

ONBOARD CHARGER

RO

COMPACT. EFFICIENT. BUILT FOR INDUSTRIAL
ELECTRIFICATION.



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YOUR POWERFUL SOLUTIONS PARTNER

Micropower Group develops and manufactures energy-efficient Lithium-Ion batteries, chargers, and power converters. With 40+ years of experience, we deliver high-quality systems and long-term value to leading OEMs through technical expertise, innovation, and reliability.

*Intelligent Energy
Solutions for a
Sustainable Future*

ABOUT MICROPOWER GROUP

Driving Electrification of Industry

Micropower enables industrial electrification through energy solutions tailored to real industrial applications. With deep system integration know-how and advanced battery expertise, we deliver efficient, high-performing technologies that support OEMs on their electrification journey.

In-house Development & Manufacturing

Our Nordic-based R&D and manufacturing ensure full process control and scalability. Our testing facilities support solution validation under real conditions. From prototype to volume, our industrialized setup enables efficient, high-quality production at scale.

Partnership Excellence

As a strategic partner, Micropower supports customers across the full electrification process. We ensure compliance, prioritize safety, and provide expert training. Our reliable delivery, short lead times, and dedicated support foster long-term collaboration.



RETHINK POWER SYSTEMS

Imagine designing a power system around your equipment instead of designing your equipment depending on a fixed power system.

INTEGRATED POWER SYSTEMS

COMPONENTS AND PRODUCTS
OF ANY **SIZE** AND **VOLTAGE**



SOFTWARE
SOLUTIONS



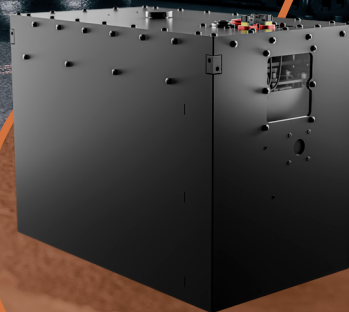
BATTERY
MONITORING
SYSTEMS



POWERFUL
BATTERY
SOLUTIONS



STATIONARY
CHARGERS



COMPLETE AND
CUSTOM BATTERY
SYSTEMS



POWER
CONVERTERS



ON-BOARD
CHARGERS

RO ONBOARD BATTERY CHARGERS

The RO series is a range of compact, high-efficiency 3-phase onboard chargers designed for industrial lead-acid and lithium-ion battery systems. Supporting both low- and high-voltage applications, the series combines robust performance with seamless integration. With a wide 380-480 VAC input range and IP66-rated protection, RO chargers are built to operate reliably in demanding environments and are available with output power up to 7.2 kW.

Performance & Efficiency

Up to 96% efficiency minimizes power loss and reduces CO₂ emissions by up to 50%, supporting sustainable operations and lower energy costs.

Smart Integration

Features CAN bus communication, and interface via Molex 12-pin – enabling fast, fail-safe installation. Same housing as the well proven Robust series.

Built for industry use

Fan cooled (no liquid cooling required), low-weight, and IP66-rated design ensures durability in harsh conditions, with consistent charging and optimized lithium-ion performance. RO is certified to demanding EMC standards.



Air cooled

No liquid cooling
needed

96%

Efficiency

380-480

VAC

6.6-7.2kW

Output power

50%

CO₂ reduction*

*compared with traditional charger with 90-92% efficiency

TECHNICAL SPECIFICATIONS

Technical specifications	
Phase	3-phase
Mains Voltage	380-480VAC (50/60Hz)
Output Voltage	48Vnom, up to 6600W 80Vnom, up to 6600W 96Vnom, up to 6600W 360Vnom, 420Vmax up to 7200W 720Vnom, 840Vmax up to 7200W
Battery types	Lead-acid and lithium-ion with CAN-bus communication
Support Battery Technologies	Lead-acid and lithium-ion (CAN-BMS controlled)

Product features	
CAN bus / Interface	Communication with Li-battery (BMS) with isolated CAN-H, CAN-L, CAN-GND, CAN open
Pilot / Detect Signal	Enable/disable signal for BMS and/or charger
Interlock Signal (Immobilizer)	AC-present indicator - potential-free relay
External LED Drive	3 external LEDs
External Battery Temperature Sensor	NTC
HMI (User interface)	4 LED (AC-present, Charging, Alarm, Charging finished)
Parallel Connection	Up to 4 units in parallel (max. 28,8kW)
J1772 Compatibility	With our Mode 3 controller the charger can be regulated according to J1772
Cabinet dimensions	255 x 429 x 86 mm

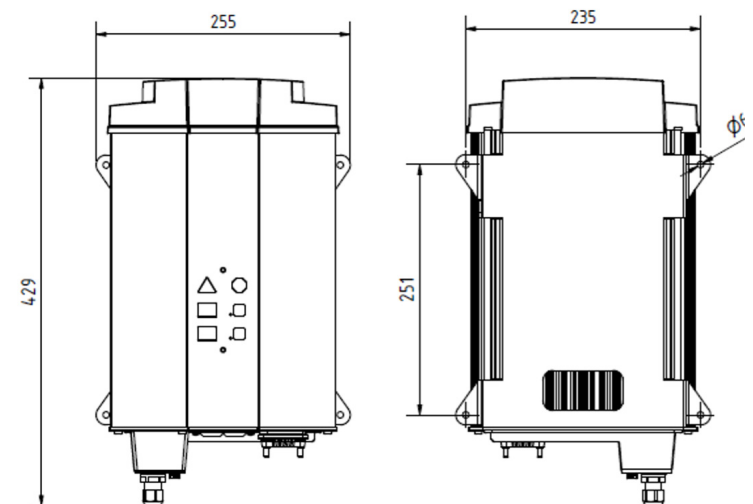
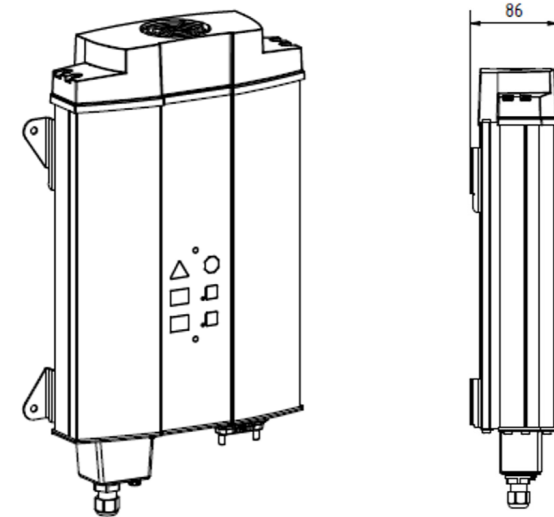
CERTIFICATIONS



Safety	CE, IEC/EN 62477-1
Emissions & Immunity	FCC 47 Part 15/ICES-001 Class A, EN 61000-6-3, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-11, EN 61000-3-3,

TECHNICAL DOCUMENTATION PORTAL

Micropower Support Center



MICROPOWER RO LV MODEL RANGE

Product	RO66 Pb 48V	RO66 Li 48V	RO66 Pb 80V	RO66 Li 80V	RO66 Pb 96V	RO66 Li 96V
Part Number	S34455-T4	M34455-T4	S36345-T4	M36345-T4	S39345-T4	M38345-T4
Model	3A8R353	3ANR353	3A8R355	3ANR355	3A8R356	3ANR356

Main data

Output voltage (V)	48 (72Vmax)	(72Vmax)	80 (120Vmax)	80 (120Vmax)	96 (144Vmax)	96 (144Vmax)
Output current (A)	115	115	60	60	60	60
Number of phases	3	3	3	3	3	3
Rated voltage (V)	380-480 (50/60Hz)	380-480 (50/60Hz)	380-480 (50/60Hz)	380-480 (50/60Hz)	380-480 (50/60Hz)	380-480 (50/60Hz)
Current at nominal voltage 380/480Vac(A)	14 / 12	14/12	10 / 8	10 / 8	14/12	14 / 12

Battery connection

Output cable terminals (in unit)	Internal connected	Internal connected	Internal connected	Internal connected	Internal connected	Internal connected
Auxiliary connector	Molex MX120G	Molex MX120G	Molex MX120G	Molex MX120G	Molex MX120G	Molex MX120G
Output voltage (V)	24-48	24-48	48-80	48-80	48-96	48-96

Electric data

Standby AC power consumption (W)	< 10	< 10	<10	<10	< 10	< 10
Power consumption (W)	6600	6600	6100	6100	6600	6600
Power factor	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9
Inrush current (A)	Circuit breaker type C	Circuit breaker type C	Circuit breaker type C	Circuit breaker type C	Circuit breaker type C	Circuit breaker type C
Efficiency (%)	Up to 96	Up to 96	Up to 96	Up to 96	Up to 96	Up to 96

MICROPOWER RO HV MODEL RANGE

Product	RO72 Pb HV 360V	RO72 Li HV 360V	RO72 Pb HV 720V	RO72 Li HV 720V
Part Number	S34455-T4	M34455-T4	S36345-T4	M36345-T4
Model	3A8R353	3ANR353	3A8R355	3ANR355

Main data

Output voltage (V)	360 (420Vmax)	360 (420Vmax)	720 (840Vmax)	720 (840Vmax)
Output current (A)	20	20	10	10
Number of phases	3	3	3	3
Rated voltage (V)	380-480 (50/60Hz)	380-480 (50/60Hz)	380-480 (50/60Hz)	380-480 (50/60Hz)
Current at nominal voltage 380/480Vac(A)	14/12	14/12	14/12	14/12

Battery connection

Output cable terminals (in unit)	Internal connected	Internal connected	Internal connected	Internal connected
Auxiliary connector	Molex MX120G	Molex MX120G	Molex MX120G	Molex MX120G
Output voltage (V)	x-420	x-420	x-840	x-840

Electric data

Standby AC power consumption (W)	<3	<3	<3	<3
Power consumption (W)	7200	7200	7200	7200
Power factor	>0.9	>0.9	>0.9	>0.9
Inrush current (A)	Circuit breaker type C	Circuit breaker type C	Circuit breaker type C	Circuit breaker type C
Efficiency (%)	Up to 96	Up to 96	Up to 96	Up to 96

PRODUCT TYPEKEY STRUCTURE

X Y Z UU T - AA B C DD [-OR_] EE

X	
Code	Control
M	RO66 Li
S	RO66 Pb

Y	
Code	Casing
3	RO66 (casing P9)

Z	
Code	DC Volt
4	48
6	80
9	96
H	360
O	720

UU	
Code	DC Current
14	10
24	20
34	60
45	115

T	
Code	AC Volt 3-Phase
5	380–480

AA	
Code	Branding/Certification
T4	Micropower CE
T5	Micropower UR
T6	Micropower UL

B	
Code	AC cable 3-Phase
1	2,5m; CEE 16A red (3P+N+E) 400V
4	2,5m; no connector
8	2,5m; 16A CEE red (3P+E) 400V
A	2,5m; CEE 32A red (3P+E) 400V
C	2,5m; CEE 32A red (3P+N+E) 400V

C	
Code	DC-Cable
1	3m *others lengths on request

DD	
Code	DC-Connector
00	No DC-connector
02	MRC 80 (grey pin)
03	MRC 160 (grey pin)
04	MRC 320 (grey pin)
05	MRC 320 (red pin)
07	REMA DIN 80 (grey pin)
08	REMA DIN 160 (grey pin)
09	REMA DIN 320 (grey pin)
10	REMA DIN 640 (grey pin)
xx	And many more

EE	
Code	Option

COMPATIBLE OPTIONS

The RO-family of products has capability to support both Lead-Acid (Pb) batteries and Li-Ion batteries with BMS communication through CAN. The Options are included in the product part number and are included/attached to the charger. Options for RO72 HV available on request.

			Pb	Li
			RO66	RO66
Pb and Li relevant	Others	AGV - 1 Relay, no Ground Resistor	○-12	○-12
Li relevant	MP Battery CAN/Pilot (Node ID44, 125kb)	No cables	×	●-04
		via AUX/Pilot DC-Plug	×	●-05
		Cable - open end	×	●-30
-EE (partcode) Electrical options	Safe Disconnect	via AUX DC-Plug	○-01	×
		via Pilot DC-Plug	○-02	×
		Cable - open end	○-21	×
	Temp Sensor	via AUX DC-Plug	○-61	×
		via Pilot DC-Plug	○-62	×
		cable	○-63	×
	MP CAN (Node ID 44, 125kb)	via Aux DC-Plug	○-R1	×
		via Pilot DC-Plug	○-R2	×
		cable	○-R3	×
	MP CAN/Pilot node (Node ID 44, 125kb)	via Aux DC-Plug	○-R4	×
		via Pilot DC-Plug	○-R5	×
		cable	○-R6	×
	Drive away interlock	3m cable	○-05	×

● Standard - included
○ Optional
× Not available

Combinations of different options are also possible, please contact your Micropower sales representative.

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Learn more!

