

Sealed Lead-Acid Batteries

Energy Series

12V Batteries from 48AH to 225AH.
 ISO 9001, DIN standard, GL Certified.
 German made



FEATURES:

1. True deep cycle. Energy batteries have extra thick lead alloy plates which are capable of withstanding up to 600 discharge cycles (DIN certified and proven). This makes them ideal for solar, electric vehicle and other heavy duty applications.
2. Proven 7-10 years standby life.
3. Certified by Germanischer Lloyd as vibration resistant and suitable for marine use.
4. Patented Lid makes the batteries spillproof and maintenance free but the cells can be accessed via threaded, resealable, airtight vent plugs. This means that in the event of dry out, Energy batteries can be topped up (impossible with other maintenance free lead acid batteries).
5. Sealed lid design does not allow acid mist to exit the battery, hence users are protected from the risk of explosion due to external sparks.

Type Number	DIN Number (previous)	DIN Number (current)	Nominal Voltage	Capacity (C20)	Length (mm)	Width (mm)	Case Height (mm)	Weight (kg)
E12V48N	85405	954006000	12V	50AH	211	175	190	13
E12V60N	85505	955002000	12V	60AH	246	175	190	16
E12V75N	85605	956002000	12V	80AH	278	175	190	19.8
E12V95	85805		12V	95AH	353	175	190	23.8
E12V100N	85855	958051000	12V	100AH	305	175	220	25.4
E12V135N	86105	960051000	12V	130AH	513	189	223	39.9
E12V165N	86405	963051000	12V	180AH	513	223	223	48.3
E12V225N	86905	968001000	12V	230AH	518	276	242	64.4



Model	Minimum Cold Crank
E12V60	375A
E12V75	540A
E12V95	575A
E12V100	615A
E12V135	550A
E12V165	710A
E12V225	895A

Technical data sheet for semi traction batteries
Energy Series Lead-Acid-Batteries

Battery type:	954 06
Varta Number:	0 95406 310
Siomar Number:	E12V48N
Rated voltage:	12 V
Nominal capacity C20: (20 hrs. at 27° C)	50 Ah
Nominal capacity C5: (5 hrs. at 27° C)	40 Ah
Features:	<ul style="list-style-type: none"> - Up to 3 times higher cyclic capacity than conventional batteries - Spill proof to 55°
Dimensions in mm:	
-Length:	211 mm
-Width:	175 mm
-Height:	190 mm
Weight (dry):	approx. 10,7 kg
Weight (filled):	approx. 14,2 kg
Acid filling quantity:	approx.. 3,5 kg sulphuric acid, density 1,28 kg/l (Or 1.24kg/l for standby applications)
Terminal layout (ETN, DIN 72 311) :	0
Terminal (ETN, DIN 72 311) :	1
Base hold down (ETN, DIN 72 311):	B03, 10,5mm
Normal charge	
- charging voltage:	max. 14,4 V
- charging current :	1/10 of nominal capacity in A (C5 or C20; according to requirement)
- charging characteristic :	IU
Float charge *1)	
- charging voltage:	13,38 V (2,23V / cell)
- charge-/discharge cycles:	approx. 500
- max. discharge capacity:	60 % of nominal capacity
Standards:	DIN 43 539 part 3 DIN 41 773, charger with IU-charging characteristic

DIN 43 530, electrolyte for lead acid accumulators

Warranty: 12 months factory warranty on faulty materials and workmanship from date of delivery

Maintenance: Under normal conditions which are defined as recommended charge regime at room temperature of 20°C to 25°C this battery requires negligible maintenance. At higher temperatures where there is no voltage compensation on charging or there is heavy cyclic use some maintenance is necessary.

*¹⁾ for float charge more maintenance could be necessary, acid level has to be checked regularly and distilled water has to topped up if needed. To prevent acid stratification a charge at 14,4 V at regular intervals is necessary.



Technical data sheet for semi traction batteries
Energy Series Lead-Acid-Batteries

Battery type:	955 02
Varta Number:	0 95502 310
Siomar Number:	E12V60N
Rated voltage:	12 V
Nominal capacity C20: (20 hrs. at 27° C)	60 Ah
Nominal capacity C5: (5 hrs. at 27° C)	50 Ah
Features:	<ul style="list-style-type: none">- Up to 3 times higher cyclic capacity than conventional batteries- Spill proof to 55°
Dimensions in mm:	
-Length:	246 mm
-Width:	175 mm
-Height:	190 mm
Weight (dry):	approx. 11,6 kg
Weight (filled):	approx. 16,1 kg
Acid filling quantity:	approx.. 4,5 kg sulphuric acid, density 1,28 kg/l (Or 1.24kg/l for standby applications)
Terminal layout (ETN, DIN 72 311) :	0
Terminal (ETN, DIN 72 311) :	1
Base hold down (ETN, DIN 72 311):	B03, 10,5mm
Normal charge	
- charging voltage:	max. 14,4 V
- charging current :	1/10 of nominal capacity in A (C5 or C20; according to requirement)
- charging characteristic :	IU
Float charge *1)	
- charging voltage:	13,38 V (2,23V / cell)
- charge-/discharge cycles:	approx. 500
- max. discharge capacity:	60 % of nominal capacity
Standards:	DIN 43 539 part 3 DIN 41 773, charger with IU-charging characteristic

DIN 43 530, electrolyte for lead acid accumulators

Warranty:

12 months factory warranty on faulty materials and workmanship from date of delivery

Maintenance:

Under normal conditions which are defined as recommended charge regime at room temperature of 20°C to 25°C this battery requires negligible maintenance. At higher temperatures where there is no voltage compensation on charging or there is heavy cyclic use some maintenance is necessary.

*¹⁾ for float charge more maintenance could be necessary, acid level has to be checked regularly and distilled water has to topped up if needed. To prevent acid stratification a charge at 14,4 V at regular intervals is necessary.



Technical data sheet for semi traction batteries
Energy Series Lead-Acid-Batteries

Battery type:	956 02
Varta Number:	0 95602 310
Siomar Number:	E12V75N
Rated voltage:	12 V
Nominal capacity C20: (20 hrs. at 27° C)	80 Ah
Nominal capacity C5: (5 hrs. at 27° C)	60 Ah
Features:	<ul style="list-style-type: none">- Up to 3 times higher cyclic capacity than conventional batteries- Spill proof to 55°
Dimensions in mm:	
-Length:	278 mm
-Width:	175 mm
-Height:	190 mm
Weight (dry):	approx. 14,1 kg
Weight (filled):	approx. 19,5 kg
Acid filling quantity:	approx.. 5,4 kg sulphuric acid, density 1,28 kg/l (Or 1.24kg/l for standby applications)
Terminal layout (ETN, DIN 72 311) :	0
Terminal (ETN, DIN 72 311) :	1
Base hold down (ETN, DIN 72 311):	B03, 10,5mm
Normal charge	
- charging voltage:	max. 14,4 V
- charging current :	1/10 of nominal capacity in A (C5 or C20; according to requirement)
- charging characteristic :	IU
Float charge *1)	
- charging voltage:	13,38 V (2,23V / cell)
- charge-/discharge cycles:	approx. 500
- max. discharge capacity:	60 % of nominal capacity
Standards:	DIN 43 539 part 3 DIN 41 773, charger with IU-charging characteristic

VB Autobatterie GmbH

Warranty: 12 months factory warranty on faulty materials and workmanship from date of delivery

Maintenance: Under normal conditions which are defined as recommended charge regime at room temperature of 20°C to 25°C this battery requires negligible maintenance. At higher temperatures where there is no voltage compensation on charging or there is heavy cyclic use some maintenance is necessary.

*¹) for float charge more maintenance could be necessary, acid level has to be checked regularly and distilled water has to be topped up if needed. To prevent acid stratification a charge at 14,4 V at regular intervals is necessary.



Technical data sheet for semi traction batteries
Energy Series Lead-Acid-Batteries

Battery type:	958 51
Varta Number:	2 95851 310
Siomar Number:	E12V100N
Rated voltage:	12 V
Nominal capacity C20: (20 hrs. at 27° C)	100 Ah
Nominal capacity C5: (5 hrs. at 27° C)	85 Ah
Features:	<ul style="list-style-type: none">- Up to 3 times higher cyclic capacity than conventional batteries- Spill proof to 55°
Dimensions in mm:	
-Length:	305 mm
-Width:	175 mm
-Height:	220 mm
Weight (filled):	approx. 24,6 kg. Electrolyte density 1.28kg/l (Or 1.24kg/l for standby applications)
Terminal layout (ETN, DIN 72 311) :	0
Terminal (ETN, DIN 72 311) :	1
Base hold down (ETN, DIN 72 311):	B01
Normal charge	
- charging voltage:	max. 14,4 V
- charging current :	1/10 of nominal capacity in A (C5 or C20; according to requirement)
- charging characteristic :	IU
Float charge *1)	
- charging voltage:	13,38 V (2,23V / cell)
- charge-/discharge cycles:	approx. 500
- max. discharge capacity:	60 % of nominal capacity
Standards:	DIN 43 539 part 3 DIN 41 773, charger with IU-charging characteristic DIN 43 530, electrolyte for lead acid accumulators

VB Autobatterie GmbH

Warranty: 12 months factory warranty on faulty materials and workmanship from date of delivery

Maintenance: Under normal conditions which are defined as recommended charge regime at room temperature of 20°C to 25°C this battery requires negligible maintenance. At higher temperatures where there is no voltage compensation on charging or there is heavy cyclic use some maintenance is necessary.

*¹) for float charge more maintenance could be necessary, acid level has to be checked regularly and distilled water has to be topped up if needed. To prevent acid stratification a charge at 14,4 V at regular intervals is necessary.



Technical data sheet for semi traction batteries
Energy Series Lead-Acid-Batteries

Battery type:	960 51
Varta Number:	0 96051 310
Siomar Number:	E12V135N
Rated voltage:	12 V
Nominal capacity C20: (20 hrs. at 27° C)	130 Ah
Nominal capacity C5: (5 hrs. at 27° C)	105 Ah
Features:	<ul style="list-style-type: none">- Up to 3 times higher cyclic capacity than conventional batteries- Spill proof to 55°
Dimensions in mm:	
-Length:	513 mm
-Width:	189 mm
-Height:	223 mm
Weight (dry):	approx. 29,1 kg
Weight (filled):	approx. 40,2 kg
Acid filling quantity:	approx.. 11,1 kg sulphuric acid, density 1,28 kg/l (Or 1.24kg/l for standby applications)
Terminal layout (ETN, DIN 72 311) :	3
Terminal (ETN, DIN 72 311) :	1
Base hold down (ETN, DIN 72 311):	none
Normal charge	
- charging voltage:	max. 14,4 V
- charging current :	1/10 of nominal capacity in A (C5 or C20; according to requirement)
- charging characteristic :	IU
Float charge *1)	
- charging voltage:	13,38 V (2,23V / cell)
- charge-/discharge cycles:	approx. 500
- max. discharge capacity:	60 % of nominal capacity
Standards:	DIN 43 539 part 3 DIN 41 773, charger with IU-charging characteristic

DIN 43 530, electrolyte for lead acid accumulators

Warranty:

12 months factory warranty on faulty materials and workmanship from date of delivery

Maintenance:

Under normal conditions which are defined as recommended charge regime at room temperature of 20°C to 25°C this battery requires negligible maintenance. At higher temperatures where there is no voltage compensation on charging or there is heavy cyclic use some maintenance is necessary.

*1) for float charge more maintenance could be necessary, acid level has to be checked regularly and distilled water has to topped up if needed. To prevent acid stratification a charge at 14,4 V at regular intervals is necessary.



Technical data sheet for semi traction batteries
Energy Series Lead-Acid-Batteries

Battery type:	963 51
Varta Number:	0 96351 310
Siomar Number:	E12V165N
Rated voltage:	12 V
Nominal capacity C20: (20 hrs. at 27° C)	180 Ah
Nominal capacity C5: (5 hrs. at 27° C)	135 Ah
Features:	<ul style="list-style-type: none">- Up to 3 times higher cyclic capacity than conventional batteries- Spill proof to 55°
Dimensions in mm:	
-Length:	513 mm
-Width:	223 mm
-Height:	223 mm
Weight (dry):	approx. 37,1 kg
Weight (filled):	approx. 50,7 kg
Acid filling quantity:	approx.. 13,6 kg sulphuric acid, density 1,28 kg/l (Or 1.24kg/l for standby applications)
Terminal layout (ETN, DIN 72 311) :	3
Terminal (ETN, DIN 72 311) :	1
Base hold down (ETN, DIN 72 311):	none
Normal charge	
- charging voltage:	max. 14,4 V
- charging current :	1/10 of nominal capacity in A (C5 or C20; according to requirement)
- charging characteristic :	IU
Float charge *1)	
- charging voltage:	13,38 V (2,23V / cell)
- charge-/discharge cycles:	approx. 500
- max. discharge capacity:	60 % of nominal capacity
Standards:	DIN 43 539 part 3 DIN 41 773, charger with IU-charging characteristic

DIN 43 530, electrolyte for lead acid accumulators

Warranty: 12 months factory warranty on faulty materials and workmanship from date of delivery

Maintenance: Under normal conditions which are defined as recommended charge regime at room temperature of 20°C to 25°C this battery requires negligible maintenance. At higher temperatures where there is no voltage compensation on charging or there is heavy cyclic use some maintenance is necessary.

*¹⁾ for float charge more maintenance could be necessary, acid level has to be checked regularly and distilled water has to topped up if needed. To prevent acid stratification a charge at 14,4 V at regular intervals is necessary.



Technical data sheet for semi traction batteries
Energy Series Lead-Acid-Batteries

Battery type:	968 01
Varta Number:	0 96801 310
Siomar Number:	E12V225N
Rated voltage:	12 V
Nominal capacity C20: (20 hrs. at 27° C)	230 Ah
Nominal capacity C5: (5 hrs. at 27° C)	180 Ah
Features:	<ul style="list-style-type: none">- Up to 3 times higher cyclic capacity than conventional batteries- Spill proof to 55°
Dimensions in mm:	
-Length:	518 mm
-Width:	276 mm
-Height:	242 mm
Weight (dry):	approx. 46,8 kg
Weight (filled):	approx. 62,7 kg
Acid filling quantity:	approx.. 15,9 kg sulphuric acid, density 1,28 kg/l (Or 1.24kg/l for standby applications)
Terminal layout (ETN, DIN 72 311) :	3
Terminal (ETN, DIN 72 311) :	1
Base hold down (ETN, DIN 72 311):	none
Normal charge	
- charging voltage:	max. 14,4 V
- charging current :	1/10 of nominal capacity in A (C5 or C20; according to requirement)
- charging characteristic :	IU
Float charge *1)	
- charging voltage:	13,38 V (2,23V / cell)
- charge-/discharge cycles:	approx. 500
- max. discharge capacity:	60 % of nominal capacity
Standards:	DIN 43 539 part 3 DIN 41 773, charger with IU-charging characteristic

DIN 43 530, electrolyte for lead acid accumulators

Warranty: 12 months factory warranty on faulty materials and workmanship from date of delivery

Maintenance: Under normal conditions which are defined as recommended charge regime at room temperature of 20°C to 25°C this battery requires negligible maintenance. At higher temperatures where there is no voltage compensation on charging or there is heavy cyclic use some maintenance is necessary.

*1) for float charge more maintenance could be necessary, acid level has to be checked regularly and distilled water has to topped up if needed. To prevent acid stratification a charge at 14,4 V at regular intervals is necessary.

