DATA COLLECTION SOFTWARE USER MANUAL

This application returns the data on the operation performed by the battery charger, in particular it displays the latest 280 charging cycles made in terms of:
-date and time
-charge duration (number of steps performed and their duration)
-battery voltage at the beginning of the charging cycle
-quantity of charge supplied (Ampere/hour)
- performed charging algorithm
-any errors that occurred during the charging cycle
-etc..

To perform the downloading of data is necessary to connect the serial cable (cod. 2218.000.01) from one side to the battery charger and the other to the computer serial port as shown on Figure 1.

If your computer is not equipped with a serial port, is necessary to have a common USB-RS232 converter cable available at any computer store.

ATTENTION: FIRST CONNECT THE CABLE TO BATTERY CHARGER AND COMPUTER AND THEN SUPPLY THE BATTERY CHARGE WITH THE MAINS VOLTAGE.

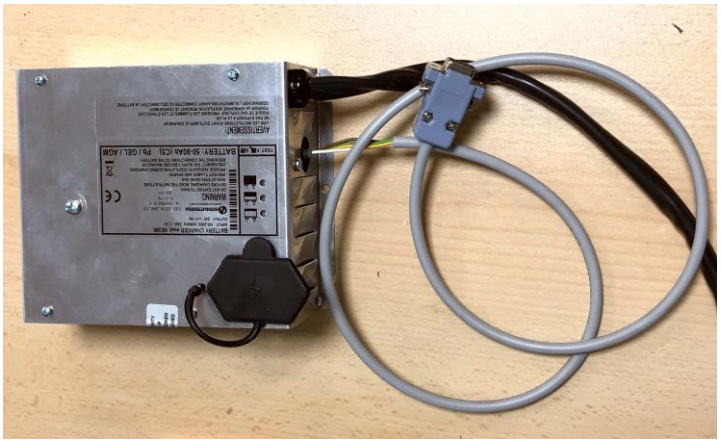


Figure 1

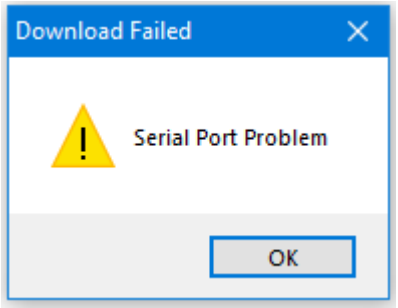
After running the program, the following screen appears:

1 Press the 'Search' button to search for COM ports connected to the computer.

2 Select the correct serial port number.

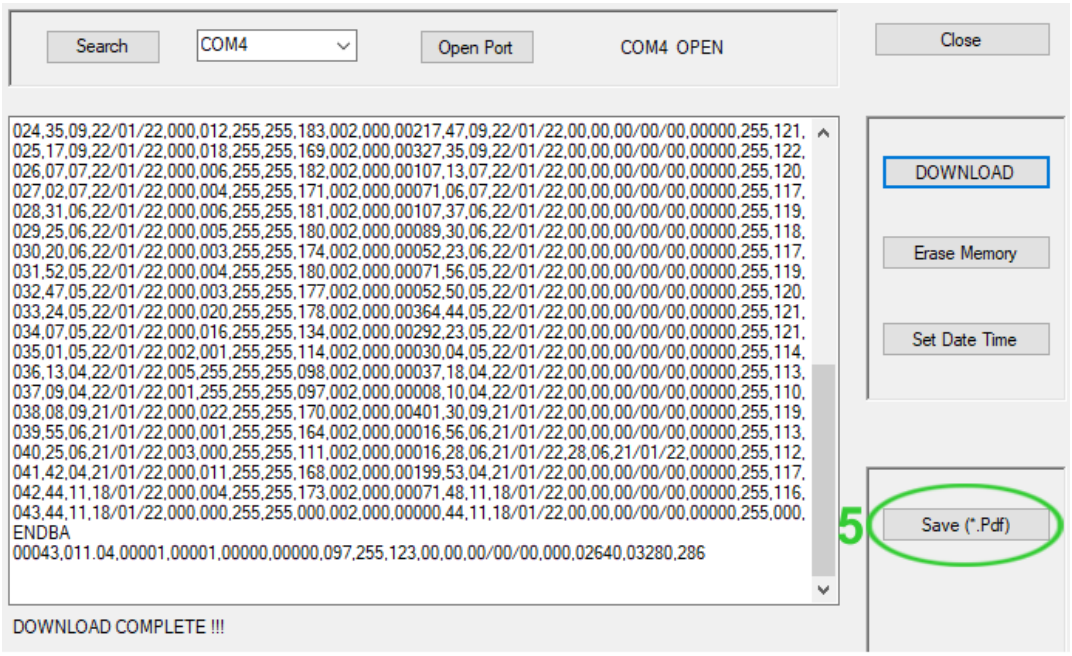
3 Press the 'Open Port' button to open the selected serial port.

4 Press the 'DOWNLOAD' button to download data from the battery charger.



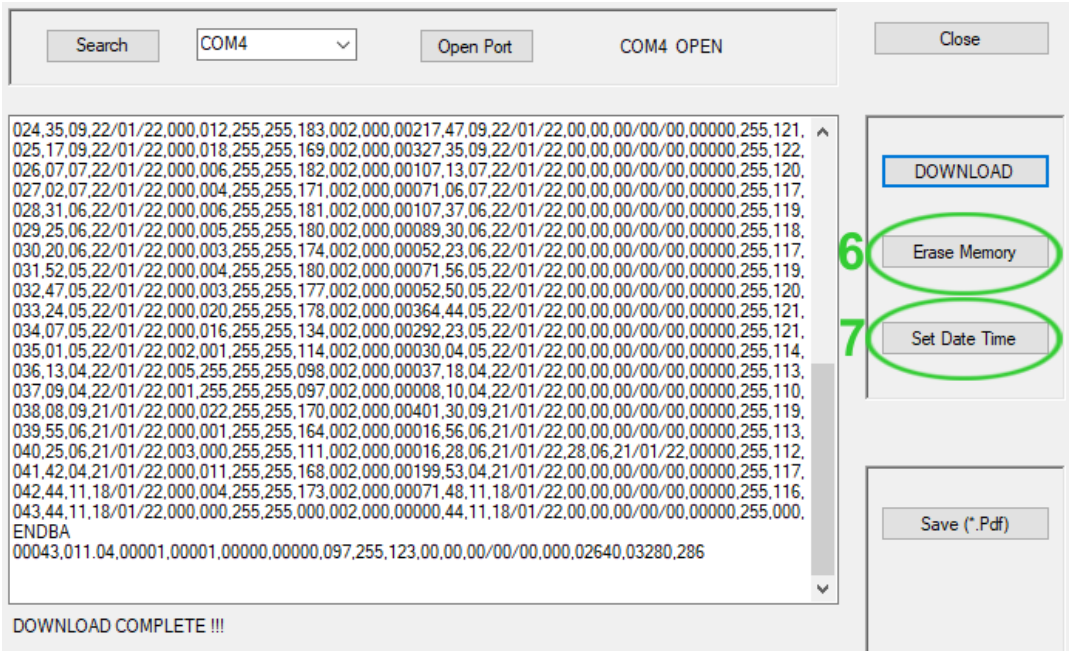
If this message appears, check that the port selected in step **2** is correct, otherwise wait a few seconds and repeat the download.

After about ten seconds, the following screen appears:



5 Now select the 'Save' button to save the data on your computer in Pdf-format, to the desired directory.

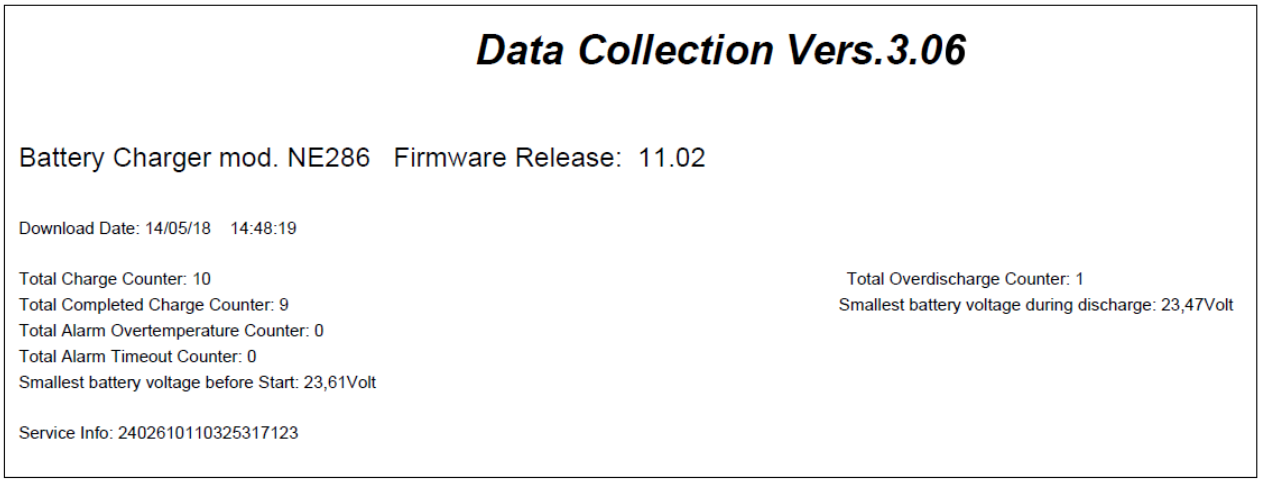
Then, on the same screen, you can reset the data memory as explained below:



6 The 'Erase Memory' button allows you to delete all data relating to the charging cycles performed by the battery charger. Attention: <u>It will no longer be possible to recover deleted data.</u>

7 Press the 'Set Date and Time' button to set the current date and time on the charger.
N.B. The date and time will be the one set on the computer.

DATA SUMMARY



Data Collection Vers.3.06

Battery Charger mod. NE286 Firmware Release: 11.02

Download Date: 14/05/18 14:48:19

Total Charge Counter: 10
Total Completed Charge Counter: 9
Total Alarm Overtemperature Counter: 0
Total Alarm Timeout Counter: 0
Smallest battery voltage before Start: 23,61Volt

Total Overdischarge Counter: 1
Smallest battery voltage during discharge: 23,47Volt

Service Info: 2402610110325317123

The following data are displayed in the document header:

Battery Charger mod.: Battery charger model (example NE286)
FIRMWARE: Firmware version of the battery charger (example 11.02)
Download date: Date and time of data download (example 14/05/18 14:48:19)
Total Charge Counter: General counter of charges made (example 10)
Total Completed Charge Counter: General counter of completed charges (example 9)
Total Alarm Overtemperature Counter: General counter of charges where an overtemperature alarm has occurred (example 0)
Total Alarm Timeout Counter: General counter of charges where a timeout alarm occurred (example 0)
Smallest battery voltage before Start: Absolute minimum battery voltage before charging (example 23,61Volt)
Total Overdischarge Counter: General counter where the battery has reached the minimum inhibit voltage (example 1)
Smallest battery voltage during discharge: Absolute minimum battery voltage during discharge (example 23,47Volt)

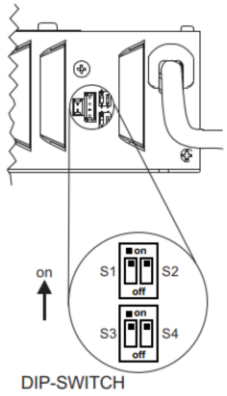
CHARGE																				DISCHARGE				
Index	Last period before charging	Time start of charge	Date start of charge (dd/mm/yy)	Ref. Dip-Switch	Battery Voltage before start (V)	Elapsed time Phase 0 (h:mm)	Elapsed time Phase 1 (h:mm)	Elapsed time Phase 2 (h:mm)	Elapsed time Phase 3 (h:mm)	Completed charge	Ampere hours charged	Disconnected battery	Short Circuit	Timeout	OverCurrent	OverVoltage	OverTemperature	Service Data	Time of main disconnected	Date of main disconnected (dd/mm/yy)	Time end of discharge	Date end of discharge (dd/mm/yy)	Total time discharge	Lowest battery voltage (V)	Inhibit Active
001	3d 23h 58m	09:24	11/12/17	3	25,16	0:00	2:07	0:24	2:31		26,98							122	07:56	14/12/17	08:39	24/01/18	26h 8m	23,47	X
002	5d 01h 33m	09:01	05/12/17	3	23,61	0:00	4:50	0:55	3:00	X	60,92							122	09:26	07/12/17	09:26	07/12/17			
003	0d 01h 04m	08:33	29/11/17	3	24,88	0:00	1:56	0:25	2:21	X	24,24							123	07:28	30/11/17	07:28	30/11/17			
004	0d 00h 00m	08:22	27/11/17	3	25,16	0:00	1:20	0:16	1:36	X	17,17							122	07:28	29/11/17	07:29	29/11/17			
005	0d 00h 38m	09:20	24/11/17	3	25,44	0:00	1:05	0:14	1:19	X	14,04							122	08:21	27/11/17	08:22	27/11/17	0h 1m		
006	9d 19h 55m	11:08	23/11/17	3	25,30	0:00	0:40	0:54	1:34	X	15,19							122	08:41	24/11/17	08:42	24/11/17	0h 1m		
007	0d 00h 01m	13:44	13/11/17	3	26,84	0:00	0:00	0:00	1:00	X	1,11							115	15:12	13/11/17	15:13	13/11/17			
008	82d 00h 24m	10:39	13/11/17	3	25,72	0:00	0:00	0:27	1:00	X	3,53							113	13:43	13/11/17					
009	29d 21h 53m	10:14	23/08/17	3	25,30	0:00	0:00				0,00							000	10:14	23/08/17	10:15	23/08/17			
010		12:21	24/07/17	3	0,00	0:00	0:00				0,00							000	12:21	24/07/17					

The table instead, shows the data for the last 280 charge cycles:

CHARGE:
Index: represents an index for the charges made
Last period before charging: period since last charge[1]
Time start of charge: charging start time
Date start of Charge: charging start date
Ref. Dip-Switch: selected algorithm with dip-switch[2]
Battery voltage before start(Volt): voltage measured at start of charge
Phase n: duration of Phase n
Completed charge: indicates whether charging has been completed
Ampere hours charged: Ah charged during the charging cycle
Disconnected battery: indicates that the battery has disconnected
Short Circuit: a short-circuit occurred at the battery charger output
Timeout: the battery did not charge in the maximum expected time
OverCurrent: an overcurrent occurred at the battery charger output
OverVoltage: an over-voltage occurred at the battery charger output
OverTemperature: the charger has exceeded the safety temperature
Time of main disconnected: time of disconnection of the battery charger from the power supply
Date of main disconnected: date of disconnection of the battery charger from the power supply

DISCHARGE *(if discharge control is active):*
Time end of discharge: time end of discharge
Date end of discharge: date of discharge
Total time discharge: total discharge hours (machine operating hours)
Lowest battery voltage: minimum voltage reached by the battery during discharge
Inhibit Active: machine inhibit for minimum voltage has occurred

[1] On battery chargers that also monitor discharge, this is the period from the last discharge to the next recharge.
[2] See table below for reference:



S1	S2	S3	S4	Reference Dip-switch	Algorithm	Status of red LED at switch on	Status of yellow LED at switch on	Number of flashes of the green LED at switch on
OFF	OFF	OFF	OFF	1	(see instruction manual)	OFF	OFF	1
ON	ON	OFF	OFF	2	(see instruction manual)	OFF	OFF	2
OFF	ON	OFF	OFF	3	(see instruction manual)	OFF	OFF	3
ON	OFF	OFF	OFF	4	(see instruction manual)	OFF	OFF	4
OFF	OFF	OFF	ON	5	(see instruction manual)	OFF	ON	1
ON	ON	OFF	ON	6	(see instruction manual)	OFF	ON	2
OFF	ON	OFF	ON	7	(see instruction manual)	OFF	ON	3
ON	OFF	OFF	ON	8	(see instruction manual)	OFF	ON	4
OFF	OFF	ON	OFF	9	(see instruction manual)	ON	OFF	1
ON	ON	ON	OFF	10	(see instruction manual)	ON	OFF	2
OFF	ON	ON	OFF	11	(see instruction manual)	ON	OFF	3
ON	OFF	ON	OFF	12	(see instruction manual)	ON	OFF	4
OFF	OFF	ON	ON	13	(see instruction manual)	ON	ON	1
ON	ON	ON	ON	14	(see instruction manual)	ON	ON	2
OFF	ON	ON	ON	15	(see instruction manual)	ON	ON	3
ON	OFF	ON	ON	16	(see instruction manual)	(*)	(*)	(*)

(*) If no algorithm has been selected the 3 LEDs flash