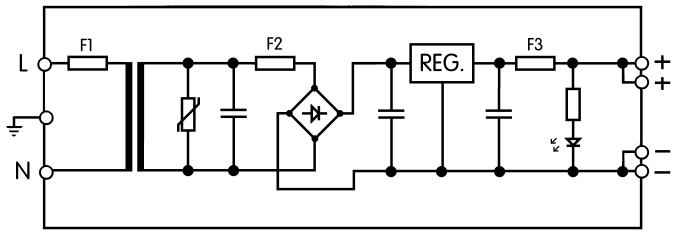
	CS624/24 Cod. XAS06VC	**CS1224/24** Cod. XAS12VC
Input Technical Data		
Voltage	22 ÷ 30 Vac	22 ÷ 30 Vac
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at Iout max.	6.6 A	13.2 A
Protection fuse	T 10 A	T 16 A (inside mounted)
OutputTechnical data		
Voltage	24 Vdc adjustable ± 8%	24 Vdc adjustable ± 8%
Maximum current	8 A	14 A
Continuous current	6 A	12 A
Load regulation	< 1 %	< 1 %
Ripple at Iout max	< 100 mV peack to peack	< 100 mV peack to peack
Hold up time	> 15 ms	> 15 ms
Overload/short circuit protection	Hiccup circuit, auto reset	Hiccup circuit, auto reset
Output signal	–	–
Parallel connection	–	–
General Technical Data		
Efficiency	≥ 90%	≥ 90%
Operating temperature	- 10 +60°C, - 0.2 A / °C over 45°C	- 10 ÷ 50°C, - 0.5 A / °C over 45°C
Input / output isolation	–	–
Input / ground isolation,	–	–
Output / ground isolation	0.5 kVac /60 s	0.5 kVac /60 s
Protection degree	IP 20	IP 20
EMC standards	EN 50081-1, EN 50082-2	EN 50081-1, EN 50082-2
Surge immunity	varistor - 4.5 kA 8/20 in input	varistor - 4.5 kA 8/20 in input
Connection terminal blocks	terminal blocks 2.5 mm², pluggable	terminal blocks 2.5 mm², pluggable
Housing material	metallic	metallic
Approximative weight	~ 0.7 kg.	~ 0.9 kg
Mounting information	vertical on rail, allow 20 mm spacing between adjacent components	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail		
standard EN 50.022	**PR/3/AC - PR/3/AS**	**PR/3/AC - PR/3/AS**
standard EN 50.035	–	–

LINEAR POWER SUPPLY WITH TRANSFORMER

- DIN rail mounting
- IP20 metallic housing
- Ample surface of dissipation
- Technical data and accessible fuses on the frontal side
- Constant operation during the micro interruptions of main (Hold up time)
- Suited for the employment of circuits SELV and PELV
- Strengthened toridal transformer second EN60742 standard



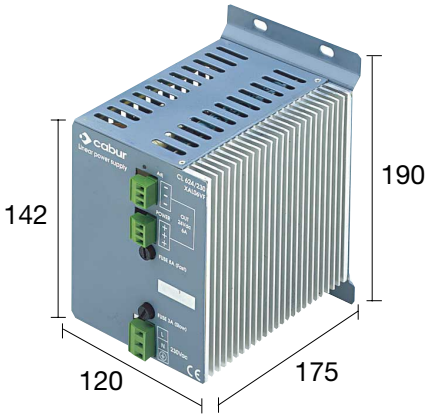
Block diagram

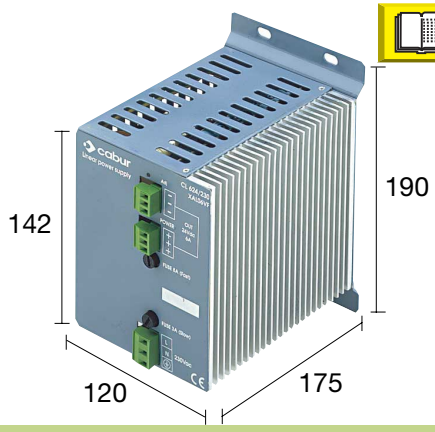


Ordering information

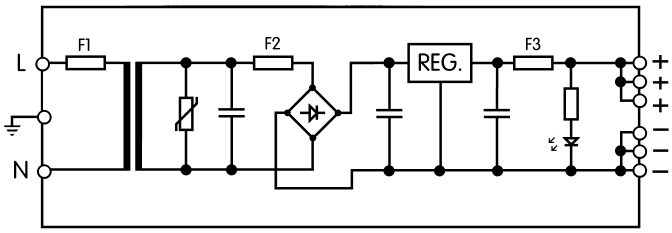
	CL424/115 Cod. XAL04VE	CL424/230 Cod. XAL04VF
Input Technical Data		
Voltage	115 Vac ± 10%	230 Vac ± 10%
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at I out max.	1.4 A	0.7 A
Protection fuse (F1)	T 1.4 A	T 1.6 A
Output Technical data		
Voltage	24 Vdc adjustable ± 10%	24 Vdc adjustable ± 10%
Maximum current	4 A	4 A
Load regulation	± 0.5 V with Δ I out 90%	± 0.6 V with Δ I out 90%
Ripple at I out max.	30 mV peack to peack	30 mV peack to peack
Hold up tume	90 ms	90 ms
Overload/short circuit protection	fuse - F 5 A	fuse - F 5 A
Output signal	–	–
Parallel connection	possible with external protection diode	possible with external protection diode
General Technical Data		
Operating temperature	- 10 ÷ 50 °C, -0.1 A /°C over 40°C	- 10 ÷ 50 °C, -0.1 A /°C over 40°C
Input/Output isolation	3 kV	3 kV
Input/ground isolation	1.5 kV	1.5 kV
Output/ground isolation	0.5 kV	0.5 kV
Protection degree	IP 20	IP 20
EMC standards	EN 55011-A1	EN 55011-A1
Safety standards	EN60950, IEC950	EN60950, IEC950
Surge immunity	EN 61000-4-2, EN 61000-4-4	EN 61000-4-2, EN 61000-4-4
Connection terminal blocks	terminal blocks 2.5 mm^2, pluggable	terminal blocks 2.5 mm^2, pluggable
Housing material	metallic	metallic
Approximative weight	~ 3 kg	~ 3 kg
Mounting information	vertical on rail, allow 20 mm spacing between adjacent components	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail		
standard EN 50.022	**PR/3/AC - PR/3/AS**	**PR/3/AC - PR/3/AS**
standard EN 50.035	–	–

LINEAR POWER SUPPLY WITH TRANSFORMER



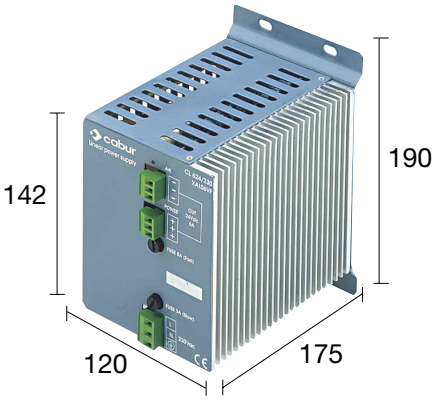


Block diagram

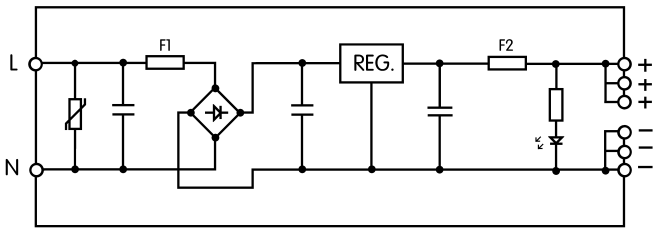


Ordering information

	CL624/115 Cod. XAL06VE	**CL624/230** Cod. XAL06VF
Input Technical Data		
Voltage	115 Vac ± 10%	230 Vac ± 10%
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at I out max.	2 A	2 A
Protection fuse (F1)	T 5 A	T 2.5 A
OutputTechnical data		
Voltage	24 Vdc adjustable ± 10%	24 Vdc adjustable ± 10%
Maximum current	6 A	6 A
Load regulation	± 0.6 V with Δ I out 90%	± 0.6 V with Δ I out 90%
Ripple at I out max.	40 mmV peack to peack	40 mmV peack to peack
Hold up time	100 ms	100 ms
Overload/short circuit protection	fuse - F 8 A	fuse - F 8 A
Output signal	-	-
Parallel connection	possible with external protection diode	possible with external protection diode
General Technical Data		
Operating temperature	- 10 ÷ 50 °C, -0.15 A /°C over 40°C	- 10 ÷ 50 °C, -0.15 A /°C over 40°C
Input/Output isolation	3 kV	3 kV
Input/ground isolation	1.5 kV	1.5 kV
Output/ground isolation	0.5 kV	0.5 kV
Protection degree	IP 20	IP 20
EMC standards	EN 55011-A1	EN 55011-A1
Safety standards	EN60950, IEC950	EN60950, IEC950
Surge immunity	EN 61000-4-2, EN 61000-4-4	EN 61000-4-2, EN 61000-4-4
Connection terminal blocks	terminal blocks 2.5 mm², pluggable	terminal blocks 2.5 mm², fixed
Housing material	metallic	metallic
Approximative weight	~ 4.1 kg	~ 4.1 kg
Mounting information	vertical, fixing with screw, to outdistance 20 mm from the adjacent components	vertical, fixing with screw, to outdistance 20 mm from the adjacent components
Mounting rail	(from to use only as support)	(from to use only as support)
standard EN 50.022	**PR/3/AC - PR/3/AS**	**PR/3/AC - PR/3/AS**
standard EN 50.035	–	–

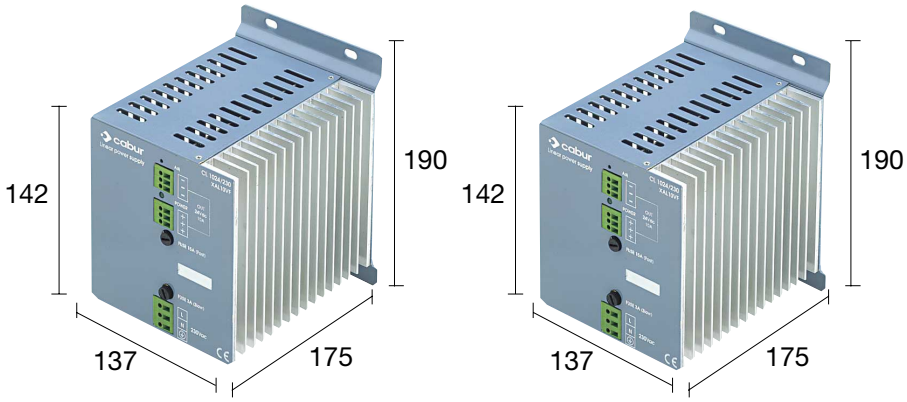


Block diagram

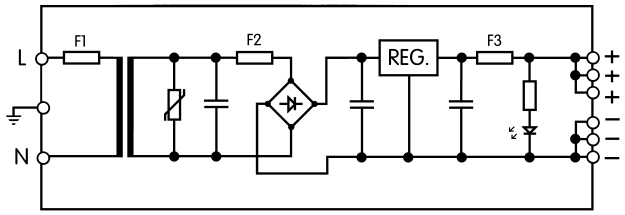


Ordering information

	CL624/400 Cod. XAL06VG	**CL1024/115** Cod. XAL10VE
Input Technical Data		
Voltage	400 Vac ± 10%	115 Vac ± 10%
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at I out max.	0.52 A	3 A
Protection fuse (F1)	T 1.6 A	T 6.3 A
OutputTechnical data		
Voltage	24 Vdc adjustable ± 10%	24 Vdc adjustable ± 10%
Maximum current	6 A	10 A
Load regulation	± 0.6 V with Δ I out 90%	± 0.6 V with Δ I out 90%
Ripple at I out max.	40 mV peack to peack	60 mV peack to peack
Hold up time	100 ms	90 ms
Overload/short circuit protection	fuse - F 8 A	fuse - F 12 A
Output signal	–	–
Parallel connection	possible with external protection diode	possible with external protection diode
General Technical Data		
Operating temperature	- 10 ÷ 50°C, -0.15 A /°C over 40°C	- 10 ÷ 50°C, -0.25 /°C over 40°C
Input/Output isolation	3 kV	3 kV
Input/ground isolation	1.5 kV	1.5 kV
Output/ground isolation	0.5 kV	0.5 kV
Protection degree	IP 20	IP 20
EMC standards	EN 55011-A1	EN 55011-A1
Safety standards	EN60950, IEC950	EN60950, IEC950
Surge immunity	EN 61000-4-2, EN 61000-4-4	EN 61000-4-2, EN 61000-4-4
Connection terminal blocks	terminal blocks 2.5 mm², pluggable	terminal blocks 2.5 mm², pluggable
Housing material	metallic	metallic
Approximative weight	~ 4.1 kg	~ 4.1 kg
Mounting information	vertical, fixing with screw, to outdistance 20 mm from the adjacent components	vertical, fixing with screw, to outdistance 20 mm from the adjacent components
Mounting rail	(from to use only as support)	(from to use only as support)
standard EN 50.022	**PR/3/AC - PR/3/AS**	**PR/3/AC - PR/3/AS**
standard EN 50.035	–	–



Block diagram

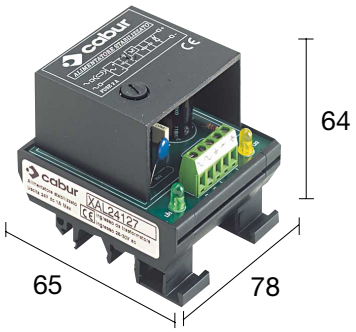


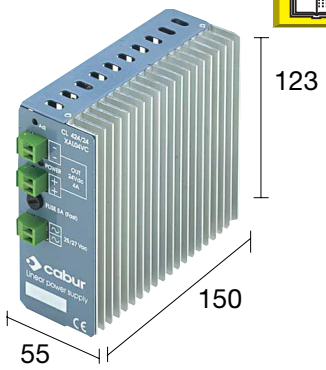
Ordering information

	CL1024/230 Cod. XAL10VF	**CL1024/400** Cod. XAL10VG
Input Technical Data		
Voltage	230 Vac ± 10%	400 Vac ± 10%
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at I out max.	1.5 A	0.8 A
Protection fuse (F1)	T 3.15 A	T 2 A
OutputTechnical data		
Voltage	24 Vdc adjustable ±10%	24 Vdc adjustable ±10%
Maximum current	10 A	10 A
Load regulation	± 0.6 V with D I out 90%	± 0.6 V with D I out 90%
Ripple at I out max.	60 mV peack to peack	60 mV peack to peack
Hold up time	90 ms	90 ms
Overload/short circuit protection	fuse - F 12 A	fuse - F 12 A
Output signal	–	–
Parallel connection	possible with external protection diode	possible with external protection diode
General Technical Data		
Operating temperature	- 10 ÷ 50°C, -0.25 A /°C over 40°C	- 10 ÷ 50°C, -0.25 A /°C over 40°C
Input/Output isolation	3 kV	3 kV
Input/ground isolation	1.5 kV	1.5 kV
Output/ground isolation	0.5 kV	0.5 kV
Protection degree	IP 20	IP 20
EMC standards	EN 55011-A1	EN 55011-A1
Safety standards	EN60950, IEC950	EN60950, IEC950
Surge immunity	EN 61000-4-2, EN 61000-4-4	EN 61000-4-2, EN 61000-4-4
Connection terminal blocks	terminal blocks 2.5 mm², pluggable	terminal blocks 2.5 mm², fixed
Housing material	metallic	metallic
Approximative weight	~ 2.35 kg	~ 2.35 kg
Mounting information	vertical, fixing with screw, to outdistance 20 mm from the adjacent components	vertical, fixing with screw, to outdistance 20 mm from the adjacent components
Mounting rail	(from to use only as support)	(from to use only as support)
standard EN 50.022	**PR/3/AC - PR/3/AS**	**PR/3/AC - PR/3/AS**
standard EN 50.035	–	–

LINEAR POWER SUPPLY WITHOUT TRANSFORMER

- DIN rail mounting
- IP20 metallic housing
- Ample surface of dissipation
- Technical data and accessible fuses on the frontal side
- Constant operation during the micro interruptions of main (Hold up time)

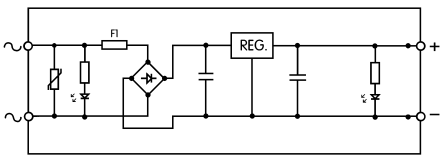


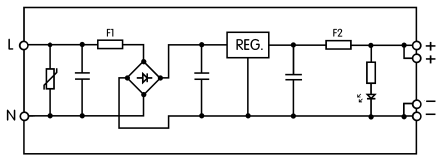


Note

(1) green LED ON = input voltage is OK
yellow LED ON = output voltage is OK
yellow LED OFF = overtemperature or short circuit in output

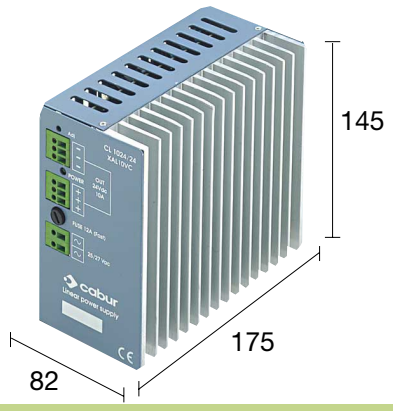
Block diagram



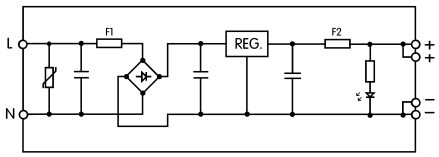


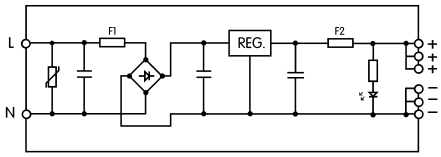
Ordering information

	AL24327/1A Cod. XAL24127	**CL424/24** Cod. XAL04VC
Input Technical Data		
Voltage	24 ÷ 25 Vac	25 Vac ÷ 27 Vac
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at I out max.	2.5 A	8 A
Protection fuse (F1)	T 2.5 A	1.5 A (inside mounted)
Output Technical Data		
Voltage	24 Vdc ± 3% (not adjustable)	24 Vdc adjustable ±10%
Maximum current	1 A	4 A
Load regulation	± 0.5 V con Iout 90%	± 0.5 V with D I out 90%
Ripple at I out max.	< 50 mV peack to peack	30 mV peack to peack
Hold up time	30 ms	90 ms
Overload/short circuit protection	electronic with auto reset (1)	fuse - F 5 A
Output signal	–	–
Parallel connection	–	possible with external protection diode
General Technical Data		
Operating temperature	-10 ÷ 50°C -0.025 A /°C over 50°C	- 10 +50°C, -0.1 A /°C over 40°C
Input/Output isolation	–	–
Input/ground isolation	0.5 kVac / 60 s	–
Output/ground isolation	0.5 kVac / 60 s	–
Protection degree	IP00	IP 20
EMC standards	EN 55011-A1	EN 55011-A1
Safety standards	–	-
Surge immunity	EN 61000-4-2, EN 61000-4-4	EN 61000-4-2, EN 61000-4-4
Connection terminal blocks	terminal blocks 2.5 mm², fixed	terminal blocks 2.5 mm², pluggable
Housing material	polyamide UL94V0	metallic
Approximative weight	~ 135 gr	~ 0.8 kg
Mounting information	–	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail standard EN 50.022 standard EN 50.035	**PR/3/AC - PR/3/AS** **PR/DIN/AC - PR/DIN/AS - PR/DIN/AL**	**PR/3/AC - PR/3/AS** –



Block diagram

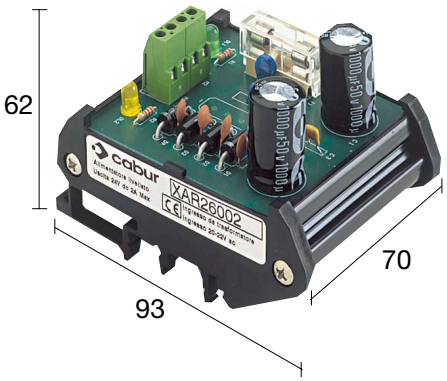


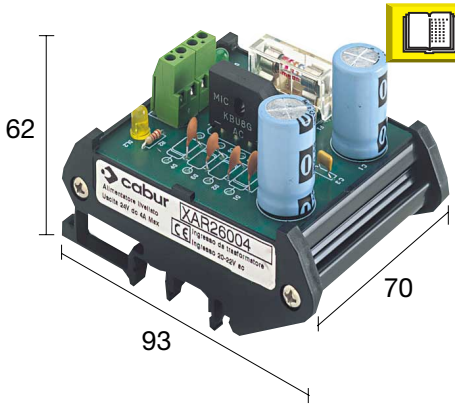


Ordering information

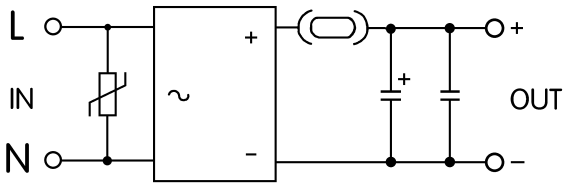
	CL624/24 Cod. XAL06VC	**CL1024/24** Cod. XAL10VC
Input Technical Data		
Voltage	25 Vac ÷ 27 Vac	25 Vac ÷ 27 Vac
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at I out max.	12 A	20 A
Protection fuse (F1)	20 A (inside mounted)	30 A (inside mounted)
Output Technical Data		
Voltage	24 Vdc adjustable ±10%	24 Vdc adjustable ± 10%
Maximum current	6 A	10 A
Load regulation	± 0.6 V with D I out 90%	± 0.6 V with D I out 90%
Ripple at I out max.	40 mV peack to peack	60 mV peack to peack
Hold up time	100 ms	90 ms
Overload/short circuit protection	fuse - F 8 A	fuse - F 12 A
Output signal	–	–
Parallel connection	possible with external protection diode	possible with external protection diode
General Technical Data		
Operating temperature	- 10 +50°C, -0.1 A /°C over 40°C	- 10 +50°C, -0.25 A /°C over 40°C
Input/Output isolation	–	–
Input/ground isolation	–	–
Output/ground isolation	–	–
Protection degree	IP 20	IP 20
EMC standards	EN 55011-A1, IEC 801.1.2.3.4	EN 55011-A1, IEC 801.1.2.3.4
Safety standards	–	–
Surge immunity	EN 61000-4-2, EN 61000-4-4	EN 61000-4-2, EN 61000-4-4
Connection terminal blocks	terminal blocks 2.5 mm², pluggable	terminal blocks 2.5 mm², fixed
Housing material	metallic	metallic
Approximative weight	~ 2.05 kg	~ 2.35 kg
Mounting information	vertical on rail, allow 20 mm spacing between adjacent components	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail		
standard EN 50.022	**PR/3/AC - PR/3/AS**	**PR/3/AC - PR/3/AS**
standard EN 50.035	–	–

FILTERED POWER SUPPLY WITHOUT TRANSFORMER





Block diagram



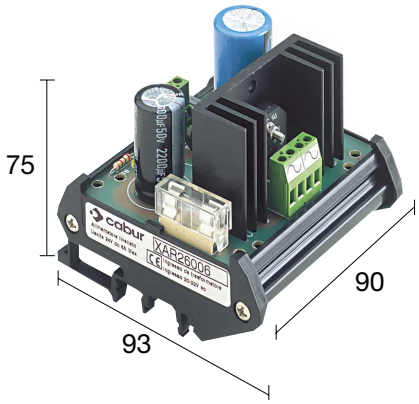
Applications

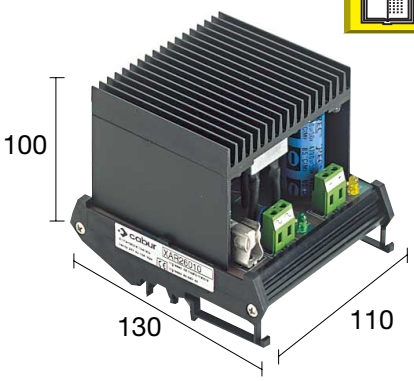
By means of an external transformer (not supplied) the line voltage is reduced to the required level. A rectifier bridge and a filter capacity convert the alternating voltage into a continuous voltage. Since the power supply unit is not stabilised, the level of the output varies considerably according to the absorption required and according to the oscillations of the line voltage. The formulae included in the output specifications allow an indication of the loadless voltage, that at 50% of the load and full load to be obtained. This will enable you to chose the most suitable transformer for your needs.

Ordering information

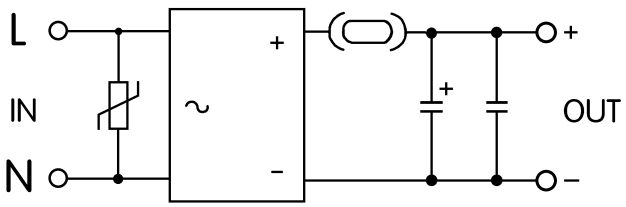
	AR2624/2A Cod. XAR26002	**AR2624/4A** Cod. XAR26004
Input Technical Data		
Voltage	9 ÷ 24 Vac ± 5%	9 ÷ 24 Vac ± 5%
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at I out max.	2.4 A	4.8 A
Output Technical Data		
Voltage (0 load)	Vout = (Vin x 1.41) – 1.2	Vout = (Vin x 1.41) – 1.2
Voltage (50% load)	Vout = (Vin x 1.41) – 3.6	Vout = (Vin x 1.41) – 3.6
Voltage (100% load)	Vout = (Vin x 1.41) – 4.8	Vout = (Vin x 1.41) – 4.8
Maximum current	2 A	4 A
Ripple	<10%	<10%
Protection fuse	T 3.15 A	T 5 A
General Technical Data		
Operating temperature	- 10 + 45°C	- 10 + 45°C
Protection degree	IP 00	IP 00
Surge immunity	varistor 1 kA	varistor 1 kA
Connection terminal blocks	terminal blocks 2.5 mm², fixed	terminal blocks 2.5 mm², fixed
Housing material	polyamide UL94V-0	polyamide UL94V-0
Weigth	~ 80 g	~ 100 g
Mounting information	vertical on rail, allow 20 mm spacing between adjacent components	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail standard EN 50.022 standard EN 50.035	**PR/3/AC - PR/3/AS** **PR/DIN/AC - PR/DIN/AS - PR/DIN/AL**	**PR/3/AC - PR/3/AS** **PR/DIN/AC - PR/DIN/AS - PR/DIN/AL**

FILTERED POWER SUPPLY WITHOUT TRANSFORMER





Block diagram

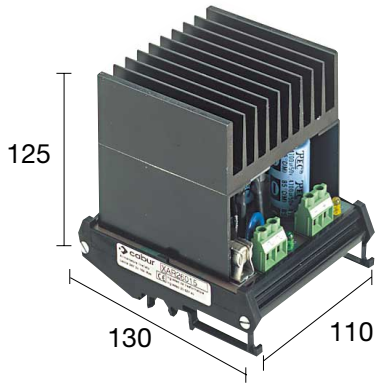


Applications

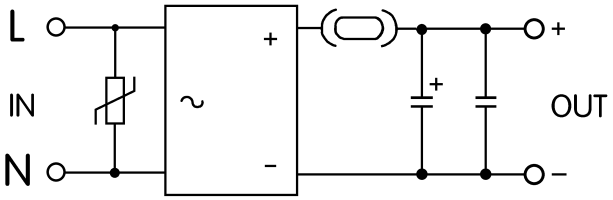
By means of an external transformer (not supplied) the line voltage is reduced to the required level. A rectifier bridge and a filter capacity convert the alternating voltage into a continuous voltage. Since the power supply unit is not stabilised, the level of the output varies considerably according to the absorption required and according to the oscillations of the line voltage. The formulae included in the output specifications allow an indication of the loadless voltage, that at 50% of the load and full load to be obtained. This will enable you to chose the most suitable transformer for your needs.

Ordering information

	AR2624/6A Cod. XAR26006	**AR2624/10A** Cod. XAR26010
Input Technical Data		
Voltage	9 ÷ 24 Vac ± 5%	9 ÷ 24 Vac ± 5%
Frequency	50 ÷ 60 Hz	50 ÷ 60 Hz
Current at I out max.	7.2 A	12 A
Output Technical Data		
Voltage (0 load)	Vout = (Vin x 1.41) – 1.2	Vout = (Vin x 1.41) – 1.2
Voltage (50% load)	Vout = (Vin x 1.41) – 3.6	Vout = (Vin x 1.41) – 3.6
Voltage (100% load)	Vout = (Vin x 1.41) – 4.8	Vout = (Vin x 1.41) – 4.8
Maximum current	6 A	10 A
Ripple	< 10%	< 10%
Protection fuse	T 8 A	T 15 A
General Technical Data		
Operating temperature	- 10 + 45°C	- 10+ 45°C
Protection degree	IP 00	IP 00
Surge immunity	varistor 1 kA	varistor 1 kA
Connection terminal blocks	terminal blocks 2.5 mm², fixed	terminal blocks 2.5 mm², fixed
Housing material	polyamide UL94V-0	polyamide UL 94 V-0
Weigth	~ 180 g	~ 390 g
Mounting information	vertical on rail, allow 20 mm spacing between adjacent components	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail standard EN 50.022 standard EN 50.035	**PR/3/AC - PR/3/AS** **PR/DIN/AC - PR/DIN/AS - PR/DIN/AL**	**PR/3/AC - PR/3/AS** **PR/DIN/AC - PR/DIN/AS - PR/DIN/AL**



Block diagram



Ordering information

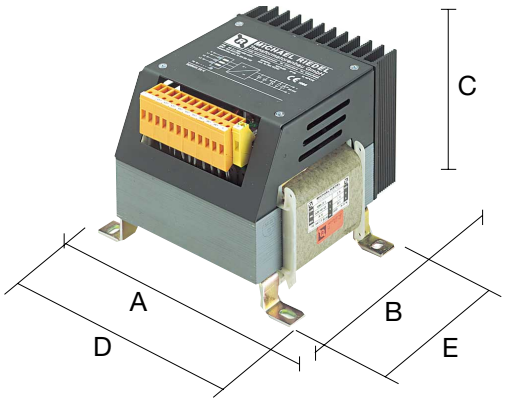
AR2624/15A Cod. XAR26015

Input Technical Data	
Voltage	9 ÷ 24 Vac ± 5%
Frequency	50 ÷ 60 Hz
Current at I out max.	18 A

Output Technical Data	
Voltage (0 load)	Vout = (Vin x 1.41) – 1.2
Voltage (50% load)	Vout = (Vin x 1.41) – 3.6
Voltage (100% load)	Vout = (Vin x 1.41) – 4.8
Maximum current	15 A
Ripple	< 10%
Protection fuse	T 20 A

General Technical Data	
Operating temperature	- 10 ÷ 50 °C
Protection degree	IP 00
Surge immunity	varistor 1 kA
Connection terminal blocks	terminal blocks 2.5 mm², fixed
Housing material	polyamide UL94V-0
Weigth	~ 480 gr
Mounting information	vertical on rail, allow 20 mm spacing between adjacent components
Mounting rail standard EN 50.022 standard EN 50.035	 **PR/3/AC - PR/3/AS** **PR/DIN/AC** - **PR/DIN/AS** - **PR/DIN/AL**

THREE PHASE FILTERED POWER SUPPLY RDRKN - - K

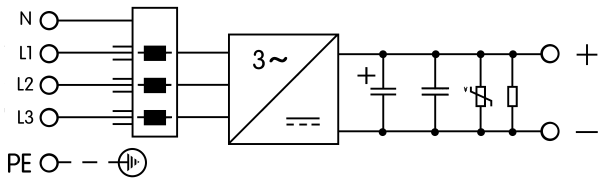


Note

(1) execution: in closed version with assemblage in panell with stirrups of fixing.

(2) connections with screw terminal blocks for transformer and faston 6,3 x 0,8 mm up to 20 A.

Block diagram



Applications

Through a 3-phase rectifier with filtering capacitors, these units support an input voltage of 3 x 380-400-420 Vac and deliver an output voltage of 24 Vdc with a residual ondulation lower than 2%.

Version maximum current	Dimension (A x B x C x D x E)	weight	fixing
10 A	156 x 165 x 110 x 140 x 100 mm	4,9 kg	M 5
16 A	156 x 165 x 125 x 140 x 100 mm	6,5 kg	M 5
20 A	206 x 190 x 140 x 184 x 120 mm	9,8 kg	M 6
25 A	206 x 190 x 150 x 184 x 120 mm	10,7 kg	M 6
30 A	206 x 190x 150 x 184 x 120 mm	11,5 kg	M 6
40 A	254 x 235 x 155 x 228 x 152 mm	17,0 kg	M 6
60 A	254 x 235 x 180 x 228 x 152 mm	22,0 kg	M 6

Ordering information	
RDRKN10K	Cod. XM28K01
RDRKN16K	Cod. XM28K02
RDRKN20K	Cod. XM28K03
RDRKN25K	Cod. XM28K04
RDRKN30K	Cod. XM28K05
RDRKN40K	Cod. XM28K06
RDRKN60K	Cod. XM28K07

Input Technical Data	
Voltage	3 x 380 /400 /420 Vac ± 10%
Frequency	50 ÷ 60 Hz

Output Technical Data	
Voltage	24 Vdc ± 3%
Maximum current	see selection guide on the top
Ripple	< 2%
Protection fuse	external (not furnished)

General Technical Data	
Max. operating temperature	40 °C
Protection degree	IP 00
Safety standards	EN 60742, EN 60204
Surge immunity	32 V with varistor
Connection terminals	terminal blocks 4 mm² (2)
Housing material	metallic
Approximative weight	see selection guide on the top
Mounting information	on the panell (1)
Mounting rail	
standard EN 50.022	–
standard EN 50.035	–

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