

SPECIFICATIONS FOR TYPE 3743 Chargers

MASCOT type 3743 Li-Ion Chargers:	1-cell Li-Ion	2-cell Li-Ion	3-cell Li-Ion
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz
Max output power	6.3 W	12.6 W	15.1 W
Charge control: Step 0 < 10min Step 0 > 10min Step 1 (Constant Current) Step 2 (Constant Voltage) Charge timer (step2, CV) Safety timer (all steps) Step 3 (Charge Completed) Restart voltage	Charge indication: Yellow Red (4 blinks) Yellow Flashing Yellow Red (5 blinks) Green	CC 100mA ± 25mA, when battery voltage < 3V. 0A / 0V CC 1.5A ± 0.1A, when 3V < Vbat < 4.2V. CV 4.2V ± 0.05V, til I _{charge} < 100mA or max. 1h. 1h 72h 0A 4.1V	CC 100mA ± 25mA, when battery voltage < 9V. 0A / 0V CC 1.2A ± 0.1A, when 9V < Vbat < 12.6V. CV 12.6V ± 0.1V, til I _{charge} < 100mA or max. 1h. 1h 72h 0A 12.3V
Efficiency (at 100% load) approx.:	79 %	81 %	82 %
Average efficiency:	> 76 %	> 78 %	> 80 %
No load consumption	< 0,5 W	< 0,5 W	< 0,5 W
Switch frequency approx.:	56kHz	56kHz	56kHz
Ripple:	< 100mV p-p	< 100mV p-p	< 100mV p-p
Rec. battery capacity:	1,5Ah (1C) to 10Ah (cut off current as EoC) or up to 60Ah (CV Timer as EoC)	1,5Ah (1C) to 10Ah (cut off current as EoC) or up to 60Ah (CV Timer as EoC)	1,2Ah (1C) to 10Ah (cut off current as EoC) or up to 48Ah (CV Timer as EoC)
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.		
Wake-up of deeply discharged battery.	Yes, will apply voltage which deactivates deep discharge protection in battery pack.		
Indication when "Battery not connected"	Flashing Green (1s/1s)		
NTC input, on request (std is 10kohm, B-value approx. 4000)	0 – 45 °C: Normal charge. Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.		
Leakage current from battery with mains switched off:	< 300 µA at nominal battery voltage (< 0.22 Ah/month)		
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be limited to 100mA and terminated after 10min. Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks) No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF.		
Temperature range:	Operating: ±25 to +40°C. Storage: ±25 to +85°C		
Safety:	Medical EN 60601-1 / Home Healthcare EN 60601-1-11 (V _{NOM} ≥110VAC) / Battery Charger EN 60335-2-29		
Insulation class :	Class II		
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC		
EMC standards:	EN 55014-1 and –2, EN 61000-6-3, EN 61000-6-1, EN 60601-1-2		
Input terminal:	2-pins IEC 320 connector for exchangeable mains plug (EU, US, UK and AUS).		
Output terminals:	Cord with/without plug. Exchangeable plugs available.		
IP-Grade:	IP41		
Dimensions:	108,5 × 49 × 29,3 mm		
Weight:	150g		

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MASCOT type 3743 Li-Ion Chargers:	4-cell Li-Ion	5-cell Li-Ion	6-cell Li-Ion
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz
Max output power	16.8 W	16.8 W	16.8 W
Charge control: Step 0 < 10min Step 0 > 10min Step 1 (Constant Current) Step 2 (Constant Voltage) Charge timer (step2, CV) Safety timer (all steps) Step 3 (Charge Completed) Restart voltage	Charge indication: Yellow Red (4 blinks) Yellow Flashing Yellow Red (5 blinks) Green	CC 100mA ± 25mA, when battery voltage < 12V. 0A / 0V CC 1A ± 0.1A, when 12V < Vbat < 16.8V. CV 16.8V ± 0.1V, til I _{charge} < 100mA or max. 1h. 1h 72h 0A 16.4V	CC 100mA ± 25mA, when battery voltage < 15V. 0A / 0V CC 0.8A ± 0.1A, when 15V < Vbat < 21V. CV 21V ± 0.1V, til I _{charge} < 100mA or max. 1h. 1h 72h 0A 20.5V
Efficiency (at 100% load) approx.:	83 %	83 %	84 %
Average efficiency:	> 80 %	> 80 %	> 80 %
No load consumption	< 0,5 W	< 0,5 W	< 0,5 W
Switch frequency approx.:	56kHz	56kHz	56kHz
Ripple:	< 100mV p-p	< 100mV p-p	< 100mV p-p
Rec. battery capacity:	1Ah (1C) to 10Ah (cut off current as EoC) or up to 40Ah (CV Timer as EoC)	0,8Ah (1C) to 10Ah (cut off current as EoC) or up to 32Ah (CV Timer as EoC)	0,66Ah (1C) to 10Ah (cut off current as EoC) or up to 26,4Ah (CV Timer as EoC)
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.		
Wake-up of deeply discharged battery.	Yes, will apply voltage which deactivates deep discharge protection in battery pack.		
Indication when "Battery not connected"	Flashing Green (1s/1s)		
NTC input, on request (std is 10kohm, B-value approx. 4000)	0 – 45 °C: Normal charge. Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.		
Leakage current from battery with mains switched off:	< 300 µA at nominal battery voltage (< 0.22 Ah/month)		
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be limited to 100mA and terminated after 10min. Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks) No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF.		
Temperature range:	Operating: ÷25 to +40°C. Storage: ÷25 to +85°C		
Safety:	Medical EN 60601-1 / Home Healthcare EN 60601-1-11 (V _{NOM} ≥110VAC) / Battery Charger EN 60335-2-29		
Insulation class :	Class II		
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC		
EMC standards:	EN 55014-1 and –2, EN 61000-6-3, EN 61000-6-1, EN 60601-1-2		
Input terminal:	2-pins IEC 320 connector for exchangeable mains plug (EU, US, UK and AUS).		
Output terminals:	Cord with/without plug. Exchangeable plugs available.		
IP-Grade:	IP41		
Dimensions:	108,5 x 49 x 29,3 mm		
Weight:	150g		

SPECIFICATIONS FOR TYPE 3743 Chargers

MASCOT type 3743 Li-Ion Chargers:	7-cell Li-Ion	8-cell Li-Ion	9-cell Li-Ion	
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz	
Max output power	16.5 W	16.8 W	17 W	
Charge control: Step 0 < 10min Step 0 > 10min Step 1 (Constant Current) Step 2 (Constant Voltage) Charge timer (step2, CV) Safety timer (all steps) Step 3 (Charge Completed) Restart voltage	Charge indication: Yellow Red (4 blinks) Yellow Flashing Yellow Red (5 blinks) Green	CC 100mA ± 25mA, when battery voltage < 21V. 0A / 0V CC 0.56A ± 0.1A, when 21V < Vbat < 29.4V. CV 29.4V ± 0.1V, til I _{charge} < 100mA or max. 1h. 1h 72h 0A 28.7V	CC 100mA ± 25mA, when battery voltage < 24V. 0A / 0V CC 0.5A ± 0.1A, when 24V < Vbat < 33.6V. CV 33.6V ± 0.1V, til I _{charge} < 100mA or max. 1h. 1h 72h 0A 32.8V	CC 100mA ± 25mA, when battery voltage < 27V. 0A / 0V CC 0.45A ± 0.1A, when 27V < Vbat < 37.8V. CV 37.8V ± 0.1V, til I _{charge} < 100mA or max. 1h. 1h 72h 0A 36.9V
Efficiency (at 100% load) approx.:	84 %	84 %	84 %	
Average efficiency:	> 80 %	> 80 %	> 80 %	
No load consumption	< 0,5 W	< 0,5 W	< 0,5 W	
Switch frequency approx.:	56kHz	56kHz	56kHz	
Ripple:	< 100mV p-p	< 100mV p-p	< 100mV p-p	
Rec. battery capacity:	0,56Ah (1C) to 10Ah (cut off current as EoC) or up to 22,4Ah (CV Timer as EoC)	0,5Ah (1C) to 10Ah (cut off current as EoC) or up to 20Ah (CV Timer as EoC)	0,45Ah (1C) to 10Ah (cut off current as EoC) or up to 18Ah (CV Timer as EoC)	
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.			
Wake-up of deeply discharged battery.	Yes, will apply voltage which deactivates deep discharge protection in battery pack.			
Indication when "Battery not connected"	Flashing Green (1s/1s)			
NTC input, on request (std is 10kohm, B-value approx. 4000)	0 – 45 °C: Normal charge. Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.			
Leakage current from battery with mains switched off:	< 300 µA at nominal battery voltage (< 0.22 Ah/month)			
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be limited to 100mA and terminated after 10min. Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks) No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF.			
Temperature range:	Operating: ÷25 to +40°C. Storage: ÷25 to +85°C			
Safety:	Medical EN 60601-1 / Home Healthcare EN 60601-1-11 (V _{NOM} ≥110VAC) / Battery Charger EN 60335-2-29			
Insulation class :	Class II			
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC			
EMC standards:	EN 55014-1 and –2, EN 61000-6-3, EN 61000-6-1, EN 60601-1-2			
Input terminal:	2-pins IEC 320 connector for exchangeable mains plug (EU, US, UK and AUS).			
Output terminals:	Cord with/without plug. Exchangeable plugs available.			
IP-Grade:	IP41			
Dimensions:	108,5 x 49 x 29,3 mm			
Weight:	150g			

SPECIFICATIONS FOR TYPE 3743 Chargers

MASCOT type 3743 Li-Ion Chargers:	10-cell Li-Ion	11-cell Li-Ion	12-cell Li-Ion	
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz	
Max output power	16.8 W	17.1 W	16.6 W	
Charge control: Step 0 < 10min Step 0 > 10min Step 1 (Constant Current) Step 2 (Constant Voltage) Charge timer (step2, CV) Safety timer (all steps) Step 3 (Charge Completed) Restart voltage	Charge indication: Yellow Red (4 blinks) Yellow Flashing Yellow Red (5 blinks) Green	CC 100mA ± 25mA, when battery voltage < 30V. 0A / 0V CC 0.4A ± 0.1A, when 30V < Vbat < 42V. CV 42V ± 0.1V, til I _{charge} < 80mA or max. 1h. 1h 72h 0A 41V	CC 100mA ± 25mA, when battery voltage < 33V. 0A / 0V CC 0.37A ± 0.1A, when 33V < Vbat < 46.2V. CV 46.2V ± 0.1V, til I _{charge} < 80mA or max. 1h. 1h 72h 0A 45.1V	CC 100mA ± 25mA, when battery voltage < 36V. 0A / 0V CC 0.33A ± 0.1A, when 36V < Vbat < 50.4V. CV 50.4V ± 0.1V, til I _{charge} < 80mA or max. 1h. 1h 72h 0A 49.2V
Efficiency (at 100% load) approx.:	84 %	84 %	84 %	
Average efficiency:	> 80 %	> 80 %	> 80 %	
No load consumption	< 0,5 W	< 0,5 W	< 0,5 W	
Switch frequency approx.:	56kHz	56kHz	56kHz	
Ripple:	< 100mV p-p	< 100mV p-p	< 100mV p-p	
Rec. battery capacity:	0,4Ah (1C) to 8Ah (cut off current as EoC) or up to 16Ah (CV Timer as EoC)	0,37Ah (1C) to 8Ah (cut off current as EoC) or up to 14,8Ah (CV Timer as EoC)	0,33Ah (1C) to 8Ah (cut off current as EoC) or up to 13,2Ah (CV Timer as EoC)	
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.			
Wake-up of deeply discharged battery.	Yes, will apply voltage which deactivates deep discharge protection in battery pack.			
Indication when "Battery not connected"	Flashing Green (1s/1s)			
NTC input, on request (std is 10kohm, B-value approx. 4000)	0 – 45 °C: Normal charge. Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.			
Leakage current from battery with mains switched off:	< 300 µA at nominal battery voltage (< 0.22 Ah/month)			
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be limited to 100mA and terminated after 10min. Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks) No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF.			
Temperature range:	Operating: ÷25 to +40°C. Storage: ÷25 to +85°C			
Safety:	Medical EN 60601-1 / Home Healthcare EN 60601-1-11 (V _{NOM} ≥110VAC) / Battery Charger EN 60335-2-29			
Insulation class :	Class II			
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC			
EMC standards:	EN 55014-1 and –2, EN 61000-6-3, EN 61000-6-1, EN 60601-1-2			
Input terminal:	2-pins IEC 320 connector for exchangeable mains plug (EU, US, UK and AUS).			
Output terminals:	Cord with/without plug. Exchangeable plugs available.			
IP-Grade:	IP41			
Dimensions:	108,5 x 49 x 29,3 mm			
Weight:	150g			

SPECIFICATIONS FOR TYPE 3743 Chargers

MASCOT type 3743 Li-Ion Chargers:	13-cell Li-Ion	14-cell Li-Ion	
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz	
Max output power	16.38 W	17.6 W	
Charge control:	<u>Charge indication:</u>		
Step 0 < 10min	Yellow	CC 80mA ± 25mA, when battery voltage < 39V.	CC 80mA ± 25mA, when battery voltage < 42V.
Step 0 > 10min	Red (4 blinks)	0A / 0V	0A / 0V
Step 1 (Constant Current)	Yellow	CC 0.3A ± 0.1A, when 39V < Vbat < 54.6V.	CC 0.3A ± 0.1A, when 42V < Vbat < 58.8V.
Step 2 (Constant Voltage)	Flashing Yellow	CV 54.6V ± 0.1V, til I _{charge} < 56mA or max. 1h.	CV 58.8V ± 0.1V, til I _{charge} < 56mA or max. 1h.
Charge timer (step2, CV)		1h	1h
Safety timer (all steps)	Red (5 blinks)	72h	72h
Step 3 (Charge Completed)	Green	0A	0A
Restart voltage		53.3V	57.4V
Efficiency (at 100% load) approx.:	84 %	84 %	
Average efficiency:	> 80 %	> 80 %	
No load consumption	< 0,5 W	< 0,5 W	
Switch frequency approx.:	56kHz	56kHz	
Ripple:	< 100mV p-p	< 100mV p-p	
Rec. battery capacity:	0,3Ah (1C) to 5,6Ah (cut off current as EoC) or up to 12Ah (CV Timer as EoC)	0,3Ah (1C) to 5,6Ah (cut off current as EoC) or up to 12Ah (CV Timer as EoC)	
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.		
Wake-up of deeply discharged battery.	Yes, will apply voltage which deactivates deep discharge protection in battery pack.		
Indication when "Battery not connected"	Flashing Green (1s/1s)		
NTC input, on request (std is 10kohm, B-value approx. 4000)	0 – 45 °C: Normal charge. Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.		
Leakage current from battery with mains switched off:	< 300 µA at nominal battery voltage (< 0.22 Ah/month)		
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be limited to 100mA and terminated after 10min. Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks) No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF.		
Temperature range:	Operating: ÷25 to +40°C. Storage: ÷25 to +85°C		
Safety:	Medical EN 60601-1 / Home Healthcare EN 60601-1-11 (V _{NOM} ≥110VAC) / Battery Charger EN 60335-2-29		
Insulation class :	Class II		
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC		
EMC standards:	EN 55014-1 and –2, EN 61000-6-3, EN 61000-6-1, EN 60601-1-2		
Input terminal:	2-pins IEC 320 connector for exchangeable mains plug (EU, US, UK and AUS).		
Output terminals:	Cord with/without plug. Exchangeable plugs available.		
IP-Grade:	IP41		
Dimensions:	108,5 x 49 x 29,3 mm		
Weight:	150g		