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1 CHARGING LEVEL

- For lead-acid battery only, up to 150Ah rating
- Rated output current:
 - 3A, 6A, 12A at 12VDC
 - 2.5, 5A, 10A at 24VDC
- Input and output protection
- Electronic lock for:
 - Shorted battery
 - Polarity inversion
 - Low battery voltage
 - Disconnected battery.



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2 CHARGING LEVELS

- For lead-acid or nickel-cadmium battery, up to 500Ah rating
- Rated output current:
 - 6A, 10A, 15A at 12VDC, 24VDC or 48VDC
- Input and output protection
- Electronic lock for:
 - Polarity inversion
 - High battery voltage
- Current limitation for shorted battery output.

- *1 or 2 charging levels*
- *Versions for lead-acid or nickel-cadmium batteries, 3 to 50A ratings.*
- *Charging current limitation selectable.*



PLANET - LOGIC

Automatic battery chargers for lead-acid or nickel-cadmium batteries

	SEC.	PAGE
With 1 charging level, BCE series	18-	2
With 2 charging levels, PS series	18-	3

Dimensions

Wiring diagrams

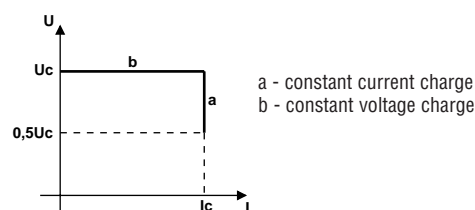
Technical characteristics

1 charging level



31 BCE...

Order code	Rated output current [A]	Rated output voltage DC [V]	Qty per pkg n°	Wt [kg]
1 charging level				
31 BCE 0312	3	12	1	1.900
31 BCE 0612	6		1	4.750
31 BCE 1212	12		1	8.600
31 BCE 2V524	2.5	24	1	1.900
31 BCE 0524	5		1	4.925
31 BCE 1024	10		1	9.550

**General characteristics**

Controlled diode devices for use in civil and industrial systems.

Suitable for small and medium rated batteries (up to 150Ah) at 1 charging level.

Protections:

- Mains input fuse (except for BCE 2V5 and BCE 03)
- Battery output fuse
- Electronic lock in case of short circuit on battery terminals, battery polarity inversion, low voltage across battery poles (<0.5 Ue) and disconnected battery
- Alarm output:
 - Negative static, NPN transistor for BCE2V5 and BCE03
 - Relay for BCE05, BCE06, BCE10 and BCE12.

Indications:

- Power on
- Charge ($I > 0.2 I_c$)
- Alarm for protection tripping.

Operational characteristics

- Supply voltage: 220-240VAC ($\pm 10\%$) 50/60Hz ($\pm 5\%$)
- Charging current: 30% - 100% I_c adjustable
- Charging cycle: in accordance with DIN 41773 standards
- Current limitation
- Degree of protection: IP00
- Operating temperature: -10 to +50°C
- Storage temperature: -30 to +80°C
- Clamping screw terminal block with captive screws:
 - Removable for BCE03 and BCE2V5
 - Fixed for BCE05, BCE06, BCE10 and BCE12.

Type	Maximum power consumption [VA]	dissipation [W]	Mains fuse [A]	Output fuse [A]
BCE 0312	117	24	—	6.3
BCE 0612	222	46	4	12.5
BCE 1212	400	73	6.3	25
BCE 2V524	166	26	—	6.3
BCE 0524	317	40	4	12.5
BCE 1024	610	66	6.3	25

Certifications and compliance

Certifications obtained: RNR (Romanian ROS).

Compliant with standards: IEC/EN 60335-2-29.

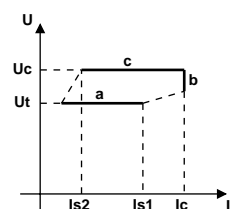
2 charging levels: fast and trickle



31 PS...

Order code	Rated output current [A]	Rated output voltage DC [V]	Qty per pkg n°	Wt [kg]
2 charging levels: fast and trickle				
31 PS 0612	6	12	1	4.130
31 PS 1012	10		1	9.455
31 PS 1512	15		1	15.000
31 PS 0624	6	24	1	5.930
31 PS 1024	10		1	12.400
31 PS 1524	15		1	21.850
31 PS 0648	6	48	1	11.050
31 PS 1048	10		1	15.800
31 PS 1548	15		1	23.200

Specify type of battery (lead acid or nickel cadmium) when ordering.



General characteristics

Controlled diode devices for use in industrial systems. Suitable for medium and large rated batteries (up to 500Ah) at 1 fast charging level and 1 trickle level. They are factory adjusted according to the type of battery indicated in the order.

Protections:

- Mains input fuse
- Battery output fuse
- Electronic lock in case of battery polarity inversion and high voltage across battery poles
- Current limitation in case of short circuit on the output
- Low voltage across battery poles (indication only)
- Alarm output with 1 changeover contact 5A at 250VAC

Indications:

- Fast charge
- Trickle charge
- High voltage across battery poles or polarity inversion
- Low voltage across battery poles or short circuit on output
- Power on.

Operational characteristics

- Supply voltage: 230VAC ($\pm 10\%$) 50/60Hz ($\pm 5\%$)
- Charging current: 33% - 100% I_e adjustable
- Charging cycle: in accordance with DIN 41773 standards
- Current limitation
- Degree of protection: IP00
- Operating temperature: -10 to +50°C
- Storage temperature: -30 to +80°C
- Termination:
 - Faston for PS06 and PS10
 - Terminals for PS15.

Type	Maximum power consumption [VA]	dissipation [W]	Mains fuse [A]	Output fuse [A]
PS 0612	170	36	2	10
PS 0624	340	52	4	10
PS 0648	650	88	8	10
PS 1012	300	44	4	16
PS 1024	550	56	6	16
PS 1048	1000	84	10	16
PS 1512	400	67	5	20
PS 1524	800	92	10	20
PS 1548	1500	178	15	20

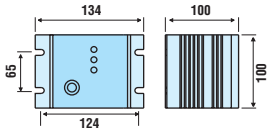
Version made to order

On request, they may be delivered in a special version up to 50A (rated output voltage up to 230VDC) or with stabilised output. For more information, contact our Customer Service (Tel. +39 035 4282422).

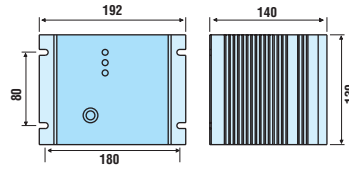
Certifications and compliance

Certifications obtained: RNR (Romanian ROS). Compliant with standards: IEC/EN 60335-2-29.

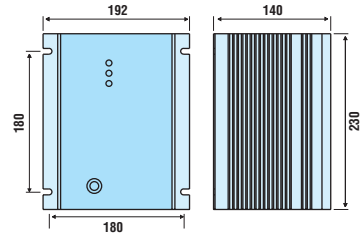
BCE 0312 - BCE 2V524



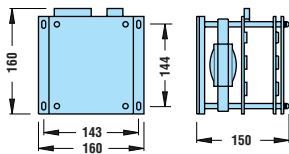
BCE 0612 - BCE 0524



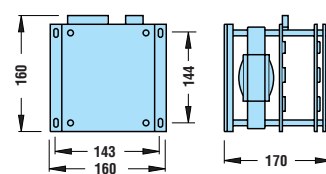
BCE 1212 - BCE 1024



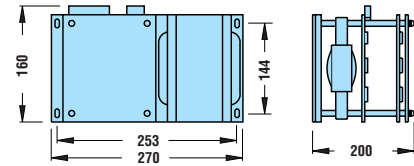
PS 0612



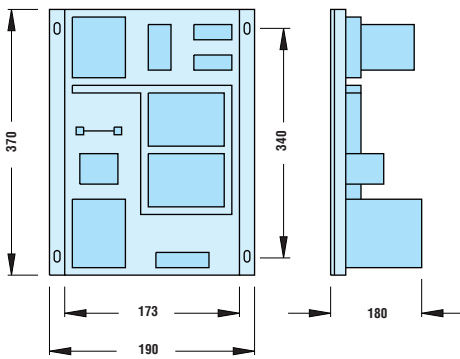
PS 0624



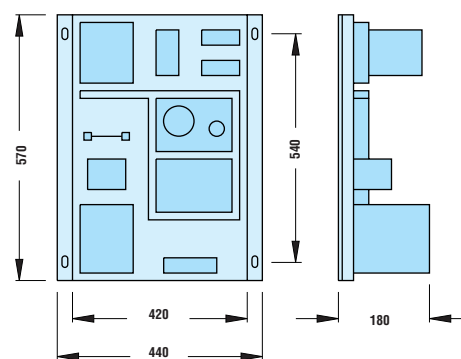
PS 0648 - PS 1012/24



PS 1048

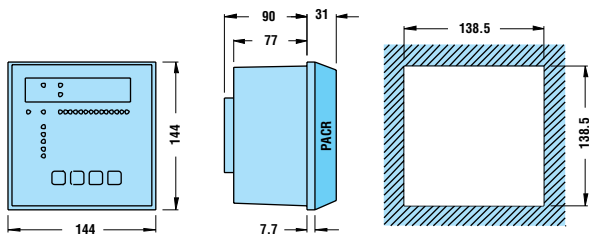


PS 1512/24/48



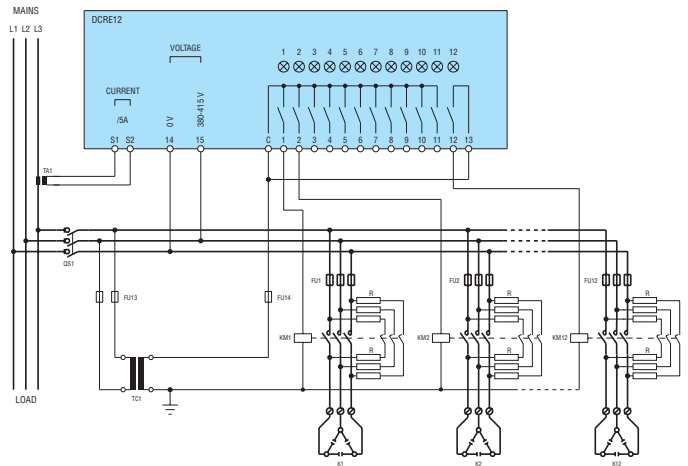
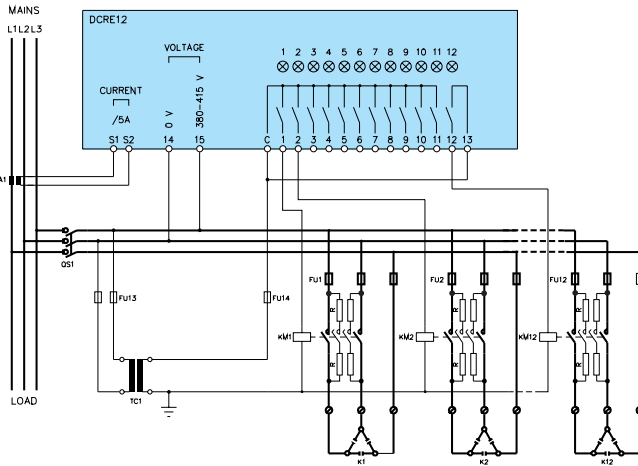
Automatic transfer switches

ATK...



DCRE... installed with BF...4A contactors

DCRE... installed with BF...K contactors

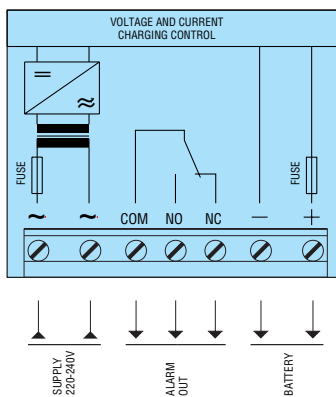
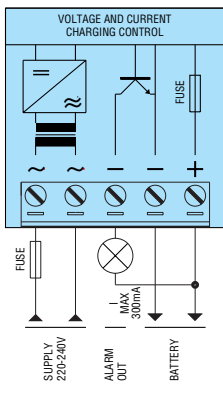


IMPORTANT

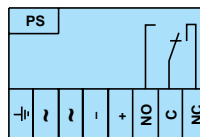
- a. For three phase connection, the voltage input must be connected between two phases; the line current transformer must be connected to the remaining phase.
 - b. The polarity of the current input is irrelevant.
 - c. When no auxiliary source is available, the line to be controlled (maximum 240VAC) can supply the regulator.
- CAUTION!** Always remove the power supply when operating on the terminals.

Automatic battery chargers

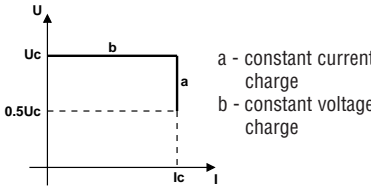
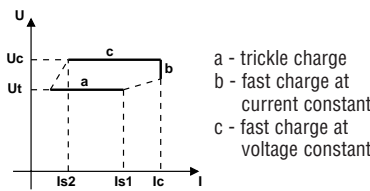
BCE...



PS...



Operational characteristics

TYPE	BCE...	PS...
Description	Single phase automatic battery charger 1 charging level for lead-acid batteries	Single-phase automatic battery charger 2 charging levels – 1 fast charge level – 1 trickle charge level
Supply voltage	220-240VAC ±10% 50/60 Hz	230VAC ± 10% 50/60 Hz ^①
Rated output voltage (Ue)	12-24VDC	12-24-48VDC ^②
Rated charging current (Ie)	3-6-12A (12VDC) 2.5-5-10A (24VDC)	6-10-15A
CHARGING CYCLE		
Reference standards	DIN 41773	
Diagram	 <p>a - constant current charge b - constant voltage charge</p>	 <p>a - trickle charge b - fast charge at current constant c - fast charge at voltage constant</p>
End charge voltage (Uc)	12V battery: 13.8VDC (2.3V/cell) 24V battery: 27.6VDC (2.3V/cell)	internally adjustment according to the type of battery
Trickle charge voltage (Ut)	—	internally adjustment according to type of battery
Charge current (Ic)	adjustable 30% to 100% Ie (using potentiometer on front)	
Threshold for trickle to fast charging transition (Is1)	—	20% Ie
Threshold for fast to trickle charging transition (Is2)	—	18% Ie
Current limit	yes	
PROTECTIONS		
Types	<ul style="list-style-type: none"> – Mains supply fuse (5, 6, 10, 12A types only) – Battery output fuse – Charging inhibition due to: <ul style="list-style-type: none"> • short circuit at battery terminals • battery polarity inverted • low voltage at battery poles (<0.5 Ue) • disconnected battery 	<ul style="list-style-type: none"> – Mains input fuse – Battery output fuse – Electronic block in the case of: <ul style="list-style-type: none"> • battery polarity inverted • high voltage at battery poles – Current limit in the case of output short circuit – Low voltage at battery poles (indication only)
ALARM OUTPUT CIRCUIT		
Configuration	static output (NPN transistor) ^③ ; relay w/1 changeover contact, 5A 250VAC ^④	1 changeover contact, 5A-250VAC
OPERATING AMBIENT CONDITIONS		
Operating temperature	-10 to +50°C	
Storage temperature	-30 to +80°C	
ENCLOSURE		
Version	open frame	
Degree of protection	IP00	
Cooling	natural	
Connections	removable/plug-in terminals ^⑤ fixed terminals ^⑥	Faston (PS06-PS10) terminals on 35mm DIN rail (EN 50022) (PS15)

^① Other voltages available on request.

^② Stabilised output available on request.

^③ For 2.5A and 3A types only.

^④ For 5, 6, 10 and 12A types only.