

SWITCH MODE POWER SUPPLIES

	Output voltage	Current	Product description	Art.-No.	Page
<i>1-phase</i>	5 V DC	3 A	MCS-B	85371	1.3.7
		6 A	MCS	85041	1.3.3
	12 V DC	1 A	MCS-B	85372	1.3.7
		2.5 A	MCS-B	85373	1.3.7
		5 A	MCS	85040	1.3.3
	24 V DC	0.6 A	MCS-B	85160	1.3.8
		0.6 A	Eco Power	85150	1.3.12
		1.3 A	MCS-B	85161	1.3.8
		1.3 A	Eco Rail	85301	1.3.12
		1.3 A	Eco Power	85151	1.3.10
		2.5 A	MCS	85064	1.3.4
		2.5 A	MCS-B	85162	1.3.8
		2.5 A	Eco-Rail	85302	1.3.10
		2.5 A	Eco Power	85152	1.3.12
		3 A	MCS	85060	1.3.4
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		5 A	MCS-B	85163	1.3.9
		5 A	Eco Rail	85303	1.3.11
		5 A	Eco Power	85153	1.3.12
		7.5 A	MCS-B	85164	1.3.9
7.5 A		Eco Power	85154	1.3.13	
10 A		MCS	85062	1.3.5	
10 A		MCS-B	85165	1.3.9	
10 A	Eco Rail	85305	1.3.11		
10 A	Eco Power	85155	1.3.13		
20 A	MCS	85063	1.3.5		
30.5 V DC	4 A	MCS-A 4	85381	1.3.6	
	4 A	MCS-A EFD	85382	1.3.6	
<i>2-phase</i>	24 V DC	5 A	MCS	857725	1.3.14
		5 A	Evolution	85000	1.3.15
		10 A	MCS	857726	1.3.14
		10 A	Evolution	85001	1.3.15
		20 A	Evolution	85002	1.3.15
		40 A	Evolution	85004	1.3.15
<i>3-phase</i>	24 V DC	5 A	MCS	857814	1.3.16
		5 A	Evolution	85000	1.3.15
		10 A	MCS	85071	1.3.16
		10 A	Evolution	85001	1.3.15
		20 A	MCS	85072	1.3.17
		20 A	Evolution	85002	1.3.15
		40 A	MCS	85099	1.3.17
		40 A	Evolution	85004	1.3.15

SWITCH MODE POWER SUPPLIES



MCS 2.5...40A • 60 °C • IP20

- 1-, 2-phase and 3-phase
- For universal applications, worldwide
- Full power up to 60 °C ambient temperature
- Adjustable output voltage
- Slim, book-like design saves space
- Pluggable screw terminals
- Parallel and series connection operation possible
- Additional model with DeviceNet certification
- Approvals for applications worldwide



EVOLUTION 5...40 A • 70 °C • IP20

- 2- and 3-phase
- Nominal input voltage range of 3 x 360...520 V AC or 480...745 V DC
- Continuous 2-phase operation possible
- Full power at 55 °C ambient temperature
- Adjustable output voltage
- Extra power function for 4 seconds 50 % additional power
- Compact design, good cooling
- Extended temperature range of -25 ... +70 °C
- Two-color LED display
- Convenient DIN-rail mounting
- Parallel and series connection operation possible
- Approvals for applications worldwide



MCS-B 0.6...10A • 70 °C • IP20

- Single-phase
- With wide voltage input for worldwide use
- Full power at 55 °C ambient temperature and 230 V AC input voltage
- Adjustable output voltage
- Slim, book-like design saves space
- Spacer for optimum air circulation
- Parallel and series connection operation possible
- Additional model with DeviceNet and NEC Class2 approval
- Approvals for applications worldwide



ECO-RAIL 1.3...10 A • 55 °C • IP20

- Single-phase
- Wide voltage input that is easily adjustable
- Full power up to 40 °C ambient temperature
- Adjustable output voltage
- Slim, book-like design saves space
- Two mounting options
- Pluggable screw terminals
- Series connection operation possible
- Approvals for applications worldwide



ECO-POWER 0.6...10 A • 50 °C • IP20

- Single-phase
- Wide voltage input that is easily adjustable
- Full power up to 40 °C ambient temperature
- Adjustable output voltage
- Flat design
- Strong, perforated housing allows optimum heat dissipation
- Convection cooling
- Screw terminals with touch protection
- Series connection operation possible

SWITCH MODE POWER SUPPLIES

Single-phase, primary switched

– stabilized output voltage
short-circuit and
overload protected

– touch protected acc. to
EN 60529 (IP20)

Approvals:



MCS

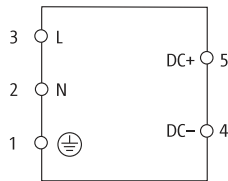
Current 5 A
Output voltage 12 V DC



MCS

Current 6 A
Output voltage 5 V DC

Circuit diagram



Ordering data

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

Input

Input voltage	90...265 V AC, 110...300 V DC	
Input current	1.1 A (115 V AC); 0.6 A (230 V AC)	0.5 A (115 V AC); 0.3 A (230 V AC)
Inrush current after 1 ms	≤ 22 A	
Primary fusing	max. 10 A	
Frequency	50/60 Hz	

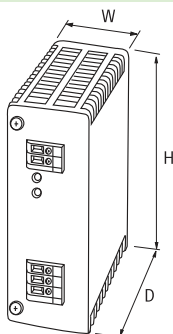
Output

Output voltage	12 V DC (SELV) ± 1 %, 10...15 V adjustable	5 V DC (SELV) ± 1 %, 4...6 V adjustable
Output current	5 A (+55 °C); 5...6 A (+45 °C)	6 A (+60 °C); 6...7.5 A (+50 °C)
Efficiency	85 %	80 %
Mains failure bridging	≥ 10 ms (115 V AC); ≥ 70 ms (230 V AC)	≥ 12 ms (115 V AC); ≥ 90 ms (230 V AC)
Ripple	≤ 20 mV eff	≤ 10 mV eff
Spikes	≤ 200 mV ss	≤ 50 mV ss
Protection	short-circuit and overload protected	
LED display	LED green for output voltage	
Parallel usage/serial usage	no/yes	

General data

Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2	
Temperature range	0...+55 °C	0...+60 °C
Relative humidity	5...95 %, no condensation	
Mounting method	DIN-rail mounting TH35 (EN 60715)	
Weight	0.45 kg	0.50 kg
Dimensions H x W x D	107.5 x 42 x 97.5 mm	

Dimension drawing



Notes

MCS switch mode power supplies meet the EN 61000-3-2 guideline.
Mounting adapter for side mounting see page 1.3.18.

SWITCH MODE POWER SUPPLIES

Single-phase, primary switched

– stabilized output voltage
short-circuit and
overload protected

– touch protected acc. to
EN 60529 (IP20)

Approvals:



MCS

Current 2.5 A

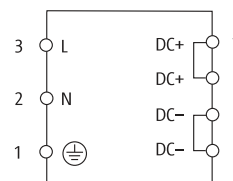
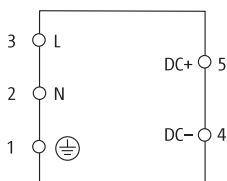


MCS

Current 3 A



Circuit diagram

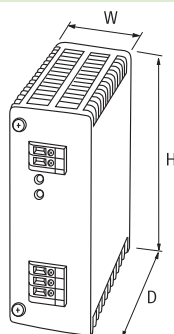


Ordering data

Output rating	Art.-No.	Art.-No.
24 V DC / 2.5 A 60 W	85064	
24 V DC / 3 A 72 W		85060

Input		
Input voltage	90...265 V AC, 110...300 V DC	85...265 V AC
Input current	1.1 A (100 V AC); 0.5 A (240 V AC)	0.82 A (115 V AC); 0.4 A (230 V AC)
Inrush current after 1 ms	≤ 22 A	≤ 20 A
Primary fusing	max. 10 A	
Frequency	50/60 Hz	
Output		
Output voltage	24 V DC (SELV) ± 1 %, 20...30 V adjustable	24 V DC (SELV) ± 1 %, 24...28 V adjustable
Output current	2.5 A (+60 °C); 2.5...3 A (+50 °C)	3 A (+60 °C); 3.5 A (+40 °C)
Efficiency	85 %	82 % (230 V AC); 79 % (115 V AC)
Mains failure bridging	≥ 10 ms typ (115 V AC); ≥ 70 ms (230 V AC)	≥ 40 ms (85...265 V AC)
Ripple	≤ 20 mV eff	
Spikes	≤ 100 mV ss	≤ 240 mV ss
Protection	short-circuit and overload protected	
LED display	LED green for output voltage	
Parallel usage/serial usage	no/yes	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2	
Temperature range	0...+60 °C	
Relative humidity	5...95 %, no condensation	
Mounting method	DIN-rail mounting TH35 (EN 60715)	
Weight	0.45 kg	0.79 kg
Dimensions H x W x D	107.5 x 42 x 97.5 mm	134 x 46 x 104 mm

Dimension drawing



Notes

MCS switch mode power supplies meet the EN 61000-3-2 guideline.
Mounting adapter for side mounting see page 1.3.18.

SWITCH MODE POWER SUPPLIES

Single-phase, primary switched

– stabilized output voltage
short-circuit and
overload protected

– touch protected acc. to
EN 60529 (IP20)

Approvals:



MCS
Current 5 A

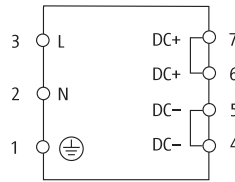
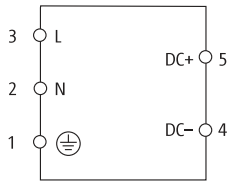


MCS
Current 10 A



MCS
Current 20 A

Circuit diagram



Ordering data

Output rating	Art.-No.	Art.-No.	Art.-No.
24 V DC/ 5 A 120 W	85061		
24 V DC/10 A 240 W		85062	
24 V DC/20 A 480 W			85063

Input

Input voltage	90...265 V AC, 125...300 V DC	90...265 V AC, 90...250 V DC	90...265 V AC, 130...300 V DC
Input current	1.4 A (100 V AC); 0.6 A (240 V AC)	2.7 A (100 V AC); 1.1 A (240 V AC)	5.5 A (100 V AC); 2.4 A (240 V AC)
Inrush current after 1 ms	≤ 25 A		≤ 30 A
Primary fusing	max. 10 A		max. 16 A
Frequency	50/60 Hz		

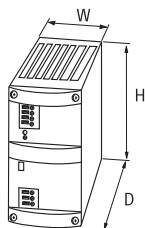
Output

Output voltage	24 V DC (SELV) ± 1 %, 24...28 V adjustable		
Output current	5 A (60 °C); 6 A (40 °C, 110...265 V AC)	10 A (60 °C); 12 A (40 °C, 110...265 V AC)	20 A (60 °C); 24 A (40 °C, 110...265 V AC)
Efficiency	83 % (115 V AC); 87 % (230 V AC)	88 % (115 V AC); 0.9 (230 V AC)	
Mains failure bridging	≥ 18 ms	≥ 15 ms	≥ 18 ms
Ripple	≤ 20 mV eff		
Spikes typical	≤ 80 mV ss	≤ 200 mV ss	≤ 250 mV ss
Protection	short-circuit and overload protected		
LED display	LED green for output voltage		
Selectable switch-off mode	front sided bridging link (self activating re-start or definite shut-off)		
Parallel usage/serial usage	yes/yes		

General data

Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2		
Temperature range	0...+60 °C		
Relative humidity	5...95 %, no condensation		
Mounting method	DIN-rail mounting TH35 (EN 60715)		screw mount. M4, 4 pcs. in rectangle 60 x 197 mm
Weight	0.75 kg	1.5 kg	2.7 kg
Dimensions H x W x D	115 x 54 x 151 mm	127 x 68 x 204 mm	209 x 84 x 233 mm

Dimension drawing



Notes

MCS switch mode power supplies meet the EN 61000-3-2 guideline.
Mounting adapter for side mounting see page 1.3.18.

SWITCH MODE POWER SUPPLIES

Single-phase, primary switched

– supply voltage
for AS-Interface bus

– touch protected acc. to
EN 60529 (IP20)

Approvals:  

MCS-A 4

Current 4 A
Output voltage 30.5 V DC

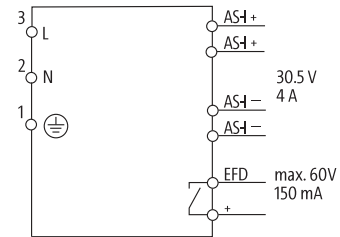
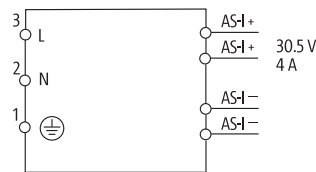


MCS-A 4 EFD

Current 4 A
Output voltage 30.5 V DC



Circuit diagram



Ordering data

Art.-No.

Art.-No.

Output rating
30.5 V DC / 4 A 122 W

85381

85382

Input

Input voltage	95...265 V AC
Input current	2.1 A (110 V AC); 0.93 A (230 V AC)
Inrush current after 1 ms	≤ 35 A (230 V AC)
Primary fusing	max. 10 A T
Frequency	50/60 Hz

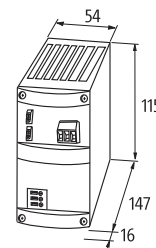
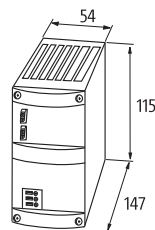
Output

Output voltage	30.5 V DC (SELV) ± 2 %
Output current	4.0 A (+40 °C); 3.4 A (+55 °C)
Efficiency	83 % (110 V AC); 85 % (240 V AC)
Mains failure bridging	≥ 14 ms (110 V AC); ≥ 80 ms (230 V AC)
Ripple	≤ 20 mV eff
Protection	short-circuit and overload protected
LED display	LED green at output voltage
Output filter	filter acc. to AS-Interface specification

General data

Standards	EN 60950-1, EN 61204-3, EN 55022 B
Temperature range	-10...+40 °C, up to +55 °C derating (storage temperature - 25...+85 °C)
Mounting method	DIN-rail mounting TH35 (EN 60715)
AS-Interface	unit appropriates AS-Interface specification for power supplies (PELV)
Weight	0.6 kg

Dimension drawing



Notes

Mounting adapter for side mounting see page 1.3.18.

SWITCH MODE POWER SUPPLIES

Single-phase, primary switched

– stabilized output voltage
short-circuit and
overload protected

– touch protected acc. to
EN 60529 (IP20)

MCS-B

Current 3 A
Output voltage 5 V DC



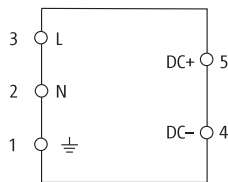
MCS-B

Current 1 A
Output voltage 12 V DC

MCS-B

Current 2.5 A
Output voltage 12 V DC

Circuit diagram



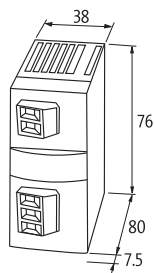
Ordering data	Art.-No.	Art.-No.	Art.-No.
Output rating			
5 V DC/ 3 A 15 W	85371		
12 V DC/ 1 A 12 W		85372	
12 V DC/2.5 A 30 W			85373

Input			
Input voltage	95...265 V AC, 110...300 V DC	90...265 V AC, 110...300 V DC	95...265 V AC, 110...300 V DC
Input current	0.3 A (115 V AC); 0.2 A (230 V AC)	0.33 A (100 V AC); 0.16 A (230 V AC)	0.56 A (115 V AC); 0.31 A (230 V AC)
Inrush current after 1 ms	≤ 15 A	≤ 20 A	
Primary fusing	max. 10 A		
Frequency	50/60 Hz		

Output			
Output voltage	5 V DC (SELV) ± 1 %, 4.2...6 V adjustable	12 V DC (SELV) ± 1 %, 12...15 V adjustable	
Output current	3 A (+40 °C), 2.5 A (+55 °C)	1 A (+50 °C); 0.8 A (+60 °C)	2.5 A (+40 °C); 2.1 A (+55 °C)
Efficiency	80 %	77 %	82 %
Mains failure bridging	≥ 30 ms (115 V AC); 180 ms (230 V AC)	≥ 20 ms (115 V AC); ≥ 150 ms (230 V AC)	≥ 20 ms (115 V AC); ≥ 110 ms (230 V AC)
Ripple	≤ 20 mV eff	≤ 50 mV eff	
Spikes	≤ 120 mV ss	≤ 300 mV ss	≤ 120 mV ss
Protection	short-circuit and overload protected		
LED display	LED green for output voltage		
Parallel usage/serial usage	no/yes max. 2 units		

General data			
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2		
Temperature range	0...+40 °C, up to 55 °C derating	0...+50 °C	0...+40 °C, up to 55 °C derating
Relative humidity	5...95 %, no condensation		
Mounting method	DIN-rail mounting TH35 (EN 60715)		
Weight	0.16 kg	0.13 kg	0.16 kg

Dimension drawing



Notes

MCS-B switch mode power supplies meet the EN 61000-3-2 guideline.
Mounting adapter for side mounting see page 1.3.18.

Switch mode power supplies

SWITCH MODE POWER SUPPLIES

Single-phase, primary switched

– stabilized output voltage
short-circuit and
overload protected

– touch protected acc. to
EN 60529 (IP20)

Approvals:



MCS-B

Current 0.6 A



MCS-B

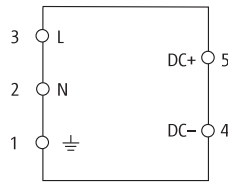
Current 1.3 A

MCS-B

Current 2 A



Circuit diagram

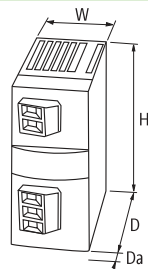


Ordering data	Art.-No.	Art.-No.	Art.-No.
Output rating			
24 V DC / 0.6 A 15 W	85160		
24 V DC / 1.3 A 30 W		85161	
24 V DC / 2.5 A 60 W			85162

Input			
Input voltage	90...265 V AC, 110...300 V DC		95...265 V AC, 110...300 V DC
Input current	0.3 A (100 V AC); 0.2 A (230 V AC)	0.65 A (100 V AC); 0.37 A (230 V AC)	1.04 A (110 V AC); 0.63 A (230 V AC)
Inrush current after 1 ms	≤ 20 A		
Primary fusing	max. 10 A		
Frequency	50/60 Hz		
Output			
Output voltage	22.5...28 V DC adjustable		
Output current	0.6 A (+55 °C)...0.4 A (+70 °C)	1.3 A (+40 °C)...0.7 A (+70 °C)	2.5 A (+40 °C)...1.5 A (+70 °C)
Efficiency	81 % (100 V AC); 83 % (230 V AC)	82 %	85 % (110 V AC); 87 % (230 V AC)
Mains failure bridging	≥ 25 ms (100 V AC); ≥ 150 ms (230 V AC)	≥ 15 ms (100 V AC); ≥ 100 ms (230 V AC)	≥ 15 ms (110 V AC); ≥ 80 ms (230 V AC)
Ripple	≤ 50 mV eff		
Spikes	≤ 350 mV ss	≤ 120 mV ss	
Protection	short-circuit and overload protected		
LED display	LED green for output voltage		
Parallel usage/serial usage	max. 5 units/max. 2 units		

General data			
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2		
Temperature range	0...+55 °C, up to +70 °C derating		
Relative humidity	5...95 %, no condensation		
Mounting method	DIN-rail mounting TH35 (EN 60715)		
Weight	0.11 kg	0.16 kg	0.23 kg
Dimensions	H x W x D x Da	76 x 38 x 80 x 7.5 mm	76 x 38 x 100.5 x 7.5 mm

Dimension drawing



Notes

MCS-B switch mode power supplies meet the EN 61000-3-2 guideline.
Mounting adapter for side mounting see page 1.3.18.

SWITCH MODE POWER SUPPLIES

Single-phase, primary switched

– stabilized output voltage
short-circuit and
overload protected

– touch protected acc. to
EN 60529 (IP20)

Approvals:



MCS-B
Current 5 A



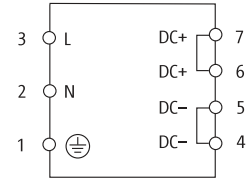
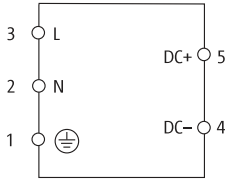
MCS-B
Current 7.5 A



MCS-B
Current 10 A



Circuit diagram



Ordering data

Output rating	Approval	Art.-No.	Art.-No.	Art.-No.
24 V DC/ 5 A 120 W	GL	85163		
24 V DC/ 7.5 A 180 W			85164	
24 V DC/ 10 A 240 W				85165

Input

Input voltage	100...265 V AC		
Input current	2 A (110 V AC); 1.16 A (230 V AC)	2.9 A (115 V AC); 1.6 A (230 V AC)	3.4 A (115 V AC); 2.2 A (230 V AC)
Inrush current after 1 ms	≤ 30 A	≤ 37 A	≤ 40 A
Primary fusing	max. 10 A		max. 16 A
Frequency	50/60 Hz		

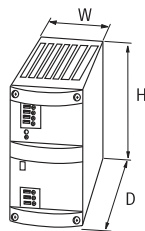
Output

Output voltage	22.5...28 V DC		
Output current	5 A (+55 °C)...3 A (+70 °C)	7.5 A (+55 °C)...4.5 A (+70 °C)	10 A (+55 °C)...6.0 A (+70 °C)
Efficiency	86 % (110 V AC); 87 % (230 V AC)	87 % (115...230 V AC/24 V DC)	83 % (115 V DC); 85 % (230 V AC)
Mains failure bridging	≥ 10 ms (110 V AC); ≥ 80 ms (230 V AC)	≥ 14 ms (115 V AC); ≥ 80 ms (230 V AC)	≥ 15 ms (115 V AC); ≥ 115 ms (230 V AC)
Ripple	≤ 20 mV eff		
Spikes	≤ 100 mV ss		
Protection	short-circuit and overload protected		
LED display	LED green for output voltage		
Parallel usage/serial usage	max. 5 units/max. 2 units		

General data

Standards	EN 60950-1, EN 61204-3, EN 55011 A		
Temperature range	0...+40 °C, up to +55 °C derating		
Relative humidity	5...95 %, no condensation		
Mounting method	DIN-rail mounting TH35 (EN 60715)		
Weight	0.54 kg	0.7 kg	1.0 kg
Dimensions H x W x D	115 x 54 x 125 mm	115 x 54 x 145 mm	128 x 68 x 165 mm

Dimension drawing



Notes

Screw mounting set and mounting adapter for side mounting see page 1.3.18.

| NOTES

A large grid of graph paper for taking notes, consisting of 20 columns and 30 rows of small squares.

SWITCH MODE POWER SUPPLIES

Single-phase, primary switched

- stabilized output voltage short-circuit and overload protected
- wide voltage input
- touch protected acc. to EN 60529 (IP20)

Eco Rail

Current 1.3 A

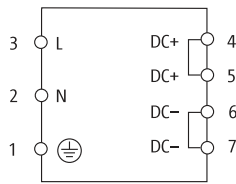
Eco Rail

Current 2.5 A



Approvals:  

Circuit diagram



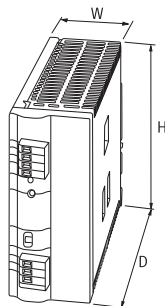
Ordering data	Art.-No.	Art.-No.
Output rating		
24 V DC/1.3 A 30 W	85301	
24 V DC/2.5 A 60 W		85302

Input		
Input voltage	90...264 V AC	
Input current	0.7 A (115 V AC); 0.4 A (230 V AC)	1.1 A (115 V AC); 0.6 A (230 V AC)
Inrush current after 1 ms	≤ 20 A	
Primary fusing	max. 20 A	
Frequency	50/60 Hz	

Output		
Output voltage	24 V DC (SELV) ± 1 %	
Output current	1.3 A (+40 °C); 1.0 A (+55 °C)	2.5 A (+40 °C); 2.0 A (+50 °C)
Efficiency	84 % (115 V AC); 84 % (230 V AC)	85 % (115 V AC); 87 % (230 V AC)
Mains failure bridging	≥ 25 ms (115 V AC); ≥ 130 ms (230 V AC)	≥ 20 ms (115 V AC); ≥ 100 ms (230 V AC)
Ripple	≤ 20 mV eff	
Spikes	≤ 100 mV ss	
Protection	short-circuit and overload protected	
LED display	LED green for output voltage	
Parallel usage/serial usage	no/yes max. 2 units	

General data		
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2	
Temperature range	0...+40 °C, up to 55 °C derating (storage temperature -20...+85 °C)	
Relative humidity	20...90 %, no condensation	
Mounting method	DIN-rail mounting (TH35) acc. to EN 60715	
Weight	0.16 kg	
Dimensions H x W x D	125 x 50 x 70 mm	125 x 50 x 80 mm

Dimension drawing



Notes
Eco Rail switch mode power supplies meet the EN 61000-3-2 guideline.

SWITCH MODE POWER SUPPLIES

Single-phase, primary switched

- stabilized output voltage short-circuit and overload protected
- wide voltage input
- touch protected acc. to EN 60529 (IP20)

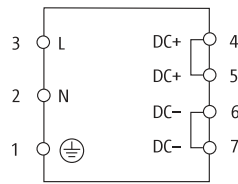
Approvals:  

Eco Rail
Current 5 A



Eco Rail
Current 10 A

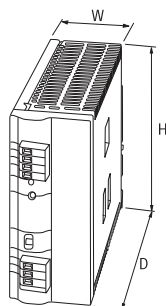
Circuit diagram



Ordering data	Art.-No.	Art.-No.
Output rating		
24 V DC/5 A 120	W	85303
24 V DC/10 A 240 W		85305

Input		
Input voltage	90...132 V AC, 173...264 V AC	
Input current	2.3 A (115 V AC); 1.2 A (230 V AC)	4.0 A (115 V AC); 2.4 A (230 V AC)
Inrush current after 1 ms	≤ 20 A	
Primary fusing	max. 20 A	
Frequency	50/60 Hz	
Output		
Output voltage	24 V DC (SELV) ± 1 %	
Output current	5 A (+40 °C); 4 A (+55 °C)	10 A (+40 °C); 7.5 A (+50 °C)
Efficiency	84 % (115 V AC); 86 % (230 V AC)	87 % (115 V AC); 88 % (230 V AC)
Mains failure bridging	≥ 40 ms (115 V AC); ≥ 40 ms (230 V AC)	≥ 20 ms (115 V AC), ≥ 20 ms (230 V AC)
Ripple	≤ 20 mV eff	
Spikes	≤ 60 mV ss	≤ 150 mV ss
Protection	short-circuit and overload protected	
LED display	LED green for output voltage	
Parallel usage/serial usage	no/yes max. 2 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2	EN 60950-1, EN 61204-3, EN 55022 B
Temperature range	0...+40 °C, up to 55 °C derating (storage temperature -20...+85 °C)	
Relative humidity	20...90 %, no condensation	
Mounting method	DIN-rail mounting (TH35) acc. to EN 60715	
Weight	0.16 kg	
Dimensions H x W x D	125 x 50 x 125 mm	125 x 72 x 125 mm

Dimension drawing



Notes

Eco Rail switch mode power supplies meet the EN 61000-3-2 guideline.

SWITCH MODE POWER SUPPLIES

Single-phase, primary switched

- stabilized output voltage short-circuit and overload protected
- wide voltage input
- touch protected acc. to EN 60529 (IP20)

Eco Power
Current 0.6 A

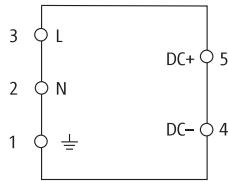
Eco Power
Current 1.3 A

Eco Power
Current 2.5 A

Eco Power
Current 5.0 A



Circuit diagram

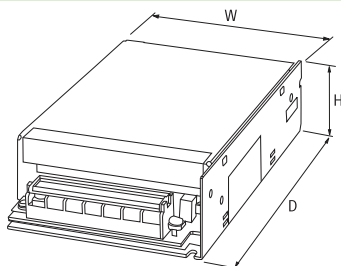


Ordering data	Art.-No.	Art.-No.	Art.-No.	Art.-No.
Output rating				
24 V DC/0.6 A 15 W	85150			
24 V DC/1.3 A 30 W		85151		
24 V DC/2.5 A 60 W			85152	
24 V DC/5.0 A 120 W				85153

Input				
Input voltage	90..264 V AC			
Input current	0.3 A (115 V AC); 0.2 A (230 V AC)	0.7 A (115 V AC); 0.4 A (230 V AC)	1.2 A (115 V AC); 0.5 A (230 V AC)	2.4 A (115 V AC); 1.0 A (230 V AC)
Inrush current after 1 ms	≤ 20 A			
Primary fusing	max. 16 A			
Frequency	50/60 Hz			
Output				
Output voltage	24 V DC (SELV) ± 1 %			
Output current	0.6 A (+40 °C); 0.5 A (+50 °C)	1.3 A (+40 °C); 1.04 A (+50 °C)	2.5 A (+40 °C); 2.0 A (+50 °C)	5.0 A (+40 °C); 4.0 A (+50 °C)
Efficiency	85 % (115 V AC); 87 % (230 V AC)	85 % (115 V AC); 85 % (230 V AC)	85 % (115 V AC); 87 % (230 V AC)	86 % (115 V AC); 87 % (230 V AC)
Mains failure bridging	≥ 10 ms (115 V AC); ≥ 90 ms (230 V AC)			≥ 15 ms (115 V AC); ≥ 80 ms (230 V AC)
Ripple	≤ 20 mV eff			≤ 30 mV eff
Spikes	≤ 100 mV ss			
Protection	short-circuit and overload protected			
LED display	LED green for output voltage			
Parallel usage/serial usage	no/yes max. 2 units			

General data				
Standards	EN 60950-1, EN 61204-3, EN 55011 B			
Temperature range	0...+40 °C, up to +50 °C derating (storage temperature -20...+85 °C)			
Relative humidity	20..90 %, no condensation			
Mounting method	screw mounting, M3			
Weight	0.16 kg			
Dimensions H x W x D	36 x 105 x 77 mm	40 x 135 x 98 mm	41 x 164 x 98 mm	

Dimension drawing



Notes

Switch mode power supplies

SWITCH MODE POWER SUPPLIES

Single-phase, primary switched

- stabilized output voltage
short-circuit and overload
protected
- wide voltage input
- touch protected acc. to
EN 60529 (IP20)

Eco Power

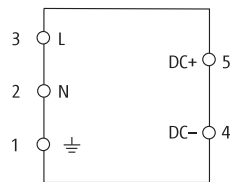
Current 7.5 A

Eco Power

Current 10 A



Circuit diagram



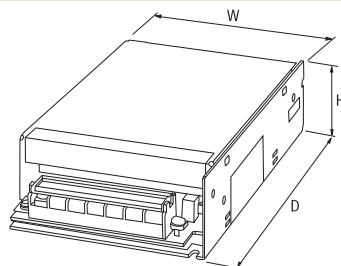
Ordering data	Art.-No.	Art.-No.
Output rating		
24 V DC/7.5 A 180 W	85154	
24 V DC/10 A 240 W		85155

Input		
Input voltage	90...132 V AC, 180...264 V AC	
Input current	3.4 A (115 V AC); 1.9 A (230 V AC)	4.6 A (115 V AC); 2.8 A (230 V AC)
Inrush current after 1 ms	≤ 20 A	25 A
Primary fusing	max. 16 A	
Frequency	50/60 Hz	

Output		
Output voltage	24 V DC (SELV) ± 1 %	
Output current	7.5 A (+40 °C); 6.0 A (+50 °C)	10 A (+40 °C); 8.0 A (+50 °C)
Efficiency	85 % (115 V AC); 86 % (230 V AC)	84 % (115 V AC); 85 % (230 V AC)
Mains failure bridging	≥ 20 ms (115 V AC); ≥ 20 ms (230 V AC)	≥ 15 ms (115 V AC); ≥ 15 ms (230 V AC)
Ripple	≤ 50 mV eff	≤ 30 mV eff
Spikes	≤ 100 mV ss	≤ 200 mV ss
Protection	short-circuit and overload protected	
LED display	LED green for output voltage	
Parallel usage/serial usage	no/yes max. 2 units	

General data		
Standards	EN 60950-1, EN 61204-3, EN 55011 B	
Temperature range	0...+40 °C, up to +50 °C derating (storage temperature -20...+85 °C)	
Relative humidity	20...90 %, no condensation	
Mounting method	screw mounting, M3	screw mounting, M4
Weight	0.16 kg	
Dimensions H x W x D	50 x 205 x 100 mm	50 x 230 x 115 mm

Dimension drawing



Notes

SWITCH MODE POWER SUPPLIES

Two-phase,
primary switched

– stabilized output voltage
short-circuit and overload
protected

– touch protected acc. to
EN 60529 (IP20)

MCS

Current 5 A

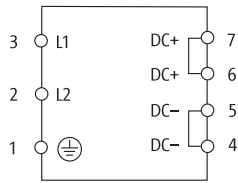
MCS

Current 10 A



Approvals:

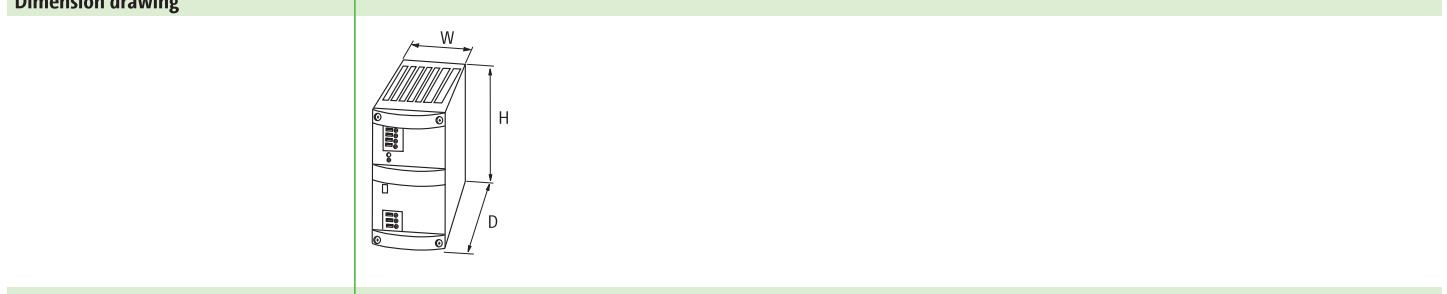
Circuit diagram



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

Input		
Input voltage	340...460 V AC	
Input current	0.85 A (400 V AC)	1.6 A (400 V AC)
Inrush current after 1 ms	≤ 22 A	
Primary fusing	max. 10 A	
Frequency	50/60 Hz	
Output		
Output voltage	24 V DC (SELV) ± 1 %, 24...28 V adjustable	
Output current	5 A (+50 °C); 5...6 A (+40 °C)	10 A (+60 °C); 10...12 A (+40 °C)
Efficiency	86 %	
Mains failure bridging	≥ 10 ms (400 V AC)	
Ripple	≤ 20 mV eff	
Spikes typical	100 mV ss	200 mV ss
Protection	short-circuit and overload protected	
LED display	LED green for output voltage	
Selectable switch-off mode	front sided bridging link (self activating re-start or definite shut-off)	
Parallel usage/serial usage	yes/yes	

General data		
Standards	EN 60950-1, EN 61204-3, EN 55022 B	
Temperature range	0...+60 °C	
Relative humidity	5...95 %, no condensation	
Mounting method	DIN-rail mounting TH35 (EN 60715)	
Weight	0.80 kg	1.7 kg
Dimensions H x W x D	127 x 68 x 140 mm	127 x 68 x 160 mm



Notes: Mounting adapter for side mounting see page 1.3.18.

SWITCH MODE POWER SUPPLIES

Two-/three-phase,
primary switched

– stabilized output voltage
short-circuit and overload
protected

– wide voltage input

– touch protected acc. to
EN 60529 (IP20)

Approvals:



Evolution

Current 5 A

Evolution

Current 10 A

Evolution

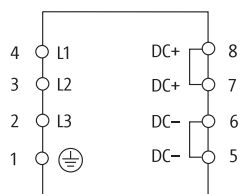
Current 20 A

Evolution

Current 40 A



Circuit diagram



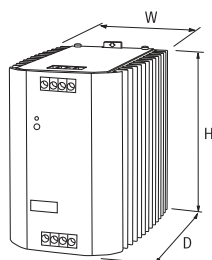
Ordering data	Art.-No.	Art.-No.	Art.-No.	Art.-No.
Output rating				
24 V DC/5 A 120 W	85000			
24 V DC/10 A 240 W		85001		
24 V DC/20 A 480 W			85002	
24 V DC/40 A 960 W				85004

Input				
Input voltage	3 x 360...520 V AC, 480...745 V DC			
Input current	3 x 0.3 A	3 x 0.8 A	3 x 1.3 A	3 x 2.4 A
Inrush current after 1 ms	≤ 10 A	≤ 15 A	≤ 19 A	
Primary fusing	3 x 10 A			3 x 20 A
Frequency	50/60 Hz			

Output				
Output voltage	24 V DC (SELV) ± 1 %, 22...28 V adjustable			
Output current	5 A (+55 °C); 3 A (+70 °C)	10 A (+55 °C); 6.5 A (+70 °C)	20 A (+55 °C); 15.8 A (+70 °C)	40 A (+55 °C); 30 A (+70 °C)
Efficiency	86 %	90 %		91 %
Mains failure bridging	≥ 30 ms (400 V AC)	≥ 19 ms (400 V AC)		
Ripple	≤ 50 mV eff			
Spikes	≤ 100 mV ss			
Protection	short-circuit and overload protected			
LED display	LED green = OK; LED red = overload			
Parallel usage/serial usage	max. 5 units/max. 2 units			

General data				
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2		EN 60950-1, EN 61204-3, EN 55011 A	
Temperature range	-25...+60 °C (stor. temp. -40...+85 °C)		-25...+70 °C (stor. temp. -40...+85 °C)	
Relative humidity	5...95 %, no condensation			
Mounting method	DIN-rail mounting (TH35) acc. to EN 60715			
Weight	1.0 kg	1.3 kg	2.0 kg	3.0 kg
Dimensions H x W x D	132 x 83 x 98 mm	132 x 93 x 114 mm	132 x 113 x 136 mm	132 x 164 x 142 mm

Dimension drawing



Notes
EVOLUTION switch mode power supplies meet the EN 61000-3-2 guideline. ¹⁾ Extra power function for 4 seconds 50 % additional power

SWITCH MODE POWER SUPPLIES

Three-phase, primary switched

– stabilized output voltage
short-circuit and overload
protected

– wide voltage input

– touch protected acc. to
EN 60529 (IP20)



Approvals:



MCS

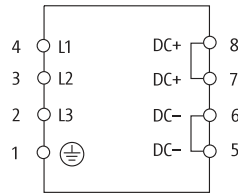
Current 5 A



MCS

Current 10 A

Circuit diagram



Ordering data

Output rating	Art.-No.	Art.-No.
24 V DC/ 5 A 120 W	857814	
24 V DC/10 A 240 W		85071

Input

Input voltage	3 x 360...550 V AC	3 x 360...550 V AC
Input current	3 x 0.33 A	3 x 0.65 A
Inrush current after 1 ms	≤ 15 A	
Primary fusing	3 x 2 A	
Frequency	50/60 Hz	

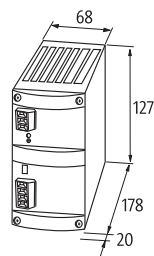
Output

Output voltage	24 V DC (SELV) ± 1 %, 24...28 V adjustable	24 V DC (SELV) ± 1 %, 24...28 V adjustable
Output current	5 A (+60 °C); 6 A (+40 °C)	10 A (+60 °C); 12 A (4+0 °C)
Efficiency	90 %	
Mains failure bridging	≥ 25 ms (400 V AC)	≥ 11 ms (500 V AC)
Ripple	≤ 20 mV eff	
Spikes	≤ 100 mV ss	
Protection	short-circuit and overload protected	
LED display	LED green for output voltage	
Selectable switch-off mode	front sided bridging link (self activating re-start or definite shut-off)	
Parallel usage/serial usage	yes/yes	

General data

Standards	EN 60950-1, EN 61000-3-2, EN 61204-3, EN 55022 B
Temperature range	0...+60 °C
Relative humidity	5...95 %, no condensation
Mounting method	DIN-rail mounting TH35 (EN 60715)
Weight	1.3 kg

Dimension drawing



Notes

MCS switch mode power supplies meet the EN 61000-3-2 guideline.

Switch mode power supplies

SWITCH MODE POWER SUPPLIES

Three-phase, primary switched

– stabilized output voltage
short-circuit and overload
protected

– wide voltage input

– touch protected acc. to
EN 60529 (IP20)



Approvals:



MCS

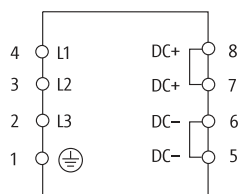
Current 20 A



MCS

Current 40 A

Circuit diagram



Ordering data	Art.-No.	Art.-No.
Output rating		
24 V DC/20 A 480 W	85072	
24 V DC/40 A 960 W		85099

Input		
Input voltage	3 x 360...550 V AC	3 x 360...550 V AC
Input current	3 x 1.2 A	3 x 1.7 A
Inrush current after 1 ms	≤ 20 A	no
Primary fusing	3 x 3 A	3 x 4 A
Frequency	50/60 Hz	

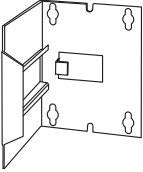
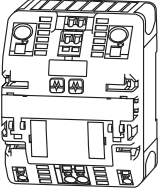
Output		
Output voltage	24 V DC (SELV) ± 1 %, 24...28 V adjustable	
Output current	20 A (+60 °C); 24 A (+40 °C)	40 A (+60 °C); 46 A (+40 °C)
Efficiency	90 %	91 %
Mains failure bridging	≥ 12 ms (400 V AC)	typ. 8 ms (440 V AC)
Ripple	≤ 20 mV eff	
Spikes	≤ 100 mV ss	≤ 150 mV ss
Protection	short-circuit and overload protected	
LED display	LED green for output voltage	
Selectable switch-off mode	front sided bridging link (self activating re-start or definite shut-off)	
Parallel usage/serial usage	yes/yes	

General data		
Standards	EN 60950-1, EN 61000-3-2, EN 61204-3, EN 55022 B	
Temperature range	0...+60 °C	
Relative humidity	5...95 %, no condensation	
Mounting method	screw mounting M 4, 4 pieces in rectangle 60 x 197 mm	screw mounting M 4, 4 pieces in rectangle 81 x 230 mm
Weight	2.3 kg	4.5 kg
Dimensions H x W x D x Da	209 x 84 x 227 x 20 mm	242 x 106 x 270 mm

Dimension drawing		

Notes	
	MCS switch mode power supplies meet the EN 61000-3-2 guideline.

ACCESSORIES

Mounting accessories		Art.-No.																				
	<p>Snap foot adapter</p> <table border="0"> <tr> <td>Current</td> <td>suitable for</td> </tr> <tr> <td>2.5 A</td> <td>MCS</td> </tr> <tr> <td>5 A</td> <td>MCS</td> </tr> <tr> <td>10 A</td> <td>MCS</td> </tr> <tr> <td>0.6...2.5 A</td> <td>MCS-B, Evolution</td> </tr> <tr> <td>5.0...10 A</td> <td>MCS-B, Evolution and MCS-A</td> </tr> </table>	Current	suitable for	2.5 A	MCS	5 A	MCS	10 A	MCS	0.6...2.5 A	MCS-B, Evolution	5.0...10 A	MCS-B, Evolution and MCS-A	<p>89851 89852 89853 89851 89853</p>								
Current	suitable for																					
2.5 A	MCS																					
5 A	MCS																					
10 A	MCS																					
0.6...2.5 A	MCS-B, Evolution																					
5.0...10 A	MCS-B, Evolution and MCS-A																					
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Switch mode power supplies</p>	<p>Screw mounting plate</p> <table border="0"> <tr> <td>Current</td> <td>suitable for</td> </tr> <tr> <td>5 A</td> <td>Art.-No. 857725</td> </tr> <tr> <td>5 A</td> <td>Art.-No. 857814</td> </tr> <tr> <td>10 A</td> <td>Art.-No. 85165</td> </tr> <tr> <td>10 A</td> <td>Art.-No. 85062</td> </tr> <tr> <td>10 A</td> <td>Art.-No. 85085</td> </tr> <tr> <td>10 A</td> <td>Art.-No. 85086</td> </tr> <tr> <td>10 A</td> <td>Art.-No. 857726</td> </tr> <tr> <td>10 A</td> <td>Art.-No. 85071</td> </tr> <tr> <td>10 A</td> <td>Art.-No. 85095</td> </tr> </table>	Current	suitable for	5 A	Art.-No. 857725	5 A	Art.-No. 857814	10 A	Art.-No. 85165	10 A	Art.-No. 85062	10 A	Art.-No. 85085	10 A	Art.-No. 85086	10 A	Art.-No. 857726	10 A	Art.-No. 85071	10 A	Art.-No. 85095	<p>89514</p>
Current	suitable for																					
5 A	Art.-No. 857725																					
5 A	Art.-No. 857814																					
10 A	Art.-No. 85165																					
10 A	Art.-No. 85062																					
10 A	Art.-No. 85085																					
10 A	Art.-No. 85086																					
10 A	Art.-No. 857726																					
10 A	Art.-No. 85071																					
10 A	Art.-No. 85095																					
	<p>Redundancy module MB Diode on page 1.4.6</p> <p>Current 40 A</p>	<p>85396</p>																				
<p>Notes</p>																						

| NOTES

A large grid of graph paper for taking notes, consisting of 20 columns and 30 rows of small squares.

BUFFER MODULES/REDUNDANCY MODULE

General information about MB Cap

MB Cap - Stable power supply secured processes

Voltage fluctuations are a common problem in industrial and commercial environments. They occur with greater frequency since power distribution systems are becoming increasingly more complex. Voltage fluctuations have considerable consequences: Production processes are interrupted, machines stop working, systems have to be reconfigured. All this costs time and money. In the worst case scenario a system breakdown can cause data loss and failure of machines and systems.

The Murrelektronik modules of the MB Cap Ultra series are buffer modules that ensure a stable power supply, thus guaranteeing secure industrial processes. They store energy and bridge voltage fluctuations from up to 38 seconds at 10 A or for several minutes at 1 A, thanks to maintenance-free ultra capacitors.



Advantages:

- Life time maintenance-free – low operating costs
- Cost-efficient – no extra costs respectively no change of batteries
- Safely buffered – buffer time up to 38 seconds at full load (10 A)
- System flexibility for your individual applications
 - long buffer time MB Cap Ultra single module
 - longer buffer time with extension module
 - longer buffer time due to cascading
 - longer buffer time due to selective protection of the most critical loads
- Safe, intelligent shutdown of industrial PCs
 - avoids data loss due to destruction
 - prevents damages to PLC/PC, machines and installations

General information about MB Diode

MB Diode eliminate downtime

Machine failure can cause high costs. In order to prevent this, electrical engineers take extensive measures to increase the reliability of their machines and installations. Murrelektronik can help prevent this with the new redundancy module: MB Diode

MB Diode decouples with power supply units

If a power supply fails, this module will integrate a connected spare power supply unit without interrupting operation. In the sense of a redundant design, all power supply units are integrated into the supply system through one or several modules of the MB Diode series.

The redundancy module from Murrelektronik does not only provide an immediate solution, it also reports the problem to the control with integrated signal contacts. In addition, the failure is indicated via LEDs located directly at the MB Diode module.

MB Diode is contained in a compact housing. A similar housing is used for MICO, Murrelektronik's intelligent power distribution system. Thanks to a bridge system, several redundancy modules can be connected together or to MICO modules. This considerably reduces wiring work. Spring clamp terminals can be easily connected to cables with wide diameters.

