

FORTIS

TRACTION BATTERY CHARGER

High frequency modular charger



EASILY OPERATING

PRECISE CHARGE



- **VERY HIGH RELIABILITY**
- **SHORT CIRCUIT PROOF OUTPUT**
- **SAVES EXPENSES FOR OPERATING**
- **MODULAR SYSTEM**
- **PRESET CHARGING CURVES**

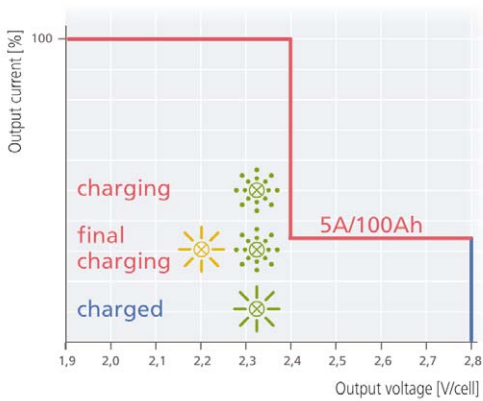
- Efficiency up to 94%, power factor $\cos \varphi \sim 1$
- Active PFC and softstart
- Verification of connected battery
- Galvanic separated mains - output
- Regeneration charging - desulphation and equalization
- Short circuit and reverse of polarity proof output
- Optimised HF charging technology accelerates charging, prolongs working life of batteries and saves energybaterie
- Traction battery charger FORTIS meets hard requirements of three shift
- operation in industrial areas

Operational stages are signaled by three big LED lights, status of charging is visible from long distance. Output current is adjustable to battery capacity, operating stages are signali-zed by three LED lights.

FORTIS chargers comply with european standards of using PFC at electronical devices.

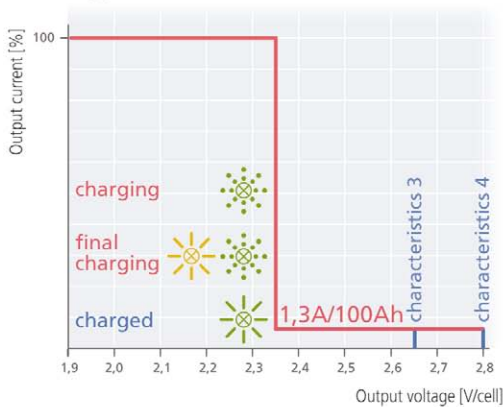
CHARACTERISTICS

IUIa

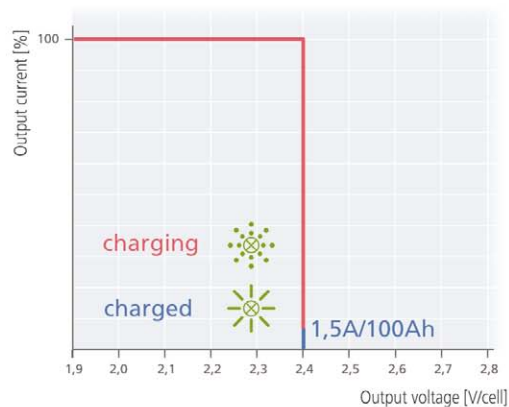


- Simple choice of charging characteristics enables to optimize charging to different battery types
- Optimal value of charging factor reduces power consumption and prolongs working life of batteries

IUIa-gel



IUIa



OPTIONAL EQUIPEMENT

- External signaling - signal column / acoustic
- Two digital inputs for remote control
- Temperature sensor - compensation of charging voltage according to battery temperature
- Two potential-free outputs



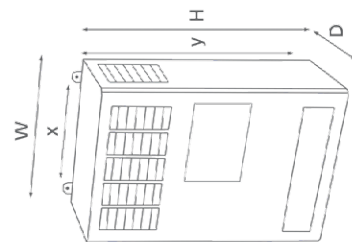
Temperature sensor



Outputs for external signaling

Output voltage (V)	Output current (A)	Mains (VAC)	Input current (A)	Mains protection (A)	Case	Type	Charging time / Battery capacity (Ah max.)			Weight (Kg)	
							Lead acid batteries		Gel batteries		
							8h	10h			12h
24	60	230	8,7	10	FF130	FORTIS 24E60	423	571	316	420	13
	100	230	14,1	16	FF130	FORTIS 24E100	704	952	526	699	13
	100	3 x 400	4,9	6	FF130	FORTIS 24D100	704	952	526	699	14
	200	3 x 400	9,8	10	FF250	FORTIS 24D200	1408	1905	1053	1399	25
48	50	230	14,1	16	FF130	FORTIS 48E50	352	476	263	350	13
	50	3 x 400	4,9	6	FF130	FORTIS 48D50	352	476	263	350	14
	100	3 x 400	8,0	10	FF130	FORTIS 48D100	644	871	482	640	18
	150	3 x 400	12,9	16	FF250	FORTIS 48D150	996	1348	745	990	27
80*	200	3 x 400	16,0	20	FF250	FORTIS 48D200	1289	1743	963	1280	30
	25	230	14,1	16	FF130	FORTIS 80E25	176	238	132	175	13
	25	3 x 400	4,9	6	FF130	FORTIS 80D25	176	238	132	175	14
	50	3 x 400	8,0	10	FF130	FORTIS 80D50	352	476	263	350	17
	75	3 x 400	12,9	16	FF250	FORTIS 80D75	528	714	395	524	26
	100	3 x 400	16,0	20	FF250	FORTIS 80D100	704	952	526	699	28
	125	3 x 400	20,9	25	FF330	FORTIS 80D125	880	1190	658	874	37
	150	3 x 400	24,0	32	FF330	FORTIS 80D150	1056	1429	789	1049	40
	175	3 x 400	28,9	32	FF550	FORTIS 80D175	1232	1667	921	1224	49
	200	3 x 400	32,0	40	FF550	FORTIS 80D200	1408	1905	1053	1399	52
	225	3 x 400	36,9	40	FF720	FORTIS 80D225	1585	2143	1184	1573	63

* Intended also for 96V and 110V Batteries. Other types on request.



Case	Dimension (mm)			Fastening holes spacing (mm)		
	H	W	D	x	y	y
FF130	477	302	135	230	515	515
FF170	477	302	169	230	515	515
FF250	477	302	254	230	515	515
FF330	477	302	339	230	515	515
FF550	477	547	339	499	515	515
FF720	477	717	339	669	515	515

Efficiency	up to 94%
Output voltage stability	± 1%
Cooling	forced ventilation
Degree of protection	IP20
Operating conditions	-10°C to +40°C
Protection class	I
Standards	EN 61000-6-2 EN 61000-6-4 EN 60950-1