



**INTER
CARS**

**DRIVING
HIGHER STANDARDS**



**TOOLS FOR SERVICING
ELECTRIC AND
HYBRID VEHICLES**



WSZYSTKODLAWARSZTATU.PL

Hybrid and electric powertrains will be a much more frequent visitor to the independent garages, as sales of these vehicles continue to grow.

The most common question an automotive technician asks when thinking about working on a hybrid or electric vehicle is: Is it safe to work with these systems? The answer is yes, but after a small investment in proper tools and equipment. Given that all car manufacturers now make these powertrains, it is clear that independent garages that invest in tools and training can be confident that their investment will be very profitable.

IC Ref. No: SEA HVCOM1

Tool kit for hybrid and electric vehicles

THE KIT INCLUDES:

SEA APPD70 — 7 Drawer Push-To-Open Rollcab - Orange
SEA SF300R — 1200 x 550 x 30mm Easy Peel Shadow Foam® Orange/Black (x3)
SEA SF500R — 1200 x 550 x 50mm Easy Peel Shadow Foam® Orange/Black (x3)
SEA PPHY — CAT IV 1000V High Voltage Tester Hybrid/Electric Vehicles
SEA BYSBKIT — 25m Black/Yellow Post & Chain Kit
SEA HVG1000VL — 1kV Electrician's Safety Gloves - Pair
SEA HVM17K02 — Electrician's Insulating Rubber Safety Mat 1 x 1m
SEA TA319 — Digital Insulation Tester
SEA HVSA4 — 200 x 300mm High Voltage Warning Sign
SEA HYBRIDTAG — Hybrid/Electric Vehicle Keyring Warning Tag
SEA HYBRIDSIGN — Hybrid/Electric Vehicle Warning Sign
SEA AK83452 — 3pc Pliers Set - VDE approved
SEA AK6124 — 8pc Screwdriver Set - VDE Approved
SEA AK63171 — 7pc Insulated Open-End Spanner Set - VDE approved
SEA AK7940 — 16pc 3/8"Sq Drive Insulated Socket Set - VDE approved
SEA STW803 — 3/8"Sq Drive Calibrated Insulated Micrometer Torque Wrench 12-60Nm
SEA AK7177 — Extra long Hex key set, VDE approved (6pc)
SEA AK7178 — Extra long TRX-Star® key set, VDA approved (9pc)
SEA HRP45 — high voltage rescue pole



IC Ref. No: 099510240555

Tools kit for hybrid and electric vehicles

contains all the materials that are required for creating a safe space for servicing and repairs of hybrid and electric vehicles.



IC Ref. No: 007935655020

Extended kit for maintenance and repair of hybrid and electric vehicles

a tool case with profiled inner dividers and tools in the set.



IC Ref. No: SEA HP55K2COMBO

Personal Protection Kit

CONTAINS:

SEA HRP45 — high voltage rescue pole
SEA HVG1000VL — 1kV Electrician's Safety Gloves
SEA HVM17K02 — Electrician's Insulating Rubber Safety Mat 1 x 1m



IC Ref. No: SEA HRP45

High Voltage Rescue Pole 1.79m

High voltage rescue pole suitable for use up to 45kV AC in dry conditions, in accordance with EN 50508
- Supplied with wall mounting brackets and instructions for use.



IC Ref. No: SEA HVM17K02 Electrician's Insulating Rubber Safety Mat 1 x 1m.

class 2 high-voltage insulator. An essential item required to protect technicians from the risk of electrocution when working on electric or hybrid vehicles. Independently tested and certified, offering safe protection up to 17kV AC in accordance with BS EN 61111.



IC Ref. No: HAZ 196VDE-8/2 Insulating mat

Rubber mat, tested: 50 000 V, in accordance with VDE 0303. One side smooth and one side anti-slipping, grooved. Dimensions: 1000 x 1000 x 4.0mm.



When working at or near high voltage, it is essential to use appropriate personal protection equipment, including insulation of the high voltage battery. Gloves for electricians working under high voltage and a protective mat for electricians must be of the correct type and have test reports confirming their suitability for this type of work.

IC Ref. No: SEA GT117 Pneumatic Glove Tester

used to carry out a pressure test on electrician's high voltage gloves
Suitable for use with SEA HVG1000VL gloves



IC Ref. No: SEA HVG1000VL 1kV Electrician's Safety Gloves - pair,

suitable for use on hybrid and electric vehicles. Class 0 gloves suitable for working on systems up to 1kV AC in accordance with EN 60903.



IC Ref. No: RIG014Y-L IC Ref. No: RIG014Y-XL Electrical insulating gloves for electrical workers

made of 100% natural rubber latex for ultimate durability and flexibility, ergonomically-designed for efficiency and safety.
Development of hybrid and electric vehicles has exposed workers to arc flash. The high voltage used in these vehicles can shock, burn and potentially kill workers without any warning. Electrical protection is a growing need in today's automotive aftermarket.

MAIN ADVANTAGES:

- Electrical insulating gloves are made

from natural rubber latex using a proprietary environmentally friendly dipping process for ultimate flexibility and dexterity
- Generous flared cuff allows room for clothing and improves ventilation.
- Case hardened finish provides smoother surface for easy donning and doffing.
- Applications with risk of touch voltage AC maximum 1 000 V
- Applications with risk of touch voltage DC maximum 1 500 V

RECOMMENDED FOR:

- Hybrid and electrical engine repair with risk of touch voltage
- Repair and replacement of electric parts



Technicians working on vehicles where high voltage is present have an essential task to create a safe and secure zone where they will not be disturbed or approached by any other people around them. A high voltage warning sign and a zone exclusion to work on the vehicle will alert others to the potential danger in the work area. It is essential that the vehicle keys are kept secure and away from the vehicle during service or repair work, and the keyring warning tag informs that a technician is working on a car.

IC Ref. No: SEA HP55K1COMBO Exclusion Zone Kit

CONTAINS:

- SEA RWSBKIT - 25m Red/White Post & Chain Kit
- SEA HVSA4 — 200 x 300mm High Voltage Warning Sign
- SEA HYBRIDSIGN — Hybrid/Electric Vehicle Warning Sign (x2)
- SEA HYBRIDTAG — Hybrid/Electric Vehicle Keyring Warning Tag



IC Ref. No: SEA HP55KECOMB Exclusion Zone Extension Kit

CONTAINS:

- SEA RWPB01 — Red/White Post with Base (x2).
- SEA HSC25M — 25m x 6mm Red/White Plastic Chain
- SEA RCC10 — Plastic Chain Connector - Pack of 10 pieces
- SEA RSH10 - Plastic Chain S-Hook - Pack of 10 pieces



IC Ref. No: SEA BYSBKIT 25m Black/Yellow Post & Chain Kit

Highly visible post and chain kit ideal for creating a temporary safety barrier when working on hybrid and electric vehicles. Consists of six black/yellow posts, six bases, 25m x 6mm black/yellow plastic chain and chain securing hooks. Only fill post base with dry sand when working around electricity.



IC Ref. No: SEA HYBRIDTAG Hybrid/Electric vehicle keyring warning tag

for placing with hybrid or electric vehicle keys whilst service or repair operations are being carried out
It is essential that the vehicle keys are kept secure and away from the vehicle during service or repair work. 80 x 110mm 400gsm paper with gloss finish.



IC Ref. No: SEA HVSA4 200 x 300mm High Voltage Warning Sign

suitable for use on an exclusion zone around a hybrid or electric vehicle during repair or service operations. Rigid 3mm thick plastic warning sign.



IC Ref. No: SEA HVSA1 High Voltage Vehicle Warning Sign

suitable for use on vehicles. Printed on both sides. Supplied with two suction cups on the base.

IC Ref. No: SEA HYBRIDSIGN Hybrid/Electric Vehicle Warning Sign

Essential safety warning sign for placing on a hybrid or electric vehicle whilst service or repair operations are being carried out. A4 300gsm paper with gloss finish. Includes a box for the technician's name, to clearly identify who is working on the vehicle.



Cat III analyser or voltmeter

essential when working on hybrid or electric vehicle systems. The circuits inside the device are specifically built to safely handle the high voltages and currents found in these types of vehicles.

IC Ref. No: SEA TA320

Digital Automotive Analyser/ Insulation Tester - Hybrid Vehicles

Specially designed for hybrid vehicles and conforms to EN61010 CAT III (1000V) and CAT IV (600V). Unlike other multimeters this unit has an insulation test function that allows testing of the insulation of the high voltage cables and motor generator units found on hybrid vehicles.



Can be used as a stand-alone device or linked wirelessly with a USB interface to a PC or laptop enabling results to be graphed, saved or printed. Supplied with high voltage probes, thermocouple soft storage bag and wireless USB cable. The unit also has the usual functions expected on a high quality multimeter including true RMS (Root-Mean-Square) and IP67 waterproof rating.

IC Ref. No: SEA TA305

AC/DC Clamp Meter & Multimeter

Designed for the automotive electrician and conforms to EN 61010 CAT III 600V. Ideal for measuring current draw from vehicle components in site. Features 10mm clamp. Supplied in pouch.



IC Ref. No: SEA TA319

Digital Insulation Tester

Specially designed for testing insulation on high voltage cables. Suitable for hybrid and electric vehicles. Supplied with test leads, batteries and storage case. Conforms to EN61010 CAT III (1000V).



IC Ref. No: 0 684 010 050

FSA 050 Hybrid Insulation Tester

tests all electric drives and is a fast and convenient way to competently solve any tasks on electric and hybrid vehicles. With the handy FSA 050, the garage will be prepared for the trend towards electric drives. The compact, lightweight and intuitive wireless device enables efficient and accurate checking of voltage, resistance, capacity, continuity, insulation and testing of the capacity of the piezo element in piezoelectrical injectors. A small device with huge possibilities!



IC Ref. No: PICO PQ297

Set PQ297

an extra accessories kit for Pico kit with a 4-channel oscilloscope 4425A, providing extra probes and meters dedicated for hybrid and electric vehicles. If you have a standard or higher 4 channel kit and want to diagnose electric and hybrid vehicles then the PQ297 kit is for you. If you don't already own a Pico oscilloscope and are interested in a kit for electric and hybrid vehicles with an oscilloscope, then the Pico PQ196 kit is for you.



IC Ref. No: SEA PPHY

CAT IV 1000V High Voltage Tester Hybrid/ Electric Vehicles

Professional 2-pole voltage tester CAT IV 1000V for checking high voltage on electric/hybrid vehicles. Suitable for checking AC mains and DC power supplies between 6-1000V DC and 24-1000V AC.

Can also be used for checking voltage and polarity on car batteries and continuity testing of DC circuits. Includes a self-test function and illumination light. EN 61243-3, IP65, CE certified. Requires 2 x AAA 1.5V batteries (not included).

IC Ref. No: PICO PQ196

First on the market oscilloscope for electric vehicles and HYBRIDS!

Pico PQ196 has been designed especially for safe work on hybrid and electric vehicles. These are the essential measuring tools required in any automotive garage for the maintenance/diagnosis of high and low voltage systems, including the safety and insulation tests necessary before work. The kit is based on the market-leading PicoScope 4425A oscilloscope with PicoBNC + © technology. The new Pico 7 software, together with dedicated guided diagnostics and instructional videos, perfectly complements and supports the diagnostician's work. Note: With the Pico PQ196, we can also diagnose combustion-engine vehicles.





IC Ref. No: EVERTMS10

**EV battery lift,
lifting capacity: 1000kg,
min. height 570mm,
max. height 1780mm**

Mobile lifting table EV EVERT model EE-MS10. Designed for dismantling and fixing battery packs of hybrid and electric vehicles as well as engine, gearbox, drive axle, fuel tank, suspension, bracket and chassis components of traditional vehicles Control and power by foot activated pneumatic driven hydraulic pump. The working table can be tilted by adjusting two independent screws attached with T shape handle. The working table can be extended to 1,480mm in length. Reserved holes (100 mm x 100 mm) on the working table for positioning and fixing components with specialized fixtures. Four heavy-duty and abrasion-resisting casters with brakes Hydraulic cylinder and seal rings with high quality. Overload dynamic test under 120% of the rated capacity Larger base frame ensures better stability and reliability Reserved holes at both sides of the working table for fixing loads with proper straps Powder-coating surface ensure long time use without peeling of



IC Ref. No: EVERTMS12M

**EV battery lift,
lifting capacity: 1200kg,
min. height 800mm,
max. height 1810mm**

Mobile lifting table EV EVERT model EE-MS12M. Designed for dismantling and fixing battery packs of hybrid and electric vehicles as well as engine, gearbox, drive axle, fuel tank, suspension, bracket and chassis components of traditional vehicles Wireless control with magnet pneumatic driven hydraulic pump, DC24V powering system, three-pin plug Suspended working table can tilt to the height of 40mm. Lower platform can move to the sides by 20mm. The working table can be extended by 325mm. Reserved holes (100 mm x 100 mm) on the working table for positioning and fixing components with specialized fixtures. The lifting table also features a dual-speed system for fast and precise lifting Four heavy-duty and abrasion-resisting casters with brakes Electrically released mechanical safety locking protection Larger base frame ensures better stability and reliability Reserved holes at both sides of the working table for fixing loads with proper straps Powder-coating surface ensure long time use without peeling off.

VDE Tools

All VDE tools are certified for safe work in electrical applications. Most technicians rarely work on high voltage circuits, but it is good practice to use these tools at all times when working on such systems. They prevent arcing, electric shock or electrocution in the event of human error when isolating a high-voltage battery or failure of the high-voltage power system itself.

IC Ref. No: SEA AK7938

50pc Insulated Tool Kit 3/8"Sq Drive 1000V



IC Ref. No: SEA AK7939

**Insulated Tool Kit
49pc 1/2"Sq Drive 1000V**

IC Ref. No: SEA STW803

**3/8"Sq Drive Calibrated Insulated
Micrometer Torque Wrench
12-60 Nm**



IC Ref. No: SEA STW804

**Calibrated 1/2"Sq Drive
Insulated Torque Wrench
12-60 Nm**

IC Ref. No: SEA STW805

**3/8"Sq Drive Calibrated Insulated
Micrometer Torque Wrench
5-25 Nm**



IC Ref. No: SEA AK83452

**3pc Pliers
Set - VDE Approved 1000 V**

IC Ref. No: SEA AK83455

**Combination Pliers
200mm 1000V**



IC Ref. No: SEA AK83454
Combination Pliers
150mm 1000V



IC Ref. No: SEA AK83456
160mm Long Nose Pliers
- VDE Approved 1000V



IC Ref. No: SEA AK83458
Side Cutters
160mm 1000V



IC Ref. No: SEA AK83459
Heavy-Duty Side Cutters
180mm 1000V



IC Ref. No: SEA AK83457
Long Nose Pliers 200mm
1000V



IC Ref. No: SEA AK6124
8pc Insulated
Screwdriver Set 1000 V



IC Ref. No: SEA AK6125
7pc Insulated
Screwdriver Set 1000 V



IC Ref. No: SEA S0756
7pc Insulated Screwdriver
Set 1000 V



IC Ref. No: SEA S01155
4pc Screwdriver Set
1000 V



IC Ref. No: SEA AK6128
13pc Interchangeable
Screwdriver Set - VDE
Approved 1000 V



IC Ref. No: SEA AK63171
7pc Insulated Open-End
Spanner Set 1000 V



IC Ref. No: SEA AK63172
18pc Insulated Open-End
Spanner Set 1000 V



IC Ref. No: SEA AK7177
6pc Insulated Extra-Long
Hex Key Set 1000 V



IC Ref. No: SEA AK7178
9pc Insulated Extra-Long
TRX-Star* Key Set 1000 V



IC Ref. No: SEA AK7942
9pc Insulated Socket Set
3/8" Sq Drive 1000V



IC Ref. No: SEA S01219
11pc Electrical VDE Tool
Kit 1000 V



IC Ref. No: SEA AK7940
Insulated Tool Kit
16pc 3/8"Sq Drive 1000V



IC Ref. No: SEA AK7941
Insulated Tool Kit
20pc 1/2"Sq Drive 1000V



IC Ref. No: SEA AK7910
Insulated Tool Kit
29pc 1000 V



IC Ref. No: SEA AK7945
Insulated Tool Kit
27pc 1000 V



IC Ref. No: 605003
50pc Insulated Tool Kit
1000 V



IC Ref. No: 007936240000
Tool kit for maintenance
and repair of hybrid and
electric vehicles



IC Ref. No: HAZ 150/27
27pc Insulated Tool Kit
1000 V



IC Ref. No: HAZ 150/43
43pc Insulated Tool Kit
1000 V



TRAININGS



Operation of vehicles with high voltage systems

German qualification (DGUV 209 093, qualification S1)

IN THIS TRAINING COURSE:

- you will acquire an S1 qualification for the basic operation of vehicles with high-voltage systems in Germany (certificate in German, additional certificate in Polish possible)
- you will learn how to prepare to operate an electric vehicle in terms of health and safety

and legal requirements.

- you will learn how to delegate responsibility between workers
- you will learn how to safely manage work on a high voltage vehicle

Electric vehicles - service procedures and safe maintenance

IN THIS TRAINING COURSE:

- you will learn about manufacturers' guidelines for safe work on vehicles with high-voltage systems
- you will learn what protective equipment you need to wear and the standards that protective equipment must meet
- you will learn what to do in the event of a fire, collision, explosion or flooding in a vehicle fitted with high voltage systems
- you will understand how to deactivate high voltage and about safety devices in a vehicle against electric shock
- you will learn how to safely transport, dismantle and handle components of a high voltage system

SEP (Association of Polish Electrical Eng.) qualification certificate for voltages up to 1kV

IN THIS TRAINING COURSE:

- you will obtain qualifications to work on electrical equipment
- you will learn the principles of safe work on electrical equipment
- you will learn about the structure of electrical networks and the resulting protection against electric shock
- you will learn the principle of selecting proper protection in electrical systems
- you will learn the principle of operation of residual-current circuit breakers
- you will learn the principles of first aid for an electrocuted person

Servicing and maintenance of EVs, 1 level

IN THIS TRAINING COURSE:

- you will learn to safely operate vehicles with high voltage systems
- you will learn how to deactivate the high voltage system correctly
- you will learn about the construction and operation of electric vehicles in theory and practice
- you will understand the construction of the main components such as the inverter, electric machine and high voltage battery
- you will learn how to charge electric vehicles using different types of chargers
- you will learn the operation of equipment necessary for maintenance of electric vehicles

Hybrid technology in motor vehicles

IN THIS TRAINING COURSE:

- you will learn to safely operate vehicles with high voltage systems
- you will learn how to deactivate the high voltage system correctly
- you will learn about the construction and operation of micro-hybrid and hybrid vehicles
- you will learn about the different types of hybrid drive systems and examples of their use based on specific vehicle examples
- you will disassemble the powertrain and inverter
- you will learn the operation of equipment necessary for maintenance of electric vehicles

A/C diagnostics and recharging stations

IC Ref. No: **TEX Z16451** **KONFORT 760 TOUCH** **(10" colour touchscreen)**

TECHNICAL DATA:

Works with: R1234yf
Conversion to R1234yf: ---
Operation mode: automatic / manual
Pump capacity: 100 l/min
Inner tank: 20 kg
Suitable for: passenger cars, trucks, agricultural, hybrids
Database: CAR
Oil management: manual / automatic (by weight)
UV management: automatic (by weight)
LP/HP valve control: automatic
Scales locking system: YES
Printer: YES



IC Ref. No: **S P00 000 175** **ACS 653-P (with printer)**

Technical Data:

Works with: R134a
Operation mode: automatic / manual
Pump capacity: 170 l/min
Inner tank: 16 kg
Suitable for: passenger cars, trucks, agricultural, hybrids
Database: CAR/TRUCK
Oil management: manual/automatic (by weight)
UV management: Automatic (by weight)
Valve control: LP/HP: automatic
Scales locking system: NO
Printer: OPTION/YES



IC Ref. No: **007936701030** **ALASKA EVO H**

Technical Data:

Works with: R1234yf
Conversion to R1234yf: ---
Operation mode: automatic / manual
Pump capacity: 50 l/min
Inner tank: 10 kg
Suitable for: passenger cars, trucks, agricultural
Database: CAR/TRUCK
Oil management: manual / automatic (by weight)
UV management: none
LP/HP valve control: automatic
Scales locking system: NONE
Printer: option



Oils and colours for A/C systems

PAG-OIL 46 UV 250ml

IC Ref. No: ER OL6006.Q.P2

PAG-OIL 100 UV 250ml

IC Ref. No: ER OL6008.Q.P2

PAG-OIL 125 UV 250ml

IC Ref. No: ER OL6045.Q.P2

PAG-OIL 150 UV 250ml

IC Ref. No: ER OL6010.Q.P2

A/C oil

PAG PREMIUM

+ UV (250 ml)

(for R134a, R1234yf, hybrid and electric vehicles)



PAG-OIL 46 UV 1000ml

IC Ref. No: ER OL6006.K.P2

PAG-OIL 100 UV 1000ml

IC Ref. No: ER OL6008.K.P2

PAG-OIL 150 UV 1000ml

IC Ref. No: ER OL6010.K.P2

A/C oil

PAG PREMIUM

+ UV (1000 ml)

(for R134a, R1234yf, hybrid and electric vehicles)



Container 250 ml

IC Ref. No: ER TR1003.01.S1

Container 1000 ml

IC Ref. No: ER TR1A03.01

Cartridge set (12pc x 7.5 ml)

IC Ref. No: ER TR1058.K1.P1

UV colour

(Contrast) A/C system leak detector
(for R134a, R1234yf, hybrid and electric vehicles)



PAG-OIL 46 250ml

IC Ref. No: ER OL6001.Q.P2

PAG-OIL 100 250ml

IC Ref. No: ER OL6003.Q.P2

PAG-OIL 125 250ml

IC Ref. No: ER OL6004.Q.P2

PAG-OIL 150 250ml

IC Ref. No: ER OL6005.Q.P2

A/C oil

PAG PREMIUM (250 ml)

(for R134a, R1234yf, hybrid and electric vehicles)



Diagnostic testers

IC Ref. No: **TEX D15510/PLUS/FCA/TICGD** Diagnostic tester **MULTIHUB CAR**

PC interface, software:
subscription/IDC5 PLUS - 12 months,
SGW FCA/TICGD - 12 months



IC Ref. No: **8PD 015 265-841** **mega macs X**

Innovative diagnostic solution
– fully customisable unparalleled flexibility

Mega macs X is the result of a complete rethink of what vehicle technicians really require, presented in such technical details as the cable channel and the magnetic surface that fixes the OBD plug in the correct position on the housing. The mega macs X is a compact device that, when not in use, can be easily placed on the charging station with inductive charger. During diagnosis, a green LED progress bar on the front and rear of the device confirms active communication with the vehicle. Other functions are signalled by partial illumination, the so-called Swoosh.

Mega macs X, with its various software modules X2/X3/X4, can access exactly the range of services that best suits the garage. If the situation changes, the user can easily modify his/her software module by selecting one of the three available X2/X3/X4 licences.



IC Ref. No: **0 684 400 622** **KTS 980**

A complete kit for wireless diagnostics: DCU 220 5 generation (WIN 10 PRO, 11.6" touch screen) with KTS 590 module, no software)



Oils and colours for A/C systems

PAG PREMIUM 250 ml

IC Ref. No: ER OL6057.Q.P2

A/C oil

PAG PREMIUM

(for refrigerant R134a, R1234yf, hybrid and electric vehicles)

Viscosity: 68



PAG-OIL 46 1000ml

IC Ref. No: ER OL6001.K.P2

PAG-OIL 100 1000ml

IC Ref. No: ER OL6003.K.P2

PAG-OIL 150 1000ml

IC Ref. No: ER OL6005.K.P2

A/C oil

PAG PREMIUM (1 litre)

(for R134a, R1234yf, hybrid and electric vehicles)



PAG-OIL 46 5000ml

IC Ref. No: ER OL6001.P.P2

PAG-OIL 100 5000ml

IC Ref. No: ER OL6003.P.P2

PAG-OIL 150 5000ml

IC Ref. No: ER OL6005.P.P2

A/C oil

PAG PREMIUM (5 litre)

(for R134a, R1234yf, hybrid and electric vehicles)



Container 250 ml

IC Ref. No: COOLMAX POE 100 250ML

Oil POE 100 HYBRID

for hybrid and electric vehicles



Container 250 ml

IC Ref. No: ER OL6033.Q.P2

Oil POE 100 HYBRID

for hybrid and electric vehicles



Cables for electric vehicles

Phoenix Contact

Founded in 1923, the company is today a leader in electrical connections and industrial automation. Practically from the beginning of the development of electromobility, it has been a leading manufacturer of cables, sockets, controllers, protection and accessories for the construction of charging stations. The current range of CHARX Connect products are world-class quality.



IC Ref. No: PHX1627131 3.7 kW, 1 -phase

IC Ref. No: PHX1627133 7.4 kW, 1 -phase

IC Ref. No: PHX1627135 11 kW, 3 -phase

IC Ref. No: PHX1627136 22 kW, 3 -phase

Cables spiral type 2 4m



IC Ref. No: PHX1623506 3.7 kW, 1 -phase

IC Ref. No: PHX1623507 7.4 kW, 1 -phase

IC Ref. No: PHX1623508 11 kW, 3 -phase

IC Ref. No: PHX1623509 22 kW, 3 -phase

Cables straight type 2 4m



IC Ref. No: PHX1627982 3.7 kW, 1 -phase

IC Ref. No: PHX1627801 7.4 kW, 1 -phase

IC Ref. No: PHX1628348 11 kW, 3 -phase

IC Ref. No: PHX1627692 22 kW, 3 -phase

Cables straight type 2 5m



IC Ref. No: PHX1097301 3.7 kW, 1 -phase

IC Ref. No: PHX1097306 7.4 kW, 1 -phase

IC Ref. No: PHX1097299 11 kW, 3 -phase

IC Ref. No: PHX1628125 22 kW, 3 -phase

Cables straight type 2 5m



7.4 kW **IC Ref. No: PHX1628198** 7 meters

IC Ref. No: PHX1628200 10 meters

11 kW **IC Ref. No: PHX1247580** 7 meters

IC Ref. No: PHX1247584 10 meters

IC Ref. No: PHX1627645 6 meters

IC Ref. No: PHX1628199 7 meters

22 kW **IC Ref. No: PHX1304027** 7.5 meters

IC Ref. No: PHX1627999 8 meters

IC Ref. No: PHX1628201 10 meters

Cables straight type 2 length 6-10 m



Phoenix Contact solutions for electromobility

AC charging stations (alternating current)



Ref. No EVB WALLBOX NANO AC

The smallest in size stations of up to 22 kW/3F in our range. Perfect for use in private homes or car parks in multi-family residential. The stations are equipped with three variants of Type2 connectors; socket or plug with 4.8 m straight or spiral cable.

Front of the station is made of Solid Surface® material with high resistance to environmental and mechanical damage. Free choice of colours and branding even when ordering just one piece. The station offers the possibility of balancing the power in the entire building so that maximum power can be allocated to charging when the power demand in the flats decreases.

- ⚡ Power up to 22 kW
- ⚡ 3 variants of type 2 connectors
- ⚡ Possibility of power balancing

Ref. No EVB WALLBOX 2M AC

AC is a small-sized, wall-mounted station with two charging points, each point can be individually configured according to individual needs.

The charger is very efficient due to the charging of two cars at the same time and can also be installed indoors, for example in company car parks or shopping centres. The station can be mounted in any required position, on a wall or on an adapted platform.

- ⚡ Power up to 22 kW
- ⚡ 3 variants of type 2 connectors
- ⚡ Perfect for a garage

Ref. No EVB 2M AC

The EVB 2M AC station is designed for domestic use or for specially designed locations. It is equipped with one or two charging points, the first socket is AC type-2 and the second is an AC charging cable with a vehicle charging plug type-1 or type-2.

Stations of this type are mounted on a reinforced concrete foundation to ensure maximum durability. There is also the possibility of an underground EVB - UG version, mounted in urban areas on a mobile, hydraulic platform.

- ⚡ Power up to 44 kW
- ⚡ 3 variants of type 2 connectors
- ⚡ Possible underground version

DC fast charging stations (direct current)



Ref. No EVB WALLBOX DC

The EVB Wallbox DC station can be configured as required. It has three charging points and can be wall-mounted or free-standing, mounted on a concrete base.

It is best suited to car parks, petrol stations and travel service areas for fast vehicle charging. The station is capable of charging at full power up to 30 kW, signalling the various stages of charging via LEDs.

- ⚡ Power up to 80 kW
- ⚡ 3 charging points
- ⚡ Perfect for car parks and petrol stations

Ref. No EVB POWER DC

EVB POWER DC is a type of super-fast, free-standing charger with AC/DC current, mounted on a dedicated plate or purpose-built reinforced foundation.

The station has one to three high-speed power outlets, with the possibility of freely selecting the power providing maximum time savings, thanks to high charging powers of up to 350 kW.

- ⚡ Power up to 350 kW
- ⚡ up to 3 charging points
- ⚡ Superfast charging

Ref. No EVB MAX ADVERT DC

The free-standing EVB max Advert DC is a super-fast charging station for an electric car, equipped with advertising media. Designed for places where you plan to charge your car quickly.

Equipped with any configuration from one to three charging outlets, with adjustable charging power (22 kW - 350 kW). The station is equipped with two multimedia screens of up to 60 inches on each side (electronic advertising surfaces), a digital display and a citylight. Aluminium profiles and tempered glass make it possible to arrange the station as desired. Optional upgrade with WiFi or monitoring

- ⚡ Power up to 350 kW
- ⚡ up to 3 charging points
- ⚡ Superfast charging
- ⚡ 60 inch multimedia screen

KEBA AG

founded in 1968, currently is an international electronics company with headquarters in Linz (Austria) and branches all over the world. It offers a wide range of wall-box electric charging stations that have gained worldwide recognition.

Wallboxes Made in Austria



4.7kW
cable type 1
RFID
98 158

IC Ref. No:
KC-P30-EC130112-00R



11kW
cable type 2
RFID
98 143

IC Ref. No:
KC-P30-EC220112-00R



22kW
Socket type 2
98 125

IC Ref. No:
KC-P30-ES240012-000

Series B



7.4kW
Socket type 2
120 280

IC Ref. No:
KC-P30-ES240031-000

NEW 2021



22kW
cable type 2
RFID
119 921

IC Ref. No:
KC-P30-ES240032-000

Series A



7.4kW
Socket type 2
RFID
120 284

IC Ref. No:
KC-P30-ES240031-00R

- adjustable power
- replaceable cover
- cable or type 2
socket
- colour
RAL 9010 (white)
RAL 7016 (grey)



22kW
Socket type 2
RFID
119 925

IC Ref. No:
KC-P30-ES240012-000

Series A



7.4kW
cable type 2
120 283

IC Ref. No:
KC-P30-EC240431-000



11kW
cable type 2
119 924

IC Ref. No:
KC-P30-EC220432-000



22kW
cable type 2
119 923

IC Ref. No:
KC-P30-EC240432-000

Series A



7.4kW
cable type 2
RFID
120 286

IC Ref. No:
KC-P30-EC240431-00R



11kW
cable type 2
RFID
119 928

IC Ref. No:
KC-P30-EC220432-00R



22kW
cable type 2
RFID
119 927

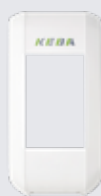
IC Ref. No:
KC-P30-EC240432-00R

Series A

Covers - design cover



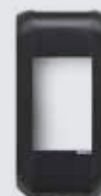
IC Ref. No: KC-P30-108354
White



IC Ref. No: KC-P30-120622
White for A series



IC Ref. No: KC-P30-108352
Grey



IC Ref. No: KC-P30-107544
Black

X and C series

possibility of creating networks with dynamic power-sharing devices on a master-slave basis

- UDP and TCP support
- OCPP support
- possibility of connecting with UTP cable via LSA+
- programmable display
- energy meter, optional MID certificate

+ X SERIES ADDITIONALLY:

- 4G LTE
- charging report generation
- support for external energy meters
- WLAN communication

- more information: eMobility@intercars.eu

Selected models



22kW
Socket type 2
98 101

IC Ref. No:
KC-P30-ES2400B2-E00



22kW
Socket type 2
energy meter
97 908

IC Ref. No:
KC-P30-ES240022-E00



22kW
Type 2 socket
energy meter
RFID, MID meter
WLAN/LTE4G
110 223

IC Ref. No:
KC-P30-ES2400E2-M0R



22kW
Socket type 2
RFID
98,102

IC Ref. No:
KC-P30-ES2400B2-E0R



22kW
Socket type 2
RFID, MID meter
102 636

IC Ref. No:
KC-P30-ES2400B2-M0R



22kW
Type 2 socket
energy meter
WLAN/LTE4G
109 651

IC Ref. No:
KC-P30-ES2400E2-E00



IC Ref. No: KC-P30-89735
1 device post



IC Ref. No: KC-P30-90786
2 device post



IC Ref. No: KC-P30-89986
Fitting kit



IC Ref. No: KC-P30-90234
Cable hanger

Charging cables for electric vehicles

HARTING Automotive

offers charging cables that meet all global standards. The range includes, among other things, AC charging cables; single-phase or three-phase. The range includes type 1 and type 2 charging cables.

Type 2 straight cables

	7.4 kW	11 kW	22 kW
2.5 meters	 <p>IC Ref. No: 08914090116A0</p>	 <p>IC Ref. No: 08914090114A0</p>	 <p>IC Ref. No: 08914090115A0</p>
5 meters	 <p>IC Ref. No: 08914090107A0</p>	 <p>IC Ref. No: 08914090105A0</p>	 <p>IC Ref. No: 08914090109A0</p>
7.5 meters	 <p>IC Ref. No: 08914090108A0</p>	 <p>IC Ref. No: 08914090106A0</p>	 <p>IC Ref. No: 08914090102A0</p>
	Type 1 cable	Charging station cables	
		11kW	22kW
5 meters	 <p>IC Ref. No: 08914090202A0</p>	 <p>IC Ref. No: 8803504444440A1</p>	 <p>IC Ref. No: 8813504444440A1</p>

EVSE wire devices

for charging electric vehicles and Plug-In hybrids

Power 2.3-11kW



Green Cell

IC Ref. No: EV16

Green Cell EV PowerCable 3.7kW

- adjustable power up to 3.7kW
- 1-phase charging
- Schuko plug
- 5 m type 2 cable
- LCD screen

IC Ref. No: EV17
Green Cell EV PowerCable 3.7kW

- adjustable power up to 3.7kW
- 1-phase charging
 - Schuko plug
- 5 m type 1 cable
- LCD screen



OSRAM

IC Ref. No: OSROPC20A05

BATTERYcharge 7PIN PORTABLE type 2 3.7kW

- adjustable power up to 3.7kW
- 1-phase charging
- Schuko plug
- 5 m type 2 cable
- LCD screen



IC Ref. No: OSROPC10A05
BATTERYcharge 5PIN PORTABLE type 1 3.7kW

- adjustable power up to 3.7kW
- 1-phase charging
 - Schuko plug
- 5 m type 1 cable
- LCD screen



EVSE wire devices

for charging electric vehicles and Plug-In hybrids

Power 2.3-11kW



IC Ref. No: AK-EC-12

Akyga CEE16 5pin Type2 LCD 16A 5m

- adjustable power up to 11 kW
- 3-phase charging
- CEE16 plug
- 5 m type 2 cable
- charging time limit setting 1-10h
- LCD screen

IC Ref. No: AK-EC-14
Akyga CEEblue 3pin Type2 LCD 32A

- adjustable power up to 7.4 kW
- 1-phase charging
- IEC 60309 3-pin socket
- 5 m type 2 cable
- charging time limit setting 1-10h
- LCD screen



IC Ref. No: AK-EC-15

Akyga CEEblue 32 3pin Type1 LCD 32A 5m

- adjustable power up to 7.4 kW
- 1-phase charging
- IEC 60309 3-pin socket
- 5 m type 1 cable
- charging time limit setting 1-10h
- LCD screen



Delphi
Technologies

IC Ref. No: PLV10003-12B1

1-phase charger 10A

- power 2.3kW
- 1-phase charging
- 230V Schuko plug
- 5m type 2 cable
- RCM type B



EVSE wire devices

for charging electric vehicles and Plug-In hybrids

Power 3.7-22kW

emone®



IC Ref. No: EMONE_AC_001

EMONE One 1-phase charger 16A

- power 3.7kW
- 230V Schuko plug
- 5m type 2 cable
- not detachable cables
- dimensions: 235 x 125 x 80 mm

IC Ref. No: EMONE_AC_002
EMONE One 1-phase charger 16A

- power 3.7kW
- 230V Schuko plug
- 5m type 2 cable
- WE/WY detachable cables
- dimensions: 235 x 125 x 80 mm



IC Ref. No: EMONE_AC_003

EMONE One 1-phase charger 32A

- power 7.4kW
- CEE32 plug with possibility of changing phases
- 5m type 2 cable
- type 2 detachable cable
- dimensions: 235 x 125 x 80 mm



IC Ref. No: EMONE_AC_005
EMONE Three 3-phase charger 16A

- Power 11kW
- CEE16 plug
- 5m type 2 cable
- not detachable cables
- dimensions: 290 x 200 x 110 mm



IC Ref. No: EMONE_AC_006

EMONE Three 3-phase charger 32A

- Power 22kW
- CEE32 plug
- 5m type 2 cable
- not detachable cables
- dimensions: 290 x 200 x 110 mm

COMMON FEATURES:

Network monitoring

- immediate load reduction upon detection of network overload

BatteryCare™

- battery balancing function, charging not to full, charging to full with battery protection against accelerated wear.

Updating

- the latest software updates by micro USB port.

2.8" touch screen

- monitoring of all parameters during charging

Made in Poland

Wallboxes 1.4-22 kW



IC Ref. No:
LA-32-3-S-0-C-50-GR-00

Lumina 22kW

NEW 2021

New generation Wallbox.
All below Lumina models
feature a RCMB protection,
Bridge network card, RFID,
and Schuko socket



IC Ref. No:
LA-32-3-B-0-C-50-GR-00



IC Ref. No:
LA-32-3-S-0-S-04-GR-00



IC Ref. No:
LA-32-3-X-0-S-04-GR-00



IC Ref. No:
LA-32-3-B-0-S-04-GR-00

MORE ABOUT
„ENELION LUMINA”



Wallbox Easy



IC Ref. No:
WE-32-3-S-0-S-03-H-00
CEE32 32A 22kW

Wallbox 22kW



IC Ref. No:
WB-32-3-B-5-S-04-0-00
Black 22kW RFID



IC Ref. No:
WB-32-3-S-5-S-04-0-00
Silver 22kW RFID

Wallbox DuoPower 2x22kW



IC Ref. No:
WE-16-3-S-0-S-03-T-00
CEE16 16A 11kW



IC Ref. No:
W2-32-3-B-0-S-04-R-00
Black 2x22kW RFID RCMB



IC Ref. No:
W2-32-3-S-0-S-04-R-00
Silver 2x22kW RFID RCMB

Stilo 22kW



IC Ref. No:
WE-16-1-S-0-S-03-K-00
Schuko 16A 3.7kW



IC Ref. No:
ST-32-3-B-7-C-50-0-00
Black 22kW 5m type 2 cable RFID



IC Ref. No:
ST-32-3-S-7-C-50-0-00
Silver 22kW 5m type 2 cable RFID

Enelion Vertica

Modular charging station in the form of an aluminium post with two slots for charging modules. These can be fitted with a socket or type 2 cable. The Vertica post can accommodate all the necessary safety features and a MID meter. This is the flagship model of the post charger that meets UDT requirements for use in public spaces.

Vertica configuration

- 1) Select type (Pole/Pole Duo), post colour (black or silver) and its equipment.
- 2) Select one or two modules. In case of one, use the blind: VERT2-TFPANEL1
- 3) Select mounting type: ready foundation or a fitting kit to settle in concrete.
- 4) You can order a complete set or individual elements. Optional installation service.

IC Ref. No: VM-32-3-X-8-C-41...

VERTICA MODULE CABLE

Available models with no equipment, or with Bridge card and/or RCMB monitor.



IC Ref. No: VM-32-3-X-8-S-04...

VERTICA MODULE SOCKET

Available models with no equipment, or with Bridge card and/or RCMB monitor.



IC Ref. No: VP-32-3-S-5-X-XX-....-LF-00

Vertica Pole 1x22kW

IC Ref. No: VP-32-3-S-5-X-XX-....-L-00

Vertica Pole Duo 2x22kW



IC Ref. No: VERT2-PREFOUND1

Concrete foundation

- contains VERT2-SETFOUND1

IC Ref. No: VERT2-SETFOUND1

A kit for fitting in concrete

Protection and communication

Also fit other Enelion models.

If you need assistance in selecting components, please contact us at eMobility@intercars.eu



IC Ref. No: E-RCDA RCD type A protection



IC Ref. No: E-MID3F Energy meter with certificate MID



IC Ref. No: AKC-RCD-100 Module RCM type B, 6mA

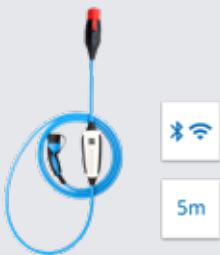
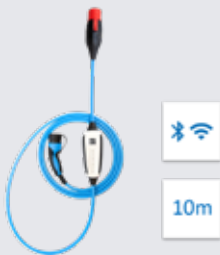




IC Ref. No: AKC-COM Network card Bridge



The second generation of the most advanced mobile device for charging EVSE electric vehicles. New for 2021, constantly produced in Austria. Only for vehicles with type 2 sockets

Mobile devices NRGkick 2.0 type 2

	5 meters	7.5 meters	10 meters
22 kW Wi-Fi, Bluetooth	 IC Ref. No: NRG12501001	 IC Ref. No: NRG12701001	 IC Ref. No: NRG12101001
22 kW Wi-Fi, Bluetooth, GSM, GPS	 IC Ref. No: NRG12601001	 IC Ref. No: NRG12801001	 IC Ref. No: NRG12201001
Optimal Set (WiFi, BT)	 IC Ref. No: NRG12501061	 IC Ref. No: NRG12701061	Both kits contain a bag and a set of adaptors

Smart Attachment adaptors and accessories

 IC Ref. No: NRG20001001 CEE32	 IC Ref. No: NRG20001004 CEEblue 16A	 IC Ref. No: NRG20001006 Type 2	 IC Ref. No: NRG20001053 Adapter set
 IC Ref. No: NRG20001003 CEE16	 IC Ref. No: NRG20001005 Schuko 230V	 IC Ref. No: NRG20001007 Bag	 IC Ref. No: NRG20001008 Dedicated 16A socket



A portable device for charging your electric vehicle at home and on the go. NRGkick Classic is a series of innovative AC plug-in vehicle charging devices.

Mobile devices NRGkick Classic type 1

3.7 kW CEE16

5m type 1 cable,
no communication



IC Ref. No: NRG20226

7.4 kW CEE32



IC Ref. No: NRG20228

3.7 kW CEE16

5m type 1 cable,
WiFi, Bluetooth



IC Ref. No: NRG20227

7.4 kW CEE32



IC Ref. No: NRG20229

Power adapters and accessories



IC Ref. No: NRG20210
NRGkick Connect
WiFi module
for photovoltaics

16A



IC Ref. No: NRG20203
Schuko-CEE16

32A



IC Ref. No: NRG20201
Schuko-CEE32



IC Ref. No: NRG20001007
NRGkick Bag
Bag for device
and adapters



IC Ref. No: NRG20204
CEEblue 16A-CEE16



IC Ref. No: NRG20208
CEEblue 16A-CEE32

HANDBOOK FOR
NRGKICK CLASSIC



IC Ref. No: NRG20207
Set 16A-CEE16

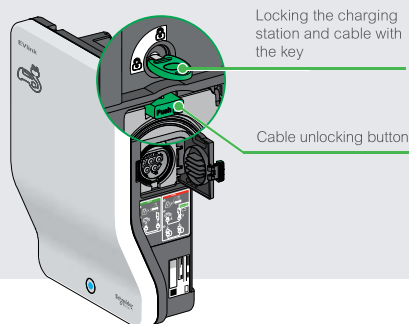


IC Ref. No: NRG20209
CEE16-CEE32

Wallboxes EVLink 3.7kW

According to the current law, a charging station which is a subject to UDT inspection is "a building facility comprising at least one normal-power charging outlet (up to 22 kW in the case of a general-purpose station and above 3.7 kW up to 22 kW in the case of a station other than a general-purpose station) or a high-power charging outlet, (above 22 kW), associated with a building facility". This means that garage equipment up to 3.7kW is not a subject to UDT inspections.

All wallboxes in the series are equipped with a key-operated charging lock and an upper housing 'fin' as a cable hanger. In case of damage, the chargers have replaceable housings.



IC Ref. No: EVH2S3P02K

EVlink Wallbox - 3.7 kW - T2 socket outlet

Socket type 2

Suggested cable type2-type2

LAPP Cable

5555931012



IC Ref. No: EVH2S3P0CK

EVlink Wallbox - 3.7 kW - T2 attached cable

cable type 2 LAPP Cable



IC Ref. No: EVH2S3P0AK

EVlink Wallbox - 3.7 kW - T1 attached cable

cable type 1

Currently the cheapest wallboxes in InterCars product range

- check that a branded charger does not have to be expensive - see the prices in our catalogue!

More information: eMobility@intercars.eu

Charging accessories

General purpose charging accessories; for cables, charging equipment, and transport.

Type 2 holders



IC Ref. No: EMONE_U1417
EMONE



IC Ref. No: PHX1624148
Phoenix Contact



IC Ref. No: 6113213040100
Harting



IC Ref. No: AK-SC-E01
Akyga

Type 1 holders



IC Ref. No: EMONE_U1420
EMONE



IC Ref. No: PHX1624139
Phoenix Contact

Holder CCS type 2



IC Ref. No: PHX1624153
Phoenix Contact

Cable bags



IC Ref. No:
EMONE_POKROWIEC_AC
EMONE



IC Ref. No: CP40401
CarPassion



IC Ref. No: CP40100
CarPassion



IC Ref. No: AK-AC-02
Akyga

Phoenix Contact charging station socket



IC Ref. No: PHX1164423
Socket 2.0 type 2 LED



IC Ref. No: PHX1164417
Socket 2.0 type 2



IC Ref. No: PHX1164365
PHX1164362
Socket cable



IC Ref. No: PHX1405217
Socket type 2 cover