

MTM PROGRAMMABLE TRADITIONAL CHARGER



- PROCESSOR CONTROLLED
- THYRISTOR REGULATED
- IUIU MULTI-CHARGER
- 24-120V, 40-300A

MTM

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- Available for all types of batteries
- High efficiency, up to 90 %
- Ampere-hour-control always results in fully charged batteries
- Available for all battery capacities
- Quick-charging
- Temperature-controlled cooling fan
- Display and keyboard provide simple adjustment and trouble shooting together with reading of statistics
- Advanced technology combined with our own developed charging-curves results in long battery lifetime.



The MTM is supplied as wall or floor cabinet in red durable industrial lacquer or as requested.

MTM is a programmable thyristor charger with charging-curves for all types of batteries and applications. The charging process is optimised for each type of battery and application. The battery is fully charged in the shortest time possible with low water consumption and minimum wear and tear in the battery.

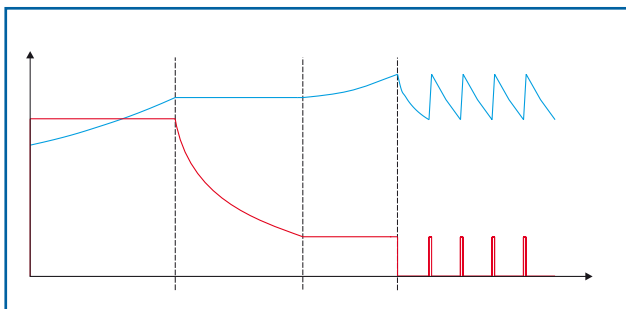
Function

With thyristor regulation, the MTM can, independently of variations in the mains voltage, charge with a constant current and constant voltage in sequences prescribed by the manufacturer of the battery. This means that the charger can be used more efficiently, leading to shorter charging-times compared with the corresponding size of Wa-chargers. The charger has a built-in real time clock and automatic start in the standard version.

- Alarm functions, potential free. I/O
- Built-in pumps for acid circulation
- IDB – Battery identification
- Remote start
- Automatic water filling

The use of primary coils and transformers of toroid models gives compact chargers with a high efficiency/weight ratio.

MTM standard charging curve



Several options are available:

- Secondary shoke for extra low ripple or multi voltage
- IP 23-54 enclosure
- Special programme

Processor

The charger's processor constantly calculates the charging power and monitors the charging process. It interrupts charging in the event of a fault in the battery or the charger, temporarily or definitively, depending on the nature of the fault. MTM furthermore indicates the kind of fault in the display. MTM is pre-programmed in the factory, but can be reprogrammed with the keyboard if the battery type is changed. For this, authority in the form of a 4-digit code is required.

Time-controlled functions

MTM is equipped with a real time clock that permits time-controlled functions such as Extra charging, Delayed charging and weekly charging. Extra charging provides scheduled refreshment charging after the weekend.



With the help of the keyboard and the display, the battery voltage, charging time, etc. can be read.

This makes the battery fully efficient in the first morning of the week, thus eliminating the Monday morning fatigue. Delayed night tariff charging permits the use of any lower electricity tariffs. The start time is entered via the keyboard. The function also permits lunchtime charging before 1 p.m. In the function Weekly charging, the real time clock's calendar function is used to adjust the charging curve to the working week. Monday to Friday a charging curve with quick recharging is used, down to 5 hours. Over the weekend, charging is automatically adjusted to equalize specific gravity and cell voltage.

IDB Battery identification

The battery can be equipped with an IDB device with which the MTM charger communicates. The IDB device transfers information about the battery temperature and an ID number. This ID number is linked to the desired charging curve and other information that permits one charger to charge different types of batteries without reprogramming. The charging voltage and the outgoing effect is compensated according to the battery temperature which provides correct recharging in applications where the battery temperature varies during the week and the year. Examples of such applications are operations in cold stores and unheated warehouses.

Statistics

The statistics of the five most recent charging cycles, with any deviations together with operation profiles are stored in the memory of the charger together with time data. The information can be read via the display.

Display and keyboard

The display is alphanumerical with fault messages and other information written in plain text or in a

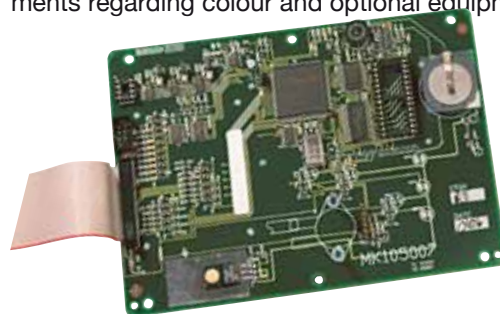
universal non-linguistic format. Via the keyboard it is easy to get information about the charging time, Ah-number, mains voltage, statistics, etc. Three LED's show the charging progress. The charger can be supplied with a display in different language versions.

Charging curves

The MTM charger has several pre-programmed charging curves for different types of battery and customer requirements, e.g. pulse charging, (chemical acid circulation). The charging curve is easily changed via the keyboard. All parameters are automatically changed when the selected charging curve is programmed.

Customisation

The MTM charger is stored as a basic model which makes it easy to adapt the charger to the customer's requirements regarding colour and optional equipment.



A printed circuit board with monitoring functions ensures safe charging. The software can easily be updated so that the charger can be adapted to new types of battery with new charging curves together with new customer functions.

Type description				Recommended battery size standard charger		Recommended size of battery with acid circulation		Number of phases / mains current (A)		Weight
				Charging time (IUIU)						
Type	Battery voltage (V)	Current (A)	Cabinet size	8 hours* cap.Ah/5h	12 hours cap.Ah/5h	7 hours cap.Ah/5h	8 hours cap.Ah/5h	1-phase 220-230 (V)	3-phase 380-400 (V)	~kg
MTM	24	40	W4	248	474	272	245	7,1		22
		50	W4	310	592	340	406	8,8		24
		60	W4	371	710	408	486	10,6		36
		60	W4	371	710	408	486		4	36
		80	W4	495	947	544	648		5,3	41
		100	W4	619	1184	680	810		6,6	47
		125	F2	774	1480	850	1013		8,3	74
		150	F2	929	1776	1020	1215		9,9	80
	200	F3	1238	2368	1190	1418		16	95	
	36	40	W4	248	474	272	324		4	39
		60	W4	371	710	408	486		5,9	48
		80	F2	495	947	544	648		7,9	77
		100	F2	619	1184	680	810		9,9	87
		125	F2	774	1480	850	1013		12,4	96
		150	F2	929	1776	1020	1215		14,9	107
		200	F3	1238	2368	1190	1418		18	138
	48	40	W4	248	474	272	324		5,3	39
		60	W4	371	710	408	486		7,9	48
		80	F2	495	947	544	648		10,6	80
		100	F2	619	1184	680	810		13,2	87
		125	F2	774	1480	850	1013		16,5	98
		150	F2	929	1776	1020	1215		19,8	110
		200	F3	1238	2368	1190	1418		24	138
		225	F3	1393	2664	1575	1868		27	147
		250	F3	1548	2960	1750	2075		30	150
	80	40	W4	248	474	280	332		8,8	57
		60	F2	371	710	420	498		13,2	82
		80	F2	495	947	560	664		17,6	96
		100	F2	619	1184	700	830		22	110
		125	F3	774	1480	875	1038		27,5	140
		150	F3	929	1776	1050	1245		33	153
		200	F3	1238	2368	1400	1660		40	183
		225	F3	1393	2664	1575	1868		45	205
		250	F4	1548	2960	1750	2075		50	240
	300	F4	1857	3552	2100	2490		60	260	
	120	40	F2	248	474	272	324		12	82
		60	F2	371	710	408	486		18	100
		80	F3	495	947	544	648		24	130
		100	F3	619	1184	680	810		30	150
		125	F3	774	1480	850	1013		37,5	174
	150	F3	929	1776	1020	1215		45	200	

Standard chargers include:

1-phase charger: Primary cable 2.5 m with contact.

3-phase charger: Primary cable 3 m with contact (no contact delivered at switchable chargers)

Secondary cable: Twin cable length 3 m.

Chargers with charge current > 200A are delivered with dual secondary cables.

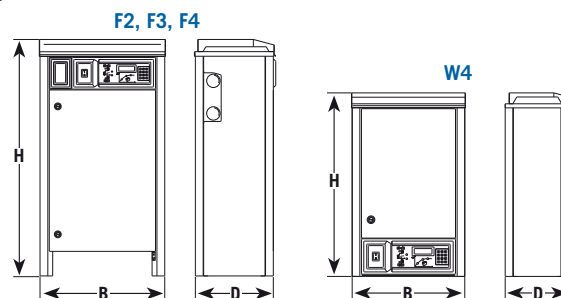
Chargers for other voltages and amperages can be quoted on request.

**With our chemical acid circulation (ionic mixing) the charging time can be about one hour less than the values shown in the table.*

Dimensions and data:

Cabinet	Height	Width	Depth
Type	H	B	D
W4	673	412	234
F2	980	520	340
F3	1120	560	420
F4	1500	560	450

All cabinets are classified as IP21. Other classifications can be obtained as an option. All measurements in mm.



The right to make changes without prior notice is reserved.