

- Robust
- Vibration-resistant
- Fully Potted

POWER SUPPLY IP67

Zero Cabinet – on-machine power!





01

High-performance power supply
exactly where you need it!

02

On-machine power supplies use
shorter cables reducing power
loss

03

Emparro67 Hybrid is equipped with IO-Link
and LED diagnostics



Zero Cabinet

...is our slogan and we help our customers move components from the control cabinet onto the machine. This concept makes applications transparent, user friendly and cost-efficient. **Increasing your competitive advantage!**

Until now, power supplies for machines and applications are almost exclusively found in the control cabinet. But not anymore! At Murrelektronik, we want to show you how it's possible to move your power supply onto the machine. With on-machine power you gain the advantage of having the power supply directly next to the load.

Customer advantages: Use smaller control cabinets (or no cabinet at all!). Reduce power loss, energy costs and wiring by converting the voltage from 230 VAC to 24 VDC directly next to the load. IP67 approval rating ensures the power supply can stand up to all the on-machine demands.



EMPARRO67 HYBRID

A new dimension of decentralized power supply

The innovative Emparro67 Hybrid switch mode power supply unit is an all-rounder with many powerful features:

It not only relocates power supply from the control cabinet to the industrial field, but it also monitors currents using two integrated channels for 24 VDC load circuit monitoring, thus ensuring high operational reliability. An IO-Link interface permits extensive and transparent communication.

Single-phase,
primary switch mode

– Short-circuit- and
overload-protected

Emparro67 Hybrid



Ordering Data	Art.-No	Art.-No	Art.-No	Art.-No
	85676	85677	85678	85679
Current	10 A	10 A	10 A	2x 4 A
Input				
Input voltage	90...265 V AC/V DC			
Input current	1,1 A at 230 V AC			
Inrush current after 1 ms	< 7 A			
PFC	active			
Connection	7/8" 3-pole, male			
Output				
Output voltage	24.1 V DC ± 2 %			
MICO Output	2 outputs, 2-pole switching			
Output current	max. 8 A / channel, max. 10 A total			2x max. 4 A
Efficiency	up to 93.8 %			
Switch-on capacitance	20.000 µF / channel			
Connection	7/8" 5-pole, female	7/8" 4-pole, female	M12 Power, L-coded	7/8" 4-pole, female
IO-Link				
Parameter	ON/OFF; setting tripping current, setting output voltage, and many more			
Diagnostics	Output current, alarm, life cycle, and many more			
Connection	M12, male			
General data				
Mains failure bridging	> 20 ms at 230 V AC			
Standards	EN 60950-1, EN 61204-3, EN 55022, EN 61000-3-2			
MTBF	430.000 h			
Temperature range	-25...+50 °C (storage temperature -40...+85 °C)			
Mounting method	screw mounting			
Dimensions (H × W × D)	212 × 109 × 51 mm			

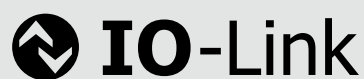
A new dimension of decentralized power supply

- Voltage conversion relocated to where it happens
- Minimum transmission losses, low energy costs
- Smaller control cabinets or even no control cabinets possible
- Protected from mechanical stress
- The high energy efficiency (93.8 %) allows all devices to be touched during operation



The practical add-on: IO-Link interface

- IO-Link interface (M12 connection)
- Communicates as device with a superior IO-Link master
- Use in fully-networked intelligent applications
- Transport of extensive diagnostic data and operating characteristics
- Enables lifetime monitoring, enabling module exchange during scheduled maintenance



Electronic current monitoring for high operational reliability

- Two integrated channels for electronic current monitoring
- Separate monitoring of sensor, module and actuator supplies
- 2-pole switch-off of short circuits and overload
- Patented tripping characteristics: "as late as possible, as early as necessary"
- 90 % early warning
- Switch-on again via button or signal





EMPARRO67

Power Supply directly next to the load

Emparro67 power supply units are specially designed for applications outside the control cabinet. They withstand extreme environmental conditions and can be installed directly in the field, next to the loads.

Power loss is reduced to a minimum, because the voltage is converted from 230 VAC to 24 VDC directly at the load. Therefore, the energy costs are reduced and smaller cabinets can be used.

Single phase,
primary switched

— short circuit and overload
protected (Power limiter)
— Power Boost 150 %

Emparro67
96 W



Emparro67
192 W



Emparro67
91,2 W

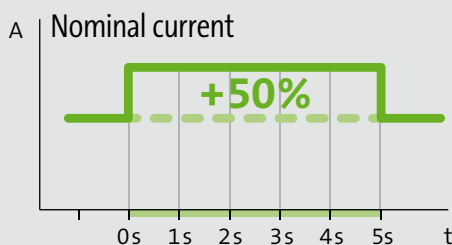


Ordering Data	Art.-No		Art.-No	
	9000-11112-1962020		9000-11112-2062020	
Current	4 A		8 A	
Input	NEC class 2			
Input voltage	90...265 V AC/V DC			
Input current	0,5 A at 230 V AC		0,9 A at 240 V AC	
Inrush current after 1 ms	< 9 A		< 7 A	
PFC	active			
Connection	7/8" 3-pole, male			
Output				
Output voltage	24.1 V DC ± 2 %			
Power Boost	150 % for 5 seconds			–
Efficiency	up to 92.4 %		up to 94.2 %	
Protection	short-circuit and overload protected (output), Power Limiter			
Connection	7/8" 5-pole, female			7/8" 4-pole, female
General data				
Mains failure bridging	> 35 ms at 230 V AC		> 35 ms at 230 V AC	
Standards	EN 60950-1, EN 61204-3, EN 55022, EN 61000-3-2			
MTBF	960.000 h		820.000 h	
Temperature range	–25...+60 °C (storage temperature –40...+85 °C)/with derating up to 85 °C			
Mounting method	screw mounting			
Dimensions (H × W × D)	140 × 109 × 51 mm		175 × 109 × 51 mm	

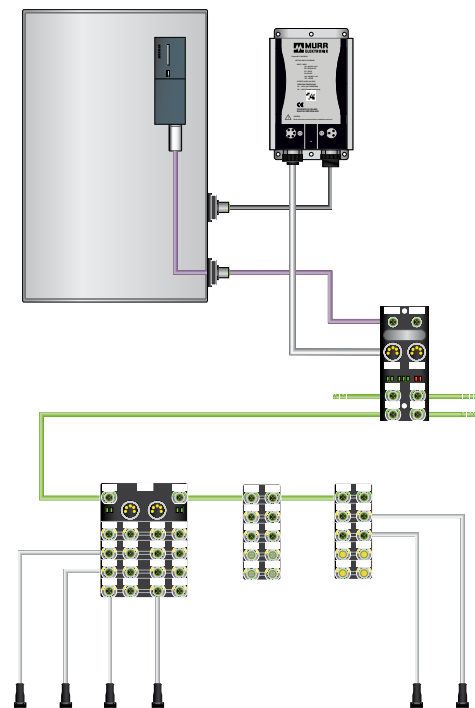
Decentralized Installation

- Extremely rugged, fully potted housing (IP67)
- Very flat, compact design with LED
- High efficiency of up to 94.2 %
- Ambient temperature up to 85 °C
- Active PFC
- Integrated input fuses
- MTBF up to 960,000

Power Boost Function



Emparro67 Topology





ACCESSORIES

Suitable Connectors for Power Supply

Murrelektronik guarantees quality

- All contacts gold-plated
- High IP67 protection as standard
- Shock and vibration resistant
- In-house test center and EMC lab for tested and accredited products
- No use of hazardous materials
- Complies with RoHS requirements




Did You Know?

Every Murrelektronik connector is 100 % tested.

- Electrical check
- High voltage test
- Function check
- Pin assignment test
- Short circuit test
- Visual check



7/8" Connectors – Input Side

Field-wireable	Description	Art.-No
	7/8" 3-pole female, 0°, field wireable, screw terminal unshielded, 6–8 mm, 300 V / 12 A, UL approved	7000-78191-0000000
	7/8" 3-pole female, 90°, field wireable, screw terminal unshielded, 6–8 mm, 300 V / 12 A, UL approved	7000-78291-0000000
Female open leads	Description	Art.-No
	7/8" 3-pole female, 0° with open lead, PUR	7700-A3021-UMByyyy
	7/8" 3-pole female 90° with open lead, PUR	7700-A3031-UMByyyy
Connecting cable	Description	Art.-No
	7/8" 3-pole male 0° on 0° female, PUR	7700-A3A01-UMByyyy
	7/8" 3-pole male 90° on 90° female, PUR	7700-A3A31-UMByyyy

7/8" Connectors and M12 Connectors – Output Side

Field-wireable	Description	Art.-No
	7/8" 5-pole female, 0°, field wireable, screw terminal unshielded, 6–8 mm, 300 V / 12 A, UL approved For Art.-No. 85676, 9000-11112-1962020, 9000-11112-2062020	7000-78081-0000000
	7/8" 5-pole female, 90°, field wireable, screw terminal unshielded, 6–8 mm, 300 V / 12 A, UL approved For Art.-No. 9000-11112-1962020, 9000-11112-2062020	7000-78141-0000000
Male open leads	Description	Art.-No
	7/8" 4-pole male, 0° with open lead, PUR For Art.-No. 85677, 85679, 9000-11112-1862020	7700-A4001-UMCyyyy
	7/8" 4-pole male 90° with open lead, PUR For Art.-No. 85677, 85679, 9000-11112-1862020	7700-A4011-UMCyyyy
	7/8" 5-pole male, 0° with open lead, PUR For Art.-No. 9000-11112-1962020, 9000-11112-2062020	7700-A5001-UMDyyyy
	7/8" 5-pole male, 90° with open lead, PUR For Art.-No. 9000-11112-1962020, 9000-11112-2062020	7700-A5011-UMDyyyy
Connecting cable	Description	Art.-No
	7/8" 4-pole male 0° with open lead, PUR For Art.-No. 85677, 85679, 9000-11112-1862020	7700-A4A01-UMCyyyy
	7/8" 4-pole male 90° with open lead, PUR For Art.-No. 85677, 85679, 9000-11112-1862020	7700-A4A11-UMCyyyy
	7/8" 5-pole male, 0° on 0° female, PUR, For Art.-No. 9000-11112-1962020, 9000-11112-2062020	7700-A5A01-UMDyyyy
	7/8" 5-pole male, 90° on 90° female, PUR, For Art.-No. 9000-11112-1962020, 9000-11112-2062020	7700-A5A11-UMDyyyy
Male open leads	Description	Art.-No
	M12 Power, 5-pole male, 0° with open lead, PUR For Art.-No. 85678	7000-P4201-P04yyyy
	M12 Power, 5-pole male, 90° with open lead, PUR For Art.-No. 85678	7000-P4211-P04yyyy
Connecting cable	Description	Art.-No
	M12 Power, 5-pole male, 0° on 0° female, PUR, For Art.-No. 85678	7000-P4241-P04yyyy
	M12 Power, 5-pole male, 90° on 90° female, PUR, For Art.-No. 85678	7000-P4271-P04yyyy

IO-Link Connectors

Connecting cable	Description	Art.-No
	M12, 4-pole male 0° on 0° female, PUR 3- and 5-pole versions – see onlineshop	7000-40021-624yyyy

Further cable types and lengths on request.

Length yyyy in cm: 0150 – 1,5 m, 0300 – 3,0 m, 0500 – 5,0 m



ACCESSORIES

IO-Link Master – suitable for Emparro67 Hybrid

Murrelektronik's compact IO-Link modules are the smartest way to get IO-Link devices connected to Ethernet/IP.

An easy-to-use configuration tool for IO-Link devices helps to decrease installation and maintenance time.

Combined with a large variety of Murrelektronik I/O hubs and IO-Link/analog converters, these modules have their flexibility increased and contribute to a reduction in hardware costs.

IO-Link Master Modules

Input/Output Modules
– digital
– IP67

MVK Metal
DIO14
DIO2/IOL2 4P



MVK Metal
DIO12
DIO4/IOL4 4P

IMPACT67
DIO14
DIO2/IOL2 4P



IMPACT67
DIO12
DIO4/IOL4 4P

EtherNet/IP

Order Data	Art.-No	Art.-No	Art.-No	Art.-No
	55543	55544	55143	55144
Description				
Fieldbus	EtherNet IP 10/100 Mbit/s			
Addressing	DHCP, BOOTP or IP address by rotary switch			
IO-Link	2 x Master	4 x Master	2 x Master	4 x Master
IO-Link specification	IO-Link Master V1.12			
Housing	metal		plastic	
Supply voltage				
Connection	7/8", 4-pole, 2 × max. 9 A			
Operation voltage	24 V DC (18...30.2 V). EN61131-2			

Input/Output Modules
– digital
– IP67

MVK Metal
DIO14
DIO2/IOL2 IRT



MVK Metal
DIO12
DIO4/IOL4 IRT

IMPACT67
DIO14
DIO2/IOL2 IRT



IMPACT67
DIO12
DIO4/IOL4 IRT

PROFI
NET

Order Data	Art.-No	Art.-No	Art.-No	Art.-No
	55531	55532	55131	55132
Description				
Fieldbus	PROFINET I/O			
Addressing	DCP			
IO-Link	2 x Master	4 x Master	2 x Master	4 x Master
IO-Link specification	V 1.12 / EN61131-2 Typ 1, Com1/Com2/Com3, automatic startup, up to 1 A Last			
Housing	metal		plastic	
Supply voltage				
Connection	7/8", 4-pole, 2 × max. 9 A			
Operation voltage	24 V DC (18...30.2 V), EN61131-2			

Input/Output Modules
– digital
– IP67

SOLID67 PN/E
IOL8



SOLID67 PN/E
IOL8



SOLID67 PN/E
IOL8



Cube67+ DIO12 IOL4
E 8xM12



PROFI
NET EtherNet/IP

Order Data	Art.-No	Art.-No	Art.-No	Art.-No
	54504	54505	54506	56766
Description				
Fieldbus	PROFINET I/O, EtherNet IP, multi protocol			Cube67
Addressing Profinet	DCP			–
Addressing EtherNet IP	DHCP, BOOTP or IP address by rotary switch			automatically
IO-Link	8 x Master	4 x Master	2 x Master	4 x Master
IO-Link specification	IO-Link Master V1.1			
Connection	M12	M12	M8	M12
Housing	metal			plastic
Supply voltage				
Connection	M12 Power, 5-pole, L-coded			via internal system connection
Operation voltage	24 V DC (18...30.2 V), EN61131-2			24 V DC (18...30.2 V), . EN61131-2



➔ www.murrelektronik.com

The information contained herein has been compiled with the utmost care. Liability for the correctness, completeness and topicality of the information is restricted to gross negligence.

Our company embraces social responsibility in all aspects of our business activities. Our brochures are printed using environmentally friendly production techniques and products.

