

General

The galvanic isolation of the input and output sides as well as the alteration of the mains voltage (i.e. into low voltage) is achieved by the transformers.

The power supply units to EN 61558 are built with either top or side mounted bridge rectifier and electronics. This both protects the electronics and enables the units to meet touch protection guidelines BVG-A2 and EN 60529.

Power supply units are fitted with angled fixing brackets and key-holes to enable simple mounting.

Conventional power supply units offer a higher power and are less expensive compared to switch mains. In addition the nominal power rating can be raised and is therefore suitable for applications with a high current.

Advantage

- highly reliable through economical use of units
- high life expectancy of units
- less disturbing potential

Smoothed



MPL

Power supplies with smoothed output voltage.

The units are touch protected.

Input voltage: 3 x 400 V AC $\pm$ 5 % tapplings
3 x 208...520 V AC

Output voltage: 24 V DC SELV

Output current range: 5...60 A

from page 4.4.2



MDG

Power supplies with smoothed output voltage.

The units are touch protected.

Input voltage: 3 x 400 V AC $\pm$ 5 % tapplings

Output voltage: 24 V DC SELV

Output current range: 2.5...60 A

from page 4.4.6

Smoothed
to EN 61558

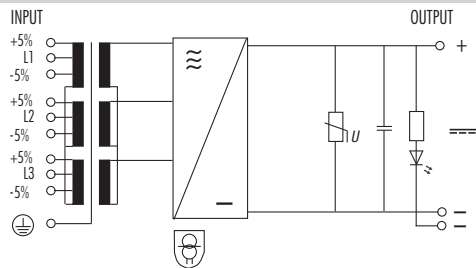
Touch protected to
EN 60529 (IP20)

Approvals: 

MPL
Input voltage 3 x 400 V AC ± 5 % toppings



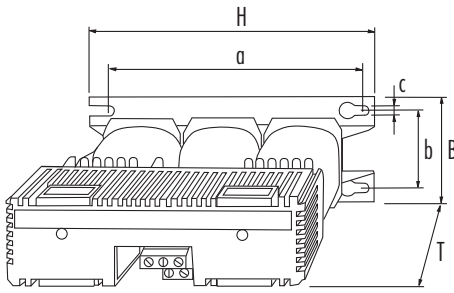
Circuit diagram



Ordering data		Art.-No.
	Output rating	
24 V DC/5.0 A	120 W	85921
24 V DC/7.5 A	180 W	85923
24 V DC/10 A	240 W	85925
24 V DC/15 A	360 W	85927
24 V DC/20 A	480 W	85929

Input	
Input voltage	3 x 400 V AC ± 5 %
Input current	0.3/ 0.42/ 0.55/ 0.8/ 1.1 A
Input fuse (external)	0.4/ 0.5/ 0.63/ 1.0/ 1.6 A T
Frequency	50/60 Hz
Output	
Output voltage	24 V DC SELV
Max. output current	5/ 7.5/ 10/ 15/ 20 A
Efficiency	0.72/ 0.72/ 0.75/ 0.77/ 0.78
Effective ripple	< 2 %
Output fuse (external)	5/ 7.5/ 10/ 15/ 20 A T
Output suppression	LED, VDR and smoothing capacitors

General data	
Test voltage	EN 61558-2-6, EN62041 Cat. 1, EN 55011 B, EN 61000-3-2
Temperature range	-20...+55 °C, mounting on vertical plane at any desired orientation, no condensation
Mounting method	key-hole mounting, at MPL 5 A (85921) no key-hole but long-hole mounting (90° position)

Dimension drawing/Fixing centers (mm)					
			H x B x T	a x b x c	Weight
		5 A	125 x 72.5 x 153	100 x 56.5 x 5	2.85 kg
		7.5 A	185 x 78 x 188	164 x 58 x 6.5	4.4 kg
		10 A	185 x 78 x 188	164 x 58 x 6.5	4.8 kg
		15 A	220 x 82 x 208	195 x 60 x 8	8.15 kg
		20 A	220 x 103 x 213	195 x 81 x 8.5	10.5 kg

Notes	
MPL power supply units meet EN 61000-3-2 guideline.	

Smoothed
to EN 61558

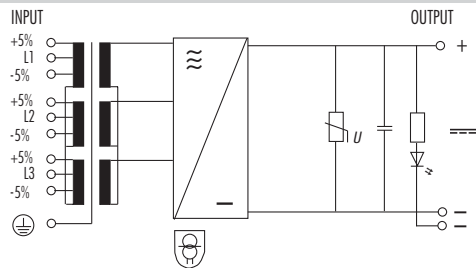
Touch protected to
EN 60529 (IP20)

Approvals: 

MPL
Input voltage 3 x 400 V AC ± 5 % toppings



Circuit diagram



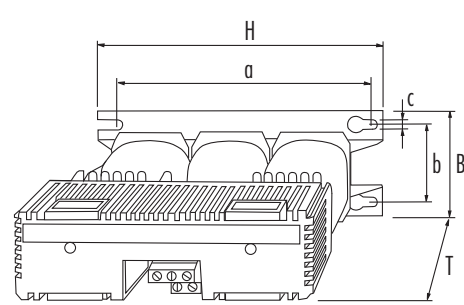
Ordering data		Art.-No.
	Output rating	
24 V DC/25 A	600 W	85931
24 V DC/30 A	720 W	85933
24 V DC/40 A	960 W	85935
24 V DC/50 A	1200 W	85937
24 V DC/60 A	1440 W	85939

Input	
Input voltage	3 x 400 V AC ± 5 %
Input current	1.35/ 1.6/ 2.0/ 2.5/ 3.1 A
Input fuse (external)	1.6/ 2.0/ 3.15/ 4.0/ 4.0 A T
Frequency	50/60 Hz

Output	
Output voltage	24 V DC SELV
Max. output current	25/ 30/ 40/ 50/ 60 A
Efficiency	0.78/ 0.76/ 0.77/ 0.79/ 0.78
Effective ripple	< 2 % eff
Output fuse (external)	25/ 30/ 40/ 50/ 60 A T
Output suppression	LED, VDR and smoothing capacitors

General data	
Test voltage	EN 61558-2-6, EN 62041 Cat. 1, EN 55011 B, EN 61000-3-2
Temperature range	-20...+55 °C, mounting on vertical plane at any desired orientation, no condensation
Mounting method	key-hole mounting

Dimension drawing/Fixing centers (mm)



The drawing shows a side view of a power supply unit with a keyhole mounting bracket. Dimension H is the total height. Dimension a is the distance between the two mounting holes. Dimension b is the distance from the bottom of the unit to the center of the mounting holes. Dimension c is the distance from the center of the mounting holes to the edge of the unit. Dimension T is the thickness of the unit. The unit has a series of cooling fins on the front and a mounting bracket on the back.

	H x B x T	a x b x c	Weight
25 A	220 x 103 x 213	195 x 81 x 8.5	11 kg
30 A	240 x 107 x 250	215 x 87 x 8.5	13.5 kg
40 A	280 x 124 x 313	256.5 x 98 x 11	17.8 kg
50 A	280 x 134 x 313	256.5 x 108 x 11	20.9 kg
60 A	280 x 154 x 313	256.5 x 128 x 11	26.1 kg

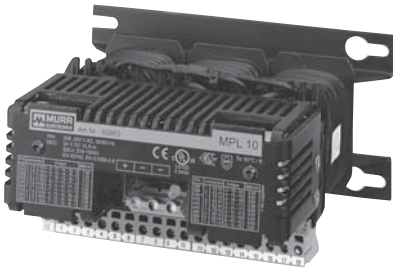
Notes	
MPL power supply units meet EN 61000-3-2 guideline. Not required for Art.-No. 85937 and 85939.	

Smoothed
to EN 61558

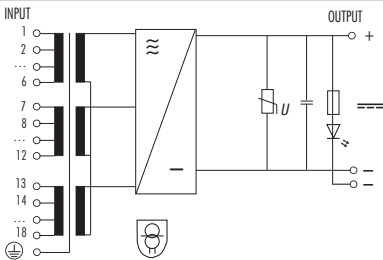
Touch protected to
EN 60529 (IP20)

Approvals: 

MPL
Input voltage 3 x 208...520 V AC



Circuit diagram



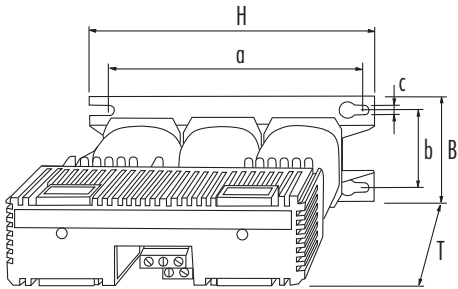
Ordering data		Art.-No.	Art.-No.
	Output rating		
24 V DC/ 10 A	240 W	85953	
24 V DC/ 15 A	360 W		85954

Input	
Input voltage (fuse external)	3 x 208...520 V AC
Frequency	50/60 Hz
Output	
Output voltage	24 V DC SELV
Max. output current	10 A
Efficiency	0.73
Effective ripple	< 2 %
Output fuse (external)	10 A T
Output suppression	LED, VDR and smoothing capacitors

General data	
Test voltage	EN 61558-2-6, EN62041 Cat. 1, EN 55011 B, EN 61000-3-2
Temperature range	-20...+55 °C, mounting on vertical plane at any desired orientation, no condensation
Mounting method	key-hole mounting

Dimension drawing/Fixing centers (mm)

Connection possibilities and protection
see page 4.4.5



	H x B x T	a x b x c	Weight
10 A	185 x 93 x 188	164 x 74 x 6.5	6.6 kg
15 A	220 x 82 x 208	195 x 60 x 8	7.5 kg
25 A	220 x 103 x 213	195 x 81 x 8.5	11.1 kg
40 A	280 x 124 x 313	256.5 x 98 x 11	17.9 kg
50 A	280 x 134 x 313	256.5 x 108 x 11	20.9 kg

Notes	
MPL power supply units meet EN 61000-3-2 guideline.	

Smoothed

to EN 61558

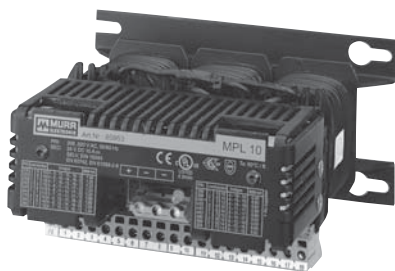
Touch protected to
EN 60529 (IP20)

Approvals:

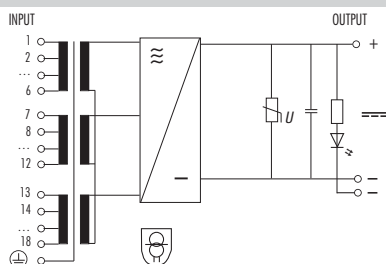


MPL

Multiple primary voltages 3 x 208...520 V AC



Circuit diagram



Ordering data		Art.-No.			Art.-No.			Art.-No.							
	Output rating														
24 V DC/ 25 A	600 W	85955													
24 V DC/ 40 A	960 W				85956										
24 V DC/ 50 A	1200 W							85957							
Input															
Input voltage (fuse external)		3 x 208...520 V AC													
Frequency		50/60 Hz													
Output															
Output voltage		24 V DC SELV													
Max. output current		25 A			40 A			50 A							
Efficiency		0.73			0.79			0.77							
Effective ripple		< 2 %													
Output fuse (external)		25 A T			40 A T			50 A T							
Output suppression		LED, VDR and smoothing capacitors													
General data															
Test voltage		EN 61558-2-6, EN 62041 Cat. 1, EN 55011 B, EN 61000-3-2													
Temperature range		-20...+55 °C, mounting on vertical plane at any desired orientation, no condensation													
Mounting method		key-hole mounting													
Wiring possibilities		Input voltage			L1 L2 L3		Bridges		Fusing		10 A	15 A	25 A	40 A	50 A
Dimension drawing/Fixing centers see page 4.4.4		208 V AC			3 9 15		4 - 9, 10 - 15, 16 - 3		(slow blow)		1.50	2.00	3.20	5.00	7.00
		220 V AC			2 8 14		4 - 8, 10 - 14, 16 - 2				1.25	2.00	3.00	5.00	6.25
		230 V AC			1 7 13		4 - 7, 10 - 13, 16 - 1				1.25	1.80	3.00	5.00	6.00
		242 V AC			3 9 15		5 - 9, 11 - 15, 17 - 3				1.25	1.80	2.80	5.00	6.00
		254 V AC			2 8 14		5 - 8, 11 - 14, 17 - 2				1.25	1.60	2.80	5.00	6.00
		266 V AC			1 7 13		5 - 7, 11 - 13, 17 - 1				1.00	1.60	2.50	4.00	5.00
		278 V AC			3 9 15		6 - 9, 12 - 15, 18 - 3				1.00	1.50	2.50	4.00	5.00
		289 V AC			2 8 14		6 - 8, 12 - 14, 18 - 2				1.00	1.50	2.50	4.00	5.00
		300 V AC			1 7 13		6 - 7, 12 - 13, 18 - 1				1.00	1.50	2.25	3.50	4.50
		360 V AC			3 9 15		4 - 10 - 16				0.80	1.25	2.00	3.00	4.00
		380 V AC			2 8 14		4 - 10 - 16				0.80	1.125	2.00	3.00	3.50
		400* V AC			1 7 13		4 - 10 - 16				0.80	1.125	2.00	3.00	3.50
		420 V AC			3 9 15		5 - 11 - 17				0.80	1.00	1.60	2.50	3.25
		440 V AC			2 8 14		5 - 11 - 17				0.60	1.00	1.50	2.50	3.00
		460 V AC			1 7 13		5 - 11 - 17				0.60	1.00	1.50	2.50	3.00
480 V AC			3 9 15		6 - 12 - 18		0.60	1.00	1.50	2.25	2.80				
500 V AC			2 8 14		6 - 12 - 18		0.50	0.80	1.50	2.25	2.80				
520 V AC			1 7 13		6 - 12 - 18		0.50	0.80	1.25	2.00	2.80				
Notes															
		* Condition. MPL power supply units meet EN 61000-3-2 guideline. Not required for Art.-No. 85957.													

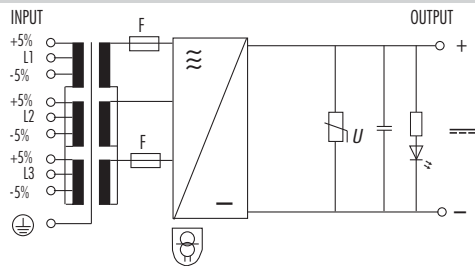
Smoothed
to EN 61558

Touch protected to
EN 60529 (IP20)

MDG
Input voltage 3 x 400 V AC ± 5 % tapings



Circuit diagram



Ordering data		Art.-No.
	Output rating	
24 V DC/2.5 A	60 W	85771
24 V DC/5.0 A	120 W	85773
24 V DC/7.5 A	180 W	85775
24 V DC/10 A	240 W	85777
24 V DC/15 A	360 W	85779
24 V DC/20 A	480 W	85781

Input	
Input voltage	3 x 400 V AC ± 5 %
Input current	0.12/ 0.24/ 0.34/ 0.46/ 0.66/ 0.9 A
Input fuse (external)	0.2/ 0.4/ 0.5/ 0.63/ 1.0/ 1.6 A T
Frequency	50/60 Hz

Output	
Output voltage	24 V DC SELV
Max. output current	2.5/ 5/ 7.5/ 10/ 15/ 20 A
Efficiency	0.71/ 0.7/ 0.7/ 0.73/ 0.77/ 0.78
Effective ripple	< 2 %
Output fuse	2 x 3 A/ 2 x 5 A/ 2 x 7.5 A/ 2 x 10 A/ 2 x 15 A/ 2 x 20 A (automotive fuse)
Output suppression	LED, VDR and smoothing capacitors

General data	
Test voltage	EN 61558-2-6, EN 62041 Cat. 1, EN 55011 B, EN 61000-3-2
Temperature range	-20...+60 °C, no condensation
Mounting method	key-hole mounting, at MDG 2.5 A (85771) and MDG 5 (85773) no key-hole but long-hole mounting (90° position)

Dimension drawing/Fixing centers (mm)		H x B x T	a x b x c	Weight
	2.5 A	125 x 87 x 146	100 x 46.5 x 5	2.4 kg
	5.0 A	125 x 87 x 146	100 x 56 x 5	2.85 kg
	7.5 A	185 x 93 x 178	164 x 57.5 x 6.3	4.4 kg
	10 A	185 x 97 x 178	164 x 57.5 x 6.3	4.8 kg
	15 A	185 x 107 x 178	164 x 71.5 x 6.3	6.85 kg
	20 A	220 x 113 x 215	195 x 61 x 7.8	8.15 kg

Notes	
MDG power supply units meet EN 61000-3-2 guideline. Replacement fuses see page 4.9.2	

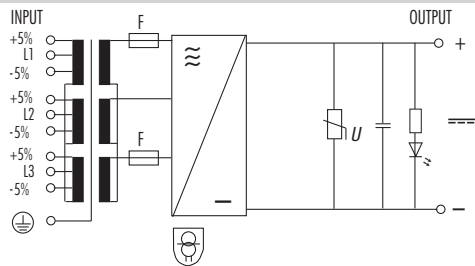
Smoothed
to EN 61558

Touch protected to
EN 60529 (IP20)

MDG
Input voltage 3 x 400 V AC ± 5 % tapings



Circuit diagram



Ordering data		Art.-No.
	Output rating	
24 V DC/ 25 A	600 W	85783
24 V DC/ 30 A	720 W	85785
24 V DC/ 40 A	960 W	1) 85763
24 V DC/ 50 A	1200 W	1) 85951
24 V DC/ 60 A	1440 W	1) 85793

Input	
Input voltage	3 x 400 V AC ± 5%
Input current	1.17/ 1.39/ 1.88/ 2.27/ 2.82 A
Input fuse (external)	1.6/ 2.0/ 3.15/ 4.0 A T / motor protection switch 3 A
Frequency	50/60 Hz

Output	
Output voltage	24 V DC SELV
Max. output current	25/ 30/ 40/ 50/ 60 A
Efficiency	0.77/ 0.77/ 0.78/ 0.79/ 0.82
Effective ripple	< 2 %
Output fuse	2 x 25 A/ 2 x 30 A (automotive fuse)
Output suppression	LED, VDR and smoothing capacitors

General data	
Test voltage	EN 61558-2-6, EN 62041 Cat. 1, EN 55011 B, EN 61000-3-2
Temperature range	-20...+60 °C, no condensation
Mounting method	key-hole mounting

Dimension drawing/Fixing centers (mm)		H x B x T	a x b x c	Weight
	25 A	220 x 122 x 215	195 x 80 x 7.8	11.0 kg
	30 A	240 x 120 x 236	215 x 87 x 8	13.1 kg
	40 A	280 x 135 x 267	256.5 x 96 x 11	17.8 kg
	50 A	280 x 143 x 267	256.5 x 106 x 11	20.9 kg
	60 A	280 x 168 x 270	256.5 x 116 x 11	26.1 kg

Notes	
MDG power supply units meet EN 61000-3-2 guideline. Not required for Art.-No. 85951 and 85793.	
1) Without fuses. Replacement fuses see page 4.9.2	