

The 50Hz charging technology for universal applications



Coloured text-display **new**

Application areas

- ▶ For single and multi shift operation
- ▶ For opportunity charge of batteries with air circulation (AEM)
- ▶ Suitable for charging standard lead acid traction batteries
- ▶ Suitable for charging with the intelligent charging programme **e-f Δ ct**
- ▶ Ready for battery recognition system **eGUIDE**

Charger type	Charge characteristic	Charging time (h)
intronic D puls	Wsa-puls	7,5 –12h
intronic D EU	Wsa EU	6,5 –12h

Technology and product features

- ▶ Wsa-puls characteristic for a quick and energy saving battery charge
- ▶ Softstart (single phase chargers)
- ▶ Ah balanced charging process
- ▶ Improved charging process for batteries with low temperature
- ▶ Automatic equalising charge
- ▶ Automatic maintenance charge
- ▶ Adaption to the voltage behaviour of sulphated batteries
- ▶ Data memory in real time, read out and analysis of stored data via IrComm-interface
- ▶ Battery charge history with battery ID in combination with e-guide
- ▶ Programmable starting time of charging process to avoid power peaks in the mains.
- ▶ Electromagnetic compatibility and safety in accordance to EMC guideline and EN-standards
- ▶ Acid resistant front label
- ▶ Protection mode IP21

Operation and display

- ▶ Automatic start, charging process and shut off
- ▶ Simple operation:
 - Just connect battery with charger
 - No adjustment of parameter settings or manual switching
 - Display of operation state by coloured text-display and Jumbo-LEDs
 - Data check via buttons and IrComm











Safety

- ▶ Reverse polarity protection
- ▶ Automatic battery parameter check prior to start of charging process
- ▶ Automatic start of charge after a safety delay
- ▶ Charge procedure check in the event of irregular battery behaviour
- ▶ Automatic shut-off of the charger after disconnecting the battery
- ▶ Thermal monitoring for charger protection
- ▶ In case of pressure fault in the AEM standard charging programme works.








Your benefits

- ▶ Far visible coloured text-display with info about residual charge time in h, progress of charge and state of charge **new**
- ▶ Operation state far visible by super bright Jumbo-LEDs
- ▶ Data display via menu and info button **new**
- ▶ Use of night electricity tariffs by programming the start of the charge with real time clock **new**

Standard features

-  Softstart (single phase charger)
-  Real time clock **new**
-  Jumbo-LED operation state
-  Coloured text-display with residual charge time, progress of charge and state of charge **new**
-  Data display via menu and info button **new**
-  IrComm-interface and data memory in real time
-  Wsa-puls charge characteristic
-  Automatic equalising charge
-  Automatic maintenance charge
-  Charger function test

Options

-  Charger plug
-  Air circulation (AEM)
-  Control for automatic water refill
-  External ON/OFF
-  Remote display
-  Battery recognition with battery ID and statistics (for leasing / rental and change batteries) **new**
-  **e-f Δ ct** charging system **new**
- Syst. I: **e-f Δ ct**
- Syst. II: **e-f Δ ct** with **eGUIDE**

Reducing costs with **e-f Δ ct**. Ask for further details.

Type table

<i>intronic D puls</i>				<i>intronic D EU</i>			<i>Ladegerät / charger / chargeur</i>							
Charging time according to battery capacity (Ah/5h) in hours ca										Gerätedaten / Charger data / Données du chargeur				
Voltage	Traction battery PzS, PzB, GiS with Wsa puls			Traction battery PzS, PzB, GiS with AEM (air electrolyte mixing)			Charger type	Mains voltage	Mains power rating	Mains current	Mains fuse (slow)	Power line Plug	Housing	Gross weight
	V	7,5 - 8,5h	8,5 - 10h	10 - 12h	6,5 - 8h	8 - 10h	10 - 12h	V / A	V	kVA	A	A	mm ²	() = EU
24V	190-214	215-244	245-280	170-199	200-245	246-280	E 24/ 30	E 230 V	1,1	4,7	10	1,5 Schuko	E1-3(G2-3)	19(35)
	215-244	245-279	280-330	200-224	225-280	281-330	E 24/ 35	E 230 V	1,3	5,5	10	1,5 Schuko	E1-3(G2-3)	23(37)
	245-279	280-320	321-380	225-259	260-320	321-380	E 24/ 40	E 230 V	1,5	6,5	10	1,5 Schuko	E1-3(G2-3)	24(38)
	280-320	321-369	370-430	260-289	290-360	361-430	E 24/ 45	E 230 V	1,6	7,0	10	1,5 Schuko	E1-3(G2-3)	25(42)
	321-369	370-429	430-480	290-329	330-420	421-480	E 24/ 50	E 230 V	1,9	8,2	16	1,5 Schuko	E1-3(G2-3)	26(42)
	370-429	430-499	500-570	330-399	400-490	491-570	E 24/ 60	E 230 V	2,2	9,5	16	1,5 Schuko	G2-3	42
	430-499	500-564	565-660	400-449	450-560	561-660	E 24/ 70	E 230 V	2,6	11,3	16	1,5 Schuko	G2-3	50
	500-564	565-639	640-750	450-509	510-630	631-750	E 24/ 80	E 230 V	3,1	13,4	16	1,5 Schuko	G2-3	50
	565-639	640-759	760-850	510-589	590-720	721-850	D 24/ 90	D 400 V	3,3	4,7	10	1,5 CEE 16	G3-3	67
	640-759	760-899	900-950	590-689	690-880	881-950	D 24/ 100	D 400 V	4,1	5,4	10	1,5 CEE 16	G3-3	70
	760-899	900-1049	1050-1200	690-799	800-1050	1051-1180	D 24/ 125	D 400 V	4,8	6,9	10	1,5 CEE 16	G3-3	73
	900-1049	1050-1200	1201-1400	800-989	990-1200	1201-1400	D 24/ 150	D 400 V	5,9	8,5	16	1,5 CEE 16	G3-3	77
1050-1200	1201-1380	1381-1550	990-1100	1101-1380	1380-1600	D 24/ 170	D 400 V	7,0	10,1	16	1,5 CEE 16	G3-3	91	
36V	190-214	215-244	245-280	170-199	200-245	246-280	E 36/ 30	E 230 V	1,7	7,4	10	1,5 Schuko	G2-3	40
	215-244	245-279	280-330	200-224	225-280	281-330	E 36/ 35	E 230 V	2,0	8,7	16	1,5 Schuko	G2-3	41
	245-279	280-320	321-380	225-259	260-320	321-380	E 36/ 40	E 230 V	2,3	10,0	16	1,5 Schuko	G2-3	43
	280-320	321-369	370-430	260-289	290-360	361-430	E 36/ 45	E 230 V	2,6	11,3	16	1,5 Schuko	G2-3	46
	321-369	370-429	430-480	290-329	330-420	421-480	E 36/ 50	E 230 V	2,9	12,6	16	1,5 Schuko	G2-3	48
	370-429	430-499	500-570	330-399	400-490	491-570	D 36/ 60	D 400 V	3,6	5,2	10	1,5 CEE 16	G3-3	70
	430-499	500-564	565-660	400-449	450-560	561-660	D 36/ 70	D 400 V	4,2	6,0	10	1,5 CEE 16	G3-3	72
	500-564	565-639	640-750	450-509	510-630	631-750	D 36/ 80	D 400 V	4,8	6,9	10	1,5 CEE 16	G3-3	73
	565-639	640-759	760-850	510-589	590-720	721-850	D 36/ 90	D 400 V	5,2	7,5	10	1,5 CEE 16	G3-3	80
	640-759	760-899	900-950	590-689	690-880	881-950	D 36/ 100	D 400 V	6,1	8,5	16	1,5 CEE 16	G3-3	82
	760-899	900-1049	1050-1200	690-799	800-1050	1051-1180	D 36/ 125	D 400 V	7,4	10,7	16	1,5 CEE 16	G3-3	85
	900-1049	1050-1200	1201-1400	800-989	990-1200	1201-1400	D 36/ 150	D 400 V	8,9	12,8	16	1,5 CEE 16	G4-3	95
1050-1200	1201-1380	1381-1550	990-1100	1101-1380	1380-1600	D 36/ 170	D 400 V	10,5	15,1	20	2,5 CEE 32	G4-3	105	
48V	190-214	215-244	245-280	170-199	200-245	246-280	E 48/ 30	E 230 V	2,2	9,5	16	1,5 Schuko	G2-3	49
	215-244	245-279	280-330	200-224	225-280	281-330	E 48/ 35	E 230 V	2,6	11,2	16	1,5 Schuko	G2-3	50
	245-279	280-320	321-380	225-259	260-320	321-380	E 48/ 40	E 230 V	3,2	13,9	16	1,5 Schuko	G2-3	52
	280-320	321-369	370-430	260-289	290-360	361-430	D 48/ 45	D 400 V	3,4	5,0	10	1,5 CEE 16	G3-3	60
	321-369	370-429	430-480	290-329	330-420	421-480	D 48/ 50	D 400 V	3,7	5,2	10	1,5 CEE 16	G3-3	63
	370-429	430-499	500-570	330-399	400-490	491-570	D 48/ 60	D 400 V	4,5	6,3	10	1,5 CEE 16	G3-3	70
	430-499	500-564	565-660	400-449	450-560	561-660	D 48/ 70	D 400 V	5,3	7,5	10	1,5 CEE 16	G3-3	75
	500-564	565-639	640-750	450-509	510-630	631-750	D 48/ 80	D 400 V	6,0	8,6	16	1,5 CEE 16	G3-3	83
	565-639	640-759	760-850	510-589	590-720	721-850	D 48/ 90	D 400 V	6,9	10,0	16	1,5 CEE 16	G3-3	83
	640-759	760-899	900-950	590-689	690-880	881-950	D 48/ 100	D 400 V	8,1	10,6	16	1,5 CEE 16	G3-3	85
	760-899	900-1049	1050-1200	690-799	800-1050	1051-1180	D 48/ 125	D 400 V	9,0	13,0	16	1,5 CEE 16	G3-3	90
	900-1049	1050-1200	1201-1400	800-989	990-1200	1201-1400	D 48/ 150	D 400 V	11,9	17,2	20	2,5 CEE 32	G4-3	114
1050-1200	1201-1380	1381-1550	990-1100	1101-1380	1380-1600	D 48/ 170	D 400 V	14,9	21,5	25	2,5 CEE 32	G4-3	134	
80V	190-214	215-244	245-280	170-199	200-245	246-280	D 80/ 30	D 400 V	3,8	6,0	10	1,5 CEE 16	G3-3	61
	215-244	245-279	280-330	200-224	225-280	281-330	D 80/ 35	D 400 V	4,5	6,3	10	1,5 CEE 16	G3-3	63
	245-279	280-320	321-380	225-259	260-320	321-380	D 80/ 40	D 400 V	5,2	7,5	10	1,5 CEE 16	G3-3	65
	280-320	321-369	370-430	260-289	290-360	361-430	D 80/ 45	D 400 V	5,7	8,1	16	1,5 CEE 16	G3-3	68
	321-369	370-429	430-480	290-329	330-420	421-480	D 80/ 50	D 400 V	6,2	8,9	16	1,5 CEE 16	G3-3	74
	370-429	430-499	500-570	330-399	400-490	491-570	D 80/ 60	D 400 V	7,4	10,7	16	1,5 CEE 16	G3-3	83
	430-499	500-564	565-660	400-449	450-560	561-660	D 80/ 70	D 400 V	8,9	12,8	16	1,5 CEE 16	G4-3	105
	500-564	565-639	640-750	450-509	510-630	631-750	D 80/ 80	D 400 V	10,0	14,4	16	1,5 CEE 16	G4-3	105
	565-639	640-759	760-850	510-589	590-720	721-850	D 80/ 90	D 400 V	11,2	16,1	20	2,5 CEE 32	G4-3	113
	640-759	760-899	900-950	590-689	690-880	881-950	D 80/ 100	D 400 V	13,1	17,7	20	2,5 CEE 32	G4-3	130
	760-899	900-1049	1050-1200	690-799	800-1050	1051-1180	D 80/ 125	D 400 V	15,2	21,6	25	2,5 CEE 32	G4-3	136
	900-1049	1050-1200	1201-1400	800-989	990-1200	1201-1400	D 80/ 150	D 400 V	19,8	28,6	35	4,0 CEE 32	G4-3	172
Abm./ Dim./ Dim. [mm]				E 230 V: Einphasenwechselstrom, single phase, monophasé, 1 x 230V 50Hz (1/N/PE)							Wand-/Standgeräte, wall / floor mounted charger, Installation murale / au sol			
Gehäuse	Höhe	Breite	Tiefe	D 400 V: Dreiphasenwechselstrom, three phase, triphasé, 3 x 400V 50Hz (3/PE)										
Housing	Height	Width	Depth	* Richtwerte, Vorschriften der Batteriehersteller sind zu beachten.										
Armoire	Hauteur	Largeur	Profondeur	* Standard values, observe recommendations of battery manufacturer.										
E1-3	260 mm	410 mm	260 mm	* Respectez les consignes du fabricant de la batterie.										
G2-3	370 mm	575 mm	380 mm	* Schutzrechte nach DIN 34 Absatz 2.1 werden beansprucht							* Technische Änderungen vorbehalten			
G3-3	680 mm	575 mm	440 mm	* Copyright protected acc. DIN 34 section 2.1							* Rights reserved for technical changes			
G4-3	680 mm	575 mm	540 mm	* Protection des copyrights acc. DIN 34 section 2.1							* Modifications techniques réservées.			