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1551-4901 Ue

2(2)

Spare parts for BMN 2423

Transformer	Tr				REK 834153
Choke	Dr				REK 833043
Silicon diode	L	(4 st)			RKZ 122403/5
CR-unit			0,25 $\mu$ F	200 ohm	RJK 37801
Capacitor	C	(2 st)	5000 $\mu$ F		699291/1
Resistor	rk1	(2 st)	100 ohm	11 W	REN 15503/1
Resistor	rk2		220 ohm	40 W	REN 13603/22
Fuse	SS1		2 A		NGH 2621
Fuse	SS2		4 A		NGH 2625

Spare parts for BMN 2424

Transformer	Tr				REK 832153
Choke	Dr				REK 817041
Silicon diode	L	(2 st)			RKZ 122403/5
CR-unit			0,25 $\mu$ F	200 ohm	RJK 37801
Capacitor	C		5000 $\mu$ F		699291/1
Resistor	rk1	(2 st)	680 ohm	9 W	REN 15403/68
Resistor	rk2		560 ohm	11 W	REN 15503/56
Fuse	SS1		1 A		NGH 2618
Fuse	SS2		2 A		NGH 2621


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	benämning	AUT. CHARGING RECTIFIER BMM 4215 48 V 4 A	nr	1551-BMM 4215 Ue	sida	1(3)
	Höör		datum	18.10.1966		
	godkänd (list. och namn)	X/Yk1C J Hammarberg	korr.			
Description						

Circuit diagram 698260  
 Assembly BMM 421 sheet 2

1. USE

This is a stabilized rectifier constructed for float charging of a 24 cell lead battery.

2. DATA

Mains voltage: 1-phase 110 V 127 V, 150 V and 220V  
 Mains frequency: 50 or 60 Hz  
 DC voltage: Automatic charge at constant voltage level 52.5 V  $\pm 2\%$  at a load variation 3-100 % and a mains voltage variation of  $\pm 10\%$ .  
 Manual charging levels: 56 V and 60 V  
 DC current: 4 A  
 Ripple: 2 mV psophometric with normal battery size.

3. FUNCTION

At float charging i.e. charging at constant voltage level a battery is rapidly recharged after a discharge, and takes, in charged condition the current required to compensate the local action.

The characteristic load curve of the rectifier is such that it is selfprotected when float charging the battery. The part of distribution load higher than rated current of the rectifier is supplied from the battery. Relay R1 is attracted when charging is going on. The relay releases and gives alarm, for instance when the DC fuse is blown or at a mains failure. Relay R2 attracts when a higher current than rated is taken from the rectifier i.e. at a discharged battery. With relay R2 attracted the rectifier is charging at 56 V level until the current is decreased i.e. the battery is fully charged. The voltage is then automatically connected to the 52,5 V level.

In connection with other consumption devices than telephone exchanges it must be checked up that the distribution current is lower than 2 A at least once a day to ensure reconnection to 52.5 V level.

The rectifier is constructed for rapid charge. Rapid charge is carried out in order to ensure highest possible capacity of the battery.

Manual charge at 56 V level can be carried out with the telephone exchange in operation. (For instance at a routine check of the telephone exchange).

Note: When the battery is recharged, switch OK must be reset to position Aut. 52.5/56 V.

reps.	översett	andra utgåvor	utgåg (typ. o. sign.)	kont. (typ. o. sign.)	nr	sida
X/Yk1	X/Yk1/JHg		X/Yk1/JHg	X/Yk1/GLö	1551-BMM 4215 Ue	1 (3)

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Manual charge at 60 V ought to be carried out when the telephone exchange is idle. (For instance at care of the battery, at which a check of specific gravity and the acid level also can be recommended).

Note: When the battery is recharged, switch OK must be reset to position Aut. 52.5/56 V.

#### 4. FRONT PANEL COMPONENTS

On the front panel is located:

Terminals for connection of voltmeter  
 Terminals for temporary connection of ammeter, distribution current  
 Terminals for temporary connection of ammeter, rectifier current  
 Automatic fuse for distribution current 8 A  
 Automatic fuse for rectifier current 15 A  
 The fuse can be reset after release.

Switch with positions:

- O: Off
- I: Automatic charge; the rectifier gives 52.5 V. At a higher current than rated (i.e. at a discharged battery) the voltage is increased to 56 V until the battery is recharged, after which the 52.5 V level is automatically restored.
- II: Manual charge: the rectifier charges at 56 V level
- III: Manual charge: the rectifier charges at 60 V level  
 The rapid charge lamp is lit.

#### 5. CONNECTION

The rectifier is to be erected on wall. It should be mounted so that air can circulate through the unit.  
 At delivery the rectifier is connected for 220 V $\sim$  and 50 Hz.  
 Before connection to other mains changing-over must be done on the voltage terminals (2 links) and frequency terminals (3 links).

Initial charge of the battery is of great importance for its life and function.

Be careful to follow the instructions from the battery manufacturer.

Mains voltage is connected to terminals marked  $\sim \sim$ .

Mains fuse 4 A

The unit is earthed to terminal marked  $\perp$

Battery is connected to terminals marked B+ and B-.

Distribution is connected to terminals marked D+ and D-.

Ringling voltage 50 Hz is taken from terminals RG.

Alarm can be arranged at mains failure or no charging current by connection to terminal LL.

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After a time of operation should be controlled that the battery is fully charged (control of specific gravity and voltage). Adjustment of the voltage level can be made on secondary side of transformer 1 according to the table below:

Brown wire to terminal	Yellow wire to terminal	Voltage level
14	19	low
14	18	
14	17	
15	19	
15	18	
15	17	
16	19	high
16	18	
16	17	

In a similar manner level adjustment can be made at a too sloping load curve by means of black and green wires on transformer Tr2.

SPARE PARTS

Transformer	Tr1		REK 835169
Transformer	Tr2		REK 835170
Choke	Dr		REK 833041/2
Diode	L		RKZ 122403/5
CR-unit		0,25 uF, 200 ohm	RJK 37801
Capacitor (2 st)	C1	10 uF	699290/1
Capacitor	C2	5000 uF	RJE 53544/5
Relay	R1		930200/2
Relay	R2		930200/1
Switch	OK		930210/1
Glow discharge lamp	SL	0,05-0,15 W	RZB 51001
Resistor	rk1	220 ohm 40 W	REN 13603/22
Fuse	TS	8A	NFS 957/8
Fuse	TS	15A	NFS 957/15