

/ Perfect Welding / Solar Energy / Perfect Charging



BATTERY CHARGING SYSTEM
SELECTIVA 3.0
FOR LEAD-ACID BATTERIES



FRONIUS SELECTIVA 3.0

BATTERY CHARGING SYSTEMS FOR INTRALOGISTICS

With the battery charging systems Selectiva 3.0, Fronius is offering one of the most advanced solution for charging lead-acid batteries available on the market. The proven Active Inverter Technology guarantees an optimal and gentle charge, while the innovative Ri-charging process adapts the charging characteristic to the age, temperature and state of charge of each individual battery. Benefit from significantly longer battery life and less energy costs.

The Selectiva 3.0 is available from 1, 2, 3, 8 to 16kW. The full Selectiva 3.0 portfolio consists of several models, from which you can choose the most suitable according to the voltage, capacity and charging time of your batteries.

SELECTIVA 3.0 FAMILY

ONE CHARGER MANY POSSIBILITIES

The universal charging systems Selectiva 3.0 offers flexible charging of batteries with different voltages and capacities. Your benefits? A very energy efficient and gentle charge thanks to the proven Ri-charging process.

SELECTIVA 1kW



BATTERY VOLTAGE	DEVICES	OUTPUT		MAINS				
	DESIGNATION	VOLTAGE	CURRENT	PHASES	VOLTAGE	CURRENT	POWER	FUSE
12V	Selectiva 1020	12	20	1	230V	3A	0,3kW	16A
	Selectiva 1030	12	30	1	230V	3A	0,4kW	16A
24V	Selectiva 2010	24	10	1	230V	3A	0,3kW	16A
	Selectiva 2015	24	15	1	230V	3A	0,4kW	16A
	Selectiva 2020	24	20	1	230V	4A	0,7kW	16A
	Selectiva 2032	24	32	1	230V	8A	1,0kW	16A
	Selectiva 2040	24	35	1	230V	8A	1,1kW	16A

Type: 1kW
 Dimensions W/H/D: 247 x 162 x 88 mm
 Weight including charging and mains leads: 4 kg
 Protection class: IP40

Mains lead: 2 m
 Charging lead: 2.5 m
 Mains voltage: 1 x 230V AC
 (-15%/+15%)

SELECTIVA 3.0 2kW



BATTERY VOLTAGE	DEVICES	OUTPUT		MAINS				
	DESIGNATION	VOLTAGE	CURRENT	PHASES	VOLTAGE	CURRENT	POWER	FUSE
24V	Selectiva 3.0 2040 2kW	24	40	1	230V	8A	1,5kW	16A
	Selectiva 3.0 2050 2kW	24	50	1	230V	10A	1,9kW	16A
	Selectiva 3.0 2060 2kW	24	60	1	230V	12A	2,3kW	16A
	Selectiva 3.0 2070 2kW	24	70	1	230V	12A	2,4kW	16A
36/48V	Selectiva 3.0 4020 2kW	24	20	1	230V	8A	1,5kW	16A
	Selectiva 3.0 4035 2kW	24	35	1	230V	12A	2,3kW	16A

Type: 2kW
 Dimensions W/H/D: 341 x 198 x 110 mm
 Weight including charging and mains leads: 6 kg
 Protection class: IP21

Mains lead: 2,5 m
 Charging lead: 3 m
 Mains voltage: 1 x 230V AC
 (-15%/+15%)

SELECTIVA 3.0 3kW



BATTERY VOLTAGE	DEVICES	OUTPUT		PHASES	MAINS			FUSE
	DESIGNATION	VOLTAGE	CURRENT		VOLTAGE	CURRENT	POWER	
24V	Selectiva 3.0 2080 3kW	24	80	1	230V	15A	2,8kW	16A
	Selectiva 3.0 2100 3kW	24	100	1	230V	15A	3,0kW	16A
	Selectiva 3.0 2120 3kW	24	120	1	230V	16A	3,0kW	16A
36/48V	Selectiva 3.0 4045 3kW	48	45	1	230V	15A	3,0kW	16A
	Selectiva 3.0 4060 3kW	48	60	1	230V	15A	3,0kW	16A

Type: 3kW
 Dimensions W/H/D: 417 x 198 x 110 mm
 Weight including charging and mains leads: 8 kg
 Protection class: IP21

Mains lead: 2,5 m
 Charging lead: 3 m
 Mains voltage: 1 x 230V AC
 (-15%/+15%)

SELECTIVA 3.0 8kW



NEW

BATTERY VOLTAGE	DEVICES	OUTPUT		PHASES	NETZ			FUSE
	DESIGNATION	VOLTAGE	CURRENT		VOLTAGE	CURRENT	POWER	
24V	Selectiva 3.0 2100 8kW	24	100	3	400V	7A	3,9kW	16A
	Selectiva 3.0 2120 8kW	24	120	3	400V	8A	4,6kW	16A
	Selectiva 3.0 2140 8kW	24	140	3	400V	9A	5,4kW	16A
	Selectiva 3.0 2160 8kW	24	160	3	400V	10A	6,1kW	16A
	Selectiva 3.0 2180 8kW	24	180	3	400V	11A	6,9kW	16A
	Selectiva 3.0 2200 8kW	24	200	3	400V	12A	7,6kW	16A
	Selectiva 3.0 2225 8kW	24	225	3	400V	14A	8,6kW	16A
36/48V	Selectiva 3.0 4060 8kW	48	60	3	400V	7A	4,6kW	16A
	Selectiva 3.0 4075 8kW	48	75	3	400V	9A	5,7kW	16A
	Selectiva 3.0 4090 8kW	48	90	3	400V	11A	6,8kW	16A
	Selectiva 3.0 4120 8kW	48	120	3	400V	14A	9,1kW	16A
	Selectiva 3.0 4140 8kW	48	140	3	400V	14A	9,3kW	16A
	Selectiva 3.0 4160 8kW	48	160	3	400V	15A	9,4kW	16A
72/80V	Selectiva 3.0 4185 8kW	48	185	3	400V	15A	10,0kW	16A
	Selectiva 3.0 8040 8kW	80	40	3	400V	8A	5,0kW	16A
	Selectiva 3.0 8060 8kW	80	60	3	400V	12A	7,4kW	16A
	Selectiva 3.0 8075 8kW	80	75	3	400V	14A	9,1kW	16A
	Selectiva 3.0 8090 8kW	80	90	3	400V	14A	9,2kW	16A
Selectiva 3.0 8110 8kW	80	110	3	400V	15A	9,7kW	16A	

Type: 8kW
 Dimensions W/H/D: 633 x 344 x 180 mm
 Weight including charging and mains leads: 23 kg
 Protection class: IP20

Mains lead: 3 m
 Charging lead: 3 m
 Mains voltage: 3 x 400V AC
 (-10%/+30%)

SELECTIVA 3.0 16kW



NEW

BATTERY VOLTAGE	DEVICES	OUTPUT		PHASES	MAINS			FUSE
	DESIGNATION	VOLTAGE	CURRENT		VOLTAGE	CURRENT	POWER	
36/48V	Selectiva 3.0 4120 16kW	48	120	3	220V	29A	9,1kW	32A
	Selectiva 3.0 4140 16kW	48	140	3	220V	30A	9,4kW	32A
	Selectiva 3.0 4160 16kW	48	160	3	220V	30A	9,5kW	32A
	Selectiva 3.0 4210 16kW	48	210	3	400V	28A	15,9kW	32A
72/80V	Selectiva 3.0 8120 16kW	80	120	3	400V	24A	14,8kW	32A
	Selectiva 3.0 8140 16kW	80	140	3	400V	28A	17,3kW	32A
	Selectiva 3.0 8160 16kW	80	160	3	400V	30A	18,2kW	32A
	Selectiva 3.0 8180 16kW	80	180	3	400V	31A	18,3kW	32A
	Selectiva 3.0 8210 16kW	80	210	3	400V	31A	18,4kW	32A

Type: 16kW
 Dimensions W/H/D: 647 x 392 x 247 mm
 Weight including charging and mains leads: 37 kg
 Protection class: IP20

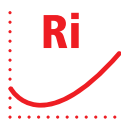
Mains lead: 3 m
 Charging lead: 3 m
 Mains voltage: 3 x 400V AC (-10%/+30%)
 3 x 220V AC (-10%/+30%)

FUNCTIONS

FOR SELECTIVA 3.0 BATTERY CHARGING SYSTEMS

The Selectiva 3.0 product family offers a large range of functions which helps to extend the service life of your lead-acid batteries. The primary focus is to optimise the charging process for each individual battery according to its unique requirements – and to simultaneously reduce costs.





RI-CHARGING CHARACTERISTIC

The Ri-charging process adapts to each battery's requirements and delivers exactly the right current for optimal charging.



USB INTERFACE

Software updates can be easily installed, and analyses easily read.



CALENDAR FUNCTION

This enables time-controlled charging, making it possible to exploit cheaper energy rates and accommodate individual shift patterns.



OPPORTUNITY CHARGING AND RAPID CHARGING CHARACTERISTIC

You can set a special characteristic for opportunity charging and rapid charging at the push of a button.



DEEP DISCHARGE CHARACTERISTIC

This special characteristic makes it possible for a deeply discharged battery to be completely recharged.



NO MONDAY MORNING SYNDROME

A programmable, time-controlled equalising charge ensures that a full charge is available over the weekend and after public holidays.

NEW



CSM CHARACTERISTIC

The CSM characteristic enables this type of battery to be optimally charged and can be combined with the Power Charging option.

NEW



LEAD CRYSTAL CHARACTERISTIC

The Lead Crystal function contains a special characteristic for optimally charging these maintenance-free batteries.



VISUALISATION OF THE COOLEST BATTERY

A blue LED indicator signals a fully charged, cooled and usable battery.



AUTOMATIC

AUTOMATIC BATTERY VOLTAGE DETECTION

The intelligent battery charger automatically detects the battery voltage as soon as it is connected.



REFRESH CHARACTERISTIC

Using the Refresh characteristic raises the performance of a weak battery.



CURRENT-PEAK AVOIDANCE

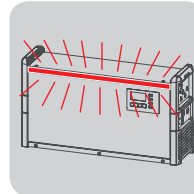
Low power consumption and adjustable charging start times decreases the required connection load and peak load.

OPTIONS

ADDITIONAL HARDWARE AND SOFTWARE

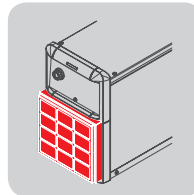
LED STRIP, CHARGING STATUS INDICATOR

Allows you to see from far away which traction battery is being charged, is fully charged, or has cooled down and is ready for use. This helps to dramatically increase the service life of your batteries.



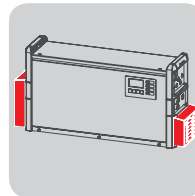
AIR FILTER

Provides effective protection against dirt for the interior of your battery charging system and prevents short circuits caused by dust particles. This increases the reliability and service life of your battery charging system dramatically.



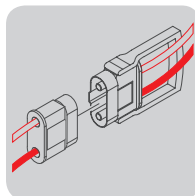
IP23

This option protects your battery charging system against spraywater at up to 60 degrees from vertical. This reduces defects caused by water ingress to a minimum.



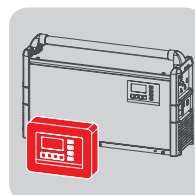
CHARGING PLUG

DIN-compliant charging plugs from REMA or Schaltbau, as well as tab connectors, are part of our standards-compliant product portfolio. Special plugs are available upon request.



REMOTE CONTROL SYSTEM

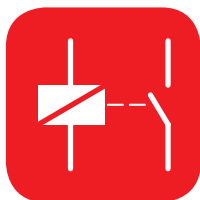
Ideal for controlling and monitoring batteries, even over large distances. The user interface can be placed up to 30 m away from the device.



TEMPERATURE-CONTROLLED CHARGING

Adapts the charging voltage and therefore the output according to the temperature of the battery. This provides sustainable protection and increases the battery's service life. If the temperature exceeds a defined limit, the charging process is automatically interrupted. The "external start/stop" function is included in this option.





RELAY BOARD, OPTION BOX

Obtains information about the state of charge of the connected battery via an external circuit. Error messages and additional features such as the Aquamatic control function, external air pump and refill indicator can also be displayed.



AIR-PULS (EUW)

The pneumatic electrolyte circulation system facilitates rapid and especially gentle charging of your traction batteries. Recommended for rapid and opportunity charging, to ensure controlled acid circulation.



POWER CHARGING **NEW**

With the Power Charging option it is possible to increase a low lead battery level with help of rapid or opportunity charging within a short amount of time.



AQUAMATIC CONTROL

An automatic filling system fills your battery with demineralised water during every charge. This prevents damage that can occur due to insufficient refilling.



COLD LOGISTICS **NEW**

The Cold Logistics option increases the performance of the cooled battery by increasing the temperature. The characteristic is adapted in such a way that the battery is fed with a higher amount of energy in order to warm it.



EXTERNAL START/STOP

If the charging lead is disconnected while charging is in progress, the external start/stop function prevents sparking. This reduces the risk of an explosion caused by oxyhydrogen produced during charging and reduces long term damage to the charging plug.



COMMON ERROR

The common error function can be used to communicate error messages to third-party systems quickly and easily.

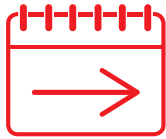


RI-CHARGING PROCESS

COOL CHARGING EXTENDS BATTERY LIFE

50 Hz transformer technology continues to be widely used in battery chargers for traction batteries, however, this gives rise to high energy consumption as well as excessive warming of the battery during charging, which reduces its service life. Although the high-frequency technology is more efficient in this respect, there are major differences here, too. With the Ri-charging process, Fronius is offering the best technology

for charging lead-acid traction batteries available on the market. Our charging process does not follow a fixed characteristic, but adapts each charging process to the needs of the individual battery. This ensures maximum energy efficiency and a long battery life.



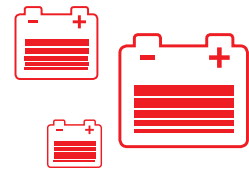
EXTEND YOUR BATTERY LIFE

The Ri-charging process ensures cooler battery charging and thus extends their lifespan on average by 10-15%.

UP TO 30%

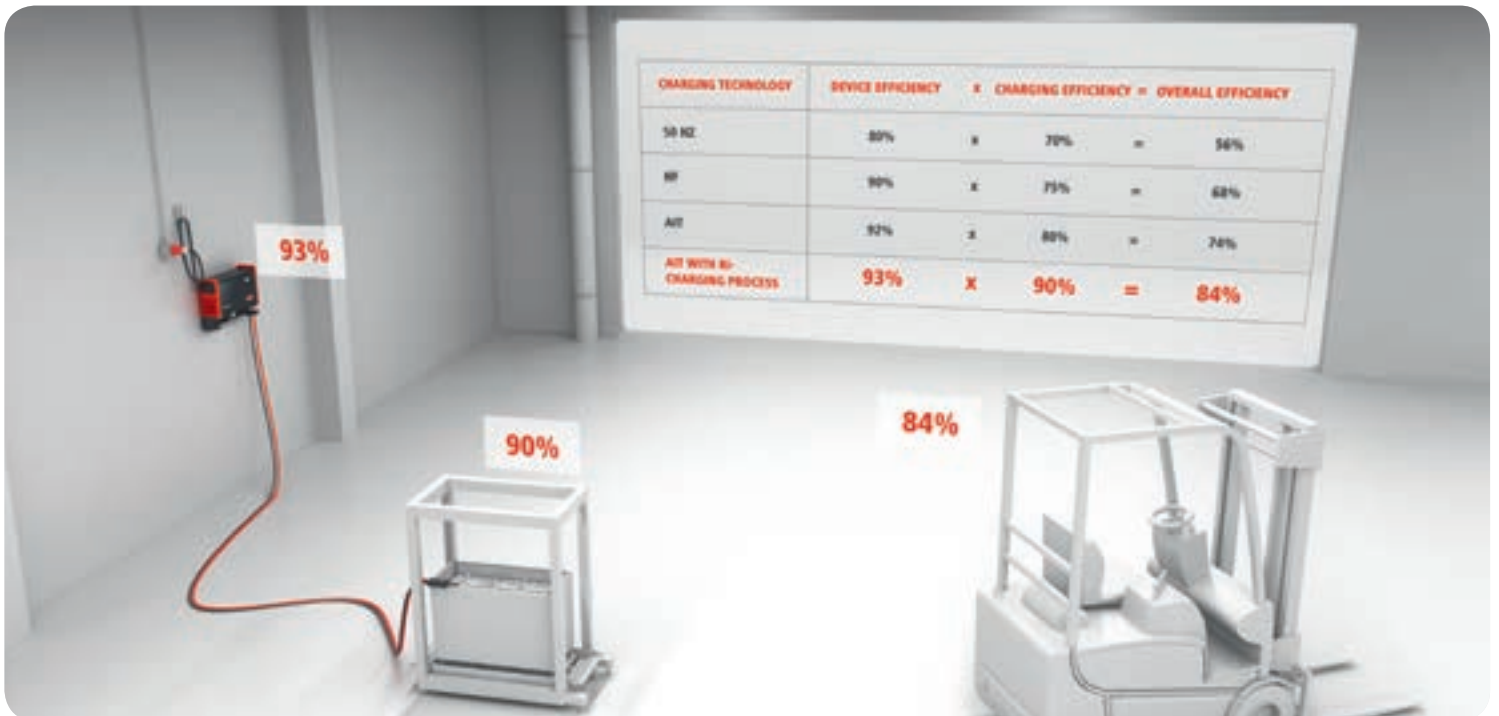
LESS ENERGY COSTS

With an overall efficiency of up to 84% from the socket to the battery, Fronius chargers significantly reduce your electricity consumption up to 30%.



DIFFERENT VOLTAGE CLASSES

The Ri-charging process enables you to charge different batteries and voltage classes with one charger.



SELECTION TABLE

THE RIGHT BATTERY CHARGER FOR YOUR BATTERY AND CHARGING TIME

BATTERY VOLTAGE	PB-WET (PZS, GIS), PB-CSM-WET* CAPACITY [AH]					PB-GEL (PZV, GIV) CAPACITY [AH]		DEVICE
	RI, I-PULS		RI, IUI, I-PULS			IUI		
	5 - 6	6 - 7	7 - 8	8 - 9	9 - 10	10h	12h	
12V	110	135	165	195	225	120	140	Selectiva 1020
	160	190	240	300	345	180	200	Selectiva 1030
24V	52	65	80	95	110	55	70	Selectiva 2010
	80	100	125	150	170	80	100	Selectiva 2015
	110	135	165	195	225	120	135	Selectiva 2020
	180	210	260	320	360	190	215	Selectiva 2032
	200	230	290	345	395	220	235	Selectiva 2040
	225	290	355	415	445	225	270	Selectiva 3.0 2040 2kW
	280	365	440	520	555	280	335	Selectiva 3.0 2050 2kW
	340	440	530	630	665	335	400	Selectiva 3.0 2060 2kW
	395	510	630	725	780	390	470	Selectiva 3.0 2070 2kW
	450	580	700	830	890	445	535	Selectiva 3.0 2080 3kW
	560	730	880	1020	1110	560	670	Selectiva 3.0 2100 3kW
	560	730	880	1040	1110	560	670	Selectiva 3.0 2100 8kW
	620	805	970	1145	1220	620	740	Selectiva 3.0 2120 3kW
	670	870	1060	1250	1335	670	800	Selectiva 3.0 2120 8kW
	800	1000	1250	1450	1555	780	935	Selectiva 3.0 2140 8kW
	930	1150	1420	1650	1780	890	1070	Selectiva 3.0 2160 8kW
1010	1305	1595	1875	2000	1000	1200	Selectiva 3.0 2180 8kW	
1120	1450	1770	2080	2220	1110	1335	Selectiva 3.0 2200 8kW	
1260	1630	2000	2330	2500	1250	1500	Selectiva 3.0 2225 8kW	
36V / 48V	110	135	165	195	225	110	135	Selectiva 3.0 4020 2kW
	185	240	290	345	395	195	235	Selectiva 3.0 4035 2kW
	250	325	400	465	500	250	300	Selectiva 3.0 4045 3kW
	310	405	485	575	620	310	365	Selectiva 3.0 4060 3kW
	340	440	530	630	665	335	400	Selectiva 3.0 4060 8kW
	420	545	660	780	845	420	500	Selectiva 3.0 4075 8kW
	505	655	795	935	1010	500	600	Selectiva 3.0 4090 8kW
	670	870	1060	1250	1335	670	800	Selectiva 3.0 4120 8kW
	800	1000	1250	1450	1555	780	930	Selectiva 3.0 4140 8kW
	870	1105	1345	1590	1720	860	1035	Selectiva 3.0 4160 8kW
	935	1200	1470	1730	1860	1025	1230	Selectiva 3.0 4185 8kW
1180	1530	1865	2175	2350	1170	1400	Selectiva 3.0 4210 16kW	
80V / 72V	225	290	335	415	445	225	270	Selectiva 3.0 8040 8kW
	340	440	530	630	665	335	400	Selectiva 3.0 8060 8kW
	420	545	660	780	845	420	500	Selectiva 3.0 8075 8kW
	505	655	795	935	1010	485	580	Selectiva 3.0 8090 8kW
	560	730	880	1020	1110	560	670	Selectiva 3.0 8110 8kW
	670	870	1060	1250	1335	670	800	Selectiva 3.0 8120 16kW
	800	1000	1250	1450	1555	780	935	Selectiva 3.0 8140 16kW
	930	1150	1420	1650	1780	890	1070	Selectiva 3.0 8160 16kW
	1010	1305	1595	1875	2000	970	1170	Selectiva 3.0 8180 16kW
1090	1380	1660	1950	2125	1170	1400	Selectiva 3.0 8210 16kW	

NEW

NEW

NEW

NEW

Charging times are valid for normal usage (Pb-WET, Pb-CSM-WET: DoD 70%)
 *CSM batteries can only be charged with the IUI characteristic.

FRONIUS PERFECT CHARGING

PROCESS EXPERT AND COST OPTIMISATION PARTNER

Fronius Perfect Charging is your process expert and cost-optimisation partner for the charging of traction batteries in the intralogistics sector.

Together with our customers, we develop custom solutions and systems that are guaranteed to cut costs for users of electrically powered forklift trucks. As a specialist in battery charging installations, our impressive range of services includes the analysis, consultation, planning, implementation and operator training for battery charging rooms and stations.

With our Ri-charging process, we offer the finest technology available anywhere in the world for the charging of lead batteries. Fronius is also driving innovation in the development of alternative drive technologies, such as lithium-ion batteries. Our extensive product and service portfolio combined with our skill and experience – not forgetting our individual and flexible technical support services – make us a partner in demand for the cost optimisation of intralogistics in practically every sector.

OFFICIAL PARTNER OF THE IFOY AWARD

Fronius is an official partner of the IFOY AWARD (International Intralogistics and Forklift Truck of the Year), which recognises the best forklift trucks and application solutions in the industry, trade and service sectors.



/ More information on Fronius and the Ri-charging process can be found at:

www.fronius.co.uk/ri or www.fronius.com/ri-charge

www.fronius.com/intralogistik

www.youtube.com/FroniusCharging

/ Perfect Welding / Solar Energy / Perfect Charging

THREE BUSINESS UNITS, ONE GOAL: TO SET THE STANDARD THROUGH TECHNOLOGICAL ADVANCEMENT.

What began in 1945 as a one-man operation now sets technological standards in the fields of welding technology, photovoltaics and battery charging. Today, the company has around 4,760 employees worldwide and 1,253 patents for product development show the innovative spirit within the company. Sustainable development means for us to implement environmentally relevant and social aspects equally with economic factors. Our goal has remained constant throughout: to be the innovation leader.

Further information about all Fronius products and our global sales partners and representatives can be found at www.fronius.com

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