

DATO-DATE
10.05.10REF.
AR

GODKJ.-APPR.

ENDRET-CHANGED
27.08.13 KNDOK.NR.-DOC.NO.
4390I

TEKNISKE DATA / SPECIFICATIONS FOR TYPE 2440.

Specifications for MASCOT type 2440	Li-Ion versions							
	1-Cell	2-Cell	3-Cell	4-Cell	5-Cell	6-Cell	7-Cell	8-Cell
Input voltage:	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC
Line frequency:	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz
Charge control:	Charge indication:							
Step 1 Charge current:	4.0A ±0.2A	4.0A ±0.2A	4.0A ±0.2A	3.5A ±0.2A	3.3A ±0.2A	2.8A ±0.2A	2.5A ±0.2A	2.1A ±0.2A
Step 2 Charge voltage:	4.2V ±0.05V	8.4V ±0.1V	12.6V ±0.1V	16.8V ±0.1V	21.0V ±0.1V	25.2V ±0.2V	29.4V ±0.2V	33.6V ±0.2V
- Charge current >:	1.8A ±0.2A	1.8A ±0.1A	1.8A ±0.1A	1.6A ±0.1A	1.6A ±0.1A	1.6A ±0.1A	0.8A ±0.1A	0.8A ±0.1A
- Charge current <:	300mA ±25%	300mA ±25%	300mA ±25%	300mA ±25%	300mA ±25%	300mA ±25%	300mA ±25%	300mA ±25%
Step 3 Charge termination <:	3.9V ±0.15V	8.0V ±0.1V	12.3V ±0.1V	16.4V ±0.1V	20.5V ±0.1V	24.6V ±0.2V	28.7V ±0.2V	32.8V ±0.2V
Charge start Vbat <:	or mains turn-on	or mains turn-on	or mains turn-on	or mains turn-on	or mains turn-on	or mains turn-on	or mains turn-on	or mains turn-on
Max output power:	17W	34W	51W	59W	70W	71W	74W	71W
Ripple:	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p
Efficiency (at 100% load, 230V) approx.:	>60%	>80%	>81%	>85%	>85%	>86%	>85%	>85%
Leakage current from battery with mains switched off:	<0.4mA @ 3.7V	<0.4mA @ 7.4V	<0.7mA @ 11.1V	<0.7mA @ 14.8V	<0.6mA @ 18.5V	<0.7mA @ 22.2V	<0.9mA @ 25.9V	<1.6mA @ 29.6V
Switch frequency approx.:	40kHz							
Protection:	Protected against reversed polarity and short circuit proof							
Temperature range:	Operating: -25 to +40°C / Storage: -25 to +85°C							
Safety:	EN 60601-1, EN 60335-2-29							
Insulation class :	Class II							
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC							
EMC standards:	Med. EN 60601-1-2 / Emission EN 61000-6-3 / Immunity EN 61000-6-1							
Mains connection:	2-pins IEC 60320 connector.							
Output terminals:	Battery clips, Push-on terminals or DC connector.							
IP-Grade:	41							
Dimensions:	135 x 80 x 44mm							
Weight:	390g							

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Specifications for MASCOT type 2440	Li-Ion versions							
	9-Cell	10-Cell	11-Cell	12-Cell	13-Cell	14-Cell	15-Cell	16-Cell
Input voltage:	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC
Line frequency:	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz
<u>Charge control:</u>	<u>Charge indication:</u>							
Step 1 Charge current:	1.9A ±0.2A	1.8A ±0.1A	1.6A ±0.1A	1.45A ±0.1A	1.35A ±0.1A	1.3A ±0.1A	1.15A ±0.1A	1.1A ±0.1A
Step 2 Charge voltage:	37.8V ±0.2V	42.0V ±0.2V	46.2V ±0.2V	50.4V ±0.3V	54.6V ±0.3V	58.8V ±0.3V	63.0V ±0.3V	67.2V ±0.3V
- Charge current >:	0.8A ±0.1A	0.8A ±0.1A	0.8A ±0.1A	0.6A ±0.1A	0.6A ±0.1A	0.6A ±0.1A	0.6A ±0.1A	0.6A ±0.1A
- Charge current <:	200mA ±25%	200mA ±25%	200mA ±25%	200mA ±25%	100mA ±25%	100mA ±25%	100mA ±25%	100mA ±25%
Step 3 Charge termination <:	36.9V ±0.2V	41.0V ±0.2V	45.1V ±0.2V	49.2V ±0.3V	53.3V ±0.3V	57.4V ±0.3V	61.5V ±0.3V	65.6V ±0.3V
Charge start Vbat <:	or mains turn-on	or mains turn-on	or mains turn-on	or mains turn-on	or mains turn-on	or mains turn-on	or mains turn-on	or mains turn-on
Max output power:	72W	76W	74W	73W	74W	76W	72W	74W
Ripple:	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p
Efficiency (at 100% load, 230V) typical.:	85%	88%	87%	87%	87%	88%	87%	87%
Leakage current from battery with mains switched off:	<1.6mA @33.3V	<0.9mA @37.0V	<1.6mA @40.7V	<1.6mA @44.4V	<1.6mA @48.1V	<0.5mA @51.8V	<1.6mA @55.5V	<0.6mA @59.2V
Switch frequency approx.:	40kHz							
Protection:	Protected against reversed polarity and short circuit proof							
Temperature range:	Operating: ±25 to +40°C / Storage: ±25 to +85°C							
Safety:	EN 60601-1, EN 60335-2-29							
Insulation class :	Class II							
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC							
EMC standards:	Med. EN 60601-1-2 / Emission EN 61000-6-3 / Immunity EN 61000-6-1							
Mains connection:	2-pins IEC 60320 connector.							
Output terminals:	Battery clips, Push-on terminals or DC connector.							
IP-Grade:	41							
Dimensions:	135 x 80 x 44mm							
Weight:	390g							

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TEKNISKE DATA / SPECIFICATIONS FOR TYPE 2440.

Specifications for MASCOT type 2440	LiFePo ₄ versions							
	1-Cell	2-Cell	3-Cell	4-Cell	5-Cell	6-Cell	7-Cell	8-Cell
Input voltage:	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC
Line frequency:	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz
Charge control:	Charge indication:							
Step 1 Charge current:	4.0A ±0.2A	4.0A ±0.2A	4.0A ±0.2A	4.0A ±0.2A	3.9A ±0.2A	3.3A ±0.1A	2.8A ±0.1A	2.5A ±0.1A
Step 2 Charge voltage:	3.65V ±0.05V	7.3V ±0.1V	10.95V ±0.1V	14.6V ±0.1V	18.25V ±0.1V	21.9V ±0.2V	25.55V ±0.2V	29.2V ±0.2V
- Charge current >:	1.8A ±0.2A	1.8A ±0.1A	1.8A ±0.1A	1.6A ±0.1A	1.6A ±0.1A	1.6A ±0.1A	0.8A ±0.1A	0.8A ±0.1A
- Charge current <:	300mA ±25%	300mA ±25%	300mA ±25%	300mA ±25%	300mA ±25%	300mA ±25%	300mA ±25%	300mA ±25%
Step 3 Charge termination <:	3.5V ±0.05V	7.0V ±0.1V	10.5V ±0.1V	14.0V ±0.1V	17.5V ±0.1V	21.0V ±0.2V	24.5V ±0.2V	28.0V ±0.2V
Float charge voltage:	15W	29W	44W	58W	71W	72W	72W	73W
Max output power:	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p
Ripple:	>60%	>80%	>80%	>82%	>85%	>85%	>85%	>88%
Efficiency (at 100% load, 230V) approx.:	<0.4mA @3.2V	<0.4mA @6.4V	<0.7mA @9.6V	<0.7mA @12.8V	<0.7mA @16.0V	<0.7mA @19.2V	<0.7mA @22.4V	<0.8mA @25.6V
Leakage current from battery with mains switched off:	40kHz							
Switch frequency approx.:	Protected against reversed polarity and short circuit proof							
Protection:	Operating: +25 to +40°C / Storage: +25 to +85°C							
Temperature range:	EN 60601-1, EN 60335-2-29							
Safety:	Class II							
Insulation class :	4000VAC / 5700VDC							
Insulation voltage: Primary – secondary:	Med. EN 60601-1-2 / Emission EN 61000-6-3 / Immunity EN 61000-6-1							
EMC standards:	2-pins IEC 60320 connector.							
Mains connection:	Battery clips, Push-on terminals or DC connector.							
Output terminals:	41							
IP-Grade:	135 x 80 x 44mm							
Dimensions:	390g							
Weight:								

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Specifications for MASCOT type 2440	LiFePo ₄ versions								
	9-Cell	10-Cell	11-Cell	12-Cell	13-Cell	14-Cell	15-Cell	16-Cell	
Input voltage:	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	
Line frequency:	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	
<u>Charge control:</u>	<u>Charge indication:</u>								
Step 1 Charge current:	Orange	2.2A ±0.2A	1.95A ±0.1A	1.8A ±0.1A	1.65A ±0.1A	1.5A ±0.1A	1.4A ±0.1A	1.3A ±0.1A	1.2A ±0.1A
Step 2 Charge voltage:		32.85V ±0.2V	36.5V ±0.2V	40.15V ±0.2V	43.8V ±0.3V	47.45V ±0.3V	51.1V ±0.3V	54.75V ±0.3V	58.4V ±0.3V
- Charge current >:	Orange	0.8A ±0.1A	0.8A ±0.1A	0.8A ±0.1A	0.6A ±0.1A	0.6A ±0.1A	0.6A ±0.1A	0.6A ±0.1A	0.6A ±0.1A
- Charge current <:	Yellow								
Step 3 Charge termination <:	Green	200mA ±25%	200mA ±25%	200mA ±25%	200mA ±25%	100mA ±25%	100mA ±25%	100mA ±25%	100mA ±25%
Float charge voltage:	31.5V ±0.2V	35.0V ±0.2V	38.5V ±0.2V	42.0V ±0.3V	45.5V ±0.3V	49.0V ±0.3V	52.5V ±0.3V	56.0V ±0.3V	
Max output power:	72W	71W	72W	72W	71W	72W	71W	70W	
Ripple:	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	
Efficiency (at 100% load, 230V) approx.:	>85%	>87%	>87%	>87%	>87%	>87%	>87%	>87%	
Leakage current from battery with mains switched off:	<1.5mA @28.8V	<1.5mA @32.0V	<1.5mA @35.2V	<1.5mA @38.4V	<1.5mA @41.6V	<1.5mA @44.8V	<1.5mA @48.0V	<1.5mA @51.2V	
Switch frequency approx.:	40kHz								
Protection:	Protected against reversed polarity and short circuit proof								
Temperature range:	Operating: +25 to +40°C / Storage: +25 to +85°C								
Safety:	EN 60601-1, EN 60335-2-29								
Insulation class :	Class II								
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC								
EMC standards:	Med. EN 60601-1-2 / Emission EN 61000-6-3 / Immunity EN 61000-6-1								
Mains connection:	2-pins IEC 60320 connector.								
Output terminals:	Battery clips, Push-on terminals or DC connector.								
IP-Grade:	41								
Dimensions:	135 x 80 x 44mm								
Weight:	390g								