EPSITRON®

Advanced Power Supply System

WE INNOVATE!

PRO Power

CLASSIC Power

COMPACT Power

ECO Power

EPSITRON® POWER SUPPLIES

Electronic Circuit Breakers

UPS

Capacitive Buffer Modules

Redundancy Modules

EPSITRON® SYSTEM MODULES

TABLE OF CONTENTS

***EPSITRON*® PRO POWER** 8 – 13

Single- and three-phase PRO Power Supplies offer a wide input voltage range and a 12 V, 24 V or 48 V nominal output. Features: PowerBoost and TopBoost functions, optional LineMonitor capability.

***EPSITRON*® CLASSIC POWER** 14 – 19

Single-phase CLASSIC Power Supplies accept a wide input voltage range, while providing a 12 V, 24 V or 48 V nominal output.

***EPSITRON*® ECO POWER** 20 – 23

Single- and three-phase ECO Power Supplies (new!) offer a wide input voltage range and a nominal output voltage of 24 V.

***EPSITRON*® COMPACT POWER** 24 – 27

Low-profile, single-phase COMPACT Power Supplies accept a wide input voltage range, while providing nominal output voltages of 5 V, 12 V, 18 V and 24 V.

***EPSITRON*® UNINTERRUPTIBLE POWER SUPPLY (UPS)** 28 – 31

UPS charger, controller and connected battery modules reliably compensate for longer power failures and feature integrated battery control technology.

***EPSITRON*® CAPACITIVE BUFFER MODULES** 32 – 33

Maintenance-free, capacitive buffer modules ensure seamless operation during short voltage fluctuations.

***EPSITRON*® REDUNDANCY MODULES** 34 – 35

Redundancy modules safeguard two power supplies that are parallel-connected, providing system redundancy or additional power.

***EPSITRON*® ELECTRONIC CIRCUIT BREAKERS (ECBs)** 36 – 41

Configurable, 2-, 4- or 8-channel ECBs feature integrated current and voltage monitoring.

***EPSITRON*® SOLUTIONS** 42 – 45

***EPSITRON*® COMMUNICATION** 46 – 49

***EPSITRON*® ACCESSORIES** 50

Redundancy modules safeguard two power supplies that are parallel-connected, providing system redundancy or additional power.

GLOSSARY 51

Clear, Quick Connections

CAGE CLAMP® Spring Pressure Connection Technology provides fast, vibration-proof and maintenance-free termination of solid, fine-stranded or ferruled conductors.

EPSITRON® POWER SUPPLIES

Selection Guide

Primary Switch Mode Power Supplies, 24 VDC Output

Output nominal current [ADC]	Input, 1-phase	Input, 2-/3-phase	Approvals: EN 60335	cURus 60950	cULus 508	GL	ANSI/ISA 12.12.1	ATEX / IEC Ex	DC OK signal/ contact	RS-232 serial interface	TopBoost *	Efficiency, typ. [%]	Ambient operating temperature [°C]****	Item Number	Page
1.0	■		■	■	■	□			■			86.0	-25 ... +70	**787-1602**	**16**
1.3	■			■	■	■						82.0	-25 ... +55	**787-1002**	**27**
2.0	■			□	□	□								**787-1014**	**27**
2.0	■		■	■	■	□			■			89.0	-25 ... +70	**787-1606**	**16**
2.5	■			■	■		■	■				82.0	-10 ... +70	**787-712**	**22**
2.5	■			■	■	■						88.0	-25 ... +55	**787-1012**	**27**
3.0	■			■	■				■		■	87.8	-25 ... +70	**787-818**	**10**
3.8	■		■	■	■	□			■			87.8	-25 ... +70	**787-1616/0000-1000****	**17**
4.0	■		■	■	■	□			■			89.0	-25 ... +70	**787-1616**	**16**
4.0	■			■	■	■						88.0	-25 ... +55	**787-1022**	**27**
5.0	■			■	■				■		■	87.8	-25 ... +70	**787-822**	**11**
5.0	■		■	■	■	□			■		■	89.0	-25 ... +70	**787-1622**	**17**
5.0	■			■	■	□			■	■	■	89.0	-25 ... +70	**787-1675*****	**31**
5.0	■			■	■		■	■				82.0	-10 ... +60	**787-722**	**22**
6.25		■		□	□							90.0	-25 ... +70	**787-738**	**23**
10.0	■			■	■				■		■	91.8	-25 ... +70	**787-832**	**11**
10.0	■			■	■	□			■		■	91.0	-25 ... +70	**787-1632**	**17**
10.0	■			■	■		■	■				82.0	-10 ... +70	**787-732**	**22**
10.0		■		■	■				■	■	■	91.7	-25 ... +70	**787-850**	**13**
10.0		■		■	■				■		■	91.7	-25 ... +70	**787-840**	**12**
10.0		■		□	□				■			89.0	-25 ... +70	**787-740**	**23**
20.0	■			■	■				■		■	91.0	-25 ... +70	**787-834**	**11**
20.0	■			■	■	□			■		■	92.0	-25 ... +70	**787-1634**	**17**
20.0	■			■	□				■			90.0	-25 ... +70	**787-734**	**22**
20.0		■		■	■				■	■	■	92.9	-25 ... +70	**787-852**	**13**
20.0		■		■	■				■		■	92.9	-25 ... +70	**787-842**	**12**
20.0		■		□	□				■			90.0	-25 ... +70	**787-742**	**23**
40.0	■			□	□				■			90.0	-25 ... +70	**787-736**	**23**
40.0		■		■	■				■	■	■	93.6	-25 ... +55	**787-854**	**13**
40.0		■		■	■				■		■	93.6	-25 ... +55	**787-844**	**12**

■ yes □ pending

*TopBoost enables magnetic tripping of power circuit breakers in the output circuit. For details, see glossary on page 17.

**Class 2 Power Unit per cURus 1310

***with uninterruptible power supply (UPS)

****Device starts at -40 °C, type-tested for 787-8xx, -10xx, -16xx

Primary Switch Mode Power Supplies, 5, 12, 18, 48 VDC Output

Output nominal current [ADC]	Input, 1-phase	Input, 2-/3-phase	Approvals: EN 60335	cURus 60950	cULus 508	GL	ANSI/ISA 12.12.1	ATEX / IEC Ex	DC OK signal/ contact	RS-232 serial interface	TopBoost *	Efficiency, typ. [%]	Ambient operating temperature [°C]****	Item Number	Page
														Output: 5 VDC	
5.5	■			■	■	□						75.0	-25 ... +55	**787-1020**	**27**
														Output: 12 VDC	
2.0	■		■	■	■	□			■			82.0	-25 ... +70	**787-1601**	**18**
2.0	■			■	■	■						80.0	-25 ... +55	**787-1001**	**26**
4.0	■		■	■	■	□			■			86.0	-25 ... +70	**787-1611**	**18**
4.0	■			■	■	■						86.0	-25 ... +55	**787-1011**	**26**
6.0	■			■	■				■		■	83.0	-25 ... +70	**787-819**	**10**
6.5	■			■	■	■						87.0	-25 ... +55	**787-1021**	**26**
7.0	■		■	■	■	□			■			85.0	-25 ... +70	**787-1621**	**18**
10.0	■			■	■				■		■	87.8	-25 ... +70	**787-821**	**10**
15.0	■			■	■				■		■	87.8	-25 ... +70	**787-831**	**10**
15.0	■			■	■	□			■		■	90.0	-25 ... +70	**787-1631**	**19**
														Output: 18 VDC	
2.4	■			■	■	□						84.0	-25 ... +55	**787-1017**	**26**
														Output: 48 VDC	
2.0	■		■	■	■	□			■			86.0	-25 ... +70	**787-1623**	**19**
5.0	■			■	■				■		■	91.0	-25 ... +70	**787-833**	**11**
5.0	■			■	■	□			■		■	92.0	-25 ... +70	**787-1633**	**19**
10.0	■			■	■				■		■	91.0	-25 ... +70	**787-835**	**11**
10.0	■			■	■	□			■		■	93.0	-25 ... +70	**787-1635**	**19**
10.0		■		■	■				■		■	93.0	-25 ... +70	**787-845**	**13**
20.0		■		■	■				■		■	94.4	-25 ... +70	**787-847**	**13**

■ yes □ pending

*TopBoost enables magnetic tripping of power circuit breakers in the output circuit. For details, see glossary on page 17.

****Device starts at -40 °C, type-tested for 787-8xx, -10xx, -16xx

EPSITRON® SYSTEM MODULES

Selection Guide

Uninterruptible Power Supplies (UPS)

Input		Output		Approvals						Dimensions and Environmental Conditions					
Nominal voltage [VAC]	Nominal voltage [VDC]	Nominal voltage [VDC]	Nominal current [ADC]	EN 60335	cURus 60950	cULus 508	GL	ANSI/ISA 12.12.1	ATEX / IEC Ex	Width [mm]	Height [mm]	Length [mm]	Ambient operating temperature [°C]	Item Number	Page
–	24	24	10.0		■	■				40.0	163.0	163.0	-10 ... +60	**787-870**	**30**
–	24	24	20.0		■	■				57.0	163.0	171.0	-10 ... +60	**787-875**	**30**
100–240	110–370	24	5.0		■	■	□			60.0	135.5	127.0	-25 ... +70	**787-1675**	**31**

Battery Modules

Input	Output		Approvals							Dimensions and Environmental Conditions					
Nominal voltage [VDC]	Nominal voltage [VDC]	Nominal capacity [Ah]	EN 60335	cURus 60950	cULus 508	GL	ANSI/ISA 12.12.1	ATEX / IEC Ex	Battery tested to VdS	Width [mm]	Height [mm]	Length [mm]	Ambient operating temperature [°C]	Item Number	Page
24	24	1.2			■				■	55.0	126.5	153.0	-15 ... +40	**787-876**	**30**
24	24	3.2			■				■	76.2	175.5	168.0	-15 ... +40	**787-871**	**31**
24	24	7.0			■				■	86.0	217.5	236.0	-15 ... +40	**787-872**	**31**
24	24	12.0			■				■	120.5	217.5	236.0	-15 ... +40	**787-873**	**30**

Capacitive Buffer Modules

Input/Output, Buffer			Approvals						Dimensions and Environmental Conditions					
Input/Output nominal voltage [VDC]	Output nominal current [ADC]	Buffer time [s]	EN 60335	cURus 60950	cULus 508	GL	ANSI/ISA 12.12.1	ATEX / IEC Ex	Width [mm]	Height [mm]	Length [mm]	Ambient operating temperature [°C]	Item Number	Page
24	10.0	0.06–7.2		■	■				57.0	179.0	163.0	-10 ... +60	**787-880**	**33**
24	20.0	0.17–16.5		■	■				57.0	179.0	181.0	-10 ... +60	**787-881**	**33**

Redundancy Modules

Input	Output		Approvals						Dimensions and Environmental Conditions					
Nominal voltage [VDC]	Nominal voltage [VDC]	Nominal current [ADC]	EN 60335	cURus 60950	cULus 508	GL	ANSI/ISA 12.12.1	ATEX / IEC Ex	Width [mm]	Height [mm]	Length [mm]	Ambient operating temperature [°C]	Item Number	Page
24	24	12.5			■				50.0	92.0	130.0	-25 ... +70	**787-783**	**35**
24	24	20.0		■	■				40.0	163.0	181.0	-10 ... +60	**787-885**	**34**
24	24	40.0			■				83.0	150.0	130.0	-25 ... +70	**787-785**	**35**
48	48	20.0							40.0	163.0	181.0	-10 ... +40	**787-886**	**35**

Electronic Circuit Breakers

Input/Output				Approvals						Dimensions and Environmental Conditions					
Input/Output nominal voltage [VAC]	Output channels	Output nominal current [ADC]	Active Current Limitation	EN 60335	UR 2367	cULus 508	GL	ANSI/ISA 12.12.1	ATEX / IEC Ex	Width [mm]	Height [mm]	Length [mm]	Ambient operating temperature [°C]	Item Number	Page
24	2	0.5-6.0	■		■	■	■			45.0	115.5	90.0	-25 ... +70	**787-1662/0006-1000**	**39**
24	2	1.0-6.0			■	■	■			45.0	115.5	90.0	-25 ... +70	**787-1662/0106-0000**	**39**
24	2	2.0-10.0			■	■	■			45.0	115.5	90.0	-25 ... +70	**787-1662**	**39**
24	4	0.5-6.0	■		■	■	■			45.0	115.5	90.0	-25 ... +70	**787-1664/0006-1000**	**40**
24	4	1.0-6.0				■				40.0	163.0	171.0	-10 ... +60	**787-860**	**38**
24	4	1.0-6.0			■	■	■			45.0	115.5	90.0	-25 ... +70	**787-1664/0106-0000**	**40**
24	4	1.0-8.0	■			■				40.0	163.0	171.0	-10 ... +60	**787-861**	**38**
24	4	1.0-10.0				■				40.0	163.0	171.0	-10 ... +60	**787-862**	**38**
24	4	2.0-10.0			■	■	■			45.0	115.5	90.0	-25 ... +70	**787-1664**	**40**
24	8	0.5-6.0	■		■	■	■			42.0	142.5	127.0	-25 ... +70	**787-1668/0006-1000**	**41**
24	8	1.0-6.0			■	■	■			42.0	142.5	127.0	-25 ... +70	**787-1668/0106-0000**	**41**
24	8	2.0-10.0			■	■	■			42.0	142.5	127.0	-25 ... +70	**787-1668**	**41**

EPSITRON® PRO POWER

WAGO's *EPSITRON®* PRO Power Supply Unit powers the automation components in the control cabinet of a blow-molding machine.

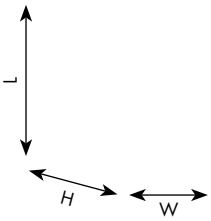
Professional and Efficient Power Supplies with Extra Power

Applications with high-output requirements call for PRO Power Supplies that provide output voltages of 12, 24 or 48 VDC and nominal output currents ranging from 3 A to 40 A.

- TopBoost provides up to 60 A of additional output for 50 ms
- PowerBoost offers up to 200 % of output power for four seconds
- Features DC OK contact and stand-by input
- LineMonitor (select models) provides configuration and monitoring of signal inputs and outputs

EPSITRON® PRO POWER

Technical Data



Item Number	**787-819**	**787-821**	**787-831**	**787-818**
Nominal input voltage	1/2 x 100–240 VAC	1/2 x 100–240 VAC	1/2 x 110–240 VAC	1/2 x 100–240 VAC
Input voltage range (use of DC requires external protection)	85–264 VAC; 120–350 VDC	85–264 VAC; 120–350 VDC	85–264 VAC; 120–350 VDC	85–264 VAC; 120–350 VDC
Nominal output voltage, SELV	12 VDC	12 VDC	12 VDC	24 VDC
Output voltage range	11–18 VDC, adjustable	11–18 VDC, adjustable	11–18 VDC, adjustable	22–29.5 VDC, adjustable
Output current	6 A at 12 VDC	10 A at 12 VDC	15 A at 12 VDC	3 A at 24 VDC
PowerBoost	12 ADC (for 4 s) 9 ADC (for 8 s)	20 ADC (for 4 s) 15 ADC (for 8 s)	30 ADC (for 4 s) 22.5 ADC (for 8 s)	6 ADC (for 4 s) 4.5 ADC (for 8 s)
TopBoost	21 ADC (for 25 ms)	60 ADC (for 25 ms); 40 ADC at V_{IN} < 110 VAC (for 25 ms)	55 ADC (for 25 ms)	14 ADC (for 25 ms)
Parallel-/Series-connections possible	yes	yes	yes	yes
Efficiency	83 % typ.	87.8 % typ.	87 % typ.	87.8 % typ.
Operation status indicator	Green LED (V_o), red LED (error)	Green LED (V_o), red LED (error)	Green LED (V_o), red LED (error)	Green LED (V_o), red LED (error)
LED indication	Green LED (V_o > 0.85 x 12 V) Red LED (V_o < 0.85 x 12 V) Relay contact DC OK (changeover contact)	Green LED (V_o > 0.85 x 12 V) Red LED (V_o < 0.85 x 12 V) Relay contact DC OK (changeover contact)	Green LED (V_o > 0.85 x 12 V) Red LED (V_o < 0.85 x 12 V) Relay contact DC OK (changeover contact)	Green LED (V_o > 0.85 x 24 V) Red LED (V_o < 0.85 x 24 V) Relay contact DC OK (changeover contact)
Stand-by input	Switches output off (stand-by operation)	Switches output off (stand-by operation)	Switches output off (stand-by operation)	Switches output off (stand-by operation)
Ambient operating temperature	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested
Dimensions (mm) W x H x L Height from upper-edge of DIN-rail L = 127 mm, without pluggable female connectors	40 x 163 x 163	57 x 163 x 163	57 x 179 x 163	40 x 163 x 163

Slim Design and Versatile Mounting Options

- Save up to 50 % more cabinet space
- Units can be mounted on DIN-rail horizontally or vertically
- Wall mount adapter for screw mounting (option)

Clear and Easy to Connect

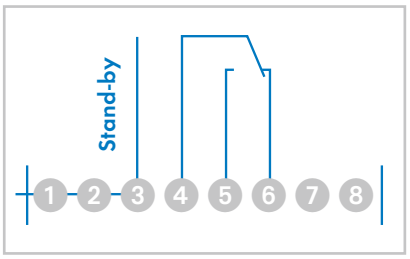
- CAGE CLAMP® connection technology – vibration-proof, fast, maintenance-free
- For solid, fine-stranded or ferruled conductors
- Colored and marked pluggable female connectors can be pre-assembled

787-822	787-832	787-834	787-833	787-835
1/2 x 100–240 VAC	1/2 x 100–240 VAC	1/2 x 110–240 VAC	1/2 x 110–240 VAC	1/2 x 110–240 VAC
85–264 VAC; 120–350 VDC	85–264 VAC; 120–350 VDC	85–264 VAC; 120–350 VDC	85–264 VAC; 120–350 VDC	85–264 VAC; 120–350 VDC
24 VDC	24 VDC	24 VDC	48 VDC	48 VDC
22–29.5 VDC, adjustable	22–29.5 VDC, adjustable	22–29.5 VDC, adjustable	33–52 VDC, adjustable	33–52 VDC, adjustable
5 A at 24 VDC	10 A at 24 VDC	20 A at 24 VDC	5 A at 48 VDC	10 A at 48 VDC
10 ADC (for 4 s) 7.5 ADC (for 8 s)	20 ADC (for 4 s) 15 ADC (for 8 s)	30 ADC (for 4 s) 25 ADC (for 8 s)	10 ADC (for 4 s) 7.5 ADC (for 8 s)	17.5 ADC (for 4 s) 15 ADC (for 8 s)
21 ADC (for 25 ms)	60 ADC (for 25 ms)	80 ADC (for 25 ms)	30 ADC (for 25 ms)	60 ADC (for 25 ms)
yes	yes	yes	yes	yes
87.8 % typ.	90 % typ.	91 % typ.	91 % typ.	91 % typ.
Green LED (V_o), red LED (error)	Green LED (V_o), red LED (error)	Green LED (V_o), red LED (error)	Green LED (V_o), red LED (error)	Green LED (V_o), red LED (error)
Green LED (V_o > 0.85 x 24 V) Red LED (V_o < 0.85 x 24 V) Relay contact DC OK (changeover contact)	Green LED (V_o > 0.85 x 24 V) Red LED (V_o < 0.85 x 24 V) Relay contact DC OK (changeover contact)	Green LED (V_o > 0.85 x 24 V) Red LED (V_o < 0.85 x 24 V) Relay contact DC OK (changeover contact)	Green LED (V_o > 0.85 x 48 V) Red LED (V_o < 0.85 x 48 V) Relay contact DC OK (changeover contact)	Green LED (V_o > 0.85 x 48 V) Red LED (V_o < 0.85 x 48 V) Relay contact DC OK (changeover contact)
Switches output off (stand-by operation)	Switches output off (stand-by operation)	Switches output off (stand-by operation)	Switches output off (stand-by operation)	Switches output off (stand-by operation)
-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested
57 x 163 x 163	57 x 179 x 163	97 x 187 x 171	57 x 163 x 163	97 x 187 x 171

Intuitive Communication

- LEDs provide clear status indication
- Green (DC OK), yellow* (warning), red (fault, overload)

*for 787-85x only



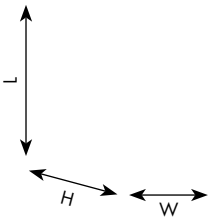
Potential-Free Contact/Stand-By Input

- Output voltage monitoring, message via potential-free changeover contact*
- Stand-by input* allows wear-free output deactivation via 10–28.8 VDC signal
- Energy-saving, stand-by mode (max. 0.8 W power dissipation) is ideal for a temporarily decentralized power supply

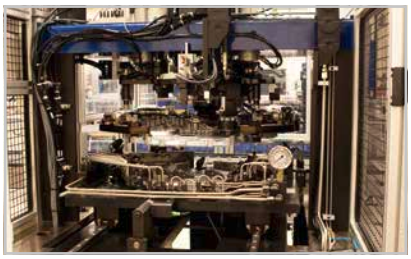
*not for 787-85x

EPSITRON® PRO POWER

Technical Data



Item Number	**787-840**	**787-842**	**787-844**
Nominal input voltage	2/3 x 400–500 VAC	2/3 x 400–500 VAC	2/3 x 400–500 VAC
Input voltage range (use of DC requires external protection)	340–550 VAC; 480–780 VDC	340–550 VAC; 480–780 VDC	340–550 VAC; 480–780 VDC
Nominal output voltage, SELV	24 VDC	24 VDC	24 VDC
Output voltage range	22.8–28.8 VDC, adjustable	22.8–28.8 VDC, adjustable	22.8– 28.8 VDC, adjustable
Output current	10 A at 24 VDC	20 A at 24 VDC	40 A at 24 VDC
PowerBoost	20 ADC (for 4 s) 15 ADC (for 16 s)	40 ADC (for 4 s) 30 ADC (for 16 s)	60 ADC (for 4 s) 50 ADC (for 16 s)
TopBoost	70 ADC (for 50 ms)	80 ADC (for 50 ms)	100 ADC (for 50 ms)
Parallel-/Series-connections possible	yes	yes	yes
Efficiency	91.7 % typ.	92.9 % typ.	93.6 % typ.
Operation status indicator	Green LED (V_o), red LED (error)	Green LED (V_o), red LED (error)	Green LED (V_o), red LED (error)
LED indication	Green LED (V_o > 20.4 V) Red LED (V_o < 20.4 V) Relay contact DC OK (changeover contact)	Green LED (V_o > 20.4 V) Red LED (V_o < 20.4 V) Relay contact DC OK (changeover contact)	Green LED (V_o > 20.4 V) Red LED (V_o < 20.4 V) Relay contact DC OK (changeover contact)
LineMonitor, parameter setting and monitoring, active signal outputs, serial interface	–	–	–
Stand-by input	Switches output off (stand-by operation)	Switches output off (stand-by operation)	Switches output off (stand-by operation)
Ambient operating temperature	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +55 °C Device starts at -40 °C, type-tested
Dimensions (mm) W x H x L Height from upper-edge of DIN-rail L = 127 mm, without pluggable female connectors	57 x 179 x 163	77 x 179 x 171	128 x 205 x 171



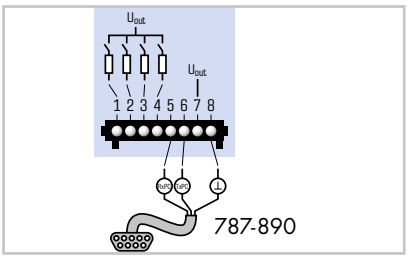
TopBoost

- Multiplies the nominal current for up to 50 ms
- Fast and reliable triggering of the secondary-side fusing via circuit breakers or fuses in the event of a short circuit or overload
- Fulfills EN 60204-1 grounding requirements in control circuits

PowerBoost

- Provides 200 % of output power for four seconds
- Provides 150 % of output power for up to 16 seconds
- Advantageous during start-up or switching of capacitive loads (e.g., valve clusters, motors)
- Power reserve eliminates expensive oversizing

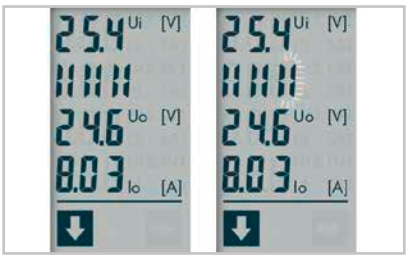
787-845	787-847	787-850	787-852	787-854
2/3 x 400–500 VAC	2/3 x 400–500 VAC	2/3 x 400–500 VAC	2/3 x 400–500 VAC	2/3 x 400–500 VAC
340–550 VAC; 480–780 VDC	340–550 VAC; 480–780 VDC	340–550 VAC; 480–780 VDC	340–550 VAC; 480–780 VDC	340–550 VAC; 480–780 VDC
48 VDC	48 VDC	24 VDC	24 VDC	24 VDC
39–53 VDC, adjustable	39–53 VDC, adjustable	22.8–28.8 VDC, adjustable	22.8–28.8 VDC, adjustable	22.8–28.8 VDC, adjustable
10 A at 48 VDC	20 A at 48 VDC	10 A at 24 VDC	20 A at 24 VDC	40 A at 24 VDC
15 ADC (for 4 s) 12.5 ADC (for 16 s)	30 ADC (for 4 s) 25 ADC (for 16 s)	20 ADC (for 4 s) 15 ADC (for 16 s)	40 ADC (for 4 s) 30 ADC (for 16 s)	60 ADC (for 4 s) 50 ADC (for 16 s)
55 ADC (for 50 ms)	80 ADC (for 50 ms)	70 ADC (for 50 ms)	80 ADC (for 50 ms)	100 ADC (for 50 ms)
yes	yes	yes	yes	yes
93 % typ.	94.4 % typ.	91.7 % typ.	92.9 % typ.	93.6 % typ.
Green LED (V_o), red LED (error)	Green LED (V_o), red LED (error)	Green LED (V_o), red LED (error)	Green LED (V_o), red LED (error)	Green LED (V_o), red LED (error)
Green LED (V_o > 36 V) Red LED (V_o < 36 V) Relay contact DC OK (changeover contact)	Green LED (V_o > 36 V) Red LED (V_o < 36 V) Relay contact DC OK (changeover contact)	Green LED (V_o > 20.4 V) Yellow LED (warnings) Red LED (error)	Green LED (V_o > 20.4 V) Yellow LED (warnings) Red LED (error)	Green LED (V_o > 20.4 V) Yellow LED (warnings) Red LED (error)
–	–	yes	yes	yes
Switches output off (stand-by operation)	Switches output off (stand-by operation)	–	–	–
-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +55 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +55 °C Device starts at -40 °C, type-tested
77 x 179 x 171	128 x 205 x 171	57 x 179 x 163	77 x 179 x 171	128 x 205 x 171



Active Signal Contacts

- Four active signal outputs* for watchdog functions
- Each unit features a separate collective message for warning/fault
- Features two individually configurable signal outputs
- Free 759-850 Configuration Software can be downloaded at **www.wago.com**

*only for 787-85x



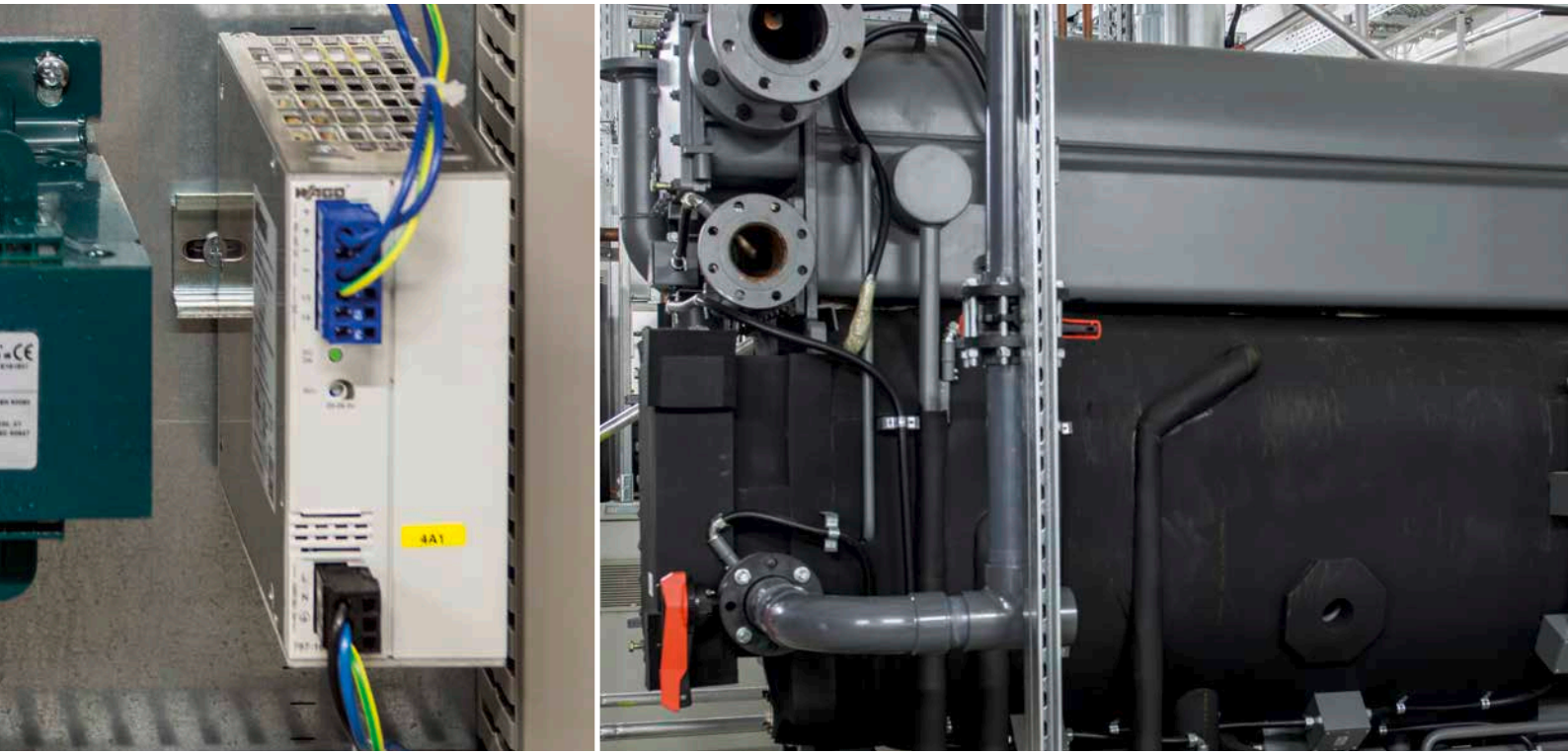
Innovative Communication

- LineMonitor* with display and function keys
- Variable monitoring, e.g., current, voltage, phase position, operating hours and more
- Output voltage and overload behavior can be parameterized
- Integrated fault memory

RS-232 Serial Interface

- Integrated, front-mount interface* communicates with a PC or PLC
- Free 759-850 Parameterization Software and 759-851 Visualization Software can be downloaded at **www.wago.com**
- Free function blocks are available for various PLC systems
- Serial 787-890 Communication Cable is available as an accessory

EPSITRON® CLASSIC POWER



WAGO's *EPSITRON*® CLASSIC Power Supply Unit powers the automation components in the control cabinet of an absorption refrigeration system.

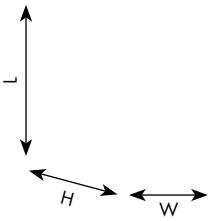
The Robust Power Supply — With Integrated TopBoost (Optional)

For applications requiring voltages of 12, 24 or 48 VDC and nominal output currents ranging from 1 A to 20 A.

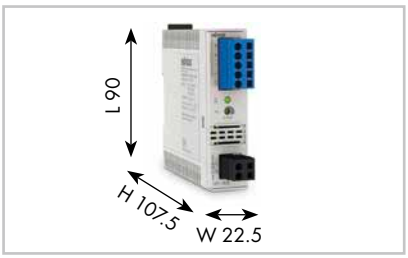
- Slim design
- Equipped with fool-proof, pluggable CAGE CLAMP® connectors
- DC OK signal/contact
- Device marking
- Integrated TopBoost (optional)

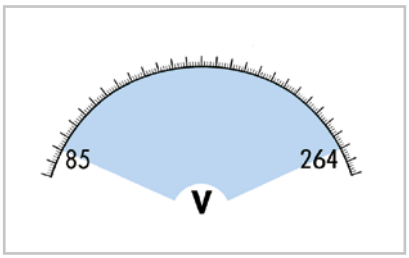
EPSITRON® CLASSIC POWER

Technical Data



Item Number	**787-1602**	**787-1606**	**787-1616**
Nominal input voltage	100–240 VAC	100–240 VAC	100–240 VAC
Input voltage range	85–264 VAC; 120–372 VDC	85–264 VAC; 120–372 VDC	85–264 VAC; 120–372 VDC
Nominal output voltage, SELV	24 VDC	24 VDC	24 VDC
Nominal output voltage range	23–28.5 VDC	23–28.5 VDC	23–28.5 VDC
Output current	1 A	2 A	4 A
Integrated TopBoost	No	No	No
Efficiency	86 %	89 %	89 %
LED indication	Green LED (DC OK); active DC OK signal	Green LED (DC OK); active DC OK signal	Green LED (DC OK); active DC OK signal
Ambient operating temperature	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested
Dimensions (mm) W x H x L Height from upper-edge of DIN-rail	22.5 x 107.5 x 90	45 x 107.5 x 90	52 x 119 x 90





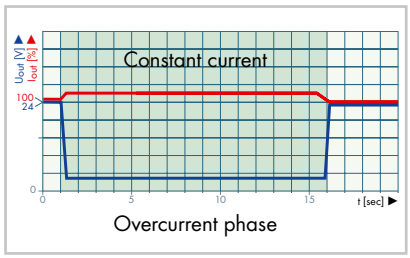
Slim Design

- Enclosure width has been reduced by up to 45 % compared to previous CLASSIC Power Supplies
- Save valuable cabinet space

Universal Supply

- Wide input voltage range: 85–264 VAC
- Can be connected worldwide to all standard single-phase power grids
- High operational reliability during power outages

787-1622	787-1632	787-1634	787-1616/0000-1000
100–240 VAC	100–240 VAC	100–240 VAC	100–240 VAC
85–264 VAC; 120–372 VDC	85–264 VAC; 120–372 VDC	85–264 VAC; 120–372 VDC	85–264 VAC; 120–372 VDC
24 VDC	24 VDC	24 VDC	24 VDC
23–28.5 VDC	23–28.5 VDC	23–28.5 VDC	23–28.5 VDC
5 A	10 A	20 A	3.8 A LPS / NEC Class 2
Yes	Yes	Yes	No
89 %	91 %	92 %	87 %
Green LED (DC OK); DC OK signal	Green LED (DC OK); DC OK signal	Green LED (DC OK); DC OK signal	Green LED (DC OK); DC OK signal
-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested
42 x 137.5 x 127	55 x 172 x 127	95 x 170 x 127	52 x 119 x 90



High Load-Carrying Capacity

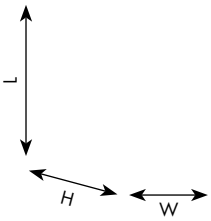
- Constant current characteristic under overload conditions
- 110 % output current with lowered output voltage, even in the event of a short circuit
- Even high capacitive loads can be reliably started

Clear and Easy to Connect

- CAGE CLAMP® connection technology – vibration-proof, fast, maintenance-free
- For solid, fine-stranded or ferruled conductors
- Colored and marked female connectors can be preassembled – 100 % protected against mismating

EPSITRON® CLASSIC POWER

Technical Data



Item Number	**787-1601**	**787-1611**	**787-1621**
Nominal input voltage	100–240 VAC	100–240 VAC	100–240 VAC
Input voltage range	85–264 VAC; 120–372 VDC	85–264 VAC; 120–372 VDC	85–264 VAC; 120–372 VDC
Nominal output voltage, SELV	12 VDC	12 VDC	12 VDC
Nominal output voltage range	11.5–14.5 VDC	11.5–14.5 VDC	11.5–14.5 VDC
Output current	2 A	4 A	7 A
Integrated TopBoost	No	No	No
Efficiency	82 %	86 %	86 %
LED indication	Green LED (DC OK); active DC OK signal	Green LED (DC OK); active DC OK signal	Green LED (DC OK); active DC OK signal
Ambient operating temperature	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested
Dimensions (mm) W x H x L Height from upper-edge of DIN-rail	22.5 x 107.5 x 90	45 x 107.5 x 90	52 x 119 x 90

Communicative

- Green LED indicates output voltage availability
- Remote monitoring via DC OK signal or isolated DC OK contact
- Easy commissioning and maintenance
- Provides fast information on system or machine status

Adjustable

- Front-panel adjustable output voltage
- Up to 20 % greater output voltage
- Easily compensate for voltage drops over long lines

787-1631	787-1623	787-1633	787-1635
100–240 VAC	100–240 VAC	100–240 VAC	100–240 VAC
85–264 VAC; 120–372 VDC	85–264 VAC; 120–372 VDC	85–264 VAC; 120–372 VDC	85–264 VAC; 120–372 VDC
12 VDC	48 VDC	48 VDC	48 VDC
11.5–15 VDC	40–56 VDC	40–56 VDC	40–56 VDC
15 A	2 A	5 A	10 A
Yes	No	Yes	Yes
90 %	86 %	92 %	93 %
Green LED (DC OK); DC OK signal	Green LED (DC OK); active DC OK signal	Green LED (DC OK); DC OK signal	Green LED (DC OK); DC OK signal
-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested	-25 °C ... +70 °C Device starts at -40 °C, type-tested
55 x 172 x 127	52 x 119 x 90	55 x 172 x 127	95 x 170 x 127

Device Marking

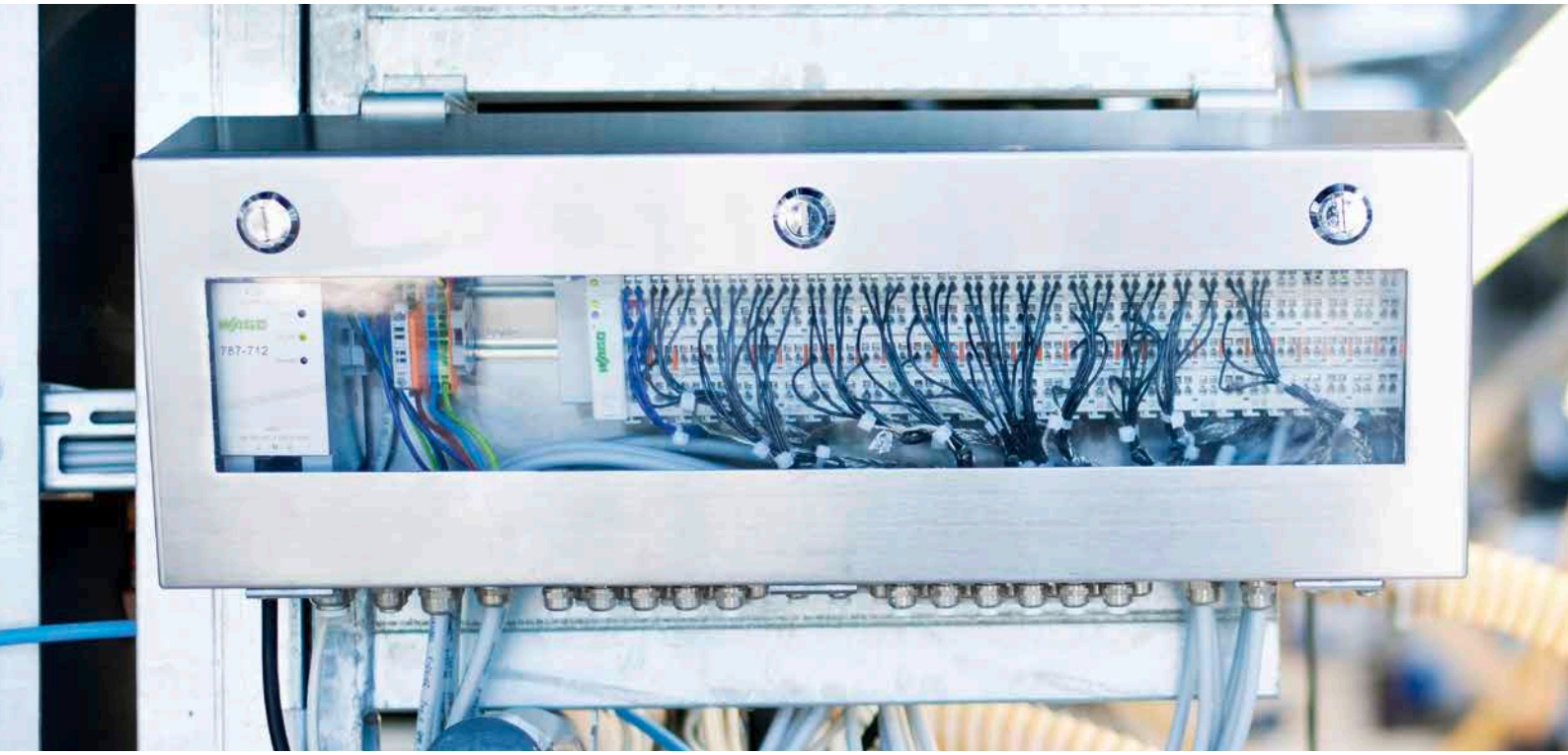
- Marking field for fast and securely attached device identification
- Supports WAGO WMB Multi Marking System, 5 mm pin spacing
- Supports 11 mm wide marking strips

Integrated TopBoost*

- Multiplies the nominal current
- Fast and reliable triggering of the secondary-side fusing via circuit breakers or fuses in the event of a short circuit or overload

*for 787-1622, -1631, -1632, -1633, -1634, -1635

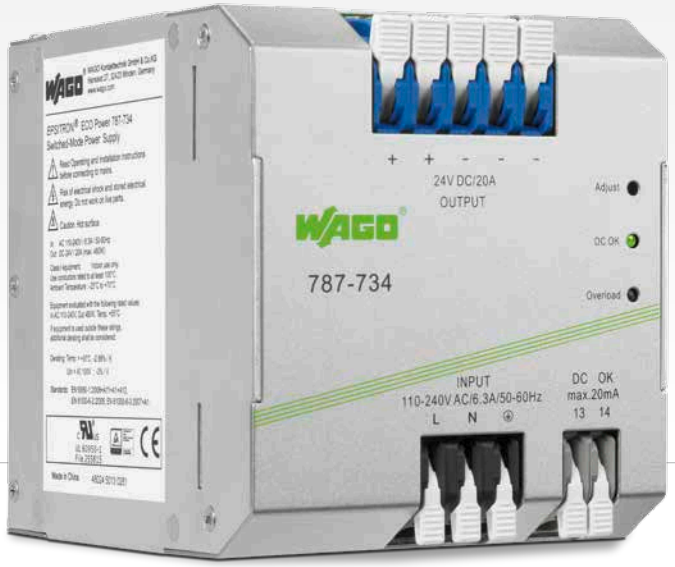
EPSITRON® ECO POWER



WAGO's *EPSITRON*® ECO Power Supply powers a machine data collection system for production.

Economical Power Supply for Standard Applications

Single- and three-phase ECO Power Supplies for applications requiring 24 VDC and nominal output currents of 2.5 A to 40 A.

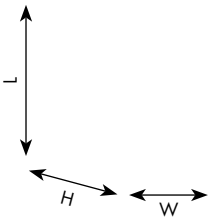


ATEX
IEC Ex

- Economically priced and robustly packaged in a metal housing
- Optional DC OK contact
- Available, tool-free CAGE CLAMP® connection technology
- Optional with ATEX/IEC Ex approval, Zone 2 and Class I Div. 2

EPSITRON® ECO POWER

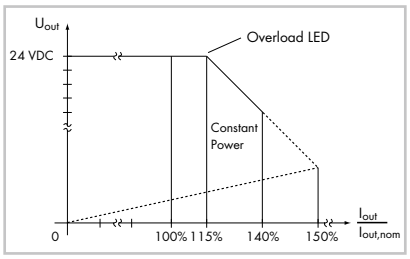
Technical Data



Item Number	**787-712**	**787-722**	**787-732**	**787-734**
Nominal input voltage	110–240 VAC	110–240 VAC	110–240 VAC	110–240 VAC
Input voltage range	85–264 VAC; 130–373 VDC	85–264 VAC; 130–373 VDC	85–264 VAC; 130–373 VDC	85–264 VAC; 130–373 VDC
Nominal output voltage, SELV	24 VDC	24 VDC	24 VDC	24 VDC
Output voltage range	22–28 VDC	22–28 VDC	22–28 VDC	22–28 VDC
Output current	2.5 A	5 A	10 A	20 A
Nominal output	60 W	120 W	240 W	480 W
Efficiency (230 VAC, nominal load)	86 % typ.	86 % typ.	86 % typ.	90 % typ.
LED indication	Green LED (DC OK) Red LED (overload)	Green LED (DC OK) Red LED (overload)	Green LED (DC OK) Red LED (overload)	Green LED (DC OK), red LED (overload), signal contact (DC OK, make contact)
Ambient operating temperature	-10 °C ... +70 °C	-10 °C ... +60 °C	-10 °C ... +70 °C	-25 °C ... +70 °C
Dimensions (mm) W x H x L Height from upper-edge of DIN-rail	50 x 92 x 130	75 x 92 x 130	110 x 92 x 130	115 x 144 x 136

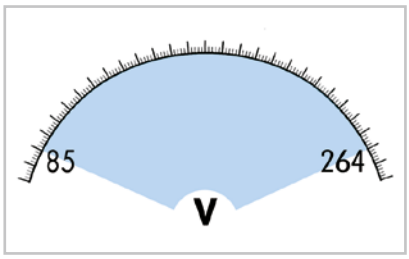
Clear Indication

- Green LED indicates output voltage availability
- Red LED indicates an overcurrent or short circuit
- Easy commissioning and maintenance



High Load-Carrying Capacity

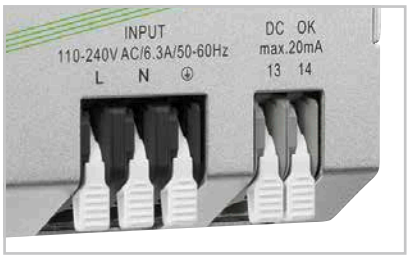
- Overload warning from 1.15 times the nominal output current
- Overload of up to 1.4 times the nominal current with lowered output voltage (constant power)
- Output shutdown in case of a low-resistance short circuit; also includes automatic restart



Universal Supply

- Wide input voltage range: 85–264 VAC (single-phase) or 325–575 VAC (two- and three-phase)
- Efficiently operates on different power grids – no need for additional conversion or adjustment
- High tolerance of voltage fluctuations within a power grid
- High level of operational reliability

787-736	787-738	787-740	787-742
110–240 VAC	3x (2x) 400–500 VAC	3x (2x) 400–500 VAC	3x (2x) 400–500 VAC
85–264 VAC; 130–373 VDC	325–575 VAC; 460–800 VDC	325–575 VAC; 460–800 VDC	325–575 VAC; 460–800 VDC
24 VDC	24 VDC	24 VDC	24 VDC
22–28 VDC	22–28 VDC	22–28 VDC	22–28 VDC
40 A	6.25 A	10 A	20 A
960 W	150 W	240 W	500 W
90 % typ.	87 % typ.	89 % typ.	90 % typ.
Green LED (DC OK), red LED (overload), signal contact (DC OK, make contact)	Green LED (DC OK), red LED (overload), signal contact (DC OK, make contact)	Green LED (DC OK), red LED (overload), signal contact (DC OK, make contact)	Green LED (DC OK), red LED (overload), signal contact (DC OK, make contact)
-25 °C ... +70 °C	-25 °C ... +70 °C	-25 °C ... +70 °C	-25 °C ... +70 °C
170 x 154 x 136	50 x 92 x 136	65 x 130 x 136	110 x 151 x 136



Fast Wiring

- PCB terminal strips with integrated operating levers (2706 or 2716 Series)*
- Convenient, tool-free wiring
- Integrated test slot simplifies testing by eliminating conductor removal

Status Monitoring

- Isolated make contact*
- Indicates whether an output voltage or an overload is present
- Ideal for remote monitoring

Easy Grounding

- Integrated third negative terminal strip on the output side*
- Direct connection to the reference ground, which is frequently used in mechanical engineering applications

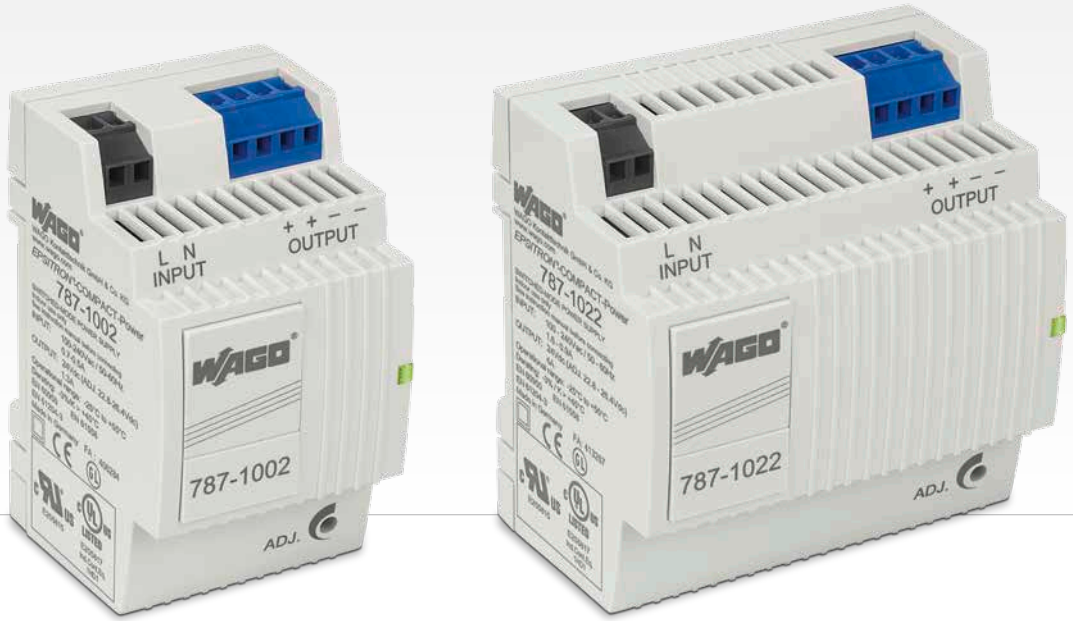
*for 787-734 and 787-736 and three-phase power supplies

EPSITRON® COMPACT POWER

WAGO's *EPSITRON®* COMPACT Power Supply in a low-profile IP65 system housing powers a measurement and recording unit.

Compact, High-Performance Power Supply

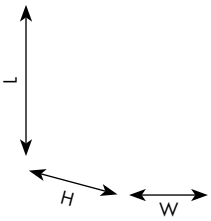
Single-phase COMPACT Power Supplies in DIN-rail-mount housings that provide output voltages of 5, 12, 18 or 24 VDC and nominal output currents up to 6.5 A.



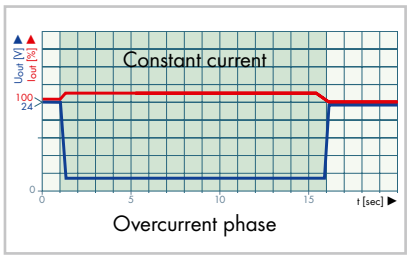
- Compact, low-profile design
- Ideal for decentralized applications
- Overhead mounting permitted
- GL marine approval

EPSITRON® COMPACT POWER

Technical Data



Item Number	787-1001	787-1011	787-1021	787-1017
Nominal input voltage	100–240 VAC	100–240 VAC	100–240 VAC	100–240 VAC
Input voltage range	85–264 VAC; 120–373 VDC	85–264 VAC; 120–373 VDC	85–264 VAC; 120–373 VDC	85–264 VAC; 120–373 VDC
Nominal output voltage, SELV	12 VDC	12 VDC	12 VDC	18 VDC
Output voltage range	10.8–18 VDC, adjustable	10.5–15.5 VDC, adjustable	10.5–15.5 VDC, adjustable	15–28 VDC, adjustable
Output current	2 A at 12 VDC / 0.75 A at 18 VDC	4 A at 12 VDC	6.5 A at 12 VDC	2.5 A at 18 VDC / 2.3 A at 24 VDC; max. 55 W
Output current for overhead mounting	max. 1.4 A at 12 VDC	max. 2.4 A	max. 4 A	max. 1.6 A
Default setting	12 VDC	12 VDC	12 VDC	18 VDC
Overload behavior	Constant current, 1.1 x Io typ.	Constant current, 1.1 x Io typ.	Constant current, 1.1 x Io typ.	Constant current, 1.1 x Io typ.
Operation status indicator	Green LED (V_o)	Green LED (V_o)	Green LED (V_o)	Green LED (V_o)
Efficiency	80 % typ.	85 % typ.	87 % typ.	83 % typ. at 18 VDC / 2.5 A 85 % typ. at 24 VDC / 2.3 A
Ambient operating temperature**	-25 °C ... +60 °C Device starts at -40 °C, type-tested	-25 °C ... +60 °C Device starts at -40 °C, type-tested	-25 °C ... +60 °C Device starts at -40 °C, type-tested	-25 °C ... +60 °C Device starts at -40 °C, type-tested
Dimensions (mm) W x H x L	54 x 55 x 89	72 x 55 x 89	90 x 55 x 89	90 x 55 x 89



Overcurrent phase

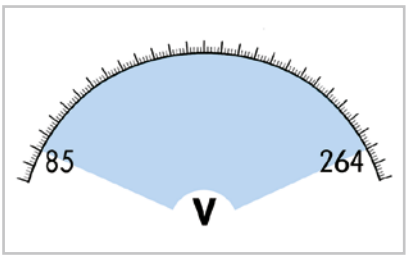
Clear Indication

- Status indication via green LED
- Current operating status can be displayed quickly

Minimum Size, Maximum Performance

- Constant current characteristic under overload conditions
- 110 % output current with lowered output voltage, even in the event of a short circuit
- High capacitive loads can be reliably started (e.g., distributed control units or HMI devices)

787-1002	787-1012	787-1022	787-1014	787-1020
100–240 VAC	100–240 VAC	100–240 VAC	110 VDC	100–240 VAC
85–264 VAC; 120–373 VDC	85–264 VAC; 120–373 VDC	85–264 VAC; 120–373 VDC	77–140 VDC	85–264 VAC; 120–373 VDC
24 VDC	24 VDC	24 VDC	24 VDC	5 VDC
22.8–26.4 VDC, adjustable	22.8–26.4 VDC, adjustable	22.8–26.4 VDC, adjustable		4.5–8.5 VDC, adjustable
1.3 A at 24 VDC	2.5 A at 24 VDC	4 A at 24 VDC	2.0 A at 24 VDC	5.5 A at 5 VDC
max. 0.9 A	max. 1.6 A	max. 2.4 A	max. 1.6 A	max. 3.5 A
24 VDC	24 VDC	24 VDC	24 VDC	5 VDC
Constant current, 1.1 x Io typ.	Constant current, 1.1 x Io typ.	Constant current, 1.1 x Io typ.	Constant current	Constant current
Green LED (V_o)	Green LED (V_o)	Green LED (V_o)	Green LED (V_o)	Green LED (V_o)
82 % typ.	88 % typ.	88 % typ.	85 % typ.	75 % typ.
-25 °C ... +60 °C Device starts at -40 °C, type-tested	-25 °C ... +60 °C Device starts at -40 °C, type-tested	-25 °C ... +60 °C Device starts at -40 °C, type-tested	-40 °C ... +70 °C	-25 °C ... +60 °C Device starts at -40 °C, type-tested
54 x 55 x 89	72 x 55 x 89	90 x 55 x 89	72 x 55 x 89	72 x 55 x 89



Universal Supply

- Wide input voltage range: 85–264 VAC (single-phase)
- Efficiently operates on different power grids – no need for additional conversion or adjustment
- High tolerance of voltage fluctuations within a power grid, which ensures a high level of operational reliability

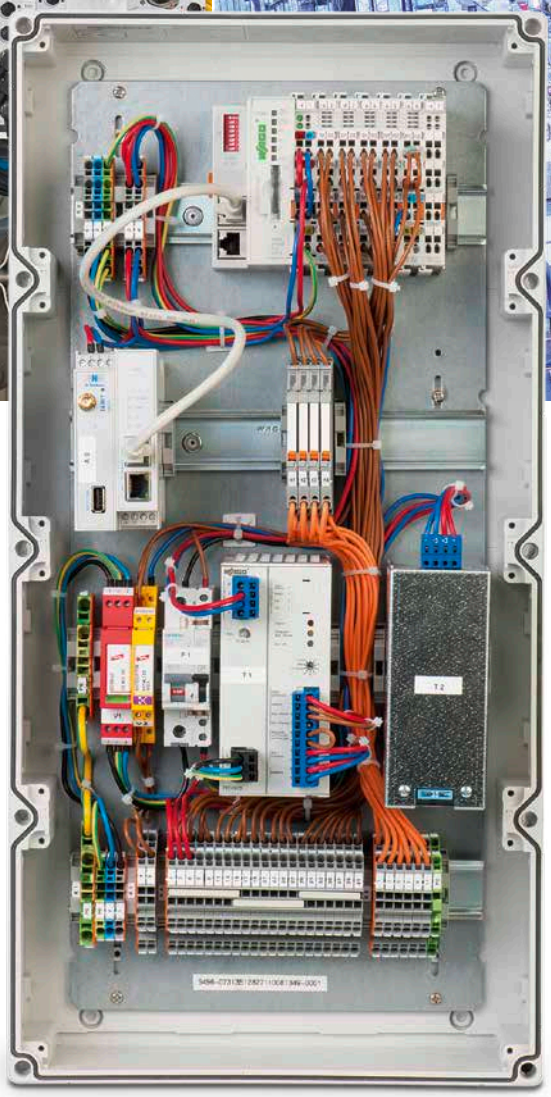
Overhead Mounting

- Any type of mounting position is possible with reduced output power
- Units can even be mounted overhead (e.g., in system distribution boxes under the ceiling)

EPSITRON® UNINTERRUPTIBLE POWER SU

Reliable Compensation — Even for Longer Power Outages

Consisting of a UPS charger and controller, as well as one or more connected batteries, WAGO's Uninterruptible Power Supply reliably powers an application for several hours.



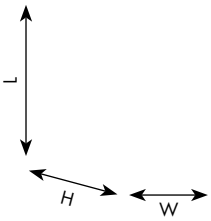
Compact and cost-effective, WAGO's 787-1675 *EPISTRON®* CLASSIC Power Supply with an integrated UPS charger and controller powers and buffers applications with low energy demands.

PPLY (UPS)

- Slim UPS charger and controller with convenient visualization and configuration
- Optional power supply with integrated UPS charger and controller (787-1675)
- Battery control technology for predictive maintenance that extends battery life

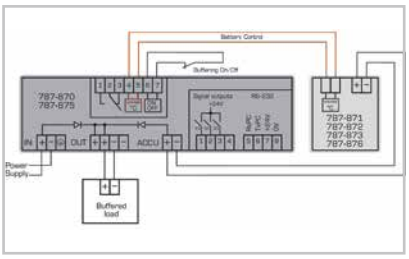
EPSITRON® UNINTERRUPTIBLE POWER SU

Technical Data



Item Number	**787-870**	**787-875**	**787-876**
Description	UPS Charger and Controller	UPS Charger and Controller	Lead-Acid AGM Battery Module
Nominal input voltage	24 VDC	24 VDC	24 VDC
Input current I_i	0.1 A (no-load running); 0.8 A (charging); 10.8 A (max.)	0.1 A (no-load running); 1.5 A (charging); 21.5 A (max.)	max. 0.3 A
Switch-on threshold (adjustable)	20–25.5 VDC	20–25.5 VDC	–
Output voltage range	V_i – 1 VDC (below switch-on threshold); Battery voltage – 1 VDC (buffer mode)	V_i – 1 VDC (below switch-on threshold); Battery voltage – 1 VDC (buffer mode)	24 VDC
Output current I_o	10 A	20 A	max. 7.5 A
Buffer time/capacity	10–600 s, IPC mode or constant (adjustable)	10–600 s, IPC mode or constant (adjustable)	1.2 Ah
End-of-charge voltage	26–29.5 VDC or temperature-controlled (adjustable)	26–29.5 VDC or temperature-controlled (adjustable)	27 VDC (at 25 °C)
LED indication	LED, LCD, 3 x signal output 24 VDC, 25 mA and 1 x isolated relay contact	LED, LCD, 3 x signal output 24 VDC, 25 mA and 1 x isolated relay contact	NTC K164 temperature sensor (4.7 kOhm), battery control
Interface	RS-232 (optional accessory: 787-890 Communication Cable)	RS-232 (optional accessory: 787-890 Communication Cable)	–
Remote input	Switches buffer mode off	Switches buffer mode off	–
Ambient operating temperature	-10 °C ... +60 °C	-10 °C ... +60 °C	-15 °C ... +40 °C
Dimensions (mm) W x H x L Height from upper-edge of DIN-rail	40 x 163 x 163	57 x 163 x 171	55 x 126.5 x 153

L = 127 mm, without pluggable female connectors (787-870 and 787-875 only)



EPSITRON® Battery Control Technology

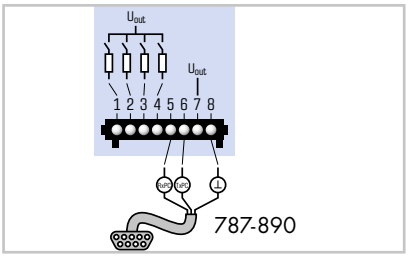
- Allows continuous data exchange between intelligent battery modules (787-87x) and UPS charger/controller
- Automatic detection of a connected battery module (787-87x)
- Maximum battery life via temperature-controlled battery management
- Reliable, early warning of decreasing battery life
- Determines battery life expectancy based on the ambient operating temperature
- Displays current charging status on site (787-870 and 787-875)

Diagnostics, Monitoring, Configuration

- LEDs display operating status, warnings and errors
- Signal outputs can be processed as a digital signal in a PLC
- Potential-free signal contacts
- Parameter setting via on-unit buttons or rotary switch
- Visualization or configuration via RS-232 serial interface

PPLY (UPS)

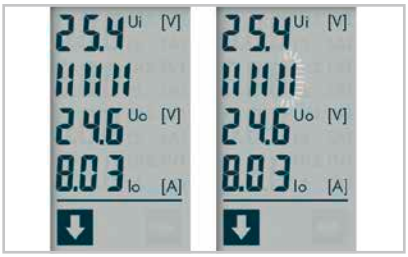
787-871	787-872	787-873	787-1675
Lead-Acid AGM Battery Module	Lead-Acid AGM Battery Module	Lead-Acid AGM Battery Module	Power Supply, 1-Phase, with Integrated UPS Charger and Controller
24 VDC	24 VDC	24 VDC	100–240 VAC
max. 0.8 A	max. 1.8 A	max. 3 A	1.1 AAC at 230 VAC and 5 ADC
–	–	–	22 VDC (pre-configured), 20–25.5 VDC (configurable via software)
24 VDC	24 VDC	24 VDC	23.0–28.5 VDC (mains operation) 18.5–27.5 VDC (battery operation)
20 A	max. 40 A	max. 40 A	5 A
3.2 Ah	7 Ah	12 Ah	0.5 s to 20 min, IPC mode or constant (adjustable)
27 VDC (at 25 °C)	27 VDC (at 25 °C)	27 VDC (at 25 °C)	26–29.5 VDC temperature-controlled (fixed or adjustable)
NTC K164 temperature sensor (4.7 kOhm), battery control	NTC K164 temperature sensor (4.7 kOhm), battery control	NTC K164 temperature sensor (4.7 kOhm), battery control	3 x signal output 24 VDC, 25 mA
–	–	–	RS-232 (optional accessory: 787-892 Communication Cable)
–	–	–	Switches buffer mode off
-15 °C ... +40 °C	-15 °C ... +40 °C	-15 °C ... +40 °C	-25 °C ... +70 °C
76.2 x 175.5 x 168	86 x 217.5 x 236	120.5 x 217.5 x 236	60 x 135.5 x 127



RS-232 Serial Interface

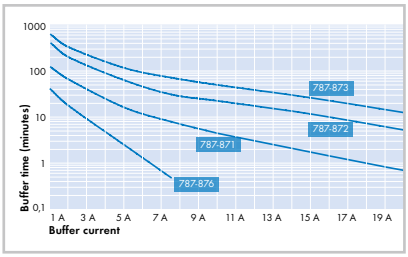
- Free download* of 759-870 Configuration and Visualization Software
- Free download of function blocks for visualization on standard PLC systems
- 787-890 or -892 Serial Communication Cable available as an accessory

*www.wago.com/epsitron



Display with Charge Level Indication

- Indication of actual current and voltage values
- Bar graph displays the charge level of connected batteries
- Integrated fault memory



Buffer Time

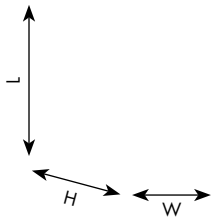
- Based on battery capacity and discharge current
- Four battery modules are available with capacities from 1.2 Ah to 12 Ah
- Parallel connection of up to three battery modules of the same type increases buffer time

EPSITRON® CAPACITIVE BUFFER MODULES

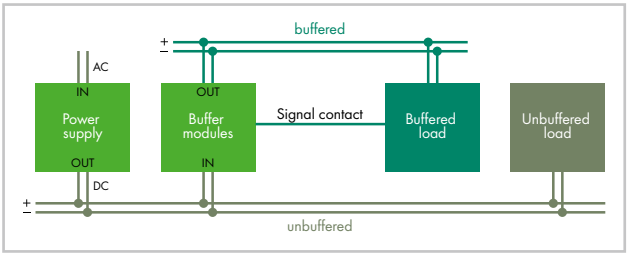
Short-Term Power Reserve for Power Outage and Load Change

Capacitive buffer modules maintain power supply within the control cabinet, even during a temporary voltage drop when starting the motor of an impact crusher.

- **Maintenance-free, high-energy gold caps**
- **Integrated diodes for decoupling buffered loads from unbuffered loads**
- **Parallel-connections possible**
- **Configurable switch-on threshold**



Item Number	787-880	787-881
Description	Capacitive Buffer Module	Capacitive Buffer Module
Nominal input voltage V_i	24 VDC	24 VDC
Input current I_i	60 mA (no-load running); 1 A (charging); 11 A (max.)	60 mA (no-load running); 1 A (charging); 22 A (max.)
Charging time	typ. 5 minutes	typ. 5 minutes
Switch-on threshold (adjustable)	20–24 VDC	20–24 VDC
Output voltage range	V_i – 1 VDC (below switch-on threshold); 20.4–24 V (buffer mode)	V_i – 1 VDC (below switch-on threshold); 20.4–24 V (buffer mode)
Output current I_o	10 A	20 A
Buffer time	0.06–7.2 s (depends on load current and switch-on threshold)	0.17–16.5 s (depends on load current and switch-on threshold)
Parallel-connections possible	yes	yes
LED indication	LED; isolated relay contact	LED; isolated relay contact
Ambient operating temperature	-10 °C ... +50 °C	-10 °C ... +50 °C
Dimensions (mm) W x H x L H from upper-edge of DIN-rail L = 127 mm, without pluggable female connectors	57 x 179 x 163	57 x 179 x 181



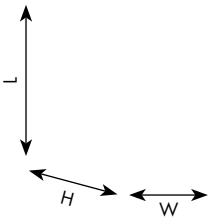
Decoupled Output

- Integrated diode
- Buffered and unbuffered loads can be decoupled
- Multiple buffer modules can be parallel-connected to increase buffer time or load current

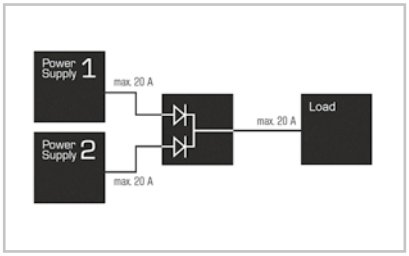
LED Indication

- Three LEDs (green/yellow/red) indicate the current operating status
- The isolated signal contact indicates the charge level

EPSITRON® REDUNDANCY MODULES



Item Number	**787-885**	**787-886**	**787-783**
Description	Redundancy Module	Redundancy Module	–
Nominal input voltage V_i	2 x 24 VDC	2 x 48 VDC	2 x 24 VDC (9–54 VDC)
Input current I_i	2 x 20 A, together max. 1 x 40 A	2 x 20 A, together max. 1 x 40 A	2 x max. 12.5 A
Nominal output voltage $V_{o\ nom}$	24 VDC	48 VDC	2 x 9–54 VDC
Output current I_o	20 A, max. 40 A	20 A, max. 40 A	max. 12.5 A as redundancy module, max. 25 A in parallel operation
Efficiency	97 % typ.	96 % typ.	96 %
Power loss P_v	1.5 W (no load) / 14 W (nominal load 20 A) / 26 W (nominal load 40 A)	1.7 W (no load) / 20 W (nominal load 20 A) / 40 W (nominal load 40 A)	12.5 W at nominal load
LED indication	LED; isolated relay contact	LED; isolated relay contact	2 x green LED (input); 1 x green LED (output)
Ambient operating temperature	-10 °C ... +60 °C	-10 °C ... +60 °C	-25 °C ... +70 °C
Dimensions (mm) W x H x L	40 x 163 x 181	40 x 163 x 181	50 x 92 x 130



LED Indication

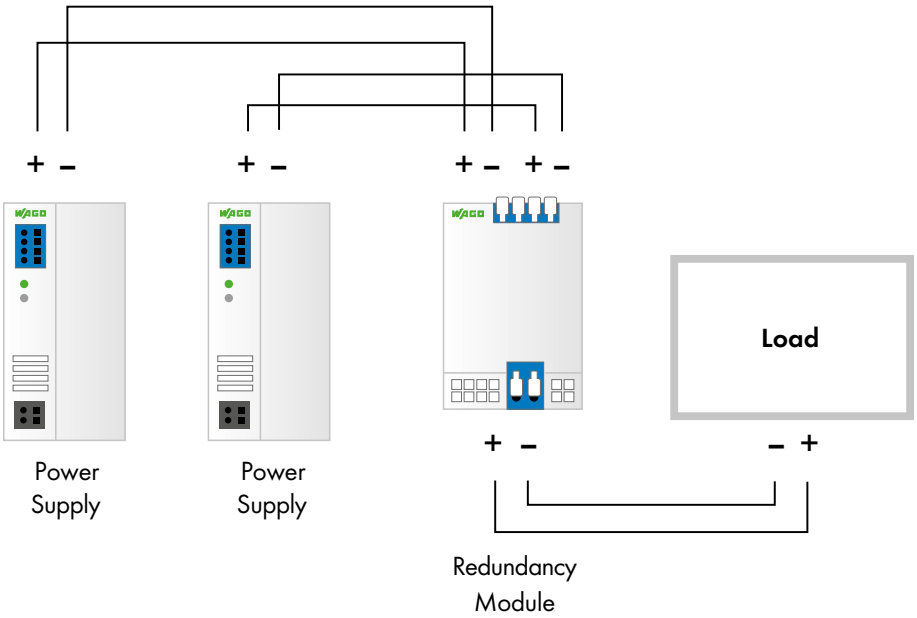
- Three LEDs indicate the presence of an input or output voltage
- Optional isolated signal contact* indicates a power outage at the input

*only for 787-885 and -886

High Overload Capability

- Power diodes in each input path feature high overload capability and are also suitable for power supplies with TopBoost or PowerBoost
- Bridging the input paths permits output currents up to 76 A

787-785
–
2 x 24 VDC (9–54 VDC)
2 x max. 40 ADC
2 x 9–54 VDC
max. 40 A as redundancy module, max. 76 A in parallel operation
97 %
30 W at nominal load
2 x green LED (input); 1 x green LED (output)
-25 °C ... +70 °C
83 x 150 x 130



Reliably Increasing Power Supply Availability

Redundancy modules decouple two parallel-connected power supplies and are ideal for applications where an electrical load must be reliably supplied – even in the event of a power supply failure.

- **Integrated power diodes with overload capability**
- **Solutions for 12/24/48 VDC supply, up to 76 A**
- **Parallel-connections possible, reverse voltage protection**
- **LED indication and optional signal contact**

EPSITRON® ELECTRONIC CIRCUIT BREAKE

WAGO's compact 787-1664 Electronic Circuit Breaker provides reliable and precise overcurrent protection on the output side.

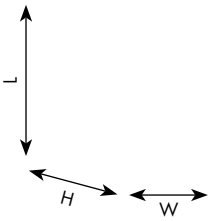
Compact and Precise ECB for Direct Voltage Circuits

2-, 4- and 8-channel ECBs support 24 VDC applications with adjustable currents ranging from 0.5 A to 10 A.

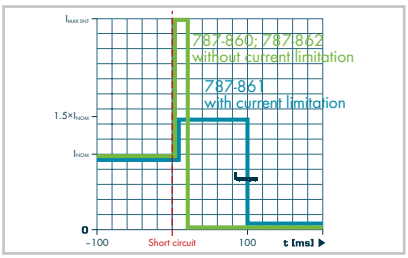
RS (ECBs)

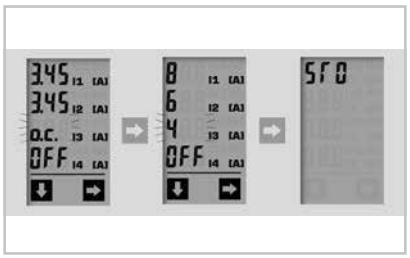
- Two, four or eight channels with a 6-stage adjustable nominal current
- Slim design, communication capability
- High switch-on capacity reduces false tripping
- Optional active current limitation

EPSITRON® ELECTRONIC CIRCUIT BREAKE



Item Number	787-860	787-862	787-861
Description	Electronic Circuit Breaker	Electronic Circuit Breaker	Electronic Circuit Breaker with Active Current Limitation
Nominal input voltage	24 VDC	24 VDC	24 VDC
Nominal output voltage	4 x 24 VDC	4 x 24 VDC	4 x 24 VDC
Nominal current	4 x 1–6 ADC (adjustable for each channel in 1 A steps)	4 x 1–10 ADC (adjustable for each channel in 1 A steps)	4 x 1–8 ADC (adjustable for each channel in 1 A steps)
Trip time	100 s (100 ms to 600 s; adjustable)	100 s (100 ms to 600 s; adjustable)	100 ms (100 ms to 1.5 s; adjustable, depending on nominal current)
Switch-on capacity	max. 20,000 µF per channel	max. 20,000 µF per channel	max. 20,000 µF per channel
Switch-on behavior	Time-delayed channel switching (250 ms each)	Time-delayed channel switching (250 ms each)	Time-delayed channel switching (250 ms each)
LED indication	LED, LCD, 4 x signal output 24 VDC, 25 mA and 1 x isolated relay contact 60 VDC, 3 A	LED, LCD, 4 x signal output 24 VDC, 25 mA and 1 x isolated relay contact 60 VDC, 3 A	LED, LC display, 4 x signal output 24 VDC, 25 mA
Remote control input	yes	yes	no
Short-circuit current limitation	-/-	-/-	1.5 x nominal current typ.
Ambient operating temperature	-10 °C ... +60 °C	-10 °C ... +60 °C	-10 °C ... +60 °C
Dimensions (mm) W x H x L	40 x 163 x 171	40 x 163 x 171	40 x 163 x 171





Trip Characteristics

- Reliable and precise disconnection in case of overcurrent and short circuit
- Nominal currents can be set separately for each channel in 1 A increments
- Tripping time can be configured in defined increments
- Optional, active short-circuit current limitation* to 1.5 times the nominal current prevents a voltage drop in other current paths

Switching and Acknowledging

- Activate tripped channels and switch channels with the click of a button
- Activate tripped channels via RS-232 interface
- Optional activation of all tripped channels via an impulse at the remote control input**

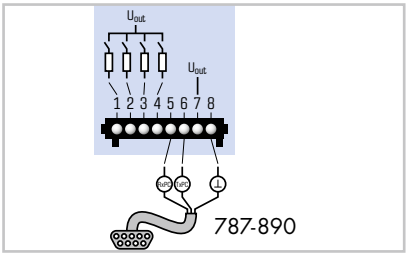
LED Indication

- Three LEDs (green/yellow/red) for easily monitoring various operating conditions
- Display shows actual current and voltage levels, as well as status messages in several views
- Integrated fault memory for quick diagnostics
- Four active signal outputs
- RS-232 serial interface permits fault diagnostics on a PC or PLC
- Potential-free contact**

*only for 787-861 **only for 787-860 and -862

RS (ECBs)

787-1662	787-1662/0106-0000	787-1662/0006-1000
Electronic Circuit Breaker	Electronic Circuit Breaker	Electronic Circuit Breaker with Active Current Limitation
24 VDC	24 VDC	24 VDC
2 x 24 VDC	2 x 24 VDC	2 x 24 VDC
2 x 2, 3, 4, 6, 8, 10 ADC (adjustable, channel-by-channel via rotary switch)	2 x 1, 2, 3, 4, 5, 6 ADC (adjustable, channel-by-channel via rotary switch)	2 x 0.5, 1, 2, 3, 4, 6 ADC (adjustable, channel-by-channel via rotary switch)
Load-dependent (16 ms to 100 s)	Load-dependent (16 ms to 100 s)	Load-dependent (16 ms to 100 s)
> 50,000 µF per channel	> 50,000 µF per channel	> 65,000 µF per channel
Time-delayed channel switching (load-dependent, 50 ms to 5 s)	Time-delayed channel switching (load-dependent, 50 ms to 5 s)	Time-delayed channel switching (load-dependent, 50 ms to 5 s)
2 x LED (green/red/orange), 2 x signal output	2 x LED (green/red/orange), 2 x signal output	2 x LED (green/red/orange), 2 x signal output
yes	yes	yes
-25 °C ... +70 °C	-25 °C ... +70 °C	-25 °C ... +70 °C
45 x 115.5 x 90	45 x 115.5 x 90	45 x 115.5 x 90

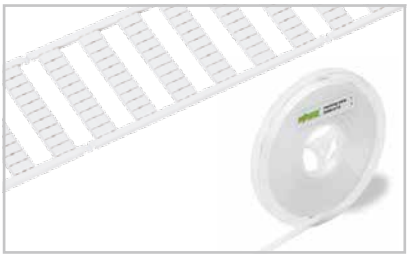


Configuration

- Display and function keys for direct, on-site parameterization
- RS-232 serial interface permits advanced parameterization via PC; free 759-860 Configuration Software available at: www.wago.com/epsitron
- Free download of function blocks for visualization on standard PLC systems

Pluggable CAGE CLAMP® Connection Technology

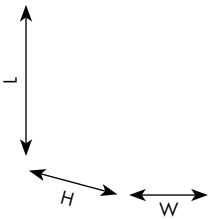
- Fast, vibration-proof, maintenance-free
- For solid, fine-stranded or ferruled conductors
- 100 % protected against mismating
- Easy-to-see terminal marking



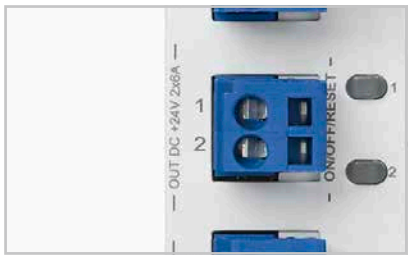
Marking

- Device identification via WMB markers or TOPJOB® S marking strips
- Label individual channels via marking strips that can be inserted into the covers of the rotary switches from the outside

EPSITRON® ELECTRONIC CIRCUIT BREAKE



Item Number	**787-1664**	**787-1664/0106-0000**	**787-1664/0006-1000**
Description	Electronic Circuit Breaker	Electronic Circuit Breaker	Electronic Circuit Breaker with Active Current Limitation
Nominal input voltage	24 VDC	24 VDC	24 VDC
Nominal output voltage	4 x 24 VDC	4 x 24 VDC	4 x 24 VDC
Nominal current	4 x 2, 3, 4, 6, 8, 10 ADC (adjustable, channel-by-channel via rotary switch)	4 x 1, 2, 3, 4, 5, 6 ADC (adjustable, channel-by-channel via rotary switch)	4 x 0.5, 1, 2, 3, 4, 6 ADC (adjustable, channel-by-channel via rotary switch)
Trip time	Load-dependent (16 ms to 100 s)	Load-dependent (16 ms to 100 s)	Load-dependent (16 ms to 100 s)
Switch-on capacity	> 50,000 µF per channel	> 50,000 µF per channel	> 65,000 µF per channel
Switch-on behavior	Time-delayed channel switching (load-dependent, 50 ms to 5 s)	Time-delayed channel switching (load-dependent, 50 ms to 5 s)	Time-delayed channel switching (load-dependent, 50 ms to 5 s)
LED indication	4 x LED (green/red/orange), 2 x signal output	4 x LED (green/red/orange), 2 x signal output	4 x LED (green/red/orange), 2 x signal output
Remote control input	yes	yes	yes
Ambient operating temperature	-25 °C ... +70 °C	-25 °C ... +70 °C	-25 °C ... +70 °C
Dimensions (mm) W x H x L	45 x 115.5 x 90	45 x 115.5 x 90	45 x 115.5 x 90



Intuitive Communication

- Each output channel has backlit buttons for switching on/off, as well as acknowledging
- Integrated multi-color LEDs indicate the operating states of each channel

Rotary Switches

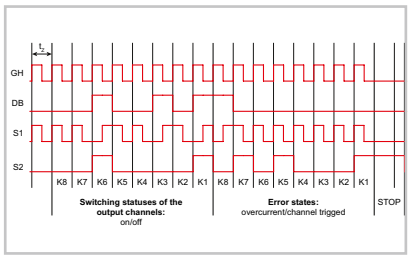
- Nominal current can be individually adjusted for each channel
- Setting is visible even when no voltage is applied
- Transparent cover can be sealed and marked

RS (ECBs)

787-1668	787-1668/0106-0000	787-1668/0006-1000
Electronic Circuit Breaker	Electronic Circuit Breaker	Electronic Circuit Breaker with Active Current Limitation
24 VDC	24 VDC	24 VDC
8 x 24 VDC	8 x 24 VDC	8 x 24 VDC
8 x 2, 3, 4, 6, 8, 10 ADC (adjustable, channel-by-channel via rotary switch)	8 x 1, 2, 3, 4, 5, 6 ADC (adjustable, channel-by-channel via rotary switch)	8 x 0.5, 1, 2, 3, 4, 6 ADC (adjustable, channel-by-channel via rotary switch)
Load-dependent (16 ms to 100 s)	Load-dependent (16 ms to 100 s)	Load-dependent (16 ms to 100 s)
> 50,000 µF per channel	> 50,000 µF per channel	> 65,000 µF per channel
Time-delayed channel switching (load-dependent, 50 ms to 5 s)	Time-delayed channel switching (load-dependent, 50 ms to 5 s)	Time-delayed channel switching (load-dependent, 50 ms to 5 s)
8 x LED (green/red/orange), 2 x signal output	8 x LED (green/red/orange), 2 x signal output	8 x LED (green/red/orange), 2 x signal output
yes	yes	yes
-25 °C ... +70 °C	-25 °C ... +70 °C	-25 °C ... +70 °C
42 x 142.5 x 127	42 x 142.5 x 127	42 x 142.5 x 127

Communication 1.0

- Remote digital input S1 resets all tripped channels
- Digital output S3 transmits a simple group message, indicating if one of the channels was triggered by an overcurrent

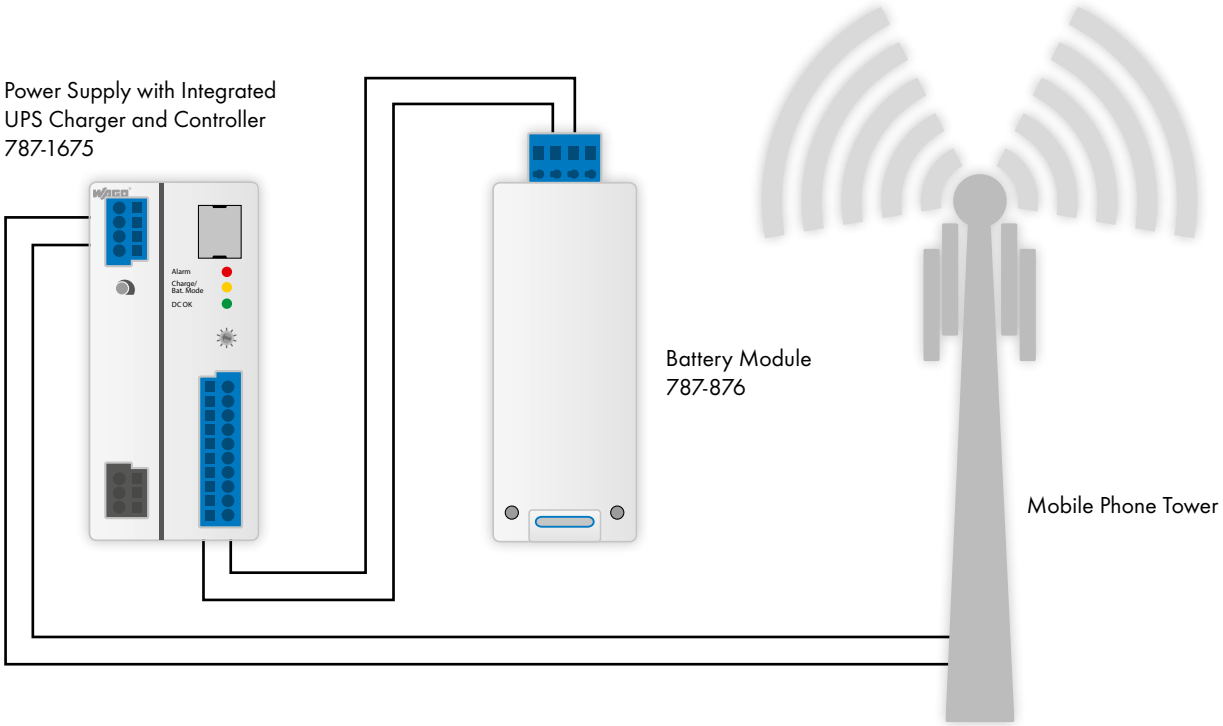


Communication 2.0

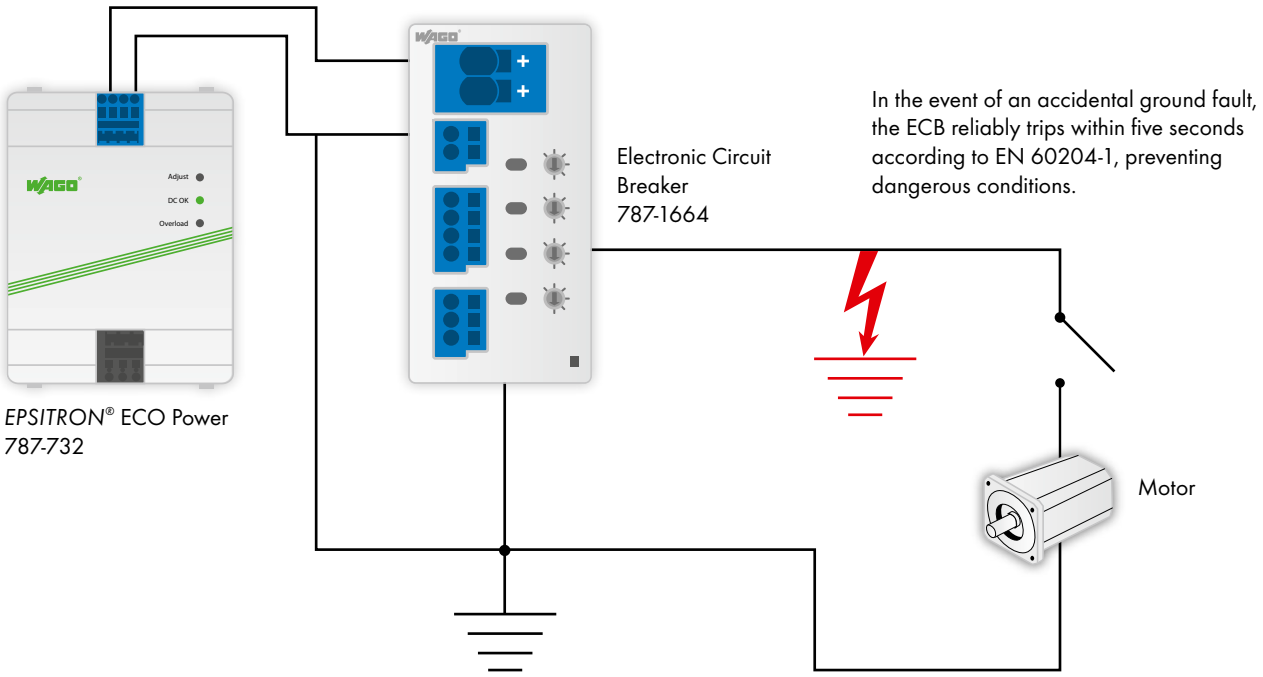
- Remote digital input S1 switches on and off certain channels via pulse sequence
- Digital output S2 transmits the current status (on/off/tripped/overcurrent) of each individual channel
- Optional transmission of input voltage and output/nominal current value for each channel

EPSITRON® SOLUTIONS

Power Supply for a Remotely Located Mobile Phone Tower

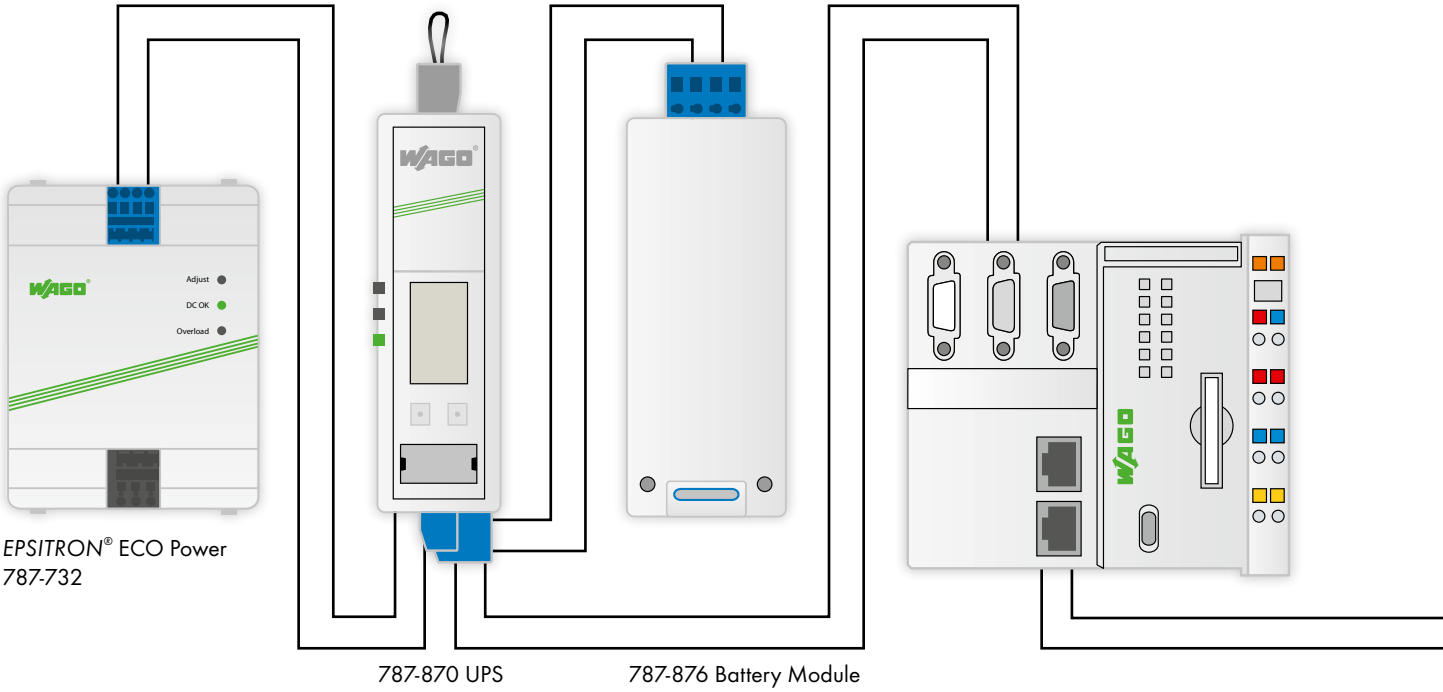


ECB Prevents Accidental Restart



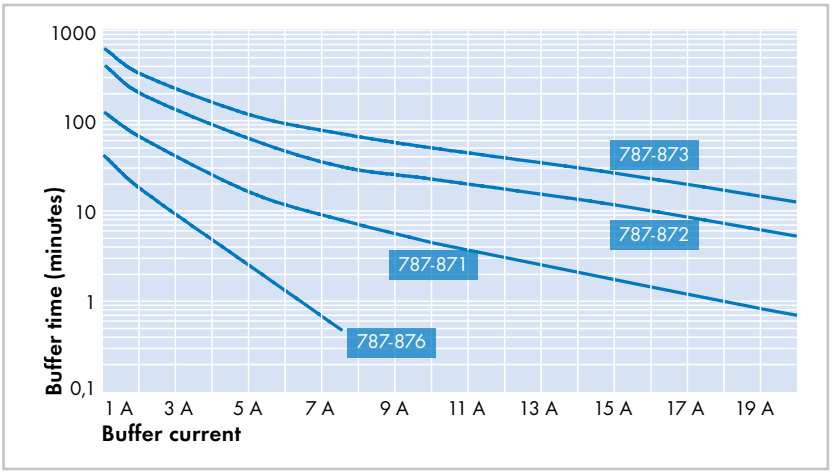
EPSITRON® SOLUTIONS

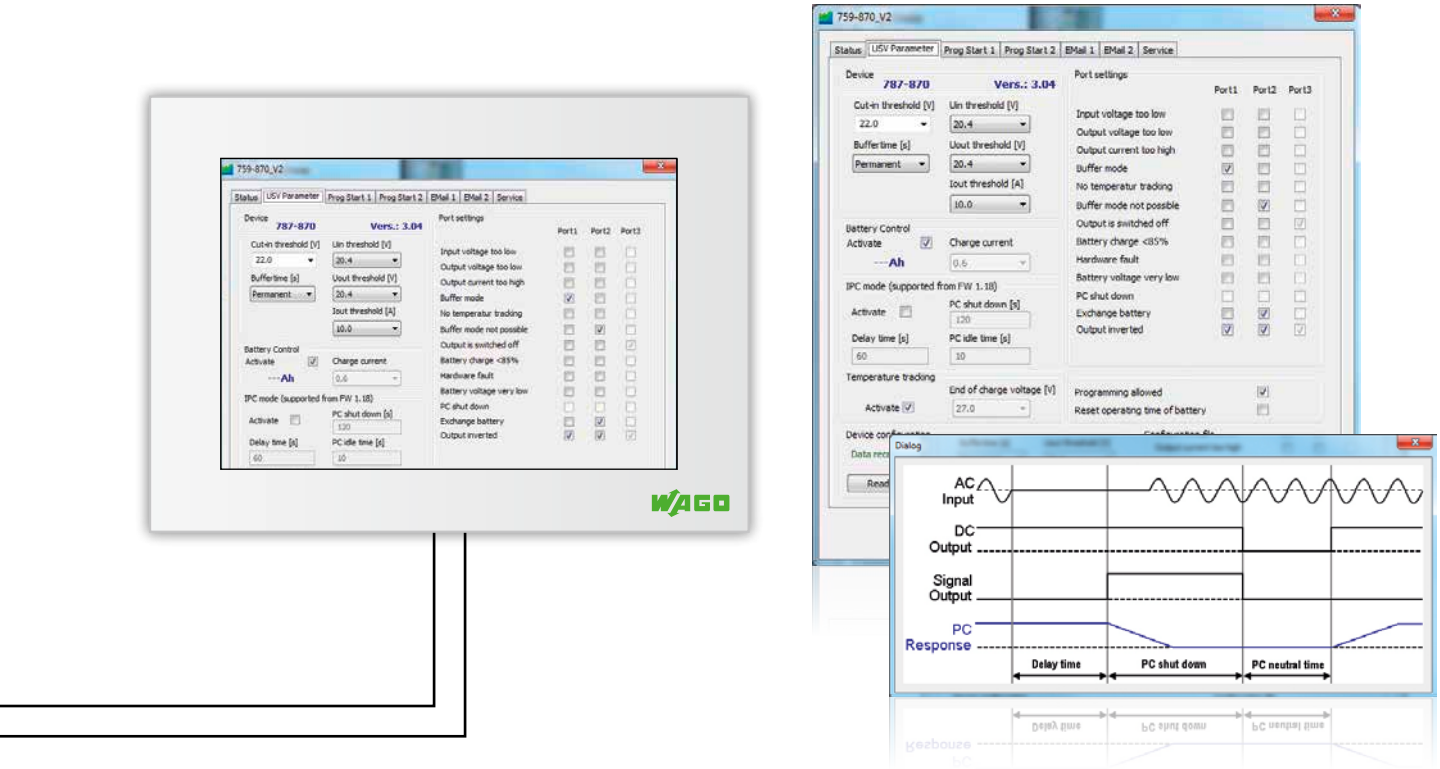
UPS Shutdown Function Permits Controlled System Shutdown



Buffer Time versus Load Current

Different buffer times/currents can be achieved depending on the battery module selected. The example below shows a 7 A load current provided for approximately 30 seconds by a 787-870 UPS Charger and Controller (10 A) and 787-876 Battery Module.





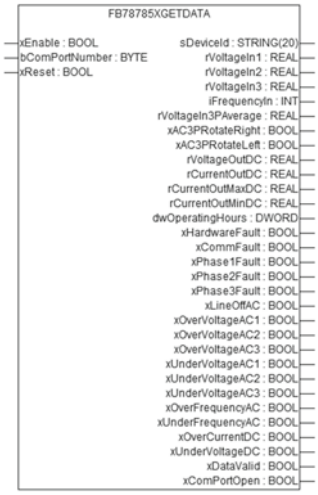
EPSITRON® COMMUNICATION

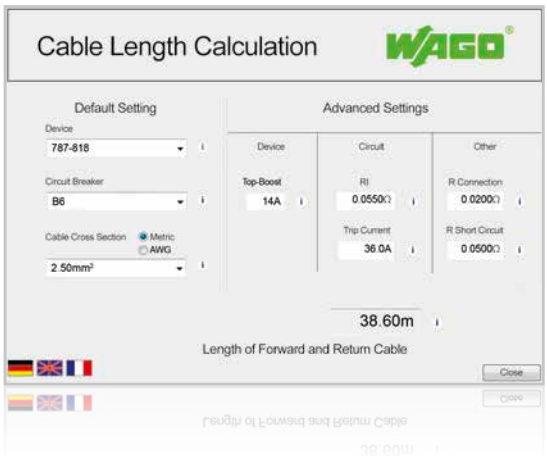
EPSITRON® PRO Power

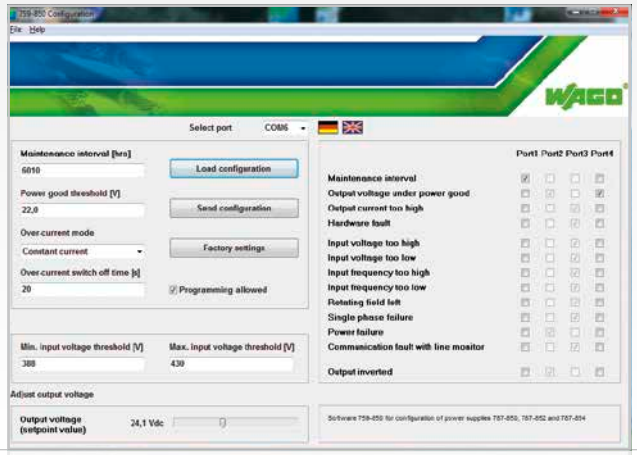
Easy Configuration and Monitoring of 787-85x PRO Power Supplies via RS-232 Interface and WAGO Software

Easily connect a notebook, PLC or WAGO-I/O-SYSTEM via RS-232 interface for quickly monitoring and configuring 787-85x PRO Power Supplies. Function blocks are available for multiple controller variants.

An integrated cable length calculator helps configure the system. It determines whether the PRO Power Supply can trip the required thermomagnetic circuit breaker at the required cable cross section and length.



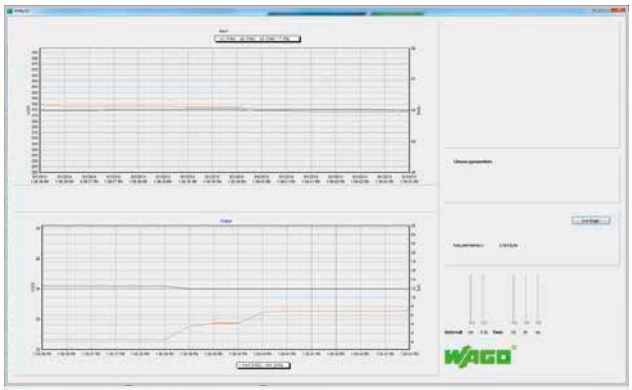




The configuration software allows you to set a maintenance timer that notifies the user when an operating hour limit has been reached.

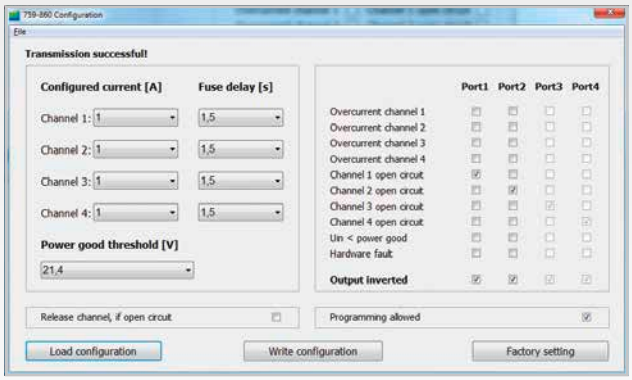
Permissible voltage and current levels can also be set and monitored with the configuration software. This value-added benefit eliminates the need for additional equipment, such as an hour meter or phase monitoring device.

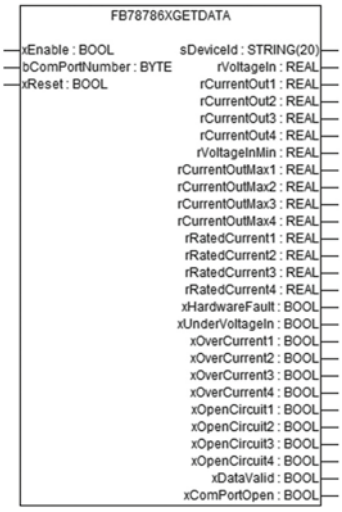
Both input and output of the *EPSITRON*® PRO Power Supply are monitored via 759-851 Visualization Software. In addition to monitoring, both input and output data recording and analysis are possible (see graphic).



EPSITRON® COMMUNICATION

Electronic Circuit Breakers (ECBs)





Function blocks for ECB monitoring that use the WAGO-I/O-SYSTEM, or different control systems, are available for free.

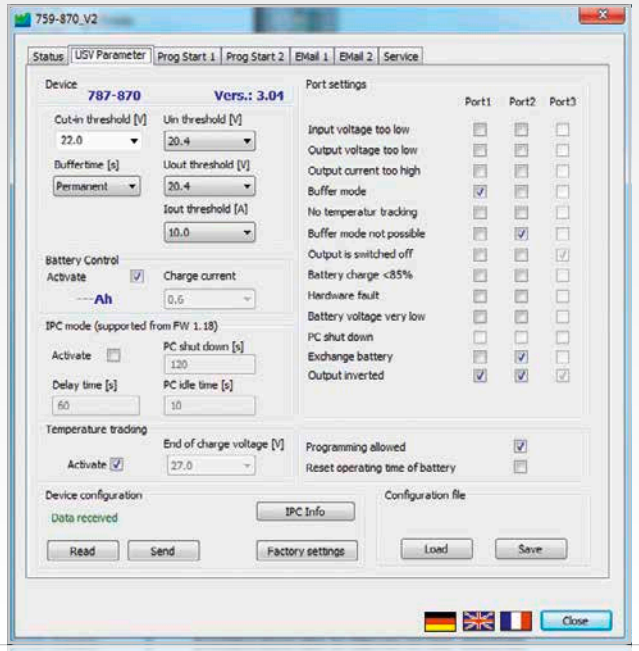
Select ECBs and UPS units from the *EPSITRON*® Series also feature an built-in display and an RS-232 interface for convenient configuration and monitoring.

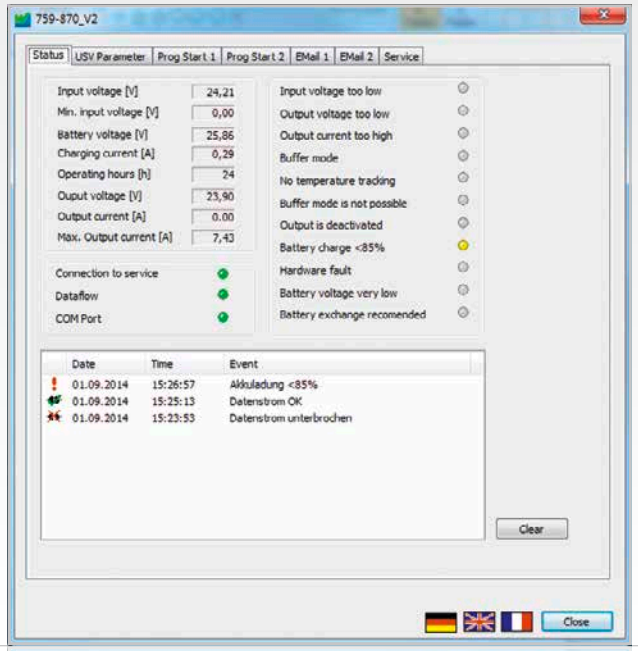
Each of the four channels can be independently configured via 759-860 Configuration Software.

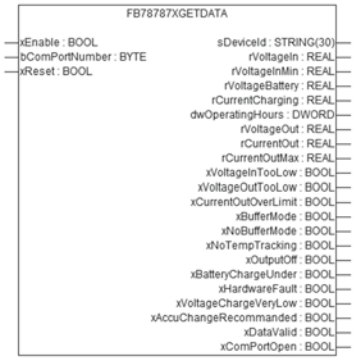
Visualize:

- Nominal current
- Actual output current
- Maximum output current per channel
- Input voltage
- Minimum input voltage
- Warnings and error condition

Uninterruptible Power Supply (UPS)



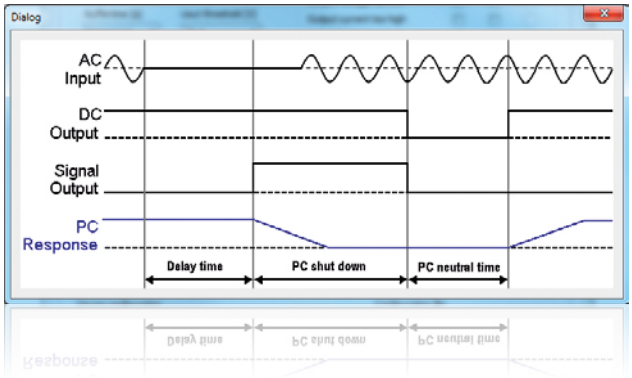




The *EPSITRON*® UPS unit can be conveniently configured using the free 759-870 Software.

Values for the input voltage, battery data, output voltage and current, as well as error status are displayed in the software.

In addition to easily connecting to a notebook for monitoring via 759-870 Software, the UPS unit can be connected to the WAGO-I/O-SYSTEM via RS-232 interface. The free WAGO function block allows easy monitoring of the UPS input and output data.



EPSITRON® ACCESSORIES

787-890 RS-232 Communication Cable, 1.8 m long

The communication cable is used for configuration and visualization via PC, notebook or PLC. It is suitable for all 787-8xx Series modules equipped with an RS-232 serial interface.

Connectors: 8-pole 733-108 Female Connector with strain relief (787-8xx module side), 9-pole D-sub Female Connector (PC/PLC side)

787-892 RS-232 Communication Cable, 1.8 m long (not pictured)
Similar to 787-890, but carries a 4-pole 734-104 Female Connector; compatible with 787-1675

761-9005 USB Adapter with 1 m connection cable

The USB adapter transmits RS-232 signals to the USB interface of a PC or notebook. The adapter is simply plugged into the 787-890 Communication Cable Connector.

Connectors: 9-pole D-sub male connector (RS-232), USB connector (type A)
Notice: No electrical isolation

787-895 Wall Mount Adapter secures 787-8xx devices on a mounting plate or wall without DIN-rail

The wall mount adapter replaces the rail support for a 787-8xx device. The adapter is secured to the 787-8xx device via provided screws.

787-896 Carrier Rail Adapter for mounting 787-8xx devices to DIN-rail

The 787-896 Carrier Rail Adapter supports both the vertical and horizontal mounting of 787-8xx devices. To mount the adapter to the device, slide both single parts into the cooling element's guide slots and then screw; this allows the position to be easily changed.

787-897 Carrier Rail Adapter made of zinc die-cast for mounting 787-8xx devices to DIN-rail

Mounting the adapter to the device is performed by pressing the adapter into the guide slots of the cooling element via operating tool. An extremely secure fit ensures reliable operation – even in environments subject to permanent vibrations.

Operating tools with partially insulated shafts, ideal for operating terminal blocks

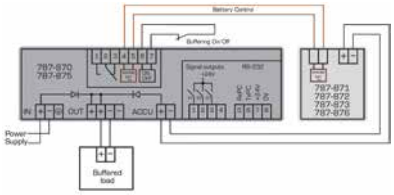
210-719: Operating tool with partially insulated shaft, type 1, (2.5 x 0.4) mm blade, suitable for 733 and 734 Series Female Connectors

210-720: Operating tool with partially insulated shaft, type 2, (3.5 x 0.5) mm blade, suitable for 231 and 721 Series Female Connectors

210-721: Operating tool with partially insulated shaft, type 3, (5.5 x 0.8) mm blade, suitable for 831 Series Female Connectors

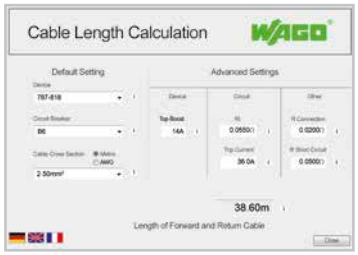
210-769: Phillips PH0 operating tool, type 1, PH0 blade; used for setting the voltage of 787-10xx Series *EPSITRON®* COMPACT Power Supplies

EPSITRON® GLOSSARY



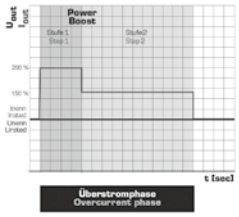
Battery Control

EPSITRON® battery control technology allows data exchange between intelligent battery modules and a UPS charger/controller. In addition to the temperature value, information on type and service life of the connected battery modules is also transmitted to the charger and controller.



TopBoost

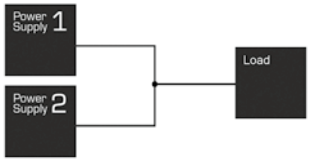
In order for high-speed magnetic miniature circuit breakers to trip, currents that are significantly higher than the rated current are required for 10–12 milliseconds. PRO Power Supplies deliver a multiple of their nominal current for a short time – the faulty circuit can be shut off within milliseconds during a short circuit. This increases uptime of the entire power supply while fulfilling EN 60204-1 requirements regarding grounding in control circuits. Using the free cable length calculator available from www.wago.com/epsitron, the designer or planer can check in advance the layout of the line protection based on cable lengths, cable cross section, characteristics of the protective device and type of power supply.



PowerBoost

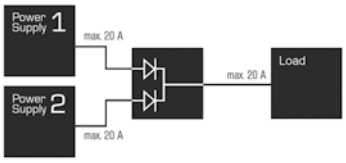
During start-up or the switching of capacitive loads (valve clusters, motors, etc.), there is an increased need for current. However, conventional switch mode power supplies usually require a much larger switch mode power supply to avoid switching to overload operation or short-circuit limitation.

In this case, PRO Power Supplies provide power reserves – up to 200 % of the nominal current at the output for up to four seconds, maximum 150 % in a second stage. The availability of twice the output power for a short time ensures reliable operation and eliminates the expensive oversizing of switch mode power supplies. This also saves space in the control cabinet and reduces power losses, while ensuring optimum efficiency.



Parallel Connection of Power Supplies – for Extra Power

Most power supplies from the *EPSITRON*® Series allow parallel connection of power supply units for extra power, except for 787-601 and 787-602 devices. To achieve a distribution of load that is as uniform as possible for parallel-connected devices, the output voltage without load must be set as precisely as possible to the same value. Star wiring using external rail-mounted terminal blocks is required to ensure the resistance levels for all power supplies are as equal as possible to the load. Do not perform parallel connection directly via the power supplies' female connectors. Using PRO Power Supplies, power supply units with differing output power levels may also be connected in parallel. Otherwise, only connect power supplies of the same type in parallel.



Parallel Connection of Power Supplies – for Increased Power Availability

Parallel connection using decoupling diodes in the respective current path reliably prevents reverse currents. In normal operation, both units supply the load. If a power supply fails, the intact power supply becomes responsible for complete supply of the load. This increases the power supply system's uptime. Of course, the nominal current of each power supply must be higher than the maximum arising load current.

The redundancy modules feature two powerful decoupling diodes, providing a permanent 40 A load current per current path.

WE INNOVATE!

60250297 - 0888-0160/0900-6901 - EPSITRON BROCHURE 9.0 US - 04/15 - Printed in Germany - Subject to design changes

WAGO Kontakttechnik GmbH & Co. KG
Postfach 28 80 · D - 32385 Minden
Hansastraße 27 · D - 32423 Minden
Germany
Phone: +49 571 887- 0
Fax: +49 571 887-169
Email: info@wago.com
Online: www.wago.com