

Compact power supplies – single phase

Single phase,
smoothed

To EN 61558,
primary to DIN IEC 38 A

Output to EN 61131-2

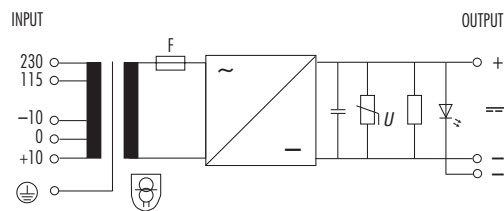
Touch protected (VBG 4)

MEN

Input voltage 115/ 230 V AC
± 10 V tapings



Circuit diagram



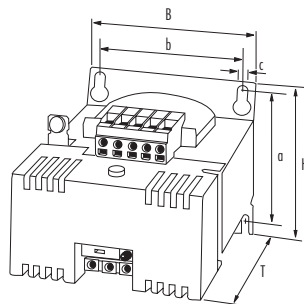
Ordering data	Art.-No.	Art.-No.	Art.-No.	Art.-No.
Output rating				
24V DC/ 1 A 24 W	UL, cUL, ENEC 85360			
24V DC/ 2,5 A 60 W		UL, cUL, ENEC 85361		
24V DC/ 5 A 120 W			UL, cUL, ENEC 85362	
24V DC/ 7,5 A 180 W				UL, cUL, ENEC 85363

Technical data	Input				
Input voltage	115/ 230 V AC ± 10 V				
Input current	0,54/ 0,27 A	1,0/ 0,5 A	2,0/ 1,0 A	2,84/ 1,42 A	
Input fuse (external)	0,8/ 0,4 A T	1,6/ 1,8 A T	3,15/ 1,6 A T	2,0/ 1,25 A T	
Frequency	50/60 Hz				

Technical data	Output				
Output voltage	24 V DC to EN 61131-2				
Max. output current	Ta 60/40 °C	1/ 1,5 A	2,5/ 3 A	5/ 6 A	7,5/ 9 A
Effective ripple	< 5 % eff				
Output fuse		3 A (automotive fuse FKS)	5 A (automotive fuse FKS)	10 A (automotive fuse FKS)	15 A (automotive fuse FKS)
Output filter	LED, VDR and smoothing capacitor				

General data					
Test voltage	to EN 61558				
Temperature range	-20...+60 °C, no condensation				
Mounting method	key-hole mounting				
Weight		1,25 kg	2,1 kg	3,0 kg	5,6 kg
Dimensions	H x B x T	71 x 78 x 109 mm	83 x 84 x 124 mm	95 x 96 x 136 mm	102 x 120 x 173 mm
Fixing centers	a x b x c	47,5 x 56 x 4,8 mm	65,5 x 64 x 4,8 mm	75 x 84 x 5,8 mm	86,5 x 90 x 5,8 mm

Dimension drawing/Fixing centers



Notes

Suitable snap adapter and replacement fuses page 4.13.2.
Wall mounting with any orientation.

Compact power supplies – single phase

**Single phase,
primary switch mode**

**Comply with PFC standard to
EN 61000-3-2**

**Stabilized output voltage
Short circuit and overload
protected**

Touch protected IP20

PIP-*Power* +

MCS
Input voltage 90...264 V AC

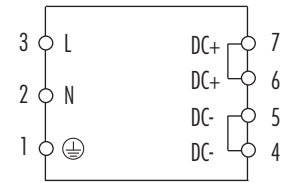
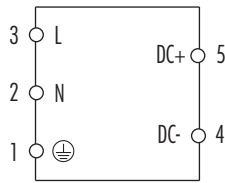


MCS
Input voltage 90...265 V AC



MCS with PFC
Input voltage 85...265 V AC

Circuit diagram



Ordering data		Art.-No.	Art.-No.	Art.-No.
	Output rating			
24 V DC/ 1,25 A	30 W	UL, cUL	¹⁾ 85432	
24 V DC/ 2,5 A	60 W		UL, cUL, ENEC	85064
24 V DC/ 3 A	72 W		UL, cUL, ENEC	85060
Technical data		Input		
Input voltage	94...264 V AC	90...265 V AC; 110...300 V DC	85...265 V AC	
Input current	0,5 A (115 V); 0,2 A (230 V)	1,3 A (100 V); 0,5 A (240 V)	0,82 A (115 V); 0,4 A (230 V)	
Inrush	< 30 A	< 22 A	< 20 A	
Primary fusing	max. 10 A			
Frequency	50/60 Hz			
Technical data		Output		
Output voltage	24 V DC, accuracy - 1 %/+ 2 %	24 V DC, ± 1 %; 20...30 V adjustable	24 V DC, ± 1 %; 24...28 V adjustable	
Nom. output current	1,25 A	2,5 A (60 °C); 2,5...3 A (50 °C)	3 A (60 °C); 3,5 A (40 °C)	
Efficiency	0,89 (115 V); 0,85 (230 V)	0,85	0,82 (230 V); 0,79 (115 V)	
Mains failure bridging	> 40 msec. (187 V)	> 70 msec. (230 V), 10 msec. typical (115 V)	> 40 msec. (85...265 V)	
Ripple	< 50 mV pp	< 20 mV eff		
Spikes	< 150 mV pp	< 100 mV pp	< 240 mV pp	
Protection	short circuit and overload protected			
Parallel usage/Serial usage	no/yes			
General data				
Guidelines	EN 60950, EN 50081-1, EN 50082-2		EN 60950, EN 50081-1, EN 61000	
Temperature range	0...+70 °C, derating 2,5 %/K (mount. > 40 °C horizontal, > 50 °C vertical)		0...+60 °C	
Relative humidity	30...90 %, no condensation			
Mounting method	DIN-rail mounting to EN 50022 ⁽¹⁾ mounting lock should be pulled by hand)			
Weight	0,15 kg	0,45 kg	0,79 kg	
Dimensions H x B x T	76 x 38 x 74 mm	107,5 x 42 x 97,5 mm	134 x 46 x 104 mm	
Dimension drawing/Fixing centers				
Notes		Mounting adapter for side mounting see page 4.13.2		

Compact power supplies – single phase

Single phase,
primary switch mode

With PFC (EN 61000-3-2)

Stabilized output voltage
Short circuit and overload
protected

Touch protected IP20

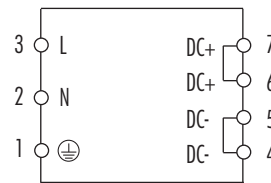
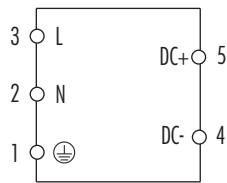
PIP-Power⁺

MCS with PFC

Input voltage 90...265 V AC



Circuit diagram



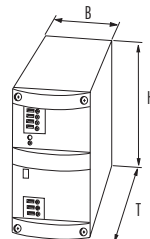
Ordering data	Art.-No.	Art.-No.	Art.-No.
Output rating			
24 V DC/ 5 A	120 W	UL, cUL, ENEC	85061
24 V DC/10 A	240 W	UL, cUL, ENEC	85062
24 V DC/20 A	480 W	UL, cUL, ENEC	85063

Technical data	Input		
Input voltage	90...265 V AC; 90...300 V DC		
Input current	1,4 A (100 V)/0,6 A (240 V)	2,7 A (100 V)/1,1 A (240 V)	5,5 A (100 V)/2,4 A (240 V)
Inrush	< 25 A	< 25 A	< 30 A
Primary fusing	max. 10 A	max. 10 A	max. 16 A
Frequency	50/60 Hz		

Technical data	Output		
Output voltage	24 V DC, $\pm 1\%$; 24...28 V adjustable		
Nom. output current	5 A (60 °C); 6 A (40 °C, 110...265 V)	10 A (60 °C); 12 A (40 °C, 110...265 V)	20 A (60 °C); 24 A (40 °C, 110...265 V)
Efficiency	0,83 (115 V)/0,87 (230 V)	0,88 (115 V)/0,9 (230 V)	0,88 (115 V)/0,9 (230 V)
Mains failure bridging	> 18 msec.	> 15 msec.	> 18 msec.
Ripple	< 20 mV eff	< 20 mV eff	< 20 mV eff
Spikes	typical 80 mV pp	200 mV pp	250 mV pp
Protection	short circuit and overload protected		
Switch off mode choosable	front sided bridging link (self activating re-start or definite shutoff)		
Parallel usage/Serial usage	yes/yes		

General data			
Guidelines	EN 60950, EN 50081-1, EN 50082-2, EN 61000-6-2, EN 61000-3-2		
Temperature range	0...+60 °C		
Relative humidity	30...90 %, no condensation		
Mounting method	DIN-rail mounting to EN 50022		screw mount. M 4, 4 pieces, \square 60 x 197 mm
Weight	0,75 kg	1,5 kg	2,7 kg
Dimensions	H x B x T	115 x 54 x 151 mm	127 x 68 x 204 mm
			209 x 84 x 233 mm

Dimension drawing/Fixing centers



Notes

Mounting adapter for side mounting see page 4.13.2

Compact power supplies – single phase

**Single phase,
primary switch mode**

**Stabilized output voltage
Short circuit and overload
protected**

Touch protected IP20

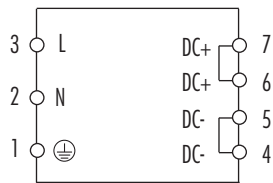
PIP-Power +

MCS

Input voltage 90...265 V AC



Circuit diagram



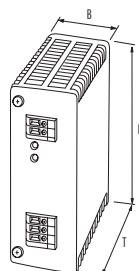
Ordering data		Art.-No.	Art.-No.
	Output rating		
12 V DC / 5 A	60 W	85040	
5 V DC / 6 A	30 W		85041

Technical data	Input	
Input voltage	90...265 V AC, 110...300 V DC	
Input current	1,3 A (100 V)/0,6 A (240 V)	0,6 A (100 V)/0,3 A (240 V)
Inrush	< 22 A	
Primary fusing	max. 10 A	
Frequency	50/60 Hz	

Technical data	Output	
Output voltage	12 V DC, $\pm 1\%$; 10...15 V adjustable	5 V DC, $\pm 1\%$; 4...6 V adjustable
Nom. output current	5 A (55 °C); 5...6 A (45 °C)	6 A (60 °C); 6...7,5 A (50 °C)
Efficiency	0,85	
Mains failure bridging	> 70 msec. (230 V), 10 msec. typical (115 V)	> 90 msec. (230 V), 12 msec. typical (115 V)
Ripple	< 20 mV eff	
Spikes	< 100 mV pp	< 50 mV pp
Protection	short circuit and overload protected	
Parallel usage/Serial usage	no/yes	

General data		
Guidelines	EN 60950, EN 50081-1, EN 50082-2, EN 61000-6-2	
Temperature range	0...+55 °C	0...+60 °C
Relative humidity	30...90 %, no condensation	
Mounting method	DIN-rail mounting to EN 50022	
Weight	0,45 kg	0,50 kg
Dimensions	H x B x T	107,5 x 42 x 97,5 mm

Dimension drawing/Fixing centers



Notes

Compact power supplies – single phase

Single phase,
primary switch mode

Stabilized output voltage
Short circuit and overload
protected

Touch protected IP20

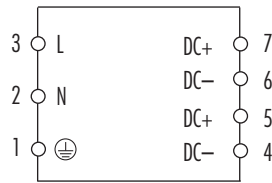
PIP-Power⁺

MCS

Input voltage 90...265 V AC



Circuit diagram



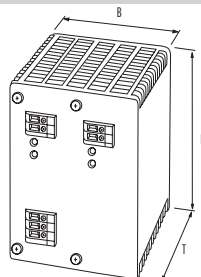
Ordering data	Art.-No.	Art.-No.	Art.-No.
Output rating 2 x 24 V DC / 2 x 2 A 2 x 48 W	ENECEC	85042	
2 x 12 V DC / 2 x 4 A 2 x 48 W		ENECEC	85043
24 V DC / 2 A; 5 V DC / 5 A 48 W; 25 W			ENECEC 85044

Technical data	Input		
Input voltage	90...265 V AC, 110...300 V DC		
Input current	1,5 A (100 V)/0,7 A (240 V)	1,7 A (100 V)/0,8 A (240 V)	1,4 A (100 V)/0,6 A (240 V)
Inrush	< 22 A		
Primary fusing	max. 10 A		
Frequency	50/60 Hz		

Technical data	Output		
Output voltage	2 x 24 V DC, ± 1 %; 20...30 V adjustable	2 x 12 V DC, ± 1 %; 10...15 V adjustable	5 + 24 V DC, ± 1 %; 4...6 V + 20...30 V adjustable
Nom. output current	2 x 2 A	2 x 4 A	5 A + 2 A
Efficiency	0,85		
Mains failure bridging	> 100 msec. (230 V); 10 msec. (115 V)	> 120 msec. (230 V); 12 msec. (115 V)	
Ripple	< 20 mV eff		
Spikes	< 100 mV pp		
Protection	short circuit and overload protected		
Parallel usage/Serial usage	no/yes		

General data	
Guidelines	EN 60950, EN 50081-1, EN 50082-2, EN 61000-6-2
Temperature range	0...+60 °C
Relative humidity	30...90 %, no condensation
Mounting method	DIN-rail mounting to EN 50022
Weight	0,85 kg
Dimensions	H x B x T

Dimension drawing/Fixing centers



Notes	
	Mounting adapter for side mounting see page 4.13.2

Compact power supplies – single phase

**Single phase,
primary switch mode**

**Stabilized output voltage
Short circuit and overload
protected**

Touch protected IP20

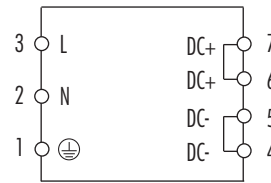
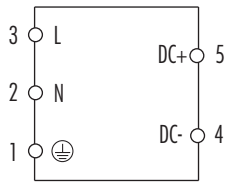
PIP-Power +

MCS

Input voltage 95...132 V AC



Circuit diagram



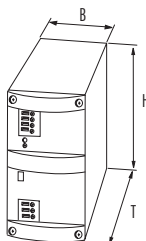
Ordering data	Art.-No.	Art.-No.	Art.-No.
Output rating			
24 V DC/ 5 A	120 W	UL, cUL, ENEC	85084
24 V DC/10 A	240 W	UL, cUL, ENEC	85086
24 V DC/20 A	480 W	UL, cUL, ENEC	85088

Technical data	Input		
Input voltage	95...132 V AC		
Input current	2,2 A (115 V)	4,2 A (115 V)	8,4 A (115 V)
Inrush	< 15 A	< 25 A	no
Primary fusing	max. 10 A		max. 16 A
Frequency	50/60 Hz		

Technical data	Output		
Output voltage	24 V DC, $\pm 1\%$; 24...28 V adjustable		
Nom. output current	5 A	10 A	20 A
Efficiency	0,84	0,9	0,9
Mains failure bridging	> 20 msec. (115 V)	> 15 msec. (115 V)	> 20 msec. (115 V)
Ripple	< 20 mV eff	< 20 mV eff	< 20 mV eff
Spikes	typical 80 mV pp	200 mV pp	250 mV pp
Protection	short circuit and overload protected		
Switch off mode choosable	front sided bridging link (self activating re-start or definite shutoff)		
Parallel usage/Serial usage	yes/yes		

General data			
Guidelines	EN 60950, EN 50081-1, EN 50082-2, EN 61000-6-2		
Temperature range	0...+60 °C		
Relative humidity	30...90 %, no condensation		
Mounting method	DIN-rail mounting to EN 50022		
Weight	0,6 kg	1,2 kg	2,3 kg
Dimensions	H x B x T	115 x 54 x 125 mm	127 x 68 x 160 mm
			170 x 84 x 201 mm

Dimension drawing/Fixing centers



Notes	
	Mounting adapter for side mounting see page 4.13.2

Compact power supplies – single phase

Single phase,
primary switch mode

Stabilized output voltage
Short circuit and overload
protected

Touch protected IP20

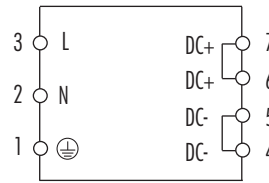
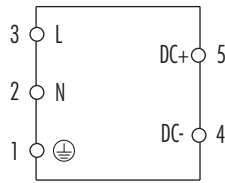
PIP-Power⁺

MCS

Input voltage 185...265 V AC



Circuit diagram



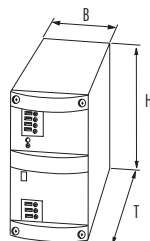
Ordering data	Art.-No.	Art.-No.	Art.-No.
24 V DC/ 5 A Output rating 120 W	UL, cUL, ENEC 85083		
24 V DC/10 A 240 W		UL, cUL, ENEC 85085	
24 V DC/20 A 480 W			UL, cUL, ENEC 85087

Technical data	Input			
Input voltage	185...265 V AC			
Input current	1,1 A (230 V)	2,1 A (230 V)	4,2 A (230 V)	
Inrush	< 25 A	no		
Primary fusing	max. 10 A	max. 16 A		
Frequency	50/60 Hz			

Technical data	Output			
Output voltage	24 V DC, ± 1 %; 24...28 V adjustable			
Nom. output current	5 A	10 A	20 A	
Efficiency	0,84	0,9	0,9	
Mains failure bridging	> 20 msec. (230 V)	> 15 msec. (230 V)	> 20 msec. (230 V)	
Ripple	< 20 mV eff	< 20 mV eff	< 20 mV eff	
Spikes	typical 80 mV pp	200 mV pp	250 mV pp	
Protection	short circuit and overload protected			
Switch off mode choosable	front sided bridging link (self activating re-start or definite shutoff)			
Parallel usage/Serial usage	yes/yes			

General data				
Guidelines	EN 60950, EN 50081-1, EN 50082-2, EN 61000-6-2			
Temperature range	0...+60 °C			
Relative humidity	30...90 %, no condensation			
Mounting method	DIN-rail mounting to EN 50022			
Weight	0,6 kg	1,2 kg	2,3 kg	
Dimensions	H x B x T 115 x 54 x 125 mm	127 x 68 x 160 mm	170 x 84 x 201 mm	

Dimension drawing/Fixing centers



Notes	Mounting adapter for side mounting see page 4.13.2			
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Compact power supplies – single phase

**Single phase,
primary switch mode**

**Stabilized output voltage
Short circuit and overload
protected**

Touch protected IP20

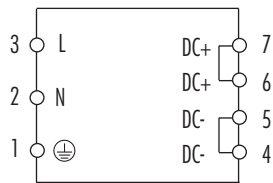
PIP-Power +

MCS

Input voltage 340...460 V AC



Circuit diagram



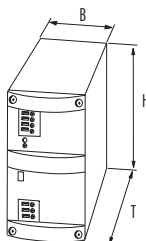
Ordering data	Art.-No.	Art.-No.
Output rating		
24 V DC/ 5 A	120 W	857725
24 V DC/10 A	240 W	857726

Technical data	Input	
Input voltage	340...460 V AC	
Input current	0,65 A (400 V)	1,2 A (400 V)
Inrush	< 22 A	
Primary fusing	max. 10 A	
Frequency	50/60 Hz	

Technical data	Output	
Output voltage	24 V DC, $\pm 1\%$; 24...28 V adjustable	
Nom. output current	5 A	10 A
Efficiency	0,85	0,87
Mains failure bridging	> 10 msec. (400 V)	> 12 msec. (400 V)
Ripple	< 20 mV eff	< 20 mV eff
Spikes	typical 100 mV pp	200 mV pp
Protection	short circuit and overload protected	
Switch off mode choosable	front sided bridging link (self activating re-start or definite shutoff)	
Parallel usage/Serial usage	yes/yes	

General data	
Guidelines	EN 60950, EN 50081-1, EN 50082-2, EN 61000-6-2
Temperature range	0...+60 °C
Relative humidity	30...90 %, no condensation
Mounting method	DIN-rail mounting to EN 50022
Weight	0,85 kg
Dimensions	H x B x T
	127 x 68 x 140 mm
	127 x 68 x 160 mm

Dimension drawing/Fixing centers



Notes
Mounting adapter for side mounting see page 4.13.2

Compact power supplies – single phase

Single phase,
primary switch mode

Stabilized output voltage
Short circuit and overload
protected

Touch protected IP20

PIP-Power⁺

MPS 10

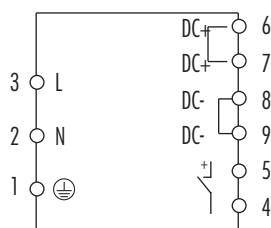
Input voltage 95...132 V AC

MPS 20

Input voltage 95...132 V AC



Circuit diagram



Ordering data		Art.-No.	Art.-No.
	Output rating		
24 V DC/10 A	240 W	UL, cUL	85054
24 V DC/20 A	480 W		UL, cUL
			85056
Technical data		Input	
Input voltage	95...132 V AC		
Input current	4,2 A		8 A
Inrush	no		
Primary fusing	max. 10 A		max. 16 A
Frequency	50/60 Hz		
Technical data		Output	
Output voltage	24 V DC, $\pm 1\%$; 22...28 V adjustable		
Nom. output current	10 A (60 °C); 12 A (40 °C)		20 A (60 °C); 24 A (40 °C)
Efficiency	0,9		
Mains failure bridging	> 10 msec. (115 V)		
Ripple; Spikes	< 20 mV eff; < 100 mV pp		
Protection	short circuit and overload protected, pre-warning and switch off when overload or high temperature, signalling over alarm output		
Status indicator	LED green in operation, LED red shut down, LED yellow pre-warning of overload or high temperature		
Parallel usage/Serial usage	yes/yes		
Alarm output ¹⁾	relay contact max. 60 V DC/0.2 A, collective alarm for all faults and pre-warnings, quit via the green reset button		
Test stop button	for test purposes, the secondary voltage can be switched off short term with the test stop button		
General data			
Guidelines	EN 60950, EN 50081-1, EN 50082-2, ENV 50142 2kV/4kV, EN 55011B		
Temperature range	0...+60 °C		
Mounting method	DIN-rail mounting to EN 50022, additional plate for screw mounting Art.-No. 89500		
Relative humidity	30...90 %, no condensation		
Weight	1,7 kg		2,5 kg
Dimensions	H x B x T	132 x 198 x 97 mm	132 x 243 x 123 mm
Dimension drawing/Fixing centers			

Notes

¹⁾ If units are used in parallel decoupling of units via diode block.
Accessories for UPS function see page 4.13.3

Compact power supplies – single phase

**Single phase,
primary switch mode**

**Stabilized output voltage
Short circuit and overload
protected**

Wide voltage input

Touch protected IP20

PIP- Power +

MPS 3

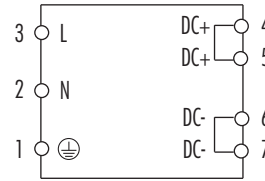
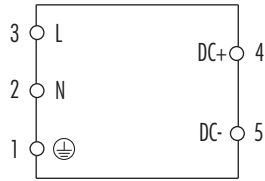
Input voltage 95...265 V AC



MPS 5

Input voltage 90...265 V AC

Circuit diagram



Ordering data	Art.-No.	Art.-No.
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Output rating		
24 V DC/3 A	72 W	UL, cUL
24 V DC/5 A	120 W	UL, cUL

Technical data	Input	Art.-No.	Art.-No.
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Input voltage	95...265 V AC	85051	85053
Input current	1,5 A (115 V); 0,75 A (230 V)		
Inrush	< 10 A		
Primary fusing	max. 10 A		
Frequency	50/60 Hz		

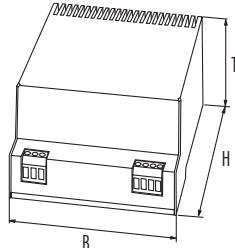
Technical data	Output	Art.-No.	Art.-No.
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Output voltage	24 V DC, +3% / -1%		
Nom. output current	3 A (60 °C); 3,5 A (40 °C)	5 A (60 °C); 6 A (40 °C)	
Efficiency	0,84	0,85	
Mains failure bridging	> 8,3 msec. (115 V); > 80 msec. (230 V)	> 10 msec. (115 V); > 80 msec. (230 V)	
Ripple	< 20 mV eff		
Spikes	< 100 mV pp		
Protection	short circuit and overload protected, automatic re-start U < 8 V		
Status indicator	LED green at output voltage > 22 V DC		
Parallel usage/Serial usage	no/yes		

General data

Guidelines	EN 60950, EN 50081-1, EN 50082-2, EN 55011B, EN 60555-2		
Temperature range	0...+60 °C		
Relative humidity	30...90 %, no condensation		
Mounting method	DIN-rail mounting to EN 50022, additional plate for screw mounting Art.-No. 89500		
Weight	0,6 kg	0,8 kg	
Dimensions H x B x T	132 x 75 x 71 mm	132 x 110 x 72 mm	

Dimension drawing/Fixing centers



Notes

Compact power supplies – single phase

Single phase,
primary switch mode

Stabilized output voltage
Short circuit and overload
protected

Touch protected IP20

PIP-Power⁺

MPS 10

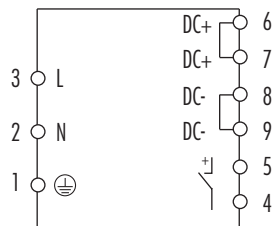
Input voltage 185...265 V AC



MPS 20

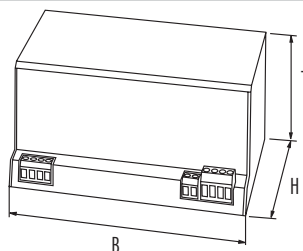
Input voltage 185...265 V AC

Circuit diagram



Ordering data		Art.-No.	Art.-No.
	Output rating		
24 V DC/10 A	240 W	UL, cUL	85055
24 V DC/20 A	480 W		UL, cUL 85057
Technical data Input			
Input voltage	185...265 V AC		185...265 V AC
Input current	2,1 A		4,0 A
Inrush	no		
Primary fusing	max. 10 A		max. 16 A
Frequency	50/60 Hz		
Technical data Output			
Output voltage	24 V DC, $\pm 1\%$; 22...28 V adjustable		
Nom. output current	10 A (60 °C); 12 A (40 °C)		20 A (60 °C); 24 A (40 °C)
Efficiency	0,9		
Mains failure bridging	> 10 msec.		
Ripple; Spikes	< 20 mV eff; < 100 mV pp		
Protection	short circuit and overload protected, pre-warning and switch off when overload or high temperature, signalling over alarm output		
Status indicator	LED green in operation, LED red shut down, LED yellow pre-warning of overload or high temperature		
Parallel usage/Serial usage	yes/yes		
Alarm output ¹⁾	relay contact max. 60 V DC/0.2 A, collective alarm for all faults and pre-warnings, quit via the green reset button		
Test stop button	for test purposes, the secondary voltage can be switched off short term with the test stop button		
General data			
Guidelines	EN 60950, EN 50081-1, EN 50082-2, ENV 50142 2kV/4kV, EN 55011B		
Temperature range	0...+60 °C		
Relative humidity	30...90 %, no condensation		
Mounting method	DIN-rail mounting to EN 50022, additional plate for screw mounting Art.-No. 89500		
Weight	1,7 kg		2,5 kg
Dimensions	H x B x T	132 x 198 x 97 mm	132 x 243 x 123 mm

Dimension drawing/Fixing centers



Notes

¹⁾ If units are used in parallel decoupling of units via diode block.
Accessories for UPS function see page 4.13.3

Compact power supplies – single phase

Supply voltage for AS-Interface Bus

- Single phase
- Primary switch mode
- Touch protected

MASI - 2.8
Input voltage 115 V AC

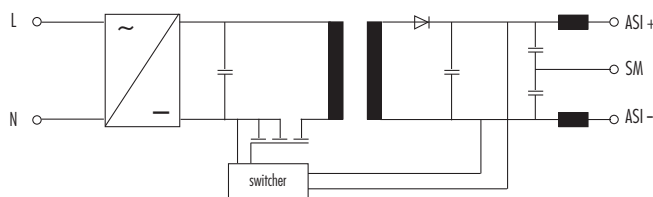


MASI - 2.8
Input voltage 230 V AC

MASI - 2.8 IP67
Input voltage 230 V AC



Circuit diagram



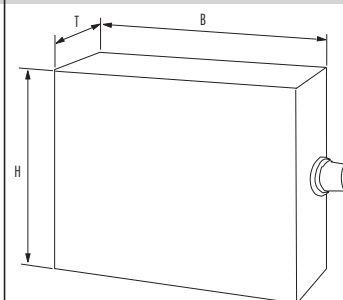
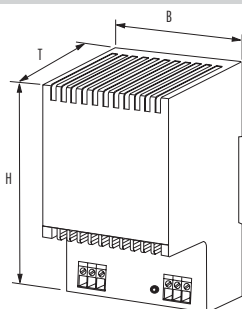
Ordering data	Art.-No.	Art.-No.	Art.-No.
MASI-2,8	85425	85424	
MASI-2,8 IP67			85430

Technical data	Input		
Input voltage	115 V AC \pm 20 %	230 V AC \pm 20 %	
Input current	1,3 A	0,8 A	
Inrush	< 14 A	< 20 A	
Primary fusing	max. 10 A T (external)		fuse 1,6 A T (internal)
Frequency	50/60 Hz		

Technical data	Output		
Output voltage	30,5 V \pm 3 %		
Max. output current	2,8 A		
Efficiency	0,85		
Mains failure bridging	> 30 msec. (115 V)	> 30 msec. (230 V)	
Ripple	< 50 mVpp		
Protection	short circuit and overload protected		
Status indicator	LED green		
Output filter	filter to AS-Interface specification		

General data		
Safety	to EN 60950	
Protection	IP20	IP67
Temperature range	-10...+60 °C, no condensation	-10...+50 °C
Mounting method	DIN-rail mounting to EN 50022	
AS-Interface	the unit meets AS-Interface requirements for power supplies (PELV)	
Weight	0,71 kg	1,26 kg
Dimensions H x B x T	153 x 103 x 70 mm	138 x 179 x 70 mm

Dimension drawing



Notes

Compact power supplies – single phase

Single phase,
linear regulated

To EN 61558

Stabilized output voltage

Short circuit and overload
protected

Touch protected IP20

NLS 0,5

Input voltage 230/ 400 V AC

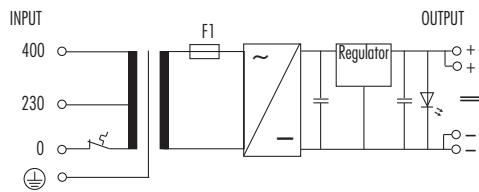


NLS 1

Input voltage 230/ 400 V AC



Circuit diagram

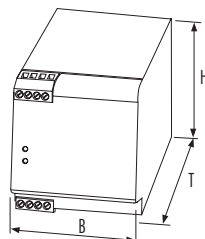


Ordering data		Art.-No.	Art.-No.
	Output rating		
24 V DC/ 0,5 A	12 W	UL, cUL	85631
24 V DC/ 1,0 A	24 W		UL, cUL

Technical data		Input	
Input voltage	230/ 400 V AC + 6% / -10% (± 10% UL)		
Input current	120/ 70 mA	230/ 135 mA	
Input fuse (external)	0,3/ 0,2 A T	0,6/ 0,4 A T	
Frequency	50/60 Hz		
Protection	thermal switch input side		
Technical data		Output	
Output voltage	24 V DC ± 2%		
Nom. output current	0,5 A	1 A	
Max. output current	2 A (short term)	4 A (short term)	
Efficiency	0,56	0,58	
Effective ripple	< 2 mV eff		
Protection	short circuit and overload protection		
Output fuse F1	1,25 A T (5 x 20 internal)	2,5 A T (5 x 20 internal)	
Status indicator	green LED operating, red LED fault		

General data			
Standards	low voltage guidelines, EMC - regulations		
Temperature range	0...+60 °C, no condensation		
Mounting method	DIN-rail mounting to EN 50022		
Weight	0,62 kg	0,92 kg	
Dimensions	H x B x T	75 x 45 x 118 mm	75 x 67,5 x 118 mm

Dimension drawing/Fixing centers



Notes

Compact power supplies – single phase

Single phase,
linear regulated

To EN 61558

Stabilized output voltage

Short circuit and overload
protected

Touch protected IP20

NLS 2

Input voltage 230/ 400 V AC

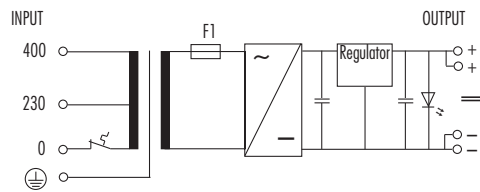


NLS 4

Input voltage 230/ 400 V AC

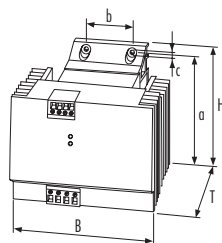


Circuit diagram



Ordering data		Art.-No.	Art.-No.
	Output rating		
24 V DC/ 2,0 A	48 W	UL, cUL	85635
24 V DC/ 4,0 A	96 W	UL, cUL	85637
Technical data Input			
Input voltage	230/ 400 V AC + 6 %/ -10 % (± 10 % UL)		
Input current	0,46/ 0,27 A	0,85/ 0,49 A	
Input fuse (external)	1,0/ 0,6 A T	1,6/ 1,0 A T	
Frequency	50/60 Hz		
Protection	thermal switch input side		
Technical data Output			
Output voltage	24 V DC ± 2 %		
Nom. output current	2 A	4 A	
Max. output current	6 A (short term)	12 A (short term)	
Efficiency	0,59	0,63	
Effective ripple	< 2 mV eff	< 10 mV eff	
Protection	short circuit and overload protection		
Output fuse F1	5 A T (5 x 20 internal)	10 A T (5 x 20 internal)	
Status indicator	green LED operating, red LED fault		
General data			
Standard	low voltage guidelines, EMC-regulations		
Temperature range/relative humidity	0... +60 °C, no condensation		
Mounting method	DIN-rail mounting to EN 50022; Key hole fixing/ screw fixing		
Weight	2,5 kg	4,5 kg	
Dimensions	H x B x T	110 x 128 x 135 mm	110 x 172 x 161 mm
Fixing centers	a x b x c	98 x 44 x 4,5 mm	98 x 80 x 4,5 mm

Dimension drawing/Fixing centers



Notes

**Single phase,
linear regulated**

To EN 61558

Stabilized output voltage

**Short circuit and overload
protected**

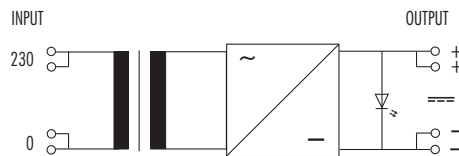
Touch protected (VBG 4)

MKN

Low power P.S.U
Input voltage 230 V AC



Circuit diagram



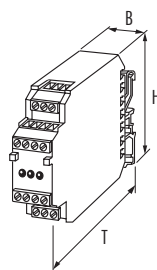
Ordering data	Art.-No.	Art.-No.	Art.-No.	Art.-No.
24 V DC/ 70 mA	85610			
10 V DC/ 80 mA		85615		
5 V DC/200 mA			85620	
9,5...15 V DC/100 mA				85625

Technical data	Input			
Input voltage	230 V AC (± 10 %)			
Input current	approx. 10 mA	approx. 20 mA	approx. 30 mA	
Input fuse (external)	63 mA T			
Frequency	50/60 Hz			

Technical data	Output			
Output voltage	24 V DC ± 2 %	10 V DC ± 2 %	5 V DC ± 2 %	9,5...15 V DC over poti
Max. output current	70 mA	80 mA	200 mA	100 mA
Effective ripple	≤ 10 mV ss			
Output fuse	elec. short circuit and overload protection			
Output suppression	LED green; varistor and smoothing capacitor			

General data		
Test voltage input/output		3,75 kV AC, trafo to EN 61558
Temperature range		0...+60 °C, no condensation
Mounting method		DIN-rail mounting to EN 50022
Weight		0,3 kg
Dimensions	H x B x T	75 x 22,5 x 102 mm

Dimension drawing/Fixing centers



Notes

Compact power supplies – single phase

**Single phase,
linear regulated**

To EN 61558

Stabilized output voltage

**Short circuit and overload
protected**

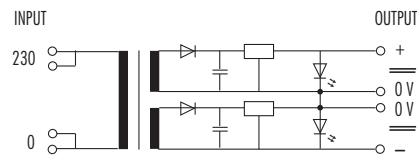
Touch protected (VBG 4)

MKN

Low power P.S.U
Input voltage 230 V AC



Circuit diagram



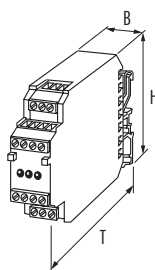
Ordering data	Art.-No.	Art.-No.
2 x 10 V DC/ 2 x 50 mA	85616	
2 x 15 V DC/ 2 x 35 mA		85617

Technical data	Input	
Input voltage	230 V AC ($\pm 10\%$)	
Input current	approx. 20 mA	
Input fuse (external)	63 mA T	
Frequency	50/60 Hz	

Technical data	Output	
Output voltage	2 x 10 V DC $\pm 5\%$	2 x 15 V DC $\pm 5\%$
Max. output current	2 x 50 mA	2 x 35 mA
Effective ripple	≤ 10 mV ss	
Output fuse	elec. short circuit and overload protection	
Output suppression	LED green; varistor and smoothing capacitor	

General data		
Test voltage input/output	3,75 kV AC, trafo to EN 61558	
Temperature range	0...+60 °C, no condensation	
Mounting method	DIN-rail mounting to EN 50022	
Weight	0,3 kg	
Dimensions	H x B x T	75 x 22,5 x 102 mm

Dimension drawing/Fixing centers



Notes

Compact power supplies – single phase

**Single phase,
linear regulated**

To EN 61558

Stabilized output voltage

**Short circuit and overload
protected**

Touch protected (VBG 4)

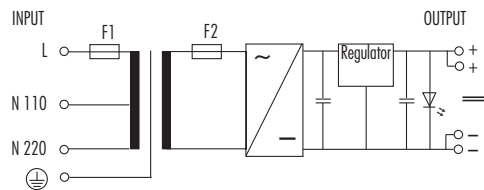
TSKL

Low power P.S.U

Primary voltage 110/ 220 V AC



Circuit diagram



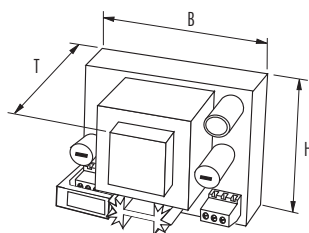
Ordering data	Art.-No.	Art.-No.	Art.-No.
Output rating			
24 V DC/250 mA 6 W	85292		
12 V DC/250 mA 3 W		85294	
5 V DC/250 mA 1,3 W			85296

Technical data	Input		
Input voltage		110/ 220 V AC + 10 %, -15 %	
Input current		0,12/ 0,06 A	
Frequency		50/60 Hz	
Input fuse	110 V AC	0,4 A T (5 x 20 mm)	
	220 V AC	0,2 A T (5 x 20 mm) - as supplied	

Technical data	Output		
Output voltage	24 V DC ± 2 %	12 V DC ± 2 %	5 V DC ± 2 %
Max. output current	250 mA		
Effective ripple	< 0,2 %		
Output fuse	0,5 A T (5 x 20 mm)		
Output suppression	elec. short circuit and overload protection		

General data		
Test voltage		to EN 61558
Temperature range		-20...+60 °C, no condensation
Mounting method		DIN-rail mounting to EN 50022
Weight		0,5 kg
Dimensions	H x B x T	75 x 90 x 78 mm

Dimension drawing/Fixing centers



Notes

Compact power supplies – single phase

Single phase,
smoothed

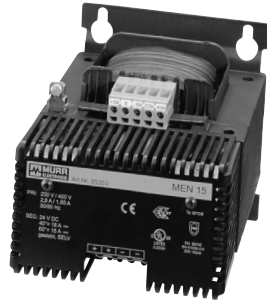
To EN 61558,
primary to DIN IEC 38 A

Output to EN 61131-2

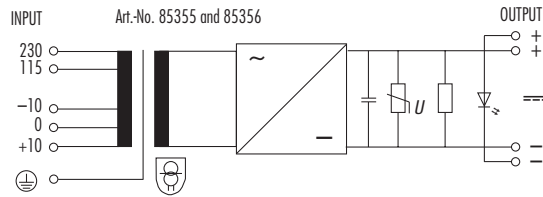
Touch protected (VBG 4)

MEN

Input voltage 115/ 230 V AC
± 10 V tappings



Circuit diagram



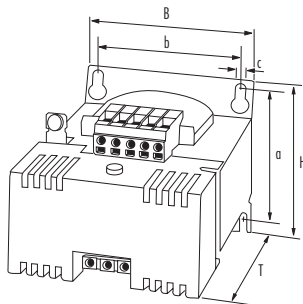
Ordering data		Art.-No.	Art.-No.	Art.-No.
	Output rating			
24 V DC/10 A	240 W	85364		
24 V DC/15 A	360 W		85355	
24 V DC/20 A	480 W			85356

Technical data		Input		
Input voltage		115/ 230 V AC ± 10 V		
Input current		3,7/ 1,85 A	5,6/ 2,8 A	7,4/ 3,7 A
Input fuse (external)		5,0/ 2,5 A T	8,0/ 4,0 A T	10/ 5,0 A T
Frequency		50/60 Hz		

Technical data		Output		
Output voltage		24 V DC to EN 61131-2		
Max. output current	Ta 60/40 °C	10/ 12 A	15/ 18 A	20/ 24 A
Effective ripple		< 5 % eff		
Output fuse		no		
Output filter		LED, VDR and smoothing capacitor		

General data				
Test voltage		to EN 61558		
Temperature range		-20...+60 °C, no condensation		
Mounting method		key-hole mounting		
Weight		6,0 kg	8,2 kg	12,8 kg
Dimensions	H x B x T	112,5 x 120 x 160 mm	138,5 x 135 x 181,5 mm	117,5 x 174 x 213,5 mm
Fixing centers	a x b x c	94,5 x 90 x 5,8 mm	126 x 104 x 6,5 mm	92,5 x 135 x 7 mm

Dimension drawing/Fixing centers



Notes

Wall mounting with any orientation.

Compact power supplies – single phase

Single phase,
smoothed

To EN 61558,
primary to DIN IEC 38 A

Output to EN 61131-2

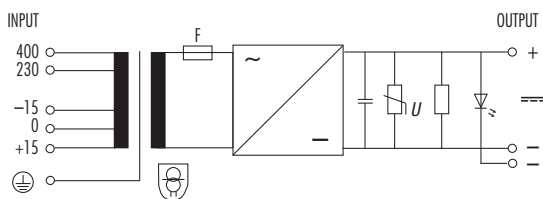
Touch protected (VBG 4)

MEN

Input voltage 230/ 400 V AC
± 15 V tapings



Circuit diagram



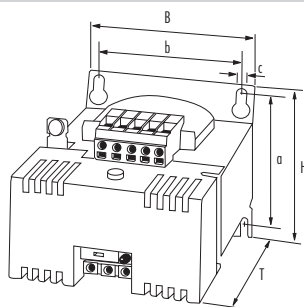
Ordering data	Art.-No.	Art.-No.	Art.-No.	Art.-No.
Output rating				
24 V DC/ 1 A 24 W	UL, cUL, ENEC 85349			
24 V DC/2,5 A 60 W		UL, cUL, ENEC 85350		
24 V DC/ 5 A 120 W			UL, cUL, ENEC 85351	
24 V DC/7,5 A 180 W				UL, cUL, ENEC 85357

Technical data	Input				
Input voltage	230/ 400 V AC ± 15 V				
Input current	0,25/ 0,145 A	0,5/ 0,28 A	0,97/ 0,56 A	1,44/ 0,84 A	
Input fuse (external)	0,4/ 0,25 A T	0,8/ 0,5 A T	1,6/ 1,0 A T	2/ 1,25 A T	
Frequency	50/60 Hz				

Technical data	Output				
Output voltage	24 V DC to EN 61131-2				
Max. output current	Ta 60/40 °C	1/ 1,5 A	2,5/ 3 A	5/ 6 A	7,5/ 9 A
Effective ripple	< 5 % eff				
Output fuse		3 A (automotive fuse FKS)	5 A (automotive fuse FKS)	10 A (automotive fuse FKS)	15 A (automotive fuse FKS)
Output filter	LED, VDR and smoothing capacitor				

General data					
Test voltage	to EN 61558				
Temperature range	-20...+60 °C, no condensation				
Mounting method	key-hole mounting				
Weight		1,25 kg	2,1 kg	3 kg	5,6 kg
Dimensions	H x B x T	71 x 78 x 109 mm	83 x 84 x 124 mm	95 x 96 x 136 mm	102 x 120 x 173 mm
Fixing centers	a x b x c	47,5 x 56 x 4,8 mm	65,5 x 64 x 4,8 mm	75 x 84 x 5,8 mm	86,5 x 90 x 5,8 mm

Dimension drawing/Fixing centers



Notes

Suitable snap adapter and replacement fuses page 4.13.2.
Wall mounting with any orientation.

Compact power supplies – single phase

Single phase,
smoothed

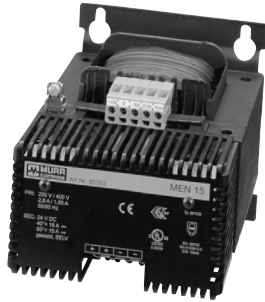
To EN 61558,
primary to DIN IEC 38 A

Output to EN 61131-2

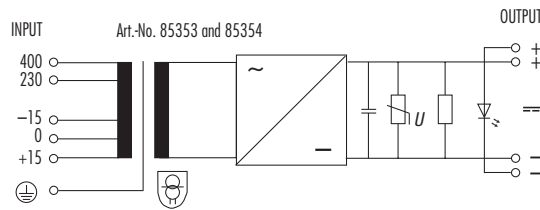
Touch protected (VBG 4)

MEN

Input voltage 230/ 400 V AC
± 15 V tapings



Circuit diagram



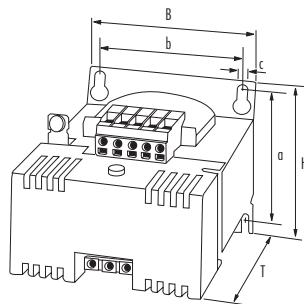
Ordering data	Art.-No.	Art.-No.	Art.-No.
Output rating			
24 V DC/ 10 A 240 W	85352		
24 V DC/ 15 A 360 W		85353	
24 V DC/ 20 A 480 W			85354

Technical data	Input		
Input voltage	230/ 400 V AC ± 15 V		
Input current	1,7/ 0,97 A	2,8/ 1,65 A	3,7/ 2,15 A
Input fuse (external)	3,15/ 1,6 A T	4/ 2,5 A T	5/ 3,15 A T
Frequency	50/60 Hz		

Technical data	Output		
Output voltage	24 V DC to EN 61131-2		
Max. output current	Ta 60/40 °C	10/ 12 A	15/ 18 A
Effective ripple	< 5 % eff		
Output fuse	no		
Output filter	LED, VDR and smoothing capacitor		

General data			
Test voltage	to EN 61558		
Temperature range	-20...+60 °C, no condensation		
Mounting method	key-hole mounting		
Weight	6 kg	8,2 kg	12,8 kg
Dimensions	H x B x T	112,5 x 120 x 160 mm	138,5 x 135 x 181,5 mm
Fixing centers	a x b x c	94,5 x 90 x 5,8 mm	126 x 104 x 6,5 mm

Dimension drawing/Fixing centers



Notes

Wall mounting with any orientation.

Compact power supplies – single phase

Single phase,
smoothed

To EN 61558,
primary to DIN IEC 38 A

Output to EN 61131-2

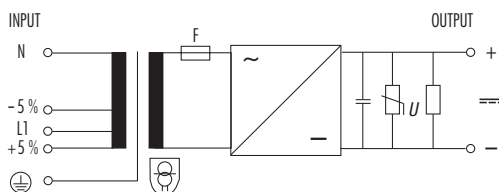
Touch-protected (VBG 4)

MNG

Input voltage 110 V AC \pm 5 % tapings



Circuit diagram



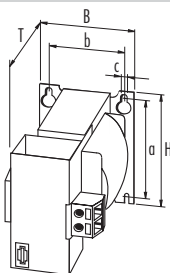
Ordering data		Art.-No.	Art.-No.	Art.-No.	Art.-No.
	Output rating				
24 V DC/ 1 A	24 W	UL, cUL	85194		
24 V DC/2,5 A	60 W			UL, cUL	85190
24 V DC/3,5 A	84 W			UL, cUL	85193
24 V DC/ 5 A	120 W				UL, cUL 85191

Technical data	Input				
Input voltage	110 V AC to DIN IEC 38 A, \pm 5 % tapings (tolerance \pm 10 %)				
Input current	0,36 A	0,82 A	1,19 A	1,6 A	
Input fuse (external)	0,63 A T	1 A T	1,5 A T	2 A T	
Frequency	50/60 Hz				

Technical data	Output				
Output voltage	24 V DC to EN 61131-2				
Max. output current	1 A	2,5 A	3 A (60 °C); 3,5 A (50 °C)	5 A	
Effective ripple	< 5 % eff				
Output fuse	2 A (automotive fuse FKS)	4 A (automotive fuse FKS)	7,5 A (automotive fuse FKS)	7,5 A (automotive fuse FKS)	
Output filter	VDR and smoothing capacitor				

General data					
Test voltage	to EN 61558				
Temperature range	-20...+55 °C, no condensation		-20...+60 °C, no condensation		-20...+55 °C, no condensation
Mounting method	key-hole mounting				
Weight	1,25 kg	1,7 kg	2,2 kg	3 kg	
Dimensions	H x B x T	78 x 71 x 109 mm	78 x 80 x 111 mm	84 x 87 x 120 mm	96 x 91,5 x 129 mm
Fixing centers	a x b x c	56 x 47,5 x 4,8 mm	56,5 x 53,5 x 4,8 mm	64 x 62 x 4,8 mm	84 x 75,5 x 5,8 mm

Dimension drawing/Fixing centers



Notes

The units are also available with UL 2601-1 medical. Suitable snap adapter and replacement fuses page 4.13.2

Compact power supplies – single phase

Single phase,
smoothed

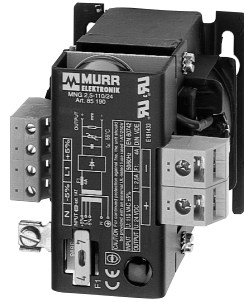
To EN 61558,
primary to DIN IEC 38 A

Output to EN 61131-2

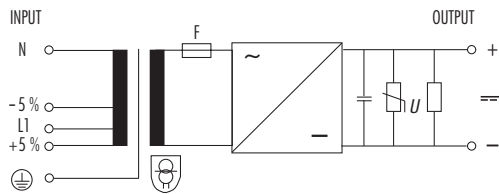
Touch protected (VBG 4)

MNG

Input voltage 110 V AC \pm 5 % tapings



Circuit diagram



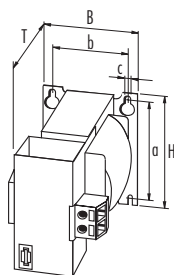
Ordering data	Art.-No.	Art.-No.
Output rating		
24 V DC/7,5 A 180 W	UL, cUL 85195	
24 V DC/10 A 240 W		UL, cUL 85192

Technical data	Input	
Input voltage	110 V AC to DIN IEC 38 A, \pm 5 % tapings (tolerance \pm 10 %)	
Input current	2,5 A	3,2 A
Input fuse (external)	3,2 A T	4 A T
Frequency	50/60 Hz	

Technical data	Output	
Output voltage	24 V DC to EN 61131-2	
Max. output current	7,5 A	10 A
Effective ripple	< 5 % eff	
Output fuse	15 A (automotive fuse FKS)	20 A (automotive fuse FKS)
Output filter	VDR and smoothing capacitor	

General data		
Test voltage	to EN 61558	
Temperature range	-20...+55 °C, no condensation	
Mounting method	key-hole mounting	
Weight	4,4 kg	5,6 kg
Dimensions	H x B x T 105 x 105 x 145 mm	120 x 105 x 174 mm
Fixing centers	a x b x c 84 x 86 x 5,8 mm	90 x 86,5 x 5,8 mm

Dimension drawing/Fixing centers



Notes	
	The units are also available with UL 2601-1 medical. Replacement fuses page 4.13.2

Compact power supplies – single phase

Single phase,
smoothed

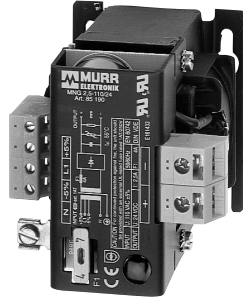
To EN 61558,
primary to DIN IEC 38 A

Output to EN 61131-2

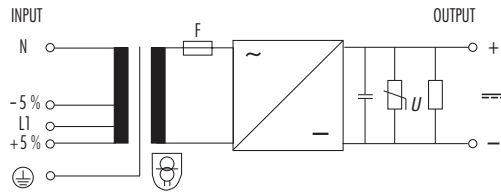
Touch protected (VBG 4)

MNG

Input voltage 230 V AC \pm 5 % tapings



Circuit diagram



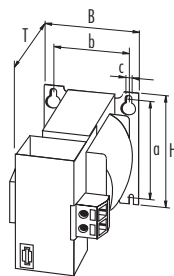
Ordering data	Art.-No.	Art.-No.	Art.-No.	Art.-No.
Output rating				
24 V DC/ 1 A 24 W	UL, cUL 85204			
24 V DC/2,5 A 60 W		UL, cUL 85200		
24 V DC/3,5 A 84 W			UL, cUL 85203	
24 V DC/ 5 A 120 W				UL, cUL 85201

Technical data	Input			
Input voltage	230 V AC to DIN IEC 38 A, \pm 5 % tapings (tolerance \pm 10 %)			
Input current	0,17 A	0,4 A	0,56 A	0,8 A
Input fuse (external)	0,25 A T	0,5 A T	0,8 A T	1 A T
Frequency	50/60 Hz			

Technical data	Output			
Output voltage	24 V DC to EN 61131-2			
Max. output current	1 A	2,5 A	3 A (60 °C); 3,5 A (50 °C)	5 A
Effective ripple	< 5 % eff			
Output fuse	2 A (automotive fuse FKS)	4 A (automotive fuse FKS)	7,5 A (automotive fuse FKS)	
Output filter	VDR and smoothing capacitor			

General data				
Test voltage	to EN 61558			
Temperature range	-20...+55 °C, no condensation		-20...+60 °C, no condensation -20...+55 °C, no condensation	
Mounting method	key-hole mounting			
Weight	1,25 kg	1,7 kg	2,2 kg	3 kg
Dimensions	H x B x T	78 x 71 x 109 mm	78 x 80 x 111 mm	84 x 87 x 120 mm 96 x 91,5 x 129 mm
Fixing centers	a x b x c	56 x 47,5 x 4,8 mm	56,5 x 53,5 x 4,8 mm	64 x 62 x 4,8 mm 84 x 75,5 x 5,8 mm

Dimension drawing/Fixing centers



Notes

The units are also available with UL 2601-1 medical. Suitable snap adapter and replacement fuses page 4.13.2

Compact power supplies – single phase

Single phase,
smoothed

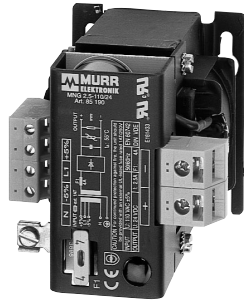
To EN 61558,
primary to DIN IEC 38 A

Output to EN 61131-2

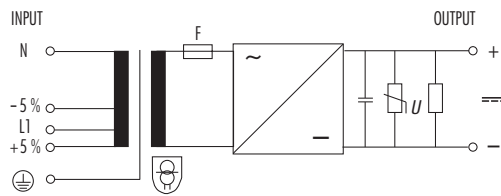
Touch protected (VBG 4)

MNG

Input voltage 230 V AC \pm 5 % tapings



Circuit diagram



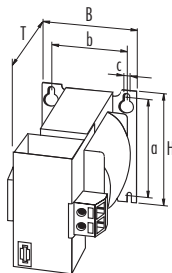
Ordering data		Art.-No.	Art.-No.
	Output rating		
24 V DC/7,5 A	180 W	UL, cUL	85199
24 V DC/10 A	240 W		UL, cUL
			85202

Technical data	Input		
Input voltage	230 V AC to DIN IEC 38 A, \pm 5 % tapings (tolerance \pm 10 %)		
Input current	1,18 A		1,51 A
Input fuse (external)	1,6 A T		2 A T
Frequency	50/60 Hz		

Technical data	Output		
Output voltage	24 V DC to EN 61131-2		
Max. output current	7,5 A		10 A
Effective ripple	< 5 % eff		
Output fuse	15 A (automotive fuse FKS)		20 A (automotive fuse FKS)
Output filter	VDR and smoothing capacitor		

General data			
Test voltage	to EN 61558		
Temperature range	-20...+55 °C, no condensation		
Mounting method	key-hole mounting		
Weight	4,4 kg		5,6 kg
Dimensions	H x B x T	105 x 105 x 145 mm	120 x 105 x 174 mm
Fixing centers	a x b x c	84 x 86 x 5,8 mm	90 x 86,5 x 5,8 mm

Dimension drawing/Fixing centers



Notes

The units are also available with UL 2601-1 medical. Replacement fuses page 4.13.2

Compact power supplies – single phase

Single phase, smoothed

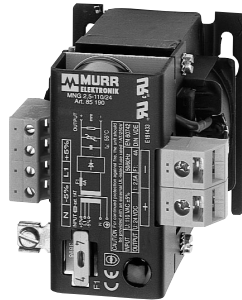
To EN 61558, primary to DIN IEC 38 A

Output to EN 61131-2

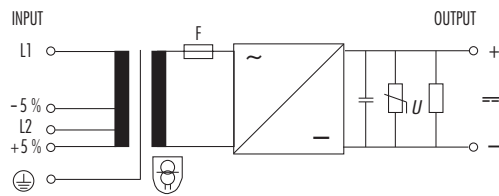
Touch protected (VBG 4)

MNG

Input voltage 400 V AC \pm 5 % tapings



Circuit diagram



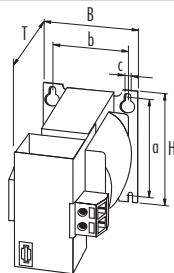
Ordering data	Art.-No.	Art.-No.	Art.-No.	Art.-No.
Output rating				
24 V DC/ 1 A 24 W	UL, cUL 85209			
24 V DC/2,5 A 60 W		UL, cUL 85205		
24 V DC/3,5 A 84 W			UL, cUL 85208	
24 V DC/ 5 A 120 W				UL, cUL 85206

Technical data	Input			
Input voltage	400 V AC to DIN IEC 38 A, \pm 5 % tapings (tolerance \pm 10 %)			
Input current	0,1 A	0,23 A	0,33 A	0,44 A
Input fuse (external)	0,2 A T	0,25 A T	0,4 A T	0,6 A T
Frequency	50/60 Hz			

Technical data	Output			
Output voltage	24 V DC to EN 61131-2			
Max. output current	1 A	2,5 A	3 A (60 °C); 3,5 A (50 °C)	5 A
Effective ripple	< 5 % eff			
Output fuse	2 A (automotive fuse FKS)	4 A (automotive fuse FKS)	7,5 A (automotive fuse FKS)	
Output filter	VDR and smoothing capacitor			

General data				
Test voltage	to EN 61558			
Temperature range	-20...+55 °C, no condensation		-20...+60 °C, no condensation -20...+55 °C, no condensation	
Mounting method	key-hole mounting			
Weight	1,25 kg	1,7 kg	2,2 kg	3 kg
Dimensions	H x B x T	78 x 71 x 109 mm	78 x 80 x 111 mm	84 x 87 x 120 mm 96 x 91,5 x 129 mm
Fixing centers	a x b x c	56 x 47,5 x 4,8 mm	56,5 x 53,5 x 4,8 mm	64 x 62 x 4,8 mm 84 x 75,5 x 5,8 mm

Dimension drawing/Fixing centers



Notes

The units are also available with UL 2601-1 medical. Suitable snap adapter and replacement fuses page 4.13.2

Compact power supplies – single phase



Single phase,
smoothed

To EN 61558,
primary to DIN IEC 38 A

Output to EN 61131-2

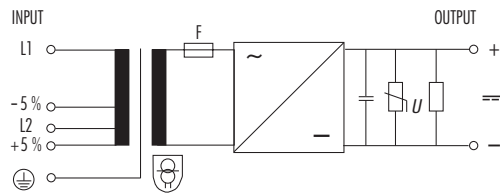
Touch protected (VBG 4)

MNG

Input voltage 400 V AC \pm 5 % tapings



Circuit diagram



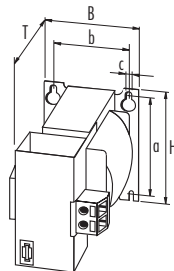
Ordering data	Art.-No.	Art.-No.
Output rating		
24 V DC/7,5 A	180 W	UL, cUL
24 V DC/10 A	240 W	85186
		UL, cUL
		85207

Technical data	Input	
Input voltage	400 V AC to DIN IEC 38 A, \pm 5 % tapings (tolerance \pm 10 %)	
Input current	0,88 A	0,9 A
Input fuse (external)	1,5 A T	1,25 A T
Frequency	50/60 Hz	

Technical data	Output	
Output voltage	24 V DC to EN 61131-2	
Max. output current	7,5 A	10 A
Effective ripple	< 5 % eff	
Output fuse	15 A (automotive fuse FKS)	20 A (automotive fuse FKS)
Output filter	VDR and smoothing capacitor	

General data		
Test voltage	to EN 61558	
Temperature range	-20...+55 °C, no condensation	
Mounting method	key-hole mounting	
Weight	4,4 kg	5,6 kg
Dimensions	H x B x T	105 x 105 x 145 mm
Fixing centers	a x b x c	84 x 86,5 x 5,8 mm

Dimension drawing/Fixing centers



Notes
The units are also available with UL 2601-1 medical. Replacement fuses page 4.13.2

Compact power supplies – single phase



Single phase, smoothed

To EN 61558, primary to DIN IEC 38 A

Touch protected (VBG 4)

TSKL

Low power P.S.U
Input voltage 115/ 230 V AC

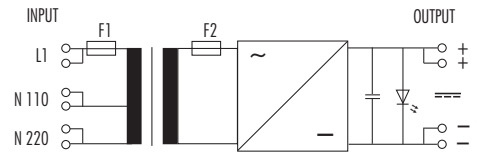
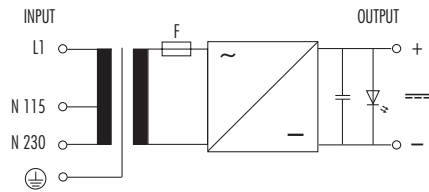


TSKL

Low power P.S.U
Input voltage 110/ 220 V AC



Circuit diagram



Ordering data

Art.-No.

Art.-No.

Output rating	Art.-No.
24 V DC/0,15 A 4 W	85297
24 V DC/0,25 A 6 W	85290

Technical data Input

Input voltage	115/ 230 V AC (tolerance ± 10 %)	110/ 220 V AC (tolerance ± 10 %)
Input current	0,12/ 0,06 A	0,1/ 0,05 A
Frequency	50/60 Hz	50/60 Hz
Input fuse	115/110 V AC 0,2 A T (external) 230/220 V AC 0,1 A T (external)	0,2 A T (5 x 20 mm) - as supplied 0,1 A T (5 x 20 mm)

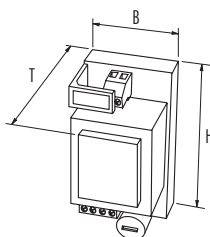
Technical data Output

Output voltage	24 V DC to EN 61131-2	24 V DC (28 V DC ≥ 21 V DC at nominal input voltage)
Max. output current	0,15 A	0,25 A
Effective ripple	< 5 % eff	< 5 % eff
Output fuse	0,25 A T (5 x 20 mm)	0,5 A T (5 x 20 mm)
Output filter	LED green; Varistor and smoothing capacitor	

General data

Test voltage	to EN 61558	
Temperature range	-20...+60 °C, no condensation	
Mounting method	DIN-rail mounting to EN 50022	
Protection	IP20	IP20
Weight	0,35 kg	0,5 kg
Dimensions H x B x T	86 x 45 x 70 mm	86 x 67,5 x 75 mm

Dimension drawing/Fixing centers



Notes