

TRANSFORMERS / RECTIFIED POWER SUPPLIES

- Approvals for the global market
- Flexible and versatile
- Customized solutions

MTS, MST, MET OR MTL – THE RIGHT TRANSFORMER FOR EVERY APPLICATION

Different situations require different voltages. Transformers have to be just as flexible as the application. Murrelektronik's range provides you with the flexibility you need!

No matter if it's an isolation transformer, control transformer, or safety transformer – we have the right solution for any application. Murrelektronik's transformers are reliable, safe and their approvals and voltage ranges make them ideal for worldwide use.

BASIC FUNCTIONS

Rectified power supplies galvanically separate input and output. They convert mains voltage into Protected Extra Low Voltage. The electronic unit rectifies and smooths the voltage.

Rectified power supplies are designed for a frequency of 50/60 Hz. Their slow reaction prevents voltage spikes from being passed from the mains side to the output, which would interfere with peripheral devices.

They have fixing brackets with keyholes that ensure easy wall mounting. Models for DIN-rail mounting are available for applications up to 5 A.

Transformers



MTS – Isolation class T 40/B

- Nominal power rating: 40...250 VA
- Input voltage: 230, 400 V AC or multi voltage (± 15 V AC)
- Output voltage: 24 V AC or 230 V AC
- Ambient temperature: 40 °C

Page 1.1.1



MST – Isolation class T 40/B

- Nominal power rating: 320...1000 VA
- Input voltage: 230, 400 V AC or multi voltage
- Output voltage: 24 V AC or 230 V AC
- Ambient temperature: 40 °C

Page 1.1.4



MTL – Isolation class T 60/B

- Nominal power rating: 25...2500 VA
- Input voltage: 230/400 V AC ± 15 V AC
- Output voltage: 2 x 24 V AC or 2 x 115 V AC
- Ambient temperature: 60 °C

Page 1.1.7

Single-phase, single/two-phase, smoothed (Rectified Power Supplies)



MEN

- Input voltage: 115/230 V AC and 230/400 V AC
±15 V AC reconnectable
- Output voltage: 24 V DC SELV
- Output current: 1.0/2.5/5/7.5/10/15/20 A

Page 1.1.8



MTPS

- Input voltage: 230/400 V AC
±15 V AC reconnectable
- Output voltage: 24 V DC SELV
- Output current: 0.5/1/2/4/6/10 A

Page 1.1.12

Three-phase, smoothed (Rectified Power Supplies)



MPL

- Input voltage: 3 × 400 V AC ±5% reconnectable
3 × 208...520 V AC
- Output voltage: 24 V DC SELV
- Output current: 5...60 A

Page 1.1.13

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

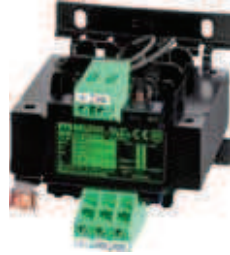
– INPUT: 230/400 V AC

– Isolation class T 40/B

Approvals:  **UL** _{US}

MTS

OUTPUT: 230 V AC
Screw terminals



MTS

OUTPUT: 230 V AC
Spring clamp terminals

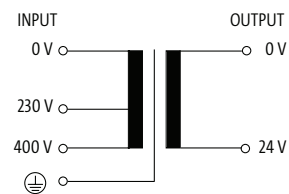
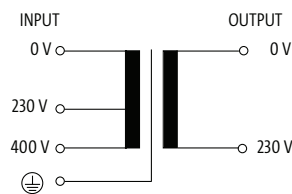
MTS

OUTPUT: 24 V AC
Screw terminals

MTS

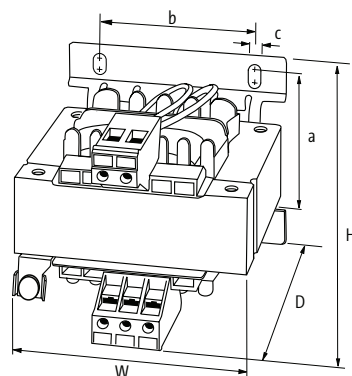
OUTPUT: 24 V AC
Spring clamp terminals

Circuit diagram



Order Data	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.
40 VA	79x78x93/0.8	86346	79x78x93/0.8	6686346	79x78x93/0.8	86340	79x78x93/0.8	6686340
63 VA	79x78x93/1.2	86347	79x78x93/1.2	6686347	79x78x93/1.2	86341	79x78x93/1.2	6686341
100 VA	86x84x98/2.0 – GL	86348	86x84x98/2.0	6686348	86x84x98/2.0 – GL	86342	86x84x98/2.0	6686342
160 VA	101x96x106/2.7 – GL	86349	101x96x106/2.7	6686349	101x96x106/2.7 – GL	86343	101x96x106/2.7	6686343
250 VA	102x96x108/3.5 – GL	86351	102x96x108/3.5	6686351	102x96x108/3.5 – GL	86345	102x96x108/3.5	6686345


Input	
Input voltage	230/400 V AC
Frequency	50...60 Hz
Output	
Output voltage	230 V AC 24 V AC (SELV)
Output rating	40 VA
General data	
Test isolation voltage	4 kV (prim./sec.)
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0 EN 61558-1, EN 61558-2-6, EN 62041 category 0
Mounting method	Long-hole mounting or DIN-rail mountable TH35 (EN 60715)
Temperature range	-20...+40 °C (storage temperature -40...+80 °C)
Dimension drawing	



Notes
GL-Approval from 100 VA and with screw terminals.

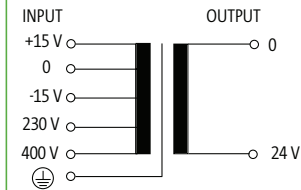
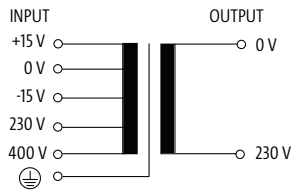
TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase
 – INPUT: 230/400 ±15 V AC
 – Isolation class T 40/B

Approvals: 



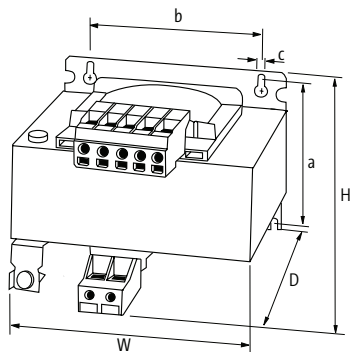
Circuit diagram



Order Data	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.
40 VA	79x78x93/0.8	86366	79x78x93/0.8	6686366	79x78x93/0.8	86360	79x78x93/0.8	6686360
63 VA	79x78x93/1.2	86367	79x78x93/1.2	6686367	79x78x93/1.2	86361	79x78x93/1.2	6686361
100 VA	86x84x98/2.0 – GL	86368	86x84x98/2.0	6686368	86x84x98/2.0 – GL	86362	86x84x98/2.0	6686362
160 VA	101x96x106/2.7 – GL	86369	101x96x106/2.7	6686369	101x96x106/2.7 – GL	86363	101x96x106/2.7	6686363
250 VA	102x96x108/3.5 – GL	86371	102x96x108/3.5	6686371	102x96x108/3.5 – GL	86365	102x96x108/3.5	6686365

Input	
Input voltage	230/400 ±15 V AC
Frequency	50...60 Hz
Output	
Output voltage	230 V AC 24 V AC (SELV)
Output rating	40 VA
General data	
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0 EN 61558-1, EN 61558-2-6, EN 62041 category 0
Test isolation voltage	4 kV (prim./sec.)
Mounting method	Long-hole mounting or DIN-rail mountable TH35 (EN 60715)
Temperature range	-20...+40 °C (storage temperature -40...+80 °C)

Dimension drawing



Notes

GL-Approval from 100 VA and with screw terminals.

Transformers / Rectified Power Supplies

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-2-phase

– INPUT: 208...550 V AC

– Isolation class T 40/B

Approvals: 

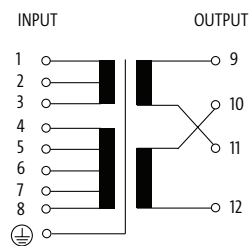
MTS Multi

OUTPUT: 1 x 230, 1 x 115, 2 x 115 V AC

Screw terminals



Circuit diagram



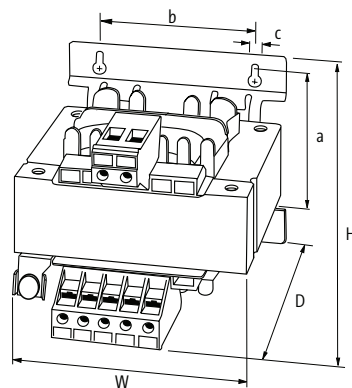
Order Data	HxWxD/kg	Art-No.
25 VA	90x78x102/0.7	86140
40 VA	88x78x93/1.1	86141
63 VA	97x78x93/1.4	86142
100 VA	105x84x98/2.0 – GL	86143
160 VA	101x96x106/2.7 – GL	86144

Input	
Input voltage	208, 230, 380, 400, 420, 440, 460, 480, 500, 525, 550 V AC
Frequency	50...60 Hz

Output	
Output voltage	1 x 230, 1 x 115, 2 x 115 V AC
Output rating	25 VA

General data	
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0
Test isolation voltage	4 kV (prim./sec.)
Mounting method	Long-hole mounting or DIN-rail mountable TH35 (EN 60715)
Temperature range	-20...+40 °C (storage temperature -20...+80 °C)

Dimension drawing




Notes	
	GL-Approval from 100 VA and with screw terminals.

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 230/400 V AC

– Isolation class T 40/B

Approvals: 

MST

OUTPUT: 230 V AC
Screw terminals



MST

OUTPUT: 230 V AC
Spring clamp terminals

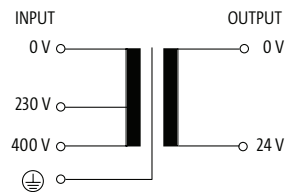
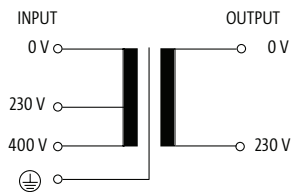
MST

OUTPUT: 24 V AC
Screw terminals

MST

OUTPUT: 24 V AC
Spring clamp terminals

Circuit diagram



Order Data	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.
320 VA	92x120x122/4.2 – GL	86306	92x120x122/4.2	6686306	92x120x122/4.2 – GL	86326	92x120x122/4.2	6686326
400 VA	104x120x123/5.2 – GL	86307	104x120x123/5.2	6686307	104x120x123/5.2 – GL	86327	104x120x123/5.2	6686327
500 VA	108x135x134/6.5 – GL	86308	108x135x134/6.5	6686308	108x135x134/6.5 – GL	86328		
630 VA	113x150x145/7.7 – GL	86309	113x150x145/7.7	6686309	113x150x145/7.7 – GL	86329		
800 VA	129x150x145/10.1 – GL	86310	129x150x145/10.1	6686310	136x150x149/10.1 – GL	86330		
1 000 VA	128x174x160/12.3 – GL	86311	128x174x160/12.3	6686311	133x174x165/12.3 – GL	86331		

Input

Input voltage 230/400 V AC
Frequency 50..60 Hz

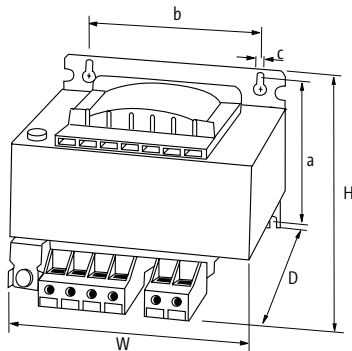
Output

Output voltage 230 V AC 24 V AC (SELV)
Output rating 320 VA

General data

Standards EN 61558-1, EN 61558-2-4, EN 62041 category 0 EN 61558-1, EN 61558-2-6, EN 62041 category 0
Test isolation voltage 4 kV (prim./sec.)
Mounting method Key-hole mounting
Temperature range -20...+40 °C (storage temperature -40...+80 °C)

Dimension drawing



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 230/400 ±15 V AC

– Isolation class T 40/B

Approvals:  

MST+

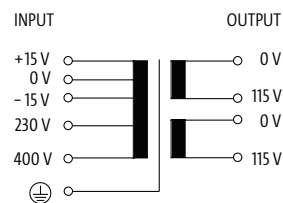
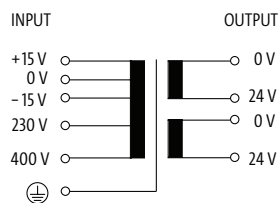
OUTPUT: 24 V AC, 48 V AC
Screw terminals



MST+

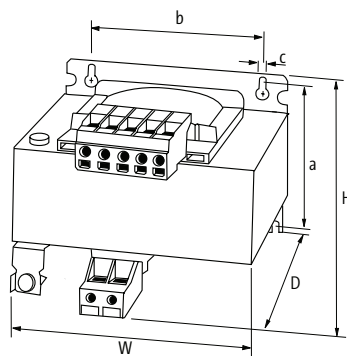
OUTPUT: 115 V AC, 230 V AC
Screw terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
630 VA	121×150×165/8.0	86463	113×150×146/8.2	86483
1 000 VA	156×150×197/13.5	86464	156×150×146/13.5	86484
1 600 VA	168×174×222/19.5	86465	168×174×163/19.5	86485
2 500 VA	182×192×242/27.0	86466	182×192×196/27.0	86486

Input	
Input voltage	230/400 ±15 V AC
Frequency	50...60 Hz
Output	
Output voltage	1 × 24, 1 × 48, 2 × 24 V AC 1 × 230, 1 × 115, 2 × 115 V AC
Output rating	630 VA
General data	
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0
Test isolation voltage	5.8 kV (prim./sec.)
Mounting method	Key-hole mounting
Temperature range	-20...+40 °C, no condensation
Dimension drawing	



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 208...550 V AC

– Isolation class T 40/B

Approvals:  

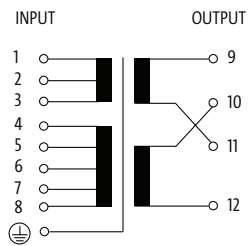
MST Multi

OUTPUT: 1 × 230, 1 × 115, 2 × 115 V AC

Screw terminals



Circuit diagram



Order Data	H×W×D/kg	Art-No.
250 VA	104×120×122/4.0	86145
320 VA	115×135×132/5.8	86146
400 VA	115×135×132/6.2	86147
500 VA	138×135×135/5.8	86148
800 VA	156×150×150/7	86150
1 000 VA	128×174×160/12.3	86151
1 600 VA	168×174×163/7	86152
2 000 VA	185×192×185/10	86153
2 500 VA	200×195×217/10	86154
3 000 VA	250×197×193/29.5	86155
5 000 VA	248×197×250/9	86157

Input

Input voltage	208, 230, 380, 400, 420, 440, 460, 480, 500, 525, 550 V AC
Frequency	50...60 Hz

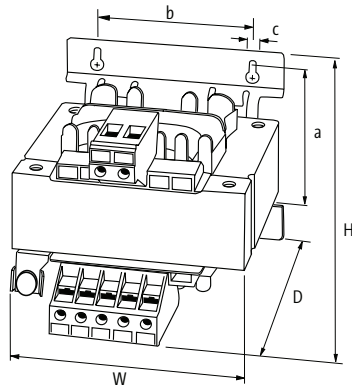
Output

Output voltage	1 × 230, 1 × 115, 2 × 115 V AC
Output rating	250 VA

General data

Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0
Test isolation voltage	4 kV (prim./sec.)
Mounting method	Key-hole mounting
Temperature range	-20...+40 °C (storage temperature -20...+80 °C)

Dimension drawing



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 230/400 ±15 V AC

– Isolation class T 60/B

Approvals:  

MTL

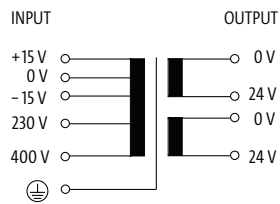
OUTPUT: 24 V AC, 48 V AC
Screw terminals



MTL

OUTPUT: 115 V AC, 230 V AC
Screw terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
25 VA	108×87×98/1.1	86450	108×87×98/1.1	86470
40 VA	108×87×104/1.4	86451	108×87×104/1.4	86471
63 VA	108×87×116/2.0	86452	108×87×116/2.0	86472
100 VA	108×87×139/2.9	86453	108×87×139/2.9	86473
160 VA	153×123×128/4.4	86454	153×123×128/4.4	86474
250 VA	153×123×142/5.7	86455	153×123×142/5.7	86475
320 VA	153×123×160/7.2	86456	153×123×160/7.2	86476

Technical Data

LED display LED (green) for input voltage

Input

Input voltage 230/400 ±15 V AC

Frequency 50...60 Hz

Output

Output voltage 1 × 24, 1 × 48, 2 × 24 V AC

1 × 230, 1 × 115, 2 × 115 V AC

Output rating 25 VA

General data

Test isolation voltage 5.1 kV (prim./sec.)

4 kV (prim./sec.)

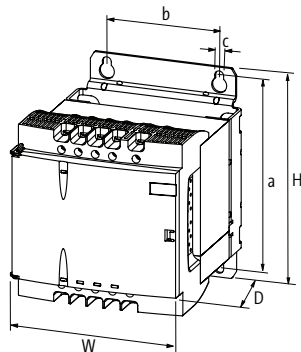
Standards EN 61558-2-4, EN 61558-2-6, EN 62041 category 0

EN 61558-1, EN 61558-2-4, EN 62041 category 0

Mounting method DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting

Temperature range -20...+60 °C, no condensation

Dimension drawing



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

Single-phase

– OUTPUT: 24 V DC (SELV)

Approvals: 

MEN

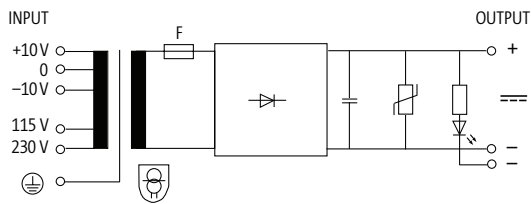
INPUT: 115/230 V AC



MEN

INPUT: 115/230 V AC
with MES DIN-rail adapter

Circuit diagram



Order Data	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.
24 V DC/1 A	64x78x120/1.3	85360	64x78x120/1.3	8985360
24 V DC/2.5 A	83x84x124/2.1	85361	83x84x124/2.1	8985361
24 V DC/5 A	95x96x136/3.0	85362	95x96x136/3.0	8985362
24 V DC/7.5 A	103x105x151/5.6	85363		

Input

Input voltage	115/230 V AC ± 10 V AC
Frequency	50...60 Hz

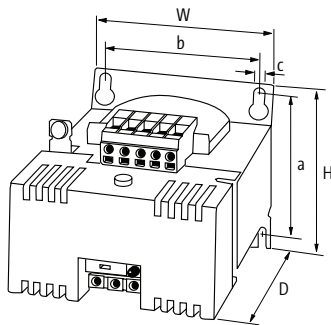
Output

Output voltage	24 V DC (SELV)
Ripple	max. 5 %rms
Output filter	LED, VDR and smoothing capacitor

General data

Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2	
Mounting method	Key-hole mounting	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting
Temperature range	-20...+60 °C, no condensation	

Dimension drawing



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

Single-phase

– OUTPUT: 24 V DC (SELV)

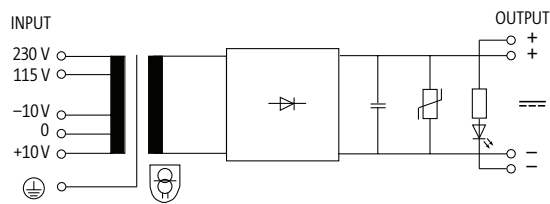
MEN

INPUT: 115/230 V AC



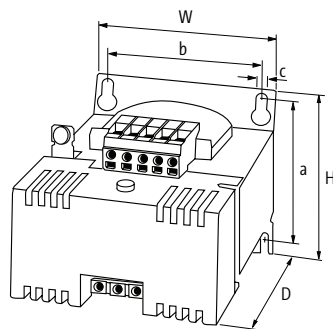
Approvals:  

Circuit diagram



Order Data	H×W×D/kg	Art-No.
24 V DC/10 A	113×120×160/6.0	85364
24 V DC/15 A	139×135×182/8.2	85355
24 V DC/20 A	127×174×214/12.8	85356

Input	
Input voltage	115/230 V AC ±10 V AC
Frequency	50...60 Hz
Output	
Output voltage	24 V DC (SELV)
Ripple	max. 5 %rms
Output filter	LED, VDR and smoothing capacitor
General data	
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2
Mounting method	Key-hole mounting
Temperature range	-20...+60 °C, no condensation
Dimension drawing	



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– OUTPUT: 24 V DC (SELV)

Approvals: 

MEN

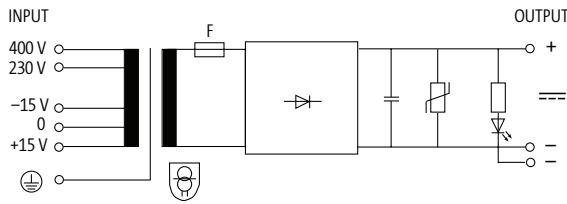
INPUT: 230/400 V AC



MEN

INPUT: 230/400 V AC
with MES DIN-rail adapter

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/1 A	64×78×120/1.3	85349	64×78×120/1.3	8985349
24 V DC/2.5 A	83×84×124/2.1	85350	83×84×124/2.1	8985350
24 V DC/5 A	95×96×136/3.0	85351	95×96×136/3.0	8985351
24 V DC/7.5 A	103×105×151/5.6	85357		

Input

Input voltage	230/400 ±15 V AC
Frequency	50...60 Hz

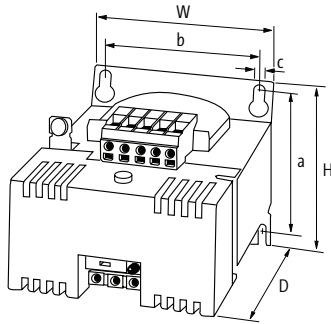
Output

Output voltage	24 V DC (SELV)
Ripple	max. 5 %rms
Output filter	LED, VDR and smoothing capacitor

General data

Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2	
Mounting method	Key-hole mounting	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting
Temperature range	-20...+60 °C, no condensation	

Dimension drawing



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– OUTPUT: 24 V DC (SELV)

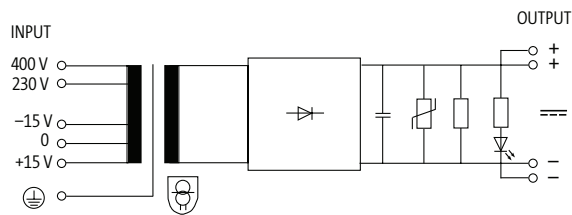
MEN

INPUT: 230/400 V AC



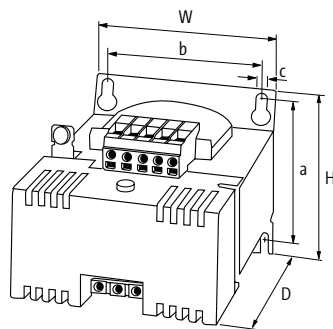
Approvals:

Circuit diagram



Order Data	H×W×D/kg	Art-No.
24 V DC/10 A	113×120×160/6.0	85352
24 V DC/15 A	139×135×182/8.2	85353
24 V DC/20 A	127×174×214/12.8	85354

Input	
Input voltage	230/400 ±15 V AC
Frequency	50...60 Hz
Output	
Output voltage	24 V DC (SELV)
Ripple	max. 5 %rms
Output filter	LED, VDR and smoothing capacitor
General data	
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2
Mounting method	Key-hole mounting
Temperature range	-20...+60 °C, no condensation
Dimension drawing	



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– OUTPUT: 24 V DC (SELV)

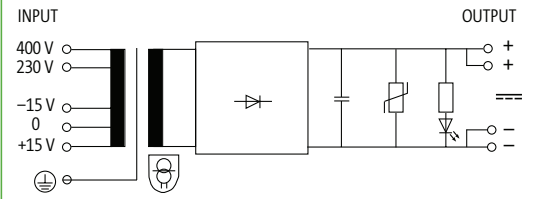
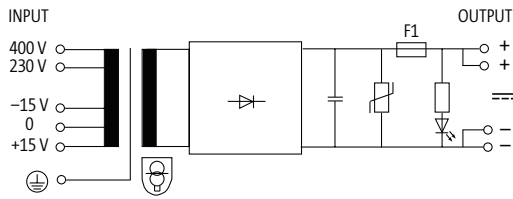
Approvals: 

MTPS

INPUT: 230/400 V AC



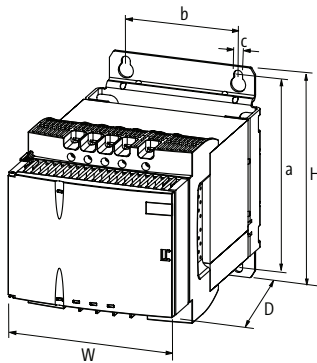
Circuit diagram



Order Data	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.
24 V DC/0.5 A	108x87x124/1.3	85400		
24 V DC/1 A	108x87x124/1.3	85401		
24 V DC/2 A	108x87x142/2.0	85402		
24 V DC/4 A	108x87x165/2.9	85403		
24 V DC/6 A	153x123x153/4.9	85404		
24 V DC/10 A			153x123x185/7.7	85405

Input	
Input voltage	230/400 ±15 V AC
Frequency	50...60 Hz
LED display	LED (green) for input voltage
Output	
Output voltage	24 V DC (SELV)
Ripple	max. 5 %rms
Output filter	LED, VDR and smoothing capacitor
General data	
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2
Temperature range	-20...+60 °C, no condensation
Mounting method	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting

Dimension drawing



Notes

3-phase

– OUTPUT: 24 V DC (SELV)

Approvals: UL_{us} Listed

MPL

INPUT: 3 × 400 V AC, ±5% reconnectable

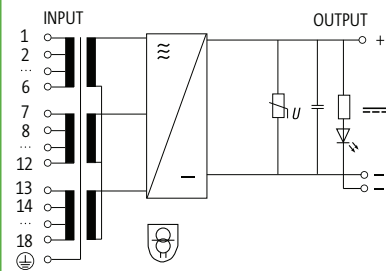
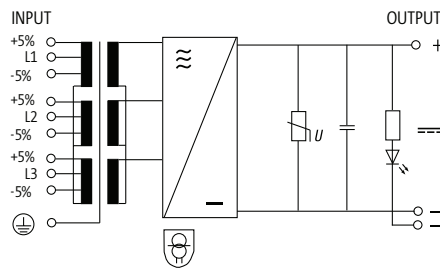


MPL Multi

INPUT: 3 × 208...520 V AC



Circuit diagram



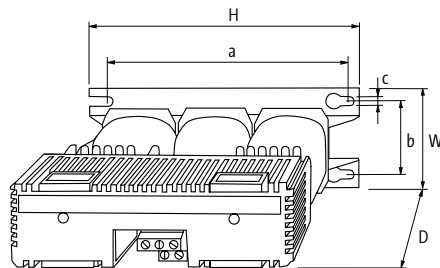
Order Data	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.
24 V DC/5 A	125x73x153/2.9 – cURus	85921		
24 V DC/7.5 A	185x78x188/4.4 – cURus	85923		
24 V DC/10 A	185x78x188/4.5 – cURus	85925	185x93x188/6.6	85953
24 V DC/15 A	220x82x208/8.2 – cURus	85927	220x82x208/7.5	85954
24 V DC/20 A	220x103x213/10.5 – cURus	85929		
24 V DC/25 A	220x103x213/11.0 – cURus	85931	220x103x213/11.1 – cURus	85955
24 V DC/30 A	240x107x250/13.5 – cURus	85933		
24 V DC/40 A	280x124x313/17.8 – cURus	85935	280x124x313/17.9 – cURus	85956
24 V DC/50 A	280x134x313/20.9 – cURus	85937	280x134x313/20.9 – cURus	85957
24 V DC/60 A	280x154x313/26.1 – cURus	85939		

Input		
Input voltage	3 × 400 V AC ±5%	3 × 208...520 V AC
Frequency	50...60 Hz	

Output	
Output voltage	24 V DC (SELV)
Ripple	max. 2%rms
Output filter	LED, VDR and smoothing capacitor

General data	
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2
Mounting method	Key-hole mounting
Temperature range	-20...+55 °C, for any mounting position at vertical wall, no condensation

Dimension drawing



Notes