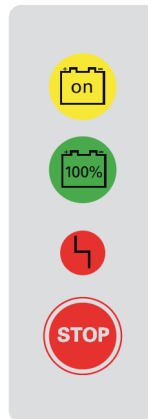


## HF-chargers for traction battery applications



Large LED-display



new

- ▶ For single and multi shift operation
- ▶ For opportunity charge of batteries with air circulation (AEM)
- ▶ To charge all types of standard PzS, PzV and VRLA traction batteries
- ▶ Ready for future battery technologies (e.g. Lithium)

Charger type	Battery type	Charging time
<b>powertron E</b>	Standard PzS	7 – 14h
<b>powertron E</b>	Standard PzS with AEM	5,5 – 13h
<b>powertron E</b>	PzV + VRLA types	11 – 14h

### Technology and characteristics

- ▶ Fully regulated charging programmes
- ▶ Energy saving due to HF-technology
- ▶ Ah balanced charging process
- ▶ Guaranteed recharge times in case of mains voltage variations +/- 10%
- ▶ Sinusoidal mains current due to active power factor correction (PFC) (>600W)
- ▶ Completely smoothed charge current (100% DC), therefore reduced increase of the battery temperature (approx. -5°C) during the charging process
- ▶ Suitable for industrial and household applications, respecting EMC-guidelines and EN-standards
- ▶ Automatic equalising and maintenance charge
- ▶ Data memory and analysis of stored data via USB-interface

### Operation and display

- ▶ Fully automatic:
  - Soft start
  - Adjustment of charge parameter
  - Secured full charge & termination of charging programme
- ▶ Simple operation:
  - Just connect battery with charger
  - No adjustment of parameter settings or manual switching
  - Clear status indication of the charging process through large LED-display







### Safety

- ▶ Reverse polarity protection
- ▶ Automatic battery parameter check prior to start of charging process
- ▶ Permanent control of the charging programme on errors and safety switch-off parameters
- ▶ Thermal protection of the charger
- ▶ If a pressure fault in the air circulation system is detected, switch over to the standard charging programme







### Your benefits

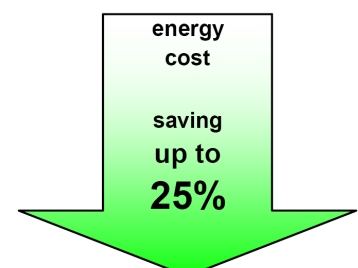
- ▶ **Higher performance through** new
  - Unique ventilation system
    - Without fan up to 1200 Watt
    - Forced ventilation through a separate air channel, therefore less sensitivity for dust
    - More stable use in areas with high mains voltage variations
- ▶ **Reduction of energy cost up to 25% through** new
  - Higher efficiency up to 95%
  - Very little reactive power,  $\cos \varphi > 0,95$
  - Low backlashes into mains
- ▶ **Clear information through** new
  - Large coloured LED-display with far visible traffic light display
- ▶ **Analysis of stored data via USB-interface** new
- ▶ **Suitable for industrial and household applications,** respecting EMC-guidelines and EN-standards
- ▶ **Housing suitable for wall and floor mounting**

### Standard features

-  Soft start
-  Large LED-display new
-  USB-interface and data memory (>1200W) new
-  PFC-Filter (>600W)
-  Automatic equalising charge
-  Automatic maintenance charge

### Options

-  Charger plug
-  Air circulation (AEM)
-  Control for automatic water refill
-  Remote control
-  Charge programme for batteries in cold store application
-  UL & Australian Standard and special designs on request



## Type table

U Nenn Batt.	Ladezeit je Batterie-Kapazität (Ah/C5) Charging time according to battery capacity (Ah/C5) Temps de charge selon capacité (Ah/C5) de la batterie							Geräte- typ	Netz- spannung	Netz- strom	Gehäuse (mit EU)	Brutto- gewicht ca.																											
	PzS-Batterie mit Puls			PzS-Batterie mit EU			PzV + VRLA wartungsfrei																																
U Nom Batt.	PzS-Batterie with Pulse			PzS-Batterie with AEM			PzV + VRLA M.F.	Charger type	Mains voltage	Mains current	Housing (with AEM)	Cross weight approx.																											
U Nom Batt.	PzS-Batterie avec Puls			PzS-Batterie avec brassage d'électrolyte			PzV + VRLA S.E.	Type de chargeur	Tension secteur	Courant secteur	Armoire (avec BE)	Poids brut environ																											
Volt	7 - 8,5h	8,5 - 11h	11 - 14h	5,5 - 6,5h	6,5 - 9h	9 - 13h	11 - 14h *	V / A	V	A		kg																											
24	85-120	120-150	150-200	—	—	—	85-125	E 24/ 15	1x 230V	1,8	H0	6																											
	110-160	160-200	200-270	—	—	—	110-160	E 24/ 20	1x 230V	2,2	H0	6																											
	145-200	200-250	250-340	—	—	—	140-200	E 24/ 25	1x 230V	2,8	H0	6																											
	200-280	280-350	350-465	160-205	205-320	320-450	200-280	E 24/ 35	1x 230V	3,5	H1 (H10)	8 (10)																											
	280-400	400-500	500-640	230-300	300-450	450-625	280-400	E 24/ 50	1x 230V	5,6	H1 (H10)	8 (10)																											
	380-525	525-625	625-875	320-375	375-575	575-840	360-520	E 24/ 65	1x 230V	7,5	H10 (H2)	13 (19)																											
	470-640	640-800	800-1050	340-470	470-720	720-1000	450-640	E 24/ 80	1x 230V	9,3	H10 (H2)	13 (19)																											
	580-800	800-1000	1000-1260	450-575	575-900	900-1200	560-800	E 24/ 100	1x 230V	11,6	H3	38																											
	700-980	980-1200	1200-1550	575-700	700-1085	1085-1550	700-960	E 24/ 120	1x 230V	13,9	H3	38																											
850-1240	1240-1500	—	700-875	875-1350	—	840-1150	D 24/ 150	3x 400V	6,4	H3	46																												
36	85-120	120-150	150-200	—	—	—	85-125	E 36/ 15	1x 230V	2,7	H0	6																											
	110-160	160-200	200-270	—	—	—	110-160	E 36/ 20	1x 230V	3,3	H1	8																											
	145-200	200-250	250-340	—	—	—	140-200	E 36/ 25	1x 230V	4,2	H1	8																											
	200-280	280-350	350-465	160-205	205-320	320-450	200-280	E 36/ 35	1x 230V	6,1	H1 (H10)	8 (10)																											
	280-400	400-500	500-640	230-300	300-450	450-625	280-400	E 36/ 50	1x 230V	8,7	H10 (H2)	13 (19)																											
48	200-280	280-350	350-465	160-205	205-320	320-450	200-280	E 48/ 35	1x 230V	8,1	H10 (H2)	13 (19)																											
	280-400	400-500	500-640	230-300	300-450	450-625	280-400	E 48/ 50	1x 230V	11,6	H3	38																											
	350-480	480-600	600-800	290-350	350-540	540-775	325-480	E 48/ 60	1x 230V	13,9	H3	38																											
	500-690	690-850	850-1125	340-500	500-775	775-1050	480-690	D 48/ 85	3x 400V	7,3	H3	46																											
	580-800	800-1000	1000-1260	450-575	575-900	900-1200	560-800	D 48/ 100	3x 400V	8,6	H3	46																											
	700-980	980-1200	1200-1550	575-700	700-1085	1085-1550	700-960	D 48/ 120	3x 400V	10,3	H3	46																											
	850-1240	1240-1500	—	700-875	875-1350	—	840-1150	D 48/ 150	3x 400V	12,9	H4	87																											
	980-1395	—	—	775-1000	1000-1450	—	945-1260	D 48/ 170	3x 400V	14,6	H4	87																											
	1150-1500	—	—	900-1150	1150-1550	—	1100-1550	D 48/ 200	3x 400V	17,2	H4	87																											
80	145-200	200-250	250-340	—	—	—	140-200	E 80/ 25	1x 230V	9,7	H10	13																											
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	980-1395	—	—	775-1000	1000-1450	—	945-1260	D 80/ 170	3x 400V	24,3	H4	87																											
Typ E Einphasenwechselstrom, single phase, monophasé 1x 230V 50/60Hz Typ D Dreiphasenwechselstrom, three phase, triphasé 3x 400V 50/60Hz								Abmessungen/ Dimensions/ Dimensions [mm]																															
* Richtwerte, Vorschriften der Batteriehersteller beachten. * Standard values, observe recommendations of battery manufacturer. * Valeurs standard, respectez les consignes du fabricant de la batterie.								<table border="1"> <thead> <tr> <th>Gehäuse Housing Armoire</th> <th>Höhe Height Hauteur</th> <th>Breite Width Largeur</th> <th>Tiefe Depth Profondeur</th> </tr> </thead> <tbody> <tr> <td>H0</td> <td>250</td> <td>290</td> <td>135</td> </tr> <tr> <td>H1</td> <td>250</td> <td>350</td> <td>135</td> </tr> <tr> <td>H10</td> <td>260</td> <td>450</td> <td>150</td> </tr> <tr> <td>H2</td> <td>360</td> <td>450</td> <td>200</td> </tr> <tr> <td>H3</td> <td>560</td> <td>520</td> <td>260</td> </tr> <tr> <td>H4</td> <td>960</td> <td>520</td> <td>260</td> </tr> </tbody> </table>				Gehäuse Housing Armoire	Höhe Height Hauteur	Breite Width Largeur	Tiefe Depth Profondeur	H0	250	290	135	H1	250	350	135	H10	260	450	150	H2	360	450	200	H3	560	520	260	H4	960	520	260
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Technische Änderungen vorbehalten! Rights reserved for technical changes! Modifications techniques réservées!																																							