

TECHNICAL INFORMATION



PRODUCT

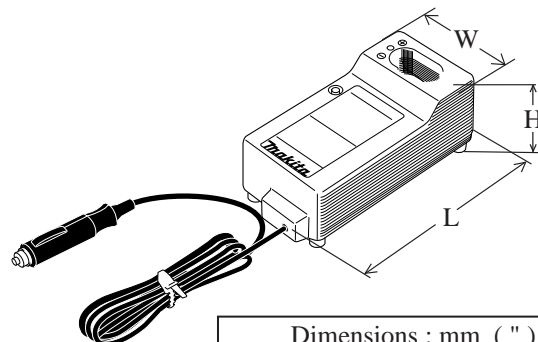
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Model No. ▶ DC1822

Description ▶ Automotive charger

CONCEPT AND MAIN APPLICATIONS

Both Ni-Cd and Ni-MH batteries from 7.2V to 18V can be charged with DC1822 connected with the automobile's socket for cigarette lighter.



Dimensions : mm (")	
Length (L)	201 (7-15/16)
Width (W)	105 (4-1/8)
Height (H)	78 (3-1/16)

► Specification

Voltage (V)	Current (A)	Cycle (Hz)	Continuous Rating (W)		Max. Output(W)
			Input	Output	
DC12			75		
DC12 - 24			75		

Output voltage : V		7.2	9.6	12	14.4	18
Output current : A		2.6				
Charging time : min.	for 1.3Ah Ni-Cd. battery	7.2 V - 14.4V	Approx. 30	—		
	for 2.0Ah Ni-Cd. battery	7.2 V - 14.4V	Approx. 45	18V	Approx. 60	
	for 2.2Ah Ni-MH. battery	7.2 V - 14.4V	Approx. 50	18V	Approx. 65	
	for 2.6Ah Ni-MH. battery	7.2 V - 14.4V	Approx. 60	18V	Approx. 75	
	for 3.0Ah Ni-MH. battery	7.2 V - 14.4V	Approx. 70	18V	Approx. 90	
Cord length : m (ft)		2 (6.6)				
Net weight : kg (lbs)		0.48 (1.06)				

< Note > The above figures about charging time may differ from condition to condition on batteries' temperature or room temperature.

► Features and benefits

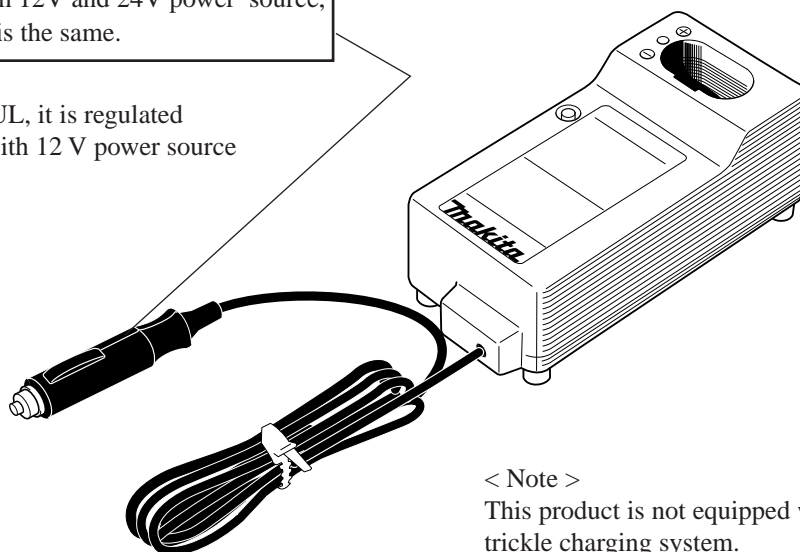
Possible to charge both Ni-Cd and Ni-MH batteries up to 18V. See the list below.

The list of chargeable batteries									
			Battery's Voltage						
			7.2V	9.6V		12V		14.4V	18V
Battery type	Ni-Cd	1.3Ah	7000	9000	9100	1200	1200A	1420	—
				9100A	9120	1210	1220		
	Ni-MH	2.0Ah	7002	9002	9102	1202	1202A	1422	1822
				9102A	9122	1222			
		2.2Ah	7033	9033	9133	1233		1433	1833
		2.6Ah	—	9134		1234		1434	1834
		3.0Ah	—	9135	9135A	1235	1235A	1435	1835

Connectable to both 12V and 24V power source, and charging time is the same.

<Note>

Because of CE and UL, it is regulated to use this product with 12 V power source in Europe and USA.



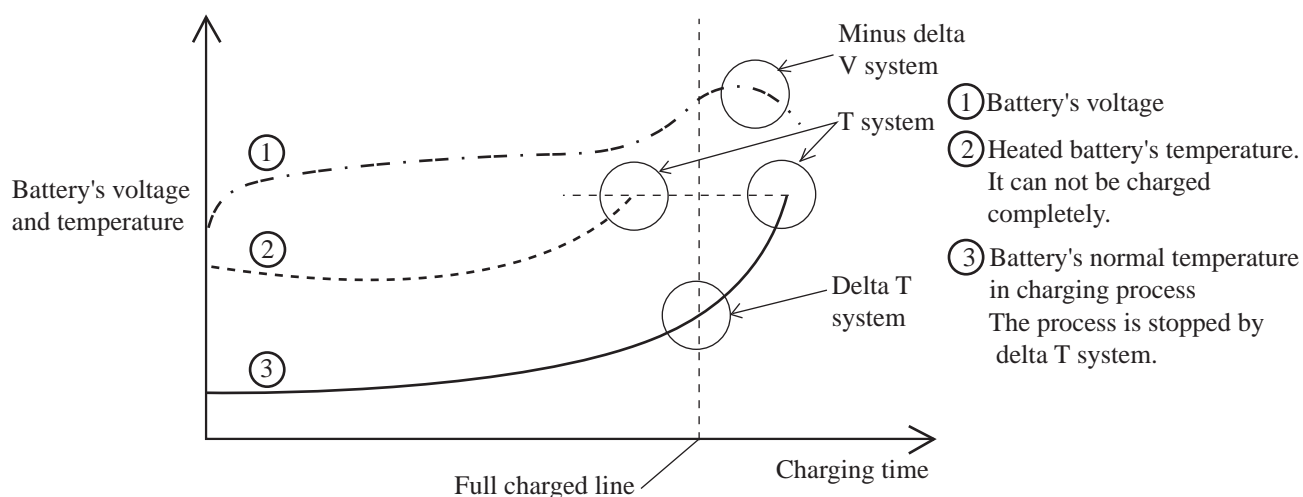
< Note >

This product is not equipped with trickle charging system.

Charging system

* Controlling by micro computer : The installed micro computer recognizes the full charged condition, and selects the optimum way to stop the charging process, from the followings.

- A) Minus delta V system : Stop the charging process with recognizing the battery's voltage drop.
- B) Delta T system : Stop the charging process with recognizing the change of battery's temperature.
(This system is applied to only the charger of 4 terminal-type.)
- C) T system : Stop the charging process with recognizing the battery's temperature which is input in the micro computer in advance. For instance the charging process is to be stopped at 45°C for 1.3Ah battery, and at 60°C for 1.7 - 2.2Ah battery.
- D) Timer system : Stop the charging process in 150 minutes after starting the charge, if the full charged condition would not be recognized with any of the above 3 systems.



* Constant output current (charging current) : By keeping the output current (Ampere) in the constant level, it is possible to stop the charging process with perceiving the battery's voltage drop exactly. Namely, it is possible to perceive the full charged condition by the above "Minus delta V system".

* Current transforming system : The built in "High-Frequency Transformer" supplies the charging current as follows.

1. Convert the DC of 12V or 24V into the AC with high frequency of approx. 150Hz - 160Hz .
2. Reduce the voltage to the battery's voltage.

Model No.		MAKITA		
		DC1822		DC1422
Input voltage : V		12 V / 24V		12 V / 24V
Output voltage : V		7.2V, 9.6V, 12V, 14.4V	18V,	7.2V, 9.6V, 12V, 14.4V
Charging time : min.	for 1.3Ah	Approx. 30	—	Approx. 45
	for 2.0Ah	Approx. 45	Approx. 60	Approx. 70
	for 2.2Ah	Approx. 50	Approx. 65	Approx. 75
	for 2.6Ah	Approx. 60	Approx. 75	Approx. 85
	for 3.0Ah	Approx. 70	Approx. 90	Approx. 100
Dimensions	Length (L) : mm (")	201 (7-15/16)		193 (7-15/16)
	Width (W) : mm (")	105 (4-1/8)		92 (3-5/8)
	Height (H) : mm (")	78 (3-1/16)		78 (3-1/16)
Net weight		0.48 (1.06)		0.41 (0.9)

< Note > The above figures about charging time may differ from condition to condition on batteries' temperature or room temperature.

► **Repair**

In case of damaged fuse, they can be replaced with the fresh one in accordance with the following procedure.

(1) How to find a broken fuse

- If the charging light flashes alternately in green and red approx. in one minute after starting of charge, fuse can be damaged.
- If the above phenomenon appears after forcing the battery to insert with wrong direction as illustrated in Fig. 1A, fuse can be damaged.
- If the fuse is in order nevertheless the above phenomenon, "a" is perceived, replace circuit board, because the cause of trouble can not be on the fuse.

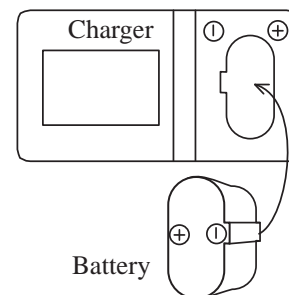


Fig. 1A

(2) replacing the damaged fuse

- Remove the fuse with soldering iron, form the circuit board.
- Assemble the fresh fuse to the circuit board, with soldering iron.

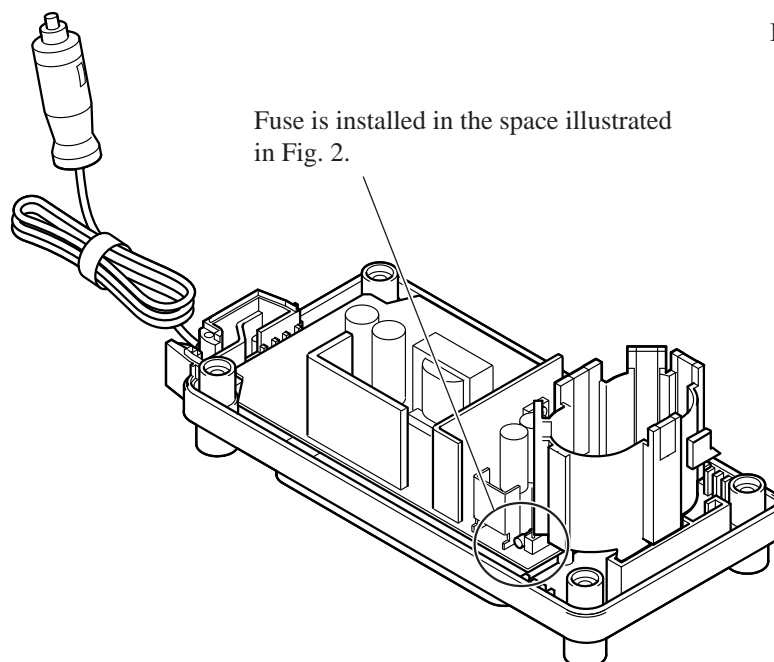


Fig. 2.