








ROSE









A Phoenix Mecano Company



INDUSTRIAL ENCLOSURES CATALOGUE _____

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Since 1969 ROSE Systemtechnik is well known for their robust and innovative industrial enclosures. Nowadays the company is not only one of the leading suppliers for enclosures but also when it comes to individual solutions. We can maintain a leading position on today's world market thanks to over 2,190 reliable employees.

Our products are made to protect sensitive built-in components against External influences, they are found in many different industries such as: railway- and traffic engineering, machine- and plant construction, automation engineering, potentially Explosive atmospheres, measurement- and control technology as well as the food and beverage industry.

The 37,000 m² site in Porta Westfalica is home to the headquarters with around 350 employees who work in production, sales, marketing and development. In addition to the site on the edge of the Wiehengebirge, ROSE Systemtechnik has another plant in Finow. Industrial and control enclosures, device carriers and accessories are assembled there. The development and production of our HMI solutions is located in Hohenlockstedt.

Alongside a wide variety of industrial enclosures, HMI Panel-PCs and Ex proof enclosures, ROSE Systemtechnik offers unmatched services, that also provide tailor-made solutions.

ROSE Systemtechnik sticks out in all categories thanks to our Extensive service. Enclosures made of aluminium, polyester, polycarbonate, ABS and stainless steel belong to our integrated system solutions. Just as the assembly with i. e. cable glands or terminal blocks and customer specific surface finishing as well as packaging and detailed security tests.

Regarding special requirements, we also develop tailor-made special enclosures in close contact with the customer.





Overview of our services:

Machining:

- > Milling
- > Drilling
- > Thread cutting
- > Backwards cutting
- > Engraving
- > Laser machining



Surface engineering:

- > Painting
- > Printing
- > Special coating
- > Blasting
- > Cleaning
- > Passivation
- > Powder coating
- > Screen printing
- > Pad printing



Equipment:

- > Cable glands
- > Terminal blocks
- > Mounting plates
- > Membrane keyboards and electrical inspection
- > Wiring
- > Circuit board assembly



Mounting of HMI Solutions:

- > Unpacking
- > Assembly and fitting
- > Briefing employees at your location
- > Adjusting already existing systems
- > Leaving a spotless workplace
- > Disposal of packaging material



Laboratory:

- > IP protection class test
- > IK impact tests
- > Protection class test according to DIN EN 60529
- > Impact tests according to EN 62262
- > Heat and climate tests according to IEC 60079



Traffic engineering

Enclosure solutions for traffic engineering

Traffic engineering includes transportation of people and goods

- > on the street
- > on the rails
- > on water
- > in the air

Sensitive electronics from traffic engineering or traffic guidance systems are safely protected by innovative and robust industrial enclosures from ROSE Systemtechnik. Traffic engineering has very high requirements towards our products. As they are often exposed to extreme weather conditions such as

- > Corrosion
- > Vibrations
- > Stone impacts
- > Varying temperatures
- > Strong pollution

We partake to a functioning infrastructure in this sector with our special industrial enclosures, because traffic engineering connects people and supports globalisation due to freight trafficking.



eMobility

Enclosure solutions for eMobility

We need to have a more sustainable way of dealing with our environment to fight against climate change in the best possible way. Emissions can be lowered with electric cars to path the way into a more climate friendly mobility solution. That's why ROSE Systemtechnik supports this sector with the following products:

- > Charging stations
- > Wall boxes
- > Special enclosures
- > High Voltage Power Distribution Units
- > Housing for batteries

Our charging stations and wall boxes define themselves with the following attributes:

- > Withstanding environmental stress
- > Made of aluminium
- > Can be equipped with up to two charging sockets
- > Can be designed individually according to customer requirements

Especially our wall boxes are best suited for personal use at home. They can transfer about 22 kW into the car with the appropriate installations. Which means that even at home aggregates can be charged within a short amount of time. ROSE offers different variations of wall boxes within this sector, which all have their own advantages, not only aluminium but also stainless steel and polyester wall boxes can be the perfect solution for private usage.



Automotive

Enclosure solutions for the automotive industry

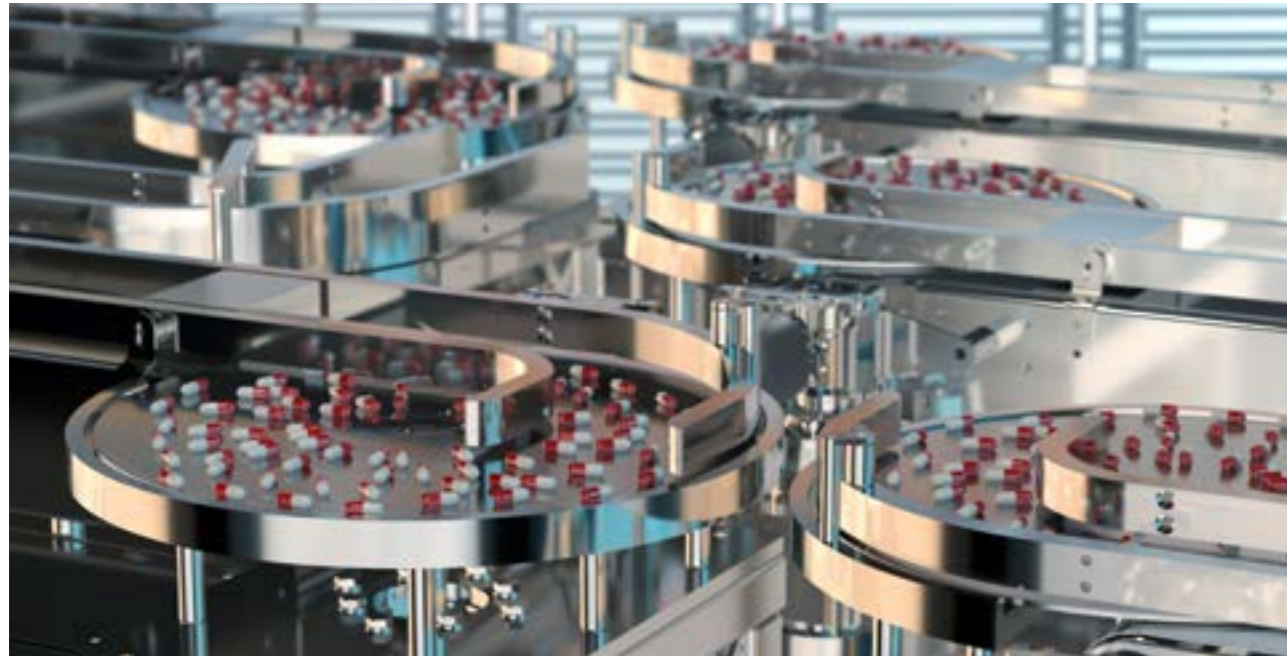
Assembly lines in the automotive industry are leading when it comes to all things regarding automation and advancements. Currently this sector is facing several challenges:

- > eMobility
- > Digitization
- > Shorter model cycles

However, the manufacturers of the required production equipment must also meet the frequently changing trends in the automotive industry. Because the machine- and plant construction sector must deal with way more than just fair market prices. That's why we at ROSE not only offer industrial-, operating-, and display enclosures as well as support arm systems with a high-quality standard but moreover:

- > Comprehensive technical know how
- > Fast reaction- and responding times
- > Short delivery times
- > Reliability
- > Flexibility

ROSE offers a new product line called HMI Solutions which combines different IPC products with our established control enclosures and support arm systems. That is why we also offer complete solutions for machine and plant construction in addition to the distributor housings.



Chemistry

Enclosure solutions for the chemistry industry

There is a high fire hazard during the conversion from natural raw materials into synthetic material, as many chemicals are easily flammable and sensitive to mechanical exposure. That's why sparks and discharge from electrical components needs to be shielded while simultaneously protecting them from intrusion through corrosive materials. This especially affects industrial sectors like:

- > Synthetic industry
- > Food industry
- > Automotive industry
- > Machine and plant construction

Stainless steel Ex enclosures from ROSE Systemtechnik guarantee a safe containment of

- > Electrical distribution systems
- > Devices
- > Built in components
- > Small parts

We are specialised in Ex projects for many years and offer custom-made enclosure solutions in this area.



Oil and gas

Industry solutions for the Oil- and gas industry

Natural and combustible gases as well as flammable liquids, such as gasoline or oil, are often pumped in areas with Extreme ambient temperatures. Particularly safe enclosures are needed to protect the environment from pollution caused by ignition. ROSE produces different kinds of enclosures in various types for that use.

- > Terminal enclosures
- > Control enclosures
- > Display enclosures
- > Operating enclosures

These are used in both onshore and offshore applications. There are certain criteria you must consider when choosing an Ex product:

- > Zone
- > Temperature resistance
- > Dust or gas atmosphere
- > Location
- > Size
- > Protective function

ROSE Systemtechnik also offers a wide range of applications made of stainless steel, polyester, polycarbonate or aluminium for the various types of ignition protection.



Machine and plant construction

Industry solutions for the machine- and plant construction

More machines are needed to produce goods to meet the increasing demands of a steadily rising world population. ROSE Systemtechnik offers different industrial enclosures for automation processes. We also support our customers in machine- and plant construction with custom-made enclosure concepts and excellent service. We score particularly well with:

- > Innovation
- > Reliability
- > Swiftness
- > Flexibility

Depending on the application machines and plants may need to withstand heavy exterior impact. In the food industry as an example:

- > Chemical cleaning
- > Water
- > Food residues

That's why industrial enclosures and system solutions from ROSE Systemtechnik are extremely durable and easy to maintain. Built in components are interchangeable at any time.



Agricultural technology

Industry solutions for agricultural technology

Almost 10% of earth's surface is used agriculturally. The vehicles used are becoming more digitalized. Drones and radio-controlled agricultural machinery with sensitive electronics are being used to make arable farming even more efficient. Technicians and engineers like to speak of Smart-Farming-Systems.

- > Sensor technology
- > Satellite based GPS orientation
- > Robot technologies

ROSE Systemtechnik enclosures made of aluminium, stainless steel or polyester can protect any kind of electrical fittings with protection classes up to IP 69K against

- > Vibrations
- > Water
- > Dust
- > Acids

Additionally, they reliably shield from electromagnetic interference and are especially shock-proof. Quick maintenance of the machines is assured through easy handling.



Wind energy

Industry solutions for wind turbines

Power generation through wind energy is set to be the most important source of renewable energy in the future. Wind turbines are mainly placed

- > on fields
- > in the ocean
- > at lakes

Customized enclosures from ROSE Sytemtechnik are installed on the inside and outside of wind turbines to protect electronics. They need to withstand strong vibrations and caused by the movement of the rotor blades and be impact resistant due to possible collision. A special coating protects against:

- > Lubricating oil
- > Gasoline
- > Salt and seawater
- > Fertilizer

Terminal boxes made of aluminium are being installed in maintenance platforms as an example. Offshore plants need to use special stainless steel enclosures due to corrosion resistance.



Shipbuilding

Industry solutions for shipbuilding

90% of goods worldwide are being transported via ships. Which makes shipbuilding mandatory for globalisation. In addition, there are markets for ferries, yachts and cruise ships. Parts are exposed to especially strong weather conditions due to water and wind.

- > Saltwater
- > Varying temperatures
- > Wind
- > Swell

Control stations made of stainless steel and distribution boxes made of aluminium from ROSE Systemtechnik are used in numerous ships. Our enclosures receive a special coating against corrosion which makes them not only weather-proof but also protects them against:

- > Oil and grease
- > Fuels
- > Brine
- > Detergent

We offer enclosures in individual sizes and shapes. Certificates from the American Bureau of Shipment, Lloyds Register of Shipping and Maritime Register of Shipping show, that our products meet the high expectations from the nautical industry.



Vehicle construction

Industry solutions for construction vehicles

Construction vehicles are massive, that's why they need a strong power unit. This sector currently goes through a turnaround when it comes to motorisation. From old diesel engines to environmentally friendly eMobility that's the current agenda for the manufactures of construction vehicles. The benefits gained from this are remarkable:

- > Due to high braking energy vehicles can charge themselves.
- > Considerable reduction of diesel usage and CO² emissions.
- > The vehicles are almost silent.
- > Maintenance costs are lower.
- > There are no restrictions due to environmental zones.

We produce high-voltage distributors as a central link between aggregates, batteries and E-Motors, to assist manufacturers on their way to eMobility. Power distribution units from ROSE Systemchnik are characterized by

- > Reliability
- > Quality
- > Flexibility
- > High IP protection class

Our competent solution team consisting of designers and engineers will develop a suiting special enclosure, should your HVDU-solution not fit with our standard enclosure.

Application



> Aluminium Standard

Aluminium enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Robust aluminium enclosure for mechanical engineering and automation technology
- + Fastening options for mounting rails and mounting plates
- + Applicable in wide temperature ranges



Technical data

Material:	DIN EN 1706 AC-AISI12 (Fe) DIN EN 1706 AC - AISI12 (a)
Surface:	Powder coating, silk gloss structure
Colour:	RAL 7001, silver-grey Special paint finish on request
Ingress protection:	IP66 according to EN 60529
Impact resistance:	IK09 according to DIN EN 60068-2-75
Temperature resistance:	PU (polyurethane) seal (standard): -40 °C to +80 °C CR (chloroprene) seal (optional): -30 °C to +90 °C VMQ (silicone) seal (optional): -60 °C to +175 °C EMC (silicone) seal (optional): -55 °C to +125 °C



3-D data
and drawings

Included in delivery

Aluminium enclosure consisting of lid, seal, incl. captive +/- stainless steel screws, bottom part with 2 or 4 earthing screws

> Aluminium Standard

Aluminium enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Product overview

Standard enclosure Order no.	W x L x H (mm)	Mounting rails for terminals	Earthing rails Clamping piece	Mounting plates Thickness in mm	External fixing brackets Pair	External hinges Pair	Hinges inside Pair	Turning latchlock
		1)	1)	1)	2)	3) 4)	2) 4)	4)
01 05 05 03 0	45 x 50 x 30							
01 06 06 03 0	64 x 58 x 34							
01 06 10 03 0	64 x 98 x 34	*						
01 06 12 00 0	64 x 115 x 34	*						
01 06 19 00 0	64 x 185 x 34	*						
01 06 15 03 0	64 x 150 x 34	*						
01 06 19 03 0	64 x 185 x 34	*						
01 08 08 06 0	80 x 75 x 57	*		1,5	*			
01 08 13 06 0	80 x 125 x 57	*		1,5	*			
01 08 18 06 0	80 x 175 x 57	*		1,5	*			
01 08 25 05 0	80 x 250 x 52	*			*			
01 10 10 08 0	100 x 100 x 81	*		1,5	*	*		
01 10 16 08 0	100 x 160 x 81	*		1,5	*	*		
01 10 20 08 0	100 x 200 x 81	*		1,5	*	*		
01 12 12 08 0	120 x 122 x 81	*	6	1,5	*	*		
01 12 12 09 0	120 x 122 x 91	*	6	1,5	*	*		
01 12 22 08 0	120 x 220 x 81	*	13	1,5	*	*		
01 12 22 09 0	120 x 220 x 91	*	13	1,5	*	*		
01 12 22 12 0	120 x 220 x 118	*	13	1,5	*	*		
01 12 36 08 0	120 x 360 x 81	*	23	1,5	*	*		
01 14 14 09 0	140 x 140 x 91	*	6	1,5	*	*		
01 14 20 09 0	140 x 200 x 91	*	11	1,5	*	*		*
01 16 16 09 0	160 x 160 x 91	*	8	1,5	*	*	*	*
01 16 26 09 0	160 x 260 x 91	*	16	1,5	*	*	*	*
01 16 26 16 0	160 x 260 x 160	*	16	1,5	*	*	*	*
01 16 36 09 0	160 x 360 x 91	*	23	1,5	*	*	*	*
01 16 56 09 0	160 x 560 x 91	*	36	2,0	*	*	*	*
01 18 18 10 0	180 x 180 x 101	*	8	1,5	*	*	*	*
01 18 28 10 0	180 x 280 x 101	*	17	1,5	*	*	*	*
01 23 10 11 0	230 x 100 x 111	*	13	1,5	*	*	*	*
01 23 20 11 0	232 x 202 x 111	*	10	1,5	*	*	*	*
01 23 20 18 0	232 x 202 x 181	*	10	1,5	*	*	*	*
01 23 28 11 0	230 x 280 x 111	*	16	1,5	*	*	*	*
01 23 33 11 0	230 x 330 x 111	*	21	1,5	*	*	*	*
01 23 33 18 0	230 x 330 x 181	*	21	1,5	*	*	*	*
01 23 40 11 0	230 x 400 x 111	*	25	2	*	*	*	*
01 23 40 18 0	230 x 400 x 181	*	25	2	*	*	*	*
01 23 40 23 0	230 x 400 x 225	*	25	2	*	*	*	*
01 23 60 11 0	230 x 600 x 111	*	40	2	*	*	*	*
01 31 40 11 0	313 x 404 x 111	*	25	2	*	*	*	*
01 31 40 14 0	312 x 403 x 141	*	25	2	*	*	*	*
01 31 40 18 0	313 x 404 x 181	*	25	2	*	*	*	*
01 31 40 23 0	313 x 404 x 227	*	25	2	*	*	*	*
01 31 60 11 0	310 x 600 x 111	*	40	2	*	*	*	*
01 31 60 18 0	310 x 600 x 181	*	40	2	*	*	*	*
01 60 60 20 0	600 x 600 x 202	*		2,5				

1) Galvanised sheet steel, 2) Stainless steel, 3) Die-cast aluminium, 4) Please state installation side A-D when ordering.

> Aluminium Standard

Aluminium enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Accessories



External mounting brackets
(Set = 4 pieces)

Order no.	for enclosures
10 03 11 01 0	01 08 08 06 0 - 01 10 20 08 0
10 03 11 02 0	01 12 12 08 0 - 01 31 60 18 0



External hinges
Swivel range 150
(Set = 2 pieces)
Order no. 10 02 70 01 0



Internal hinges
Swivel range 150
(Set = 2 pieces)
Order no. 10 02 20 01 0

> Aluform

Aluminium enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Applications





- + Aluminium die-cast enclosure for I&C and automation technology
- + Prepared to accommodate front foils and membrane keypads
- + Rectangular dome arrangement in the lid and lower part



Technical data

Material:	DIN EN 1706 AC-AISI12 (Fe)
Surface:	Powder coating, fine structure matt
Colour:	RAL 7038, agate grey Special lacquering on request
Protection class:	IP66 according to EN 60529 Higher protection class on request
Impact resistance:	IK09 according to DIN EN 60068-2-75
Temperature resistance:	PU (polyurethane) seal (standard): -40 °C to +80 °C CR (chloroprene) seal (optional): -40 °C to +90 °C VMQ (silicone) seal (optional): -60 °C to +175 °C EMC (silicone) seal (optional): -55 °C to +125 °C



3-D data
and drawings

Included in delivery

Die-cast aluminium enclosure consisting of lid, seal, incl. captive +/- stainless steel screws, lower part with 4 earthing screws.

Product overview

Order no.	W x L x H (mm)	Mounting plates	Mounting rails TS 15	Mounting rails TS 35	External fastening stays (pair)
04 08 08 08 0	80 x 80 x 81	10 01 10 60 0	10 06 10 03 0		
04 08 12 05 0	80 x 120 x 51	10 01 10 61 0			04 00 00 80 0
04 08 12 08 0	80 x 120 x 81	10 01 10 61 0	10 06 10 50 0		04 00 00 80 0
04 10 10 06 0	100 x 100 x 61	10 01 10 31 0	10 06 10 07 0	10 06 14 71 0	04 00 01 00 0
04 10 16 06 0	100 x 160 x 61	10 01 10 32 0	10 06 10 08 0	10 06 14 72 0	04 00 01 00 0
04 10 20 06 0	100 x 200 x 61	10 01 10 33 0	10 06 10 09 0	10 06 14 73 0	04 00 01 00 0
04 12 12 08 0	120 x 120 x 81	10 01 10 62 0	10 06 10 50 0	10 06 14 83 0	04 00 01 20 0
04 12 16 08 0	120 x 160 x 81	10 01 10 63 0	10 06 10 08 0	10 06 14 72 0	04 00 01 20 0
04 14 14 07 0	140 x 140 x 71	10 01 10 34 0	10 06 10 44 0	10 06 14 74 0	04 00 01 40 0
04 14 18 07 0	140 x 180 x 71	10 01 10 35 0	10 06 10 05 0	10 06 14 75 0	04 00 01 40 0
04 14 22 07 0	140 x 220 x 72	10 01 10 36 0	10 06 10 46 0	10 06 14 76 0	04 00 01 40 0
04 15 18 08 0	150 x 180 x 81	10 01 10 70 0	on request	on request	
04 16 16 08 0	160 x 160 x 81	10 01 10 64 0	10 06 10 08 0	10 06 14 72 0	04 00 01 60 0
04 16 24 08 0	160 x 240 x 81	10 01 10 65 0	10 06 10 51 0	10 06 14 84 0	04 00 01 60 0
04 20 20 07 0	200 x 200 x 72	10 01 10 37 0	10 06 10 09 0	10 06 14 73 0	04 00 02 00 0
04 20 28 07 0	200 x 280 x 72	10 01 10 59 0	10 06 10 48 0	10 06 14 81 0	04 00 02 00 0
04 28 28 11 0	280 x 280 x 111	10 01 10 71 0	10 06 10 48 0	10 06 14 81 0	

Accessories

Order no.	Mounting rails for terminals		Mounting plates 1)	External fastening bars Pair	Aluminium External hinges Pair	EMC Shielding	SWB/SBG/SBGL Corrosion protection	HEXagon socket cover screws	Silicone lid seal	Sealable Steel cover screws	Cover retaining strap
	TS 15 ⁵⁾	TS 35 ⁵⁾									
04 08 08 08 0	*	*	*	*	*	*	*	*	*	*	*
04 08 12 05 0	*	*	*	*	*	*	*	*	*	*	*
04 08 12 08 0	*	*	*	*	*	*	*	*	*	*	*
04 10 10 06 0	*	*	*	*	*	*	*	*	*	*	*
04 10 16 06 0	*	*	*	*	*	*	*	*	*	*	*
04 10 20 06 0	*	*	*	*	*	*	*	*	*	*	*
04 12 12 08 0	*	*	*	*	*	*	*	*	*	*	*
04 12 16 08 0	*	*	*	*	*	*	*	*	*	*	*
04 14 14 07 0	*	*	*	*	*	*	*	*	*	*	*
04 14 18 07 0	*	*	*	*	*	*	*	*	*	*	*
04 14 22 07 0	*	*	*	*	*	*	*	*	*	*	*
04 15 18 08 0	*	*	*	*	*	*	*	*	*	*	*
04 16 16 08 0	*	*	*	*	*	*	*	*	*	*	*
04 16 24 08 0	*	*	*	*	*	*	*	*	*	*	*
04 20 20 07 0	*	*	*	*	*	*	*	*	*	*	*
04 20 28 07 0	*	*	*	*	*	*	*	*	*	*	*
04 28 28 11 0	*	*	*	*	*	*	*	*	*	*	*

1) Hard paper, 2) Non-rusting steel, 3) Die-cast aluminium, 4) Please state installation side A-D when ordering, 5) Galvanised sheet steel

> Aluform

Aluminium enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Accessories



External fastening bars (set = 2 pieces)

For fastening the enclosures without cover opening

Order no.	for type	Order no.	for type
04 00 01 00 0	04 10 10 06 0	04 00 01 40 0	04 14 22 07 0
04 00 01 00 0	04 10 16 06 0	04 00 01 60 0	04 16 16 08 0
04 00 01 00 0	04 10 20 06 0	04 00 01 60 0	04 16 24 08 0
04 00 01 20 0	04 12 12 08 0	04 00 02 00 0	04 20 20 07 0
04 00 01 20 0	04 12 16 08 0	04 00 02 00 0	04 20 28 07 0
04 00 01 40 0	04 14 14 07 0		



Desk holder

For upgrading the Aluform enclosure to a multifunctional operating terminal Wall or table mounting

Material Sheet steel; powder coating, RAL 7030, stone grey

Order no.	Wide	for type
04 30 00 09 0	98 mm	04 10 10 06 0 04 10 16 06 0 04 10 20 06 0
04 30 00 14 0	138 mm	04 14 14 07 0 04 14 18 07 0 04 14 22 07 0



External hinges (Set = 2 pieces)

Order no. 04 00 00 10 0



Lid safety strip (Set = 2 pieces)

Order no. 04 00 00 20 0

Attention: Machining of the lower part is required for installation. Only possible on side C or D.

> Polyester Standard

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Applications



> Polyester Standard

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



+ Robust plastic enclosure for automation technology and mechanical engineering

+ Fastening options for mounting rails and mounting plates

+ Universal construction



Technical data

Material:	glass-fibre reinforced, thermoset polyester
Colour:	RAL 7000, squirrel grey
Protection class:	IP66 according to EN 60529
Impact resistance:	from IK07-IK09 according to DIN EN 60068-2-75
Surface resistance:	>10 ¹² Ohm, IEC 60093
Flammability:	VO/self-Extinguishing, UL 94
Insulation:	Fully insulated according to VDE 0100
Disruptive strength:	18 KV/mm, IEC 60243-1
Toxicity:	halogen-free
Temperatur range:	CR (chloroprene) seal (standard): -30°C to +90°C VMQ (silicone) seal (optional): -60°C to +165°C

Included in delivery

Polyester enclosure consisting of cover, seal, incl. captive +/- stainless steel screws, lower part with 2 or 4 earthing screws.



3-D data and drawings

> Polyester Standard

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Product overview

Order no.	W x L x H (mm)	Order no.	W x L x H (mm)
02 06 06 03 0	55 x 55 x 37	02 12 22 09 0	120 x 220 x 91
02 06 06 06 0	55 x 55 x 59	02 16 16 09 0	160 x 160 x 91
02 08 08 06 0	75 x 80 x 56	02 16 26 09 0	160 x 260 x 91
02 08 08 08 0	75 x 80 x 75	02 16 36 09 0	160 x 360 x 91
02 08 11 06 0	75 x 110 x 56	02 16 56 09 0	160 x 560 x 91
02 08 11 08 0	75 x 110 x 75	02 25 26 12 0	250 x 255 x 121
02 08 16 06 0	75 x 160 x 56	02 25 26 16 0	250 x 255 x 161
02 08 16 08 0	75 x 160 x 75	02 25 40 12 0	250 x 400 x 121
02 08 19 06 0	75 x 190 x 56	02 25 40 16 0	250 x 400 x 161
02 08 19 08 0	75 x 190 x 75	02 25 60 12 0	250 x 600 x 121
02 08 23 06 0	75 x 230 x 56	02 36 36 09 0	360 x 360 x 91
02 08 23 08 0	75 x 230 x 75	02 41 40 12 0	405 x 400 x 121
02 10 32 08 0	100 x 320 x 81	02 41 40 20 0	406 x 401 x 201
02 12 12 09 0	120 x 122 x 91		

Accessories

Order no.	Mounting rails for terminals		External fixing lugs Set	Aluminium External hinges	Hexagon socket cover screws	Silicone lid seal	Sealable lid screws	EMC version
	TS 15	TS 35						
02 06 06 03 0								
02 06 06 06 0								
02 08 08 06 0	*		2 ⁴⁾	*	*	*	*	*
02 08 08 08 0	*		2 ⁴⁾	*	*	*	*	*
02 08 11 06 0	*		2 ⁴⁾	*	*	*	*	*
02 08 11 08 0	*		2 ⁴⁾	*	*	*	*	*
02 08 16 06 0	*		2 ⁴⁾	*	*	*	*	*
02 08 16 08 0	*		2 ⁴⁾	*	*	*	*	*
02 08 19 06 0	*		2 ⁴⁾	*	*	*	*	*
02 08 19 08 0	*		2 ⁴⁾	*	*	*	*	*
02 08 23 06 0	*			*	*	*	*	*
02 08 23 08 0	*			*	*	*	*	*
02 10 32 08 0	*		1,5 ¹⁾	*	*	*	*	*
02 12 12 09 0	*		1,5 ¹⁾	*	*	*	*	*
02 12 22 09 0	*		1,5 ¹⁾	*	*	*	*	*
02 16 16 09 0	*		1,5 ¹⁾	*	*	*	*	*
02 16 26 09 0	*		1,5 ¹⁾	*	*	*	*	*
02 16 36 09 0	*		1,5 ¹⁾	*	*	*	*	*
02 16 56 09 0	*		2 ¹⁾	*	*	*	*	*
02 25 26 12 0	*		2 ¹⁾	*	*	*	*	*
02 25 26 16 0	*		2 ¹⁾	*	*	*	*	*
02 25 40 12 0	*		2 ¹⁾	*	*	*	*	*
02 25 40 16 0	*		2 ¹⁾	*	*	*	*	*
02 25 60 12 0	*		2 ¹⁾	*	*	*	*	*
02 36 36 09 0	*		2 ¹⁾	*	*	*	*	*
02 41 40 12 0	*		2 ¹⁾	*	*	*	*	*
02 41 40 20 0	*		2 ¹⁾	*	*	*	*	*

¹⁾ Galvanised sheet steel, ²⁾ Non-rusting steel, ³⁾ Please state installation side A-D when ordering, ⁴⁾ Hard paper, ⁵⁾ TS 32 on request

> Polyester Standard

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Accessories



External hinges

Material aluminium

Swivel range 150°

(Set = 2 pieces)

Order no. 10 02 70 01 0



External mounting brackets

(Set = 4 pieces)

Order no.	for enclosures
10 03 11 01 0	01 08 08 06 0 - 01 10 20 08 0
10 03 11 02 0	01 12 12 08 0 - 01 31 60 18 0

> Polyester Flange

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Applications



> Polyester Flange

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Plastic enclosure with flange openings for automation technology
- + Possible combinations with other polyester flanged enclosures
- + Quick lock technology



Technical data

Material:	glass-fibre reinforced thermoset polyester Transparent lid: Polycarbonate
Colour:	RAL 7032, pebble grey
Protection class:	IP65 according to EN 60529
Impact resistance:	IK08 according to DIN EN 60068-2-75
Flammability:	Enclosure: V0 / self-Extinguishing, UL 94 Transparent lid: V2 / UL 94
Insulation:	Fully insulated according to VDE 0100
Disruptive strength:	Enclosure: 24 KV/mm, IEC 60243-1 Transparent lid: >30 KV/mm, IEC 60243-1
Toxicity:	halogen-free
Surface resistant:	Enclosure: 10 ¹¹ Ohm, IEC 60093 Transparent lid: 10 ¹⁵ Ohm, IEC 60093
Temperature resistance:	Enclosure/lid: CR (chloroprene) seal (standard): -40 °C to +90 °C VMQ (silicone) seal (optional): -60 °C to +165 °C Flanges: CR-(chloroprene) gasket (standard): -40 °C to +90 °C VMQ (silicone) seal (optional): -60 °C to +165 °C Transparent lid: -30 °C to +125 °C

Included in delivery

Plastic enclosure made of glass fibre reinforced polyester consisting of lid, seal, plastic quick-lock screws, lower part with flange openings (please order flange plates separately)
Threaded bush set (4 pieces)



3-D data and drawings

> Polyester Flange

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

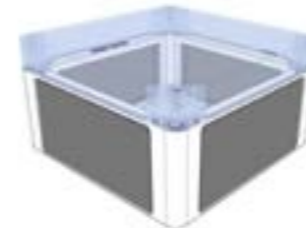
Product overview

(for all types)

Order no.	W x L x H (mm)	Flange openings	Mounting plates	Front panel on stud bolts	Mounting rails TS 35	Earth rails	Silicone seal for lids
14 01 00 00 0	170 x 270 x 136	2	14 00 00 11 0	14 00 00 27 0	10 06 17 21 0	10 06 21 01 0	*
14 02 00 00 0	270 x 270 x 136	4	14 00 00 12 0	14 00 00 28 0	10 06 17 22 0	10 06 21 01 0	*
14 03 00 00 0	270 x 541 x 136	6	14 00 00 13 0	14 00 00 29 0	10 06 17 23 0	10 06 21 02 0	*
Version with polycarbonate transparent lid							
14 01 00 01 0	170 x 270 x 150	2	14 00 00 11 0	14 00 00 27 0	10 06 17 21 0	10 06 21 01 0	*
14 02 00 01 0	270 x 270 x 150	4	14 00 00 12 0	14 00 00 28 0	10 06 17 22 0	10 06 21 01 0	*
14 03 00 01 0	270 x 540 x 150	6	14 00 00 13 0	14 00 00 29 0	10 06 17 23 0	10 06 21 02 0	*

Flange, Mounting plate, External brackets and Accessories

Blind flange (for individual machining)	14 00 00 20 0	Lid hinges (2 pcs.) can be retrofitted for all types	14 00 00 26 0
Connecting flange	14 00 00 25 0		



Blind flange

Order no.	Version
14 00 00 20 0	undrilled



Connection flange

for connecting two polyester flange enclosures

Order no. 14 00 00 25 0



Lid hinges

Set = 2 pieces, retrofittable for all polyester flange enclosures

Order no. 14 00 00 26 0

> Polyester Flange

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Accessories



External mounting brackets

Set = 4 Pieces

Order no. 10 03 11 02 0



Mounting plates

for mounting electromechanical components

Order no.	for enclosures
14 00 00 11 0	14.01
14 00 00 12 0	14.02
14 00 00 13 0	14.03



Front plate

with stud bolts and fastening screws
(dimensions see mounting plate)

Order no.	for enclosures
14 00 00 27 0	14.01
14 00 00 28 0	14.02
14 00 00 29 0	14.03

> Polycarbonate / ABS

Polycarbonate enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Applications



> Polycarbonate / ABS

Polycarbonate enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Lightweight plastic enclosures for industrial applications
- + Polycarbonate enclosure with standard or transparent lid
- + ABS enclosure with standard lid
- + Optional EMC version with coating



Technical Data

Material:	Polycarbonate, ABS
Colour:	RAL 7035, light grey
Protection class:	IP66 according to EN 60529 (03.08 23 09: IP 65)
Surface resistance:	PC: 10 ¹⁵ Ohm, IEC 60093 ABS: 4 x 10 ¹⁴ Ohm, IEC 60093
Disruptive strength:	PC: >30 KV/mm, IEC 60243-1 ABS: 24 KV/mm, IEC 60243-1
Impact resistance:	PC: IK 07 according to IEC 62262
Insulation:	Fully insulated in accordance with VDE 0100
Flammability:	PC: V2 / UL 94 ABS: HB / UL 94
Toxicity:	halogen-free
Temperature resistance:	PC: -30 °C to +125 °C ABS: -30 °C to +100 °C

Included in delivery

Plastic enclosure consisting of lid, seal, incl. captive +/- stainless steel screws, base with 2 self-moulding fixing screws for internal mounting



3-D data and drawings

> Polycarbonate / ABS

Polycarbonate enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Product overview

Polycarbonate enclosure Order no.	Polycarbonate enclosure with transparent lid Order no.	ABS enclosure Order no.	Dimensions W x L x H (mm)	Mounting rails		External mounting brackets	Pertinax mounting plates Thickness in mm	Silicone lid seal	Rubber table feet	PC External hinge approx 150° ¹⁾	Sealable lid screws ²⁾	EMC version with aluminium vapour deposition
				TS	TS							
03 05 05 04 0	33 05 05 04 0	09 05 05 04 0	50 x 52 x 35				1,5					*
03 05 07 04 0	33 05 07 04 0	09 05 07 04 0	50 x 65 x 35	*			1,5	*				*
03 08 08 06 0	33 08 08 06 0	09 08 08 06 0	80 x 82 x 55	*		*	1,5	*	*		*	*
03 08 08 09 0	33 08 08 09 0	09 08 08 09 0	80 x 82 x 85	*		*	1,5	*	*	*	*	*
03 08 12 06 0	33 08 12 06 0	09 08 12 06 0	80 x 120 x 55	*		*	1,5	*	*	*	*	*
03 08 12 09 0	33 08 12 09 0	09 08 12 09 0	80 x 120 x 85	*		*	1,5	*	*	*	*	*
03 08 16 06 0	33 08 16 06 0	09 08 16 06 0	80 x 160 x 55	*		*	1,5	*	*	*	*	*
03 08 16 09 0	33 08 16 09 0	09 08 16 09 0	80 x 160 x 85	*		*	1,5	*	*	*	*	*
03 08 23 09 0	-	09 08 23 09 0	80 x 230 x 85	*		*	1,5	*	*	*	*	*
03 12 12 06 0	33 12 12 06 0	09 12 12 06 0	120 x 122 x 55	*	*	*	2	*	*	*	*	*
03 12 12 09 0	33 12 12 09 0	09 12 12 09 0	120 x 122 x 85	*	*	*	2	*	*	*	*	*
03 12 12 11 0	33 12 12 11 0	09 12 12 11 0	120 x 122 x 105	*	*	*	2	*	*	*	*	*
03 12 16 09 0	33 12 16 09 0	09 12 16 09 0	120 x 160 x 90	*	*	*	2	*	*	*	*	*
03 12 16 14 0	33 12 16 14 0	09 12 16 14 0	120 x 160 x 140	*	*	*	2	*	*	*	*	*
03 12 20 08 0	33 12 20 08 0	09 12 20 08 0	120 x 200 x 75	*	*	*	2	*	*	*	*	*
03 12 20 09 0	33 12 20 09 0	09 12 20 09 0	120 x 200 x 90	*	*	*	2	*	*	*	*	*
03 12 24 10 0	33 12 24 10 0	09 12 24 10 0	120 x 240 x 100	*	*	*	2	*	*	*	*	*
03 15 20 08 0	33 15 20 08 0	09 15 20 08 0	150 x 200 x 75	*	*	*	2	*	*	*	*	*
03 16 24 09 0	33 16 24 09 0	09 16 24 09 0	160 x 240 x 90	*	*	*	2,5 ³⁾	*	*	*	*	*
03 16 24 12 0	33 16 24 12 0	09 16 24 12 0	160 x 240 x 120	*	*	*	2,5	*	*	*	*	*
03 16 36 10 0	-	09 16 36 10 0	160 x 360 x 100	*	*	*	2,5	*	*	*	*	*
03 20 36 15 0	33 20 36 15 0	09 20 36 15 0	200 x 360 x 149	*	*	*	2,5	*	*	*	*	*
03 23 30 09 0	33 23 30 09 0	09 23 30 09 0	230 x 300 x 85	*	*	*	2	*	*	*	*	*
03 23 30 11 0	33 23 30 11 0	09 23 30 11 0	230 x 300 x 110	*	*	*	2	*	*	*	*	*
-	-	09 40 36 15 0	400 x 360 x 150	*	*	*	2,5 ³⁾	*	*	*	*	*

Accessories

Table feet (for sizes up to xx 15 20 08 0)	10 03 40 01 0
Table feet (for sizes up to xx 16 24 19 0)	10 03 40 02 0
Threaded bushes M4 (10 pcs.)	10 03 70 04 0
Threaded bushes M3 (10 pcs.)	10 03 70 03 0
External hinge set (2 pcs.)	10 02 12 01 0
External mounting brackets (4 pcs.)	10 03 12 01 0

Mounting plates

for fixing electromechanical components
Material: Pertinax

Order no.	for enclosure type	Order no.	for enclosure type
10 01 20 01 0	03/09/33 05 05 04 0	10 01 20 07 0	03/09/33 12 16 14 0
10 01 20 02 0	03/09/33 05 07 04 0	10 01 20 08 0	03/09/33 12 20 08 0
10 01 20 03 0	03/09/33 08 08 06 0	10 01 20 08 0	03/09/33 12 20 09 0
10 01 20 03 0	03/09/33 08 08 09 0	10 01 20 09 0	03/09/33 12 24 10 0
10 01 20 04 0	03/09/33 08 12 06 0	10 01 20 10 0	03/09/33 15 20 08 0
10 01 20 04 0	03/09/33 08 12 09 0	10 01 20 11 0	03/09/33 16 24 09 0
10 01 20 05 0	03/09/33 08 16 06 0	10 01 20 11 0	03/09/33 16 24 12 0
10 01 20 05 0	03/09/33 08 16 09 0	10 01 20 12 0	03/09/33 16 36 10 0
10 01 20 16 0	03/09/33 08 23 09 0	10 01 20 13 0	03/09/33 20 36 15 0
10 01 20 06 0	03/09/33 12 12 06 0	10 01 20 14 0	03/09/33 23 30 09 0
10 01 20 06 0	03/09/33 12 12 09 0	10 01 20 14 0	03/09/33 23 30 11 0
10 01 20 06 0	03/09/33 12 12 11 0	10 01 20 15 0	03/09/33 40 36 15 0
10 01 20 07	03/09/33 12 16 09 0		

¹⁾ Please specify mounting side A-D when ordering.

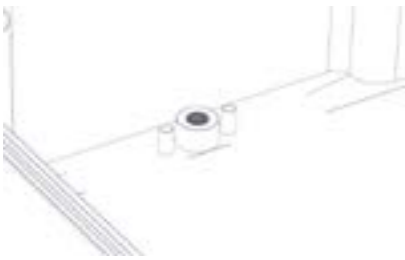
²⁾ Non-rusting steel, ³⁾ Galvanised sheet steel

Transparent cover for ABS not available.

Accessories



Externale hinges
(Set = 2 pieces)
Swivelling range 150°
Order no. 10 02 12 01 0



Thread bush inserts

Order no.

10 03 70 03 0	Set with 10 pcs. M3
10 03 70 04 0	Set with 10 pcs. M4
for enclosures only ...16 36 10; ...20 36 15; ...40 36 15	



External mounting brackets
(Set = 4 pieces)
Order no. 10 03 12 01 0

Applications



> Polycarbonate Flange

Polycarbonate enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Lightweight plastic enclosure for industrial applications with flange knockouts
- + Combination options with other polycarbonate flange enclosures
- + Quick-lock technology with flange quick-fastening system



Technical data

Material:	Polycarbonate
Colour:	Enclosure: RAL 7032, pebble grey
Protection class:	1701-1705: IP65 according to EN 60529 1706: IP54 according to EN 60529
Impact resistance:	IK07 according to DIN EN60068-2-75
Flammability:	Enclosure: V0 / self-Extinguishing, UL 94
Insulation:	Fully insulated according to VDE 0100
Disruptive strength:	Enclosure: >18 KV/mm, IEC 60243-1
Seal:	CR round cord
Toxicity:	Low halogen
Surface resistance:	10 ¹⁵ Ohm, IEC 60093
Temperature resistance:	-30 °C to +125 °C

Included in delivery

Completely closed enclosure body with flange break-out points, lid with plastic quick-lock; 4 threaded insert bushes for internal fastening



3-D data and drawings

> Polycarbonate Flange

Polycarbonate enclosure / Standard enclosure

INDUSTRIAL ENCLOSURE

Product overview

(for all types)

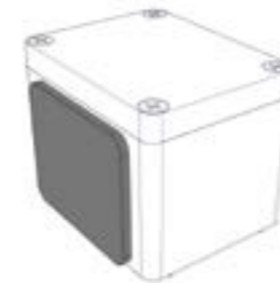
Order no.	Dimensions W x L x H (mm)	Flange openings	Mounting rails TS 35	Earth rails	Mounting plates
17 01 10 00 0	170 x 134 x 130	2	10 06 17 24 0	10 06 21 00 0	17 01 60 00 0
17 02 10 00 0	170 x 170 x 130	4	10 06 17 24 0	10 06 21 00 0	17 02 60 00 0
17 03 10 00 0	170 x 269 x 130	4	10 06 17 22 0	10 06 21 01 0	17 03 60 00 0
17 04 10 00 0	269 x 269 x 130	4	10 06 17 22 0	10 06 21 01 0	17 04 60 00 0
17 05 10 00 0	269 x 540 x 130	6	10 06 17 23 0	10 06 21 02 0	17 05 60 00 0
17 06 10 00 0	269 x 441 x 130	4	10 06 17 25 0	10 06 20 11 0	17 06 60 00 0

Accessories

(for all types)

Blind flange I	17 00 31 00 0
Blind flange II	17 00 32 00 0
Connecting flange I	17 00 36 00 0
Connection flange II	17 00 37 00 0
Fixing angle (set of 4), 2 sets required for type 17.05	17 00 42 00 0
Additional threaded bush inserts (set of 10)	10 03 50 03 0
External mounting brackets (set of 4)	10 03 11 04 0
Spare fixing wedges (set of 10)	17 00 41 00 0

Accessories



Blind flange

Order no.	Version
17 00 31 00 0	17.00 31 00 Blind flange I (125 x 106 mm)
17 00 32 00 0	Blind flange II (224 x 106 mm)



Connecting flange

For connecting two polycarbonate flange enclosures

Order no.	Version
17 00 36 00 0	Connecting flange I
17 00 37 00 0	Connecting flange II

* 2 Mounting rails possible = double number of terminals

> Polycarbonate Flange

Polycarbonate enclosures / Standard enclosures

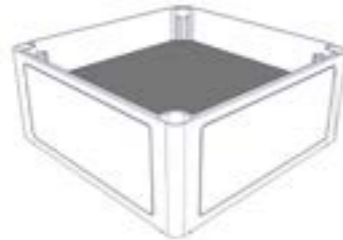
INDUSTRIAL ENCLOSURES



External mounting brackets

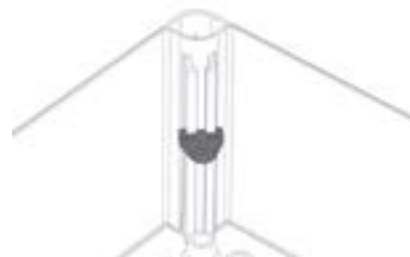
Set = 4 pieces

Order no. 10 03 11 04 0



Mounting plates

for mounting electromechanical components



Fixing angle

Set = 4 pieces

Order no. 17 00 42 00 0

> ECO / PCI Compact enclosures

Compact enclosure ECO/PCI / Standard enclosures

INDUSTRIAL ENCLOSURES

Applications



> ECO / PCI Compact enclosures

Compact enclosure ECO/PCI / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Polycarbonate enclosure with standard or transparent lid
- + ECO version: base with smooth side walls, lid version standard or transparent
- + PCI version: base with knock-outs for cable glands

Technical data

Material:	Thermoplast PS
Colour:	RAL 7035, light grey
Protection class:	IP66 according to EN 60529
Impact resistance:	IK07 according to EN 60068-2-75
Flammability:	UL 94 HB
Insulation:	Protection class II according to VDE 0140
Toxicity:	halogen-free
Weather resistance:	generally good, protect from direct sunlight
Chemical resistance:	generally good. However, not resistant to petrol, diesel, oils and greases or strong acids.
Temperature resistance:	-25 °C to +40 °C

Included in delivery

Plastic enclosure consisting of lid, seal, incl. captive +/- lid screws and screw set for fastening incl. sealing caps.



3-D data and drawings

> ECO / PCI Compact enclosures

Compact enclosures ECO/PCI / Standard enclosures

INDUSTRIAL ENCLOSURES

Product overview

Type	Order no.	Dimensions	Type	Order no.	Mounting plates	Mounting rails TS 15 (mm)					Mounting rails TS 35 (mm)								
						49,5	80	92	111	154	81	106	144	216	336				
ECO 01-6	60 07 07 11 0	65 x 65 x 57	PCI 01-6M	60 07 07 15 0	*	*													
ECO 01-8	60 07 07 21 0	65 x 65 x 81			*	*													
ECO 02-6	60 07 09 11 0	65 x 94 x 57	PCI 02-6M	60 07 09 15 0	*	*	*												
ECO 02-8	60 07 09 21 0	65 x 94 x 81			*	*	*												
ECO 03-6	60 09 09 11 0	94 x 94 x 57	PCI 03-6M	60 09 09 15 0	*	*													
ECO 03-8	60 09 09 21 0	94 x 94 x 81			*	*													
ECO 03-6 t	60 09 09 12 0	94 x 94 x 57			*	*													
ECO 03-8 t	60 09 09 22 0	94 x 94 x 81			*	*													
ECO 04-6	60 09 13 11 0	94 x 130 x 57	PCI 04-6M	60 09 13 15 0	*	*	*	*		*	*								
ECO 04-8	60 09 13 21 0	94 x 130 x 81			*	*	*	*		*	*								
ECO 04-6 t	60 09 13 12 0	94 x 130 x 57			*	*	*	*		*	*								
ECO 04-8 t	60 09 13 22 0	94 x 130 x 81			*	*	*	*		*	*								
ECO 05-7	60 11 11 11 0	110 x 110 x 66			*	*	*			*	*								
ECO 05-9	60 11 11 21 0	110 x 110 x 90	PCI 05-9M	60 11 11 15 0	*	*	*			*	*								
ECO 05-7 t	60 11 11 12 0	110 x 110 x 66			*	*	*			*	*								
ECO 05-9 t	60 11 11 22 0	110 x 110 x 90			*	*	*			*	*								
ECO 06-7	60 13 13 11 0	130 x 130 x 75	PCI 06-7M	60 13 13 15 0	*	*	*	*		*	*								
ECO 06-10	60 13 13 21 0	130 x 130 x 99			*	*	*	*		*	*								
ECO 06-7 t	60 13 13 12 0	130 x 130 x 75			*	*	*	*		*	*								
ECO 06-10 t	60 13 13 22 0	130 x 130 x 99			*	*	*	*		*	*								
ECO 07-6	60 09 18 11 0	94 x 180 x 57	PCI 07-6M	60 09 18 15 0	*	*				*	*								
ECO 07-8	60 09 18 21 0	94 x 180 x 81			*	*				*	*								
ECO 07-6 t	60 09 18 12 0	94 x 180 x 57			*	*				*	*								
ECO 07-8 t	60 09 18 22 0	94 x 180 x 81			*	*				*	*								
ECO 08-9	60 11 18 11 0	110 x 180 x 90	PCI 08-9M	60 11 18 15 0	*	*	*			*	*								
ECO 08-11	60 11 18 21 0	110 x 180 x 111	PCI 08-11M	60 11 18 25 0	*	*	*			*	*								
ECO 08-9 t	60 11 18 12 0	110 x 180 x 90			*	*	*			*	*								
ECO 08-11 t	60 11 18 22 0	110 x 180 x 111			*	*	*			*	*								
ECO 09-9	60 18 18 11 0	180 x 182 x 90	PCI 09-9M	60 18 18 15 0	*	*				*	*								
ECO 09-11	60 18 18 21 0	180 x 182 x 111	PCI 09-11M	60 18 18 25 0	*	*				*	*								
ECO 09-16	60 18 18 31 0	180 x 182 x 165			*	*				*	*								
ECO 09-9 t	60 18 18 12 0	180 x 182 x 90			*	*				*	*								
ECO 09-11 t	60 18 18 22 0	180 x 182 x 111			*	*				*	*								
ECO 09-16 t	60 18 18 32 0	180 x 182 x 165			*	*				*	*								
ECO 10-6	60 18 25 10 0	180 x 254 x 63	PCI 10-6M	60 18 25 05 0	*	*				*	*								
ECO 10-9	60 18 25 11 0	180 x 254 x 90	PCI 10-9M	60 18 25 15 0	*	*				*	*								
ECO 10-11	60 18 25 21 0	180 x 254 x 111	PCI 10-11M	60 18 25 25 0	*	*				*	*								
ECO 10-16	60 18 25 31 0	180 x 254 x 165			*	*				*	*								
ECO 10-6t	60 18 25 09 0	180 x 254 x 63			*	*				*	*								
ECO 10-9 t	60 18 25 12 0	180 x 254 x 90			*	*				*	*								
ECO 10-11 t	60 18 25 22 0	180 x 254 x 111			*	*				*	*								
ECO 10-16 t	60 18 25 32 0	180 x 254 x 165			*	*				*	*								
ECO 11-11	60 25 36 11 0	254 x 361 x 111	PCI 11-11M	60 25 36 15 0	*	*				*	*								
ECO 11-16	60 25 36 21 0	254 x 361 x 165			*	*				*	*								
ECO 11-11 t	60 25 36 12 0	254 x 361 x 111			*	*				*	*								
ECO 11-16 t	60 25 36 22 0	254 x 361 x 165			*	*				*	*								

t = lid transparent

> ECO / PCI Compact enclosures

Compact enclosures ECO/PCI / Standard enclosures

INDUSTRIAL ENCLOSURES

Accessories

(for all types)

External mounting brackets	60 00 04 00 0
External hinge (pair) up to ECO/PCI 07- (small)	60 00 04 07 0
External hinge (pair) from ECO/PCI 08- (large)	60 00 04 08 0
Knurled screw (set)	60 00 04 01 0
Spacers (set = 8 pcs.)	60 00 04 02 0



Mounting plates

made of plastic, 2.5 mm thick including self-tapping fastening screws and spacers

Order no.

60 00 01 01 0	for ECO/PCI 01-
60 00 01 02 0	for ECO/PCI 02-
60 00 01 03 0	for ECO/PCI 03-
60 00 01 04 0	for ECO/PCI 04-
60 00 01 05 0	for ECO/PCI 05-
60 00 01 06 0	for ECO/PCI 06-
60 00 01 07 0	for ECO/PCI 07-
60 00 01 08 0	for ECO/PCI 08-
60 00 01 09 0	for ECO/PCI 09-
60 00 01 10 0	for ECO/PCI 10-
60 00 01 11 0	for ECO/PCI 11-



Hinge set

Set = 2 pieces

Order no.

60 00 04 07 0	up to ECO/PCI 07- (small)
60 00 04 08 0	from ECO/PCI 08- (large)

> ECO / PCI Compact enclosures

Compact enclosures ECO/PCI / Standard enclosures

INDUSTRIAL ENCLOSURES



External mountings

Set = 4 pieces

Order no. 60 00 04 00 0

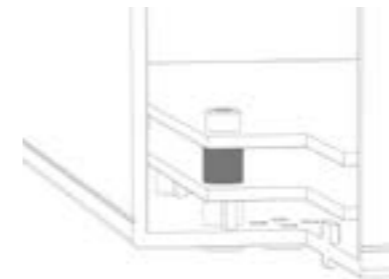


Knurled screws

Can be snapped onto the lid screw as a manual twist lock

Set = 4 pieces

Order no. 60 00 04 01 0



Spacers

6 and 8 mm made of plastic for desired distances between PCBs or mounting plates

Set = 8 pieces

Order no. 60 00 04 02 0

> ECO / PCI Compact enclosures

Compact enclosures ECO / PCI / Standard enclosures

INDUSTRIAL ENCLOSURES



Double membrane connecting plug

Set = 2 Pieces

Order no.		Sealing range (mm)
60 00 05 16 0	50 pcs. M 16	5 - 9
60 00 05 20 0	50 pcs. M 20	7 - 12
60 00 05 25 0	50 pcs. M 25	9 - 16
60 00 05 32 0	50 pcs. M 32	14 - 21



Double membrane connecting plug

IP 66, with 2 integrated sealing membranes, tight fit without counter nut, for wall thicknesses 1.5 - 4.5 mm

Order no.	
60 00 04 20 0	100 pcs. M 20

> Polyglas / Polycase

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Applications



> Polyglas / Polycase

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Enclosure system with concealed External hinge
- + Standard version or with window
- + Polycase version with carrying handle



Technical data

Material:	glass fibre reinforced, thermoset polyester
Colour:	RAL 7038, agate grey
Protection class:	IP66 according to EN 60529
Impact resistance:	Enclosure without window: IK08 Enclosure with window: IK07
Flammability:	V0 / self-Extinguishing, UL 94
Insulation:	18 KV/mm, IEC 60243-1
Disruptive strength:	Enclosure: >18 KV/mm, IEC 60243-1
Toxicity:	halogen-free
Surface resistance:	>10 ¹² Ohm, IEC 60093
Door-swivel angle:	135°
Temperature resistance:	VMQ (silicone) seal (optional): -60 °C to +165 °C Version with window: -40 °C to +80 °C

Included in delivery

Enclosure consisting of base and door; order door lock separately, press-fit bushes in base for internal and External mounting



3-D data and drawings

> Polyglas / Polycase

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Product overview

(for all types)

Polyglas/ Polycase	Dimensions W x L x H (mm)	Polyglas	Weight (g)	"Polyglas with window and lock"	"Polycase* without window with handle"	Weight (g)	"Polycase* with window and handle"
Size 1	300 x 400 x 200	21 30 40 00 0	4388	22 30 40 00 0	23 30 40 00 0	5510	24 30 40 00 0
Size 2	400 x 600 x 250	21 40 60 00 0	7300	22 40 60 00 0	23 40 60 00 0	8400	24 40 60 00 0

Note: Enclosure supplied without lock, please order separately!

Fasteners optional (loose)

Triangular lock 8 mm (2 pcs.)	21 61 00 03 0
Square lock 8 mm (2 pcs.)	21 61 00 04 0
Square lock 7 mm (2 pcs.)	21 61 00 14 0
Daimler-Benz lock (2 pcs.)	21 61 00 06 0
Double ward lock 3 mm (2 pcs.)	21 61 00 07 0
Standard handle (2 pcs.)	21 61 00 01 0
Standard handle with lock (2 pcs.)	21 61 00 02 0

Accessories (loose)

Mounting plate for size 1 (galvanised sheet steel)	10 01 12 03 0
Mounting plate for size 2 (galvanised sheet steel)	10 01 12 04 0
External mounting brackets (4 pcs.)	10 03 10 09 0
Hole covers for fastenings through the cabinet base (4 pcs.)	10 03 90 01 0
Socket wrench triangular 8 mm	10 04 70 03 0
Socket wrench square 8 mm	10 04 70 04 0
Socket wrench square 7 mm	10 04 70 14 0
Socket wrench Daimler-Benz	10 04 70 06 0
Socket wrench double ward 3 mm	10 04 70 07 0

Accessories



Mounting plates

Order no.	for sizes
10 01 12 03 0	300 x 400 mm
10 01 12 04 0	400 x 600 mm



External mounting brackets

Order no. 10 03 10 09 0

> Polyglas / Polycase

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Polyglas



Windows

Type	A	B	C
22 30 40 0	153	275	62,5
22 40 60 0	250	450	75

> Mini-Polyglas

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Applications



> Mini-Polyglas

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Mini-Polyglas housing with concealed external hinge for MSR technology
- + Standard design or with viewing window
- + Small distribution cabinets



Technical data

Material:	glass fibre reinforced, thermoset polyester
Colour:	RAL 7038, agate grey
Protection class:	IP66 according to EN 60529 Higher protection class on request
Impact resistance:	IK09 according to DIN EN 60068-2-75
Temperature resistance:	CR (chloroprene) seal (standard): -40 °C to +90 °C VMQ (silicone) seal (optional): -60 °C to +165 °C



3-D data
and drawings

Included in delivery

Die-cast aluminium enclosure
consisting of lid, seal, incl. captive
+/- stainless steel screws, base
with 4 earthing screws

> Mini-Polyglas

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Product overview

(for all types)

Mini-Polyglas	Dimension W x L x H (mm)	Weight (g)	Mini-Polyglas	Mini-Polyglas with window	Mounting plates (Sheet steel, loose)
Size 1	120 x 200 x 100	1240	21 12 20 00 0	22 12 20 00 0	10 01 12 07 0
Size 2	160 x 260 x 100	1900	21 16 26 00 0	22 16 26 00 0	10 01 12 08 0
Size 3	160 x 340 x 100	2000	21 16 34 00 0	22 16 34 00 0	10 01 12 09 0
Size 4	200 x 150 x 100	1380	21 20 15 00 0	22 20 15 00 0	10 01 12 10 0
Size 5	200 x 200 x 170	2068	21 20 20 00 0	22 20 20 00 0	10 01 12 01 0
Size 6	200 x 300 x 170	2990	21 20 30 00 0	22 20 30 00 0	10 01 12 02 0

Note: Please order enclosure without screw plugs separately on delivery.

Fasteners optional (loose)

Triangel screw 8 mm (2 pcs.)	21 63 00 03 0
Square screw 8 mm (2 pcs.)	21 63 00 04 0
Square screw 6 mm (2 pcs.)	21 63 00 24 0
Cross-head screw (2 pcs.)	21 63 00 05 0

Accessories (loose)

External mounting brackets (4 pcs.)	10 03 10 08 0
Socket wrench triangular 8 mm	10 04 70 03 0
Socket wrench square 8 mm	10 04 70 04 0
Socket wrench cross-head	10 04 70 05 0

Accessories



Mounting plates

Order no.	for sizes
10 01 12 07 0	21 12 20
10 01 12 08 0	21 16 26
10 01 12 09 0	21 16 34
10 01 12 10 0	21 20 15
10 01 12 01 0	21 20 20
10 01 12 02 0	21 20 30



External mounting brackets

Set = 4 pieces

Order no. 10 03 10 08 0

> Mini-Polyglas

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Window



Type	A	B	C
22 12 20 00 0	116	66	45
22 16 26 00 0	176	108	45
22 16 34 00 0	256	108	45
22 20 15 00 0	66	147	45
22 20 20 00 0	120	120	45
22 20 30 00 0	210	120	45

> Polyester / ABS Switch gear cabinet

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

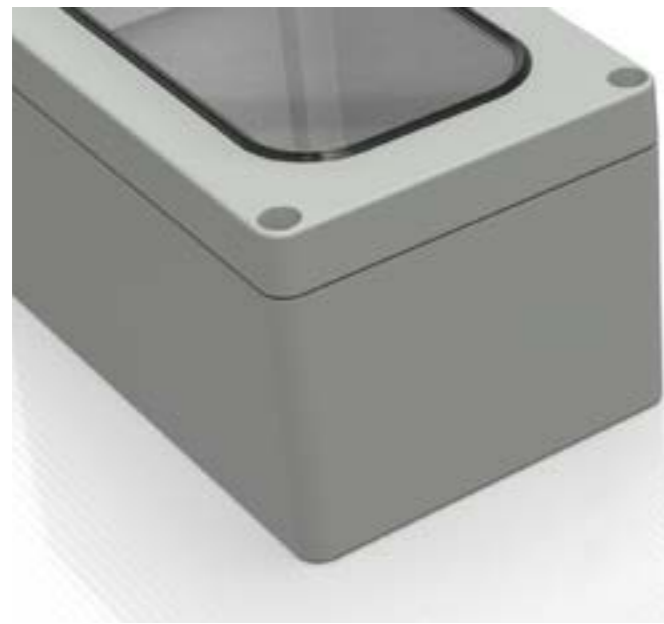
Applications



> Polyester / ABS Switch gear cabinet

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Enclosure system with hinged lid for MCR technology
- + Standard version, with window or transparent door (ABS)



Technical data

Material:	glass fibre reinforced, thermoset polyester/ABS
Colour:	Polyester: RAL 7032, pebble grey ABS: RAL 7035, light grau
Protection class:	IP65 according to EN 60529
Impact resistance:	IK07 according to EN 60068-2-75
Flammability:	Polyester: V0 / self-Extinguishing, UL 94 ABS: HB, UL 94
Insulation:	Fully insulated according to VDE 0100
Desruptive strength:	Polyester: 26 KV/mm, IEC 60243-1 ABS: 24 KV/mm, IEC 60243-1
Toxicity:	halogen-free
Surface resistance:	Polyester: 4×10^{15} Ohm, IEC 60093 ABS: 4×10^{14} Ohm, IEC 60093
Door-swivel angel:	135°
Temperature resistance:	CR (chloroprene) seal (standard): -40 °C to +90 °C VMQ (silicone) seal (optional): -60 °C to +165 °C ABS: -40 °C to +70 °C with window: -55 °C to +80 °C

Included in delivery

Enclosure consisting of base and door; order door lock separately, press-fit bushes in base for internal and External mounting.



3-D data and drawings

> Polyester / ABS Switch gear cabinet

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Product overview

(for all types)

	Dimensions W x L x H (mm)	Weight (g)	ABS	"ABS with transparent door"	Polyester	"Polyester with window"
Size 1	200 x 250 x 150	748	21.20 25 90	22.20 25 90	-	-
Size 2	250 x 300 x 170	1248	21.25 30 90	22.25 30 90	-	-
Size 1	200 x 250 x 150	1300	-	-	21.20 25 00	22.20 25 00
Size 2	250 x 300 x 170	2530	-	-	21.25 30 00	22.25 30 00

Note: Please order enclosure without screw plugs separately on delivery.

Fasteners optional (loose)

Triangular lock 8 mm (1 pc.)	21 62 00 03 0
Square lock 8 mm (1 pc.)	21 62 00 04 0
Toggle handle (1 pc.)	21 62 00 01 0
Toggle handle with lock (1 pc.)	21 62 00 02 0

Accessories (loose)

Mounting plate for size 1 (laminated paper)	10 01 12 05 0
Mounting plate for size 2 (aminated paper)	10 01 12 06 0
Internal aluminium front panel with stud bolts for size 1	10 01 31 01 0
Internal aluminium front panel with stud bolts for size 2	10 01 31 02 0
External mounting brackets (4 pcs.)	10 03 10 10 0
Hole covers for fastenings through the cupboard base (4 pcs.)	10 03 90 02 0
Socket spanner triangular 8 mm	10 04 70 03 0
Socket spanner square 8 mm	10 04 70 04 0

Accessories



Mounting plates

Order no.	for size
10 01 12 05 0	21 20 25
10 01 12 06 0	21 25 30



Internal front plate with stud bolts

Order no.	for size
10 01 31 01 0	21 20 25
10 01 31 02 0	21 25 30

> Polyester / ABS Switch gear cabinet

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



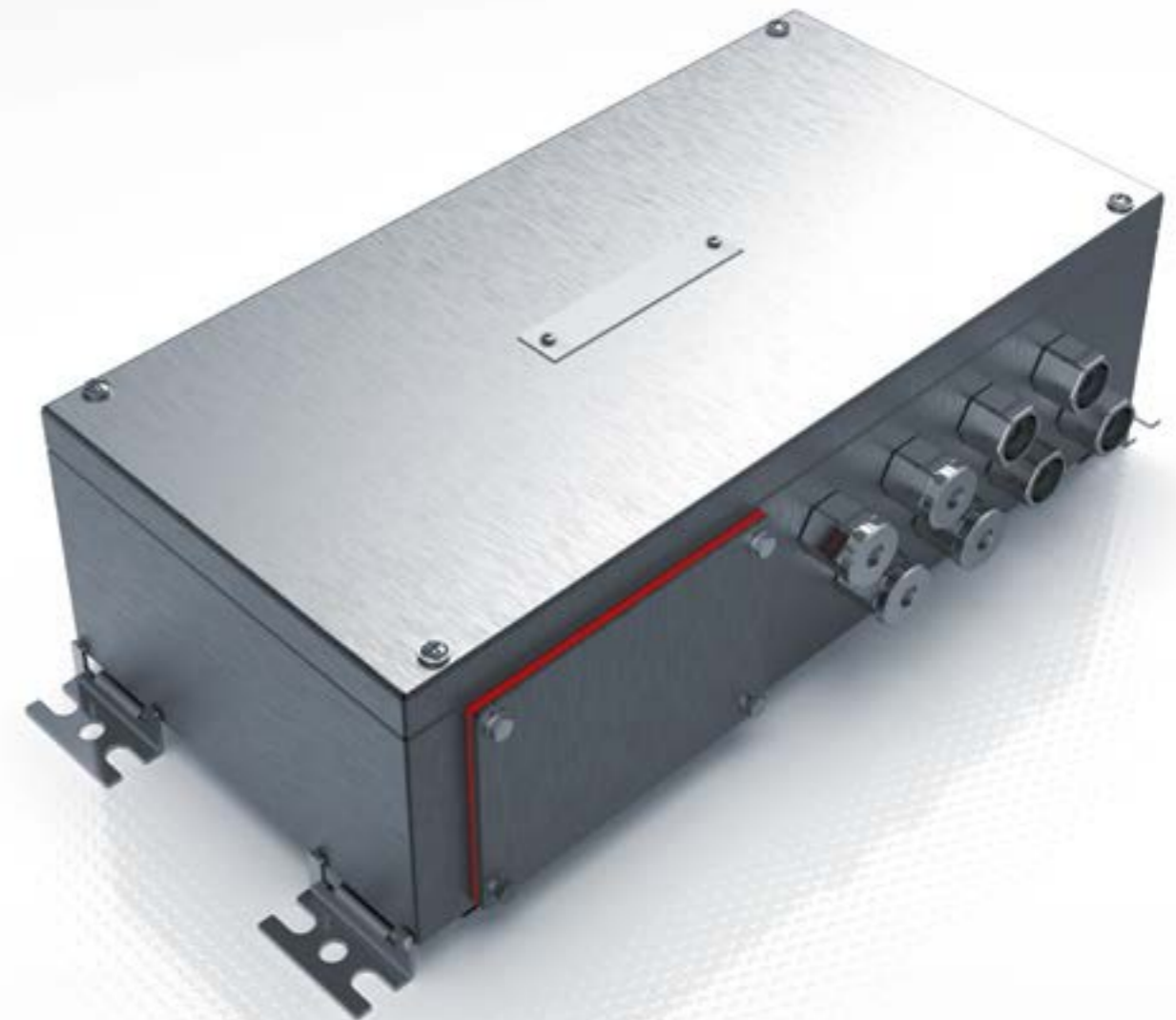
External mounting brackets
Order no. 10 03 10 10 0

> Stainless steel industrial enclosures

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

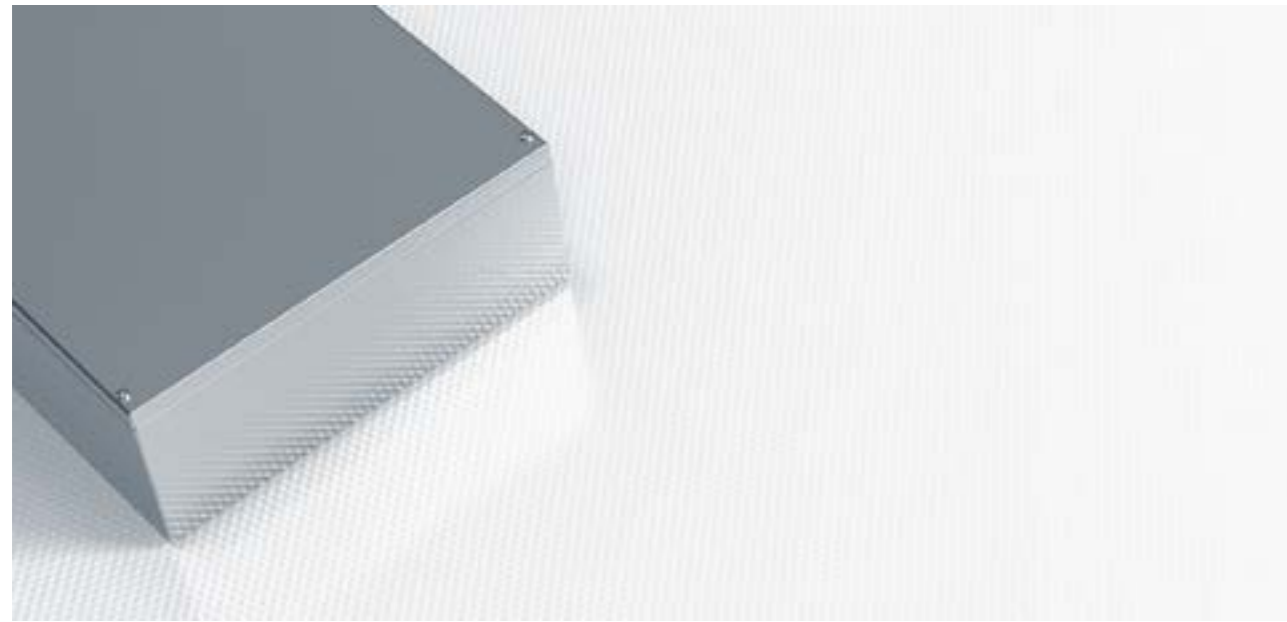
Applications



> Stainless steel Industrial enclosures

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Universal industrial enclosures for hygienic areas
- + High surface quality 1.4301
- + No gap formation lid/bottom part
- + Protection class up to IP 69K (on request)



DIN EN 45545-2
EN 15085-2 CL2 on request

Technical data

Material:	Stainless steel 1,25 mm resp. 1,5 mm; 1.4301 / 304 1.4404 / 316 on request
Protection class:	IP66 according to EN 60529 IP67 on request
Surface:	ground, grain 240 to grain 320
Temperature resistance:	VMQ (silicone) seal (standard): -60 °C to +175 °C EMC (silicone) seal (optional): -55 °C to +200 °C

Included in delivery

Lower part of enclosure with screw-on bars and threaded holes for mounting rails, 4 base embossings with fixing holes and sealing plugs. Alternative: Without fixing holes, cover with threaded bolt inside and captive cover screws



3-D data
and drawings

> Stainless steel industrial enclosures

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Product overview

Enclosure with mounting bosses and mounting hole	Enclosure with mounting bosses without mounting hole	Mounting plates	Weight (g)	Dimensions (mm) L x W x H
Order no.	Order no.	Order no.		
37 10 10 06 0	37 10 10 96 0	10 01 10 53 0	561	100 x 100 x 61
37 15 10 06 0	37 15 10 96 0	10 01 10 54 0	717	150 x 100 x 61
37 15 15 08 0	37 15 15 98 0	10 01 10 38 0	1175	150 x 150 x 81
37 20 10 06 0		10 01 10 55 0	914	200 x 100 x 61
37 20 20 08 0	37 20 20 98 0	10 01 10 40 0	1792	200 x 200 x 81
37 20 20 12 0	37 20 20 92 0	10 01 10 40 0	2106	200 x 200 x 121
37 30 15 08 0		10 01 10 39 0	1893	300 x 150 x 81
37 30 20 08 0		10 01 10 41 0	2367	300 x 200 x 81
37 30 20 12 0	37 30 20 92 0	10 01 10 41 0	2770	300 x 200 x 121
37 30 30 12 0		10 01 10 44 0	3792	300 x 300 x 121
37 30 30 16 0		10 01 10 44 0	4101	300 x 300 x 161
37 38 38 16 0		10 01 10 45 0	5838	380 x 380 x 161
37 40 15 08 0		10 01 10 56 0	2370	400 x 150 x 81
37 40 20 12 0		10 01 10 43 0	3383	400 x 200 x 121
37 40 30 16 0		10 01 10 48 0	5268	400 x 300 x 161
37 50 30 16 0		10 01 10 57 0	6237	500 x 300 x 161
37 50 40 16 0		10 01 10 49 0	7333	500 x 400 x 161
37 60 20 12 0		10 01 10 58 0	5798	600 x 200 x 121
37 99 99 99 0				Customised size according to specifications

Accessories

	Order no.
Mounting set (Sealing discs, nuts and screws)	37 99 00 01 0
External hinge set (2 pcs.)	37 00 00 02 0
External mounting brackets (4 pcs.)	37 10 50 00 0



Mounting set

Sealing discs, nuts and screws
Order no. 37 99 00 01 0

> Stainless steel Industrial enclosures

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



External hinge set
Order no. 37 00 00 02 0



External mounting brackets
Order no. 37 10 50 00 0

Order no. for enclosure type

37 10 10 06 0
37 15 10 06 0
37 15 15 08 0
37 20 10 06 0
37 20 20 08 0
37 20 20 12 0
37 30 15 08 0
37 30 20 08 0
37 30 20 12 0
37 30 30 12 0
37 30 30 16 0
37 38 38 16 0
37 40 15 08 0
37 40 20 12 0
37 40 30 16 0
37 50 30 16 0
37 50 40 16 0
37 60 20 12 0

> Stainless steel Industrial hinged

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Applications



> Stainless steel Industrial hinged

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



+ Universal enclosures with concealed hinge and lock

+ High surface quality 1.4301



DIN EN 45545-2
EN 15085-2 CL2 on request

Technical data

Material:	Stainless steel 1,25 mm resp. 1,5 mm; 1.4301/304 1.4404/316 on request
Protection class:	IP66 according to EN 60529
Surface:	ground, grain 240 to grain 320
Temperature resistance:	VMQ (silicone) seal (standard): -60 °C to +175 °C EMC (silicone) seal on request



3-D data
and drawings

Included in delivery

Enclosure with hinged lid, double-bit lock, 4 base embossings with fastening openings and sealing plugs

> Stainless steel Industrial hinged

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

Product overview

Order no.	Weight (g)	Mounting plates	Dimensions (mm) L x W x H
37 00 22 09 0	2350	10.01 10 66	200 x 250 x 97
37 00 22 15 0	2880	10.01 10 66	200 x 250 x 157
37 00 32 09 0	3490	10.01 10 67	350 x 250 x 97
37 00 33 16 0	4360	10.01 10 44	300 x 300 x 167
37 00 44 16 0	6080	10.01 10 45	380 x 380 x 167
37 00 44 21 0	6820	10.01 10 45	380 x 380 x 217
37 00 53 16 0	6350	10.01 10 57	500 x 300 x 167
37 00 63 16 0	8750	10.01 10 68	600 x 300 x 167
37 00 64 21 0	11420	10.01 10 69	600 x 380 x 217
37 00 99 00 0			Customised size according to specifications

Product overview

Mounting set (Sealing discs, nuts and screws)	37 99 00 01 0
External mounting brackets (4 pcs.)	37 10 50 00 0



Mounting set
(Sealing discs, nuts and screws)
Order no. 37 99 00 01 0

> Stainless steel Industrial hinged

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



External mounting brackets
Order no. 37 10 50 00 0

For enclosure type

37 00 22 09 0

37 00 32 09 0

37 00 22 15 0

37 00 33 16 0

37 00 44 16 0

37 00 53 16 0

37 00 63 16 0

37 00 44 21 0

37 00 64 21 0

> NoVoTronic

ELECTRONIC ENCLOSURES

INDUSTRIAL ENCLOSURES

Applications





- + Aluminium profile enclosure system in 5 sizes for data, PC and MCR technology
- + Chip-free interior thanks to External screw channels
- + Integrated guide grooves for holding circuit boards
- + External function insert strips (Except NoVoTronic 200)
- + Variable length design thanks to profile technology



DIN EN 45545-2

Technical data

Material:	Enclosure profile: DIN EN 573 EN AW-ALMgSi Enclosure lid: DIN EN 1706 EN AC-AISI 12 (Fe)
Colour:	Enclosure body and enclosure lid: RAL 9005, jet black Functional insert strips: RAL 3003, ruby red
Surface:	Powder coating, fine structure matt
Protection class:	IP65 according to EN 60529
EMC:	Optional EMC version
Temperature resistance:	PU (polyurethane) seal (standard): -40 °C to +80 °C CR (chloroprene) seal (optional): -30 °C to +90 °C VMQ (silicone) seal (optional): -60 °C to +175 °C EMC (silicone) seal (optional): -55 °C to +200 °C

Included in delivery

Enclosure with two die-cast aluminium covers and two functional insert strips, not screwed on



3-D data and drawings

Product overview

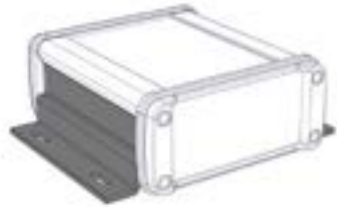
Type	Order no. Standard	Order no. EMC Version	Weight (g)	External enclosure dimensions W x H x D (mm)	Internal enclosure dimensions W x H x D (mm)
NoVoTronic 80					
NoVo-Tronic 80-100	07 50 10 10 0	07 51 10 10 0	480	106 x 49 x 120	80 x 36 x 100
NoVo-Tronic 80-160	07 50 10 11 0	07 51 10 11 0	660	106 x 49 x 180	80 x 36 x 160
NoVo-Tronic 80-200	07 50 10 12 0	07 51 10 12 0	780	106 x 49 x 220	80 x 36 x 200
NoVo-Tronic 80-SL	07 50 10 99 0	07 51 10 99 0		106 x 49 x SL	80 x 36 x SL
NoVoTronic 100					
NoVo-Tronic 100-100	07 50 20 10 0	07 51 20 10 0	550	126 x 49 x 120	100 x 36 x 100
NoVo-Tronic 100-160	07 50 20 11 0	07 51 20 11 0	750	126 x 49 x 180	100 x 36 x 160
NoVo-Tronic 100-200	07 50 20 12 0	07 51 20 12 0	880	126 x 49 x 220	100 x 36 x 200
NoVo-Tronic 100-SL	07 50 20 99 0	07 51 20 99 0		126 x 49 x SL	100 x 36 x SL
NoVoTronic 130					
NoVo-Tronic 130-130	07 50 25 10 0	07 51 25 10 0	880	157 x 69 x 150	130 x 57 x 130
NoVo-Tronic 130-160	07 50 25 11 0	07 51 25 11 0	1020	157 x 69 x 180	130 x 57 x 160
NoVo-Tronic 130-200	07 50 25 12 0	07 51 25 12 0	1200	157 x 69 x 220	130 x 57 x 200
NoVo-Tronic 130-SL	07 50 25 99 0	07 51 25 99 0		157 x 69 x SL	130 x 57 x SL
NoVoTronic 160					
NoVo-Tronic 160-160	07 50 30 10 0	07 51 30 10 0	1500	190 x 90 x 180	160 x 76 x 160
NoVo-Tronic 160-200	07 50 30 11 0	07 51 30 11 0	1800	190 x 90 x 220	160 x 76 x 200
NoVo-Tronic 160-300	07 50 30 12 0	07 51 30 12 0	2500	190 x 90 x 320	160 x 76 x 300
NoVo-Tronic 160-SL	07 50 30 99 0	07 51 30 99 0		190 x 90 x SL	160 x 76 x SL
NoVoTronic 200					
NoVo-Tronic 200-220	07 50 40 10 0	07 51 40 10 0	2500	233 x 121 x 240	200 x 105 x 220
NoVo-Tronic 200-280	07 50 40 11 0	07 51 40 11 0	3060	233 x 121 x 300	200 x 105 x 280
NoVo-Tronic 200-330	07 50 40 12 0	07 51 40 12 0	3450	233 x 121 x 350	200 x 105 x 330
NoVo-Tronic 200-SL	07 50 40 99 0	07 51 40 99 0		233 x 121 x SL	200 x 105 x SL

Accessories

	Order no.	NoVoTronic 80	NoVoTronic 100	NoVoTronic 130	NoVoTronic 160	NoVoTronic 200
Wall profile 80/100-100	07 50 90 11 0	*	*			
Wall profile 80/100-160	07 50 90 12 0	*	*			
Wall profile 80/100-200	07 50 90 13 0	*	*			
Wall profile 80/100-SL	07 50 90 99 0	*	*			
Wall profile 130/160-130	07 50 91 11 0			*	*	
Wall profile 130/160-160	07 50 91 12 0			*	*	
Wall profile 130/160-200	07 50 91 13 0			*	*	
Wall profile 130/160-300	07 50 91 14 0			*	*	
Wall profile 130/160-SL	07 50 91 99 0			*	*	
Lid wall holder 80/100	07 50 90 02 0	*	*			
NoVo-Wall holder P80	07 50 90 03 0	*				
NoVo-Wall holder P100	07 50 90 04 0		*			
NoVo-Wall holder P130	07 50 90 15 0			*		
NoVo-Wall holder P160	07 50 90 05 0				*	
Foot- / connecting element 80	07 50 90 06 0	*				
Foot- / connecting element 100	07 50 90 07 0		*			
Foot- / connecting element 130	07 50 90 14 0			*		

SL = Special length

Accessories



Wall profile (2 pieces)
For insertion into system groove as wall mounting

NoVoTronic 80



Foot- / connecting element (1 piece)
for stacking or mechanically connecting enclosures

Order no.	for type	Dimensions		
		A	B	C
07 50 90 06 0	NoVoTronic 80	107,0	33,5	20,0
07 50 90 07 0	NoVoTronic 100	127,0	33,5	20,0
07 50 90 14 0	NoVoTronic 130	158,0	51,8	25,0



NoVo-Wall holder
for wall mounting and as a connection to e.g. Commander

Order no.	for type	Dimensions		
		A	B	C
07 50 90 03 0	NoVoTronic 80	74,0	99,0	41,2
07 50 90 04 0	NoVoTronic 100	90,0	119,0	41,2
07 50 90 15 0	NoVoTronic 130	116,5	150,0	51,2
07 50 90 05 0	NoVoTronic 160	150,0	183,5	61,5



Battery compartment

Order no.	for type
83.90 00 03	for 9V block
83.90 00 06	for 4 x AA cells



Lid wall holder 80/100 (2 pieces)
For screwing onto the enclosure cover as a swivelling wall bracket
Swivelling range when mounted on a straight surface and attached to the centre of the lid:
NoVoTronic 80 +40°
NoVoTronic 100 +30°

Order no. 07 50 90 02 0

Applications





- + Aluminium table-top enclosure for MCR technology
- + Customised height variants thanks to profile technology
- + Stacking option due to special foot shape
- + Contactless inside of enclosure
- + Internal mounting groove for M4 and M5 spring nuts



Technical data

Material:	Half shell: DIN EN 1706 EN AC-AISI 12 (Fe) Side profiles: DIN EN 573 EN AW-AMgSi
Colour combination:	Enclosure RAL 7035, light grey Base elements RAL 7024, graphite grey or enclosure RAL 9005, jet black Base elements RAL 3003, ruby red
Protection class:	IP40 according to EN 60529
Surface:	Powder coating, silk gloss texture
Temperature resistance:	-40 °C to +80 °C

Included in delivery
Enclosure system with base/head elements; order front panel / rear panel separately



3-D data and drawings

Product overview

Type	Order no.	External enclosure dimensions* W x L x H (mm)	Weight (g)	Colour combinations	Front panel / rear wall (Set, 2 pcs.)	Max. front panel area
Wavetronic 1	07 70 01 01 0	324 x 268 x 55	2300	grey/anthracite	07 70 00 91 0	287 x 37
Wavetronic 1	07 70 02 01 0	324 x 268 x 55	2300	black/red	07 70 00 91 0	287 x 37
Wavetronic 2	07 70 01 02 0	324 x 268 x 101	2700	grau/anthrazit	07 70 00 92 0	287 x 83
Wavetronic 2	07 70 02 02 0	324 x 268 x 101	2700	black/red	07 70 00 92 0	287 x 83
Wavetronic 3	07 70 01 03 0	324 x 268 x 147	3100	grey/anthracite	07 70 00 93 0	287 x 129
Wavetronic 3	07 70 02 03 0	324 x 268 x 147	3100	black/red	07 70 00 93 0	287 x 129
Wavetronic 4	07 70 01 04 0	324 x 268 x 194	3500	grey/anthracite	07 70 00 94 0	287 x 176
Wavetronic 4	07 70 02 04 0	324 x 268 x 194	3500	black/red	07 70 00 94 0	287 x 176
Wavetronic Special height	07 70 01 99 0	324 x 268 x SH**		grey/anthracite	07 70 00 99 0	287 x SH***
Wavetronic Special height	07 70 02 99 0	324 x 268 x SH**		black/red	07 70 00 99 0	287 x SH***

* Dimensions without base elements

** Front panel area + 18

*** min. special height = 75 mm; max. special height = 300 mm

EMC version on request

Accessories

Type	Order no. EMC version
Support feet (2 pcs.), grey	07.70 00 81
Carrying handle	07.70 00 82
19"-Slide-in set (53TE / 3HE)	07.70 00 83
Spring nuts M4 (4 pcs.)	29.00 00 50
Spring nuts M5 (8 pcs.)	10.03 60 01



19"-Slide-in set
(for Wavetronic 3)

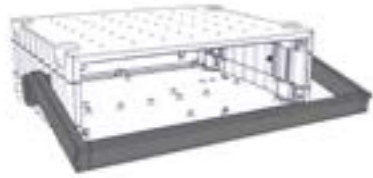
Order no. 07 70 00 83 0



Spring nuts for fastening to the side profile

M4 (4 pcs.)	29 00 00 50 0
M5 (8 pcs.)	10 03 60 01 0

Accessories

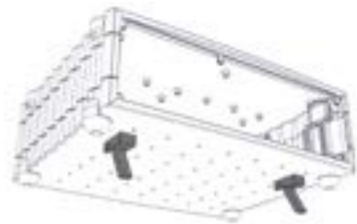


Handles
Order no. 07 70 00 82 0



Front panel / back panel

Wavetronic 1	07 70 00 91 0
Wavetronic 2	07 70 00 92 0
Wavetronic 3	07 70 00 93 0
Wavetronic 4	07 70 00 94 0
Wavetronic Special height	07 70 00 99 0



Support feet
Order no. 07 70 00 81 0



> Protection Classes and Tightening Torques

IP AND NEMA PROTECTION CLASSES

INDUSTRIAL ENCLOSURES

On request, ROSE Systemtechnik develops and manufactures enclosures in accordance with protection classes IP and NEMA (dust and water resistance) as well as IK (impact resistance). All enclosures can be tested for compliance with the guidelines in our in-house laboratory.

Meaning of the NEMA protection class:

Indoor/outdoor environmental conditions	Code number												
	1	2	3	3R	S	4	4X	5	6	6P	12	12K	13
Incidental contact with devices	X	X				X	X	X	X	X	X	X	X
Falling dirt	X	X				X	X	X	X	X	X	X	X
Falling and slightly splashing liquids		X				X	X	X	X	X	X	X	X
Flying dust, fluff and fibres						X	X	X	X	X	X	X	X
Splash and jet water						X	X		X	X			
Seeping oil and coolant										X	X	X	X
Spraying and splashing oil or coolant													X
Corrosive agents							X		X				
Occasional temporary submersion								X	X				
Occasional permanent submersion									X				
Incidental contact with devices			X	X	X	X	X		X	X			
Rain, snow and sleet			X	X	X	X	X		X	X			
Sleet				X	X	X	X		X	X			
Flying dust					X	X	X		X	X			
Jet water					X	X			X	X			
Corrosive agents										X			
Occasional temporary submersion									X	X			
Occasional permanent submersion										X			

Protection classes and tightening torques

NEMA protection classes	IP protection classes
1	IP20
2	IP21
3	IP54
3R	IP24
3S	IP54
4, 4x	IP56
5	IP52
6, 6P	IP67 (IP 68)
12, 12K	IP52
13	IP54

Degrees of protection for contact and foreign body protection in accordance with EN 60529

First digit	Naming
0	No protection
1	Protection against large foreign bodies
2	Protection against medium-sized foreign bodies
3	Protection against small foreign bodies
4	Protection against granular foreign bodies
5	Protection against dust deposits
6	Protection against dust ingress

Degrees of protection for water protection

Second digit	Naming
0	No protection
1	Protection against vertically falling dripping water
2	Protection against dripping water falling at an angle
3	Protection against water spray
4	Protection against splash water
5	Protection against water jets
6	Protection against flooding
7	Protection during immersion
8	Protection during submersion
9K	Protection against water during high-pressure/steam jet cleaning

> Protection Classes and Tightening Torques

IK protection classes and tightening torques

INDUSTRIAL ENCLOSURES

IK protection classes

IK code	Protection against mechanical impact
IK00	No protection
IK01-05	Impact < 1 joule
IK06	Blow 1 joule (500 g from 20 cm)
IK07	IK07 Impact 2 joule (500 g from 40 cm)
IK08	Impact 5 joules (1.7 kg from 29.5 cm)
IK09	Impact 10 joules (5 kg from 20 cm)
IK10	Impact 20 joules (5 kg from 40 cm)

To ensure that enclosures provide optimum protection, they should be fitted and sealed correctly. ROSE Systemtechnik recommends the following tightening torques for fastening the required fixtures and the lid:

Product group	Description	Size of the lid screw	Tightening torque in Nm
01	AL- enclosures	M4	1 - 2,5
01	AL- enclosures	M6	1 - 3,0
02	Polyester enclosures	M4	1 - 1,5
02	Polyester enclosures	M6	1 - 3,0
03	PC- enclosures	M4	1 - 2,0
03	PC- enclosures	M6	1 - 2,5
04	AluForm enclosures	M4	1 - 2,0
04	AluForm enclosures	M6	1 - 2,5

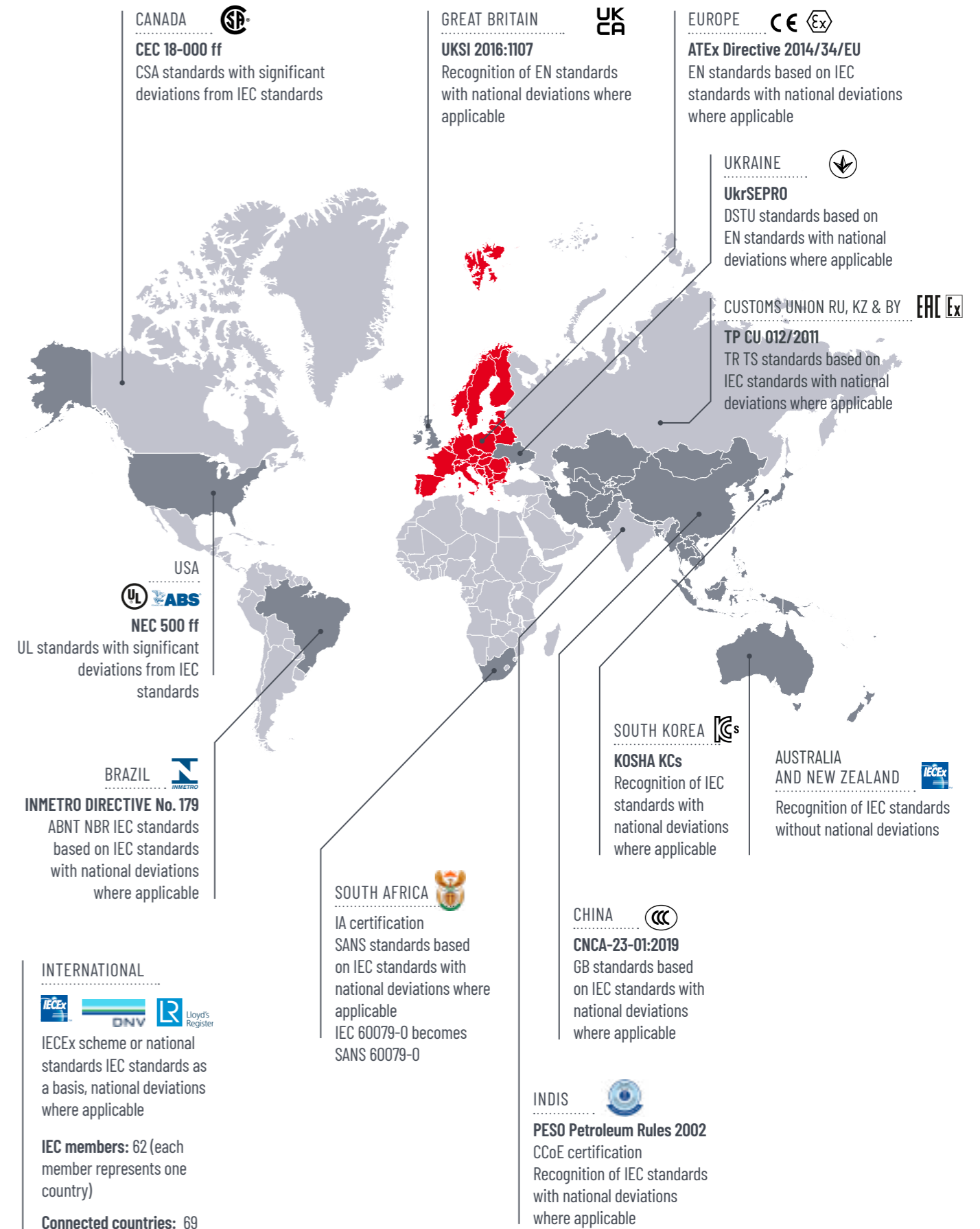
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Productgroup	ABS	ATEX	CCC (Plant India I+II)	CCC (Plant India III)	CCC (Plant Porta Westfalica)	CCC (Plant Singapore)	CCoE (India)	DNV	IA (South Africa)	IECEX	INMETRO (Brazil)	KTL (Korea)	Lloyd's Register (LR)	Russian Maritime Register of Shipping (R-MR)	TRTS/EAC (Russia)	UKCA	UkrSEPRO (Ukraine)	UL 508A (E66473)	UL Ex (E203312)
01													1						1
02													1						1
04													1						1
05	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1	1	1
06	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1	1	1
15	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1	1	1
16	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1	1	1
19																			1
20																			1
21														1					1
25	1	1		1	1	1	1	1	1	1	1		1	1	1	1	1	1	1
26	1	1		1	1	1	1	1	1	1	1		1	1	1	1	1	1	1
28		1								1					1				
34	1	1		1	1	1	1	1	1	1	1		1	1	1	1	1	1	1
35	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1	1	1
36	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1	1	1
37													1						1
38																			1
40-EJB	1		1	1	1	1	1	1	1	1				1	1	1			
40-EFJB	1									1									
40-ELJB	1									1									
40-EJS	1									1									
40-GUB	1	1	1	1	1	1	1	1	1	1				1	1	1			
40-IJB	1	1	1	1	1	1	1	1	1	1				1	1	1			
40-IFJB	1									1									
40-TBE	1	1	1	1	1	1	1	1	1	1				1	1				
40-CA	1									1									
42																			
46	1						1			1									
47	1																		
48	1																1		
58	1									1									
62																			
64																			1
68	1									1									
90	1						1			1									
91	1						1			1									
92	1						1			1									
35.30.30.19												1							
35.40.30.16												1							
35.50.40.16												1							
35.60.70.19												1							

> Approvals

INDUSTRIAL ENCLOSURES



The path to the right enclosure

There are various criteria to consider when selecting an enclosure:

- > the installation location (indoor/outdoor area, hazardous area, seawater area, etc.)
- > the size (depends on the fixtures)
- > the protective function (protection class, EMC resistance, Ex)

The following lists will help you select the right enclosure for your specific application.

I. Enclosure material specifications

Aluminium enclosure

- > lightweight, robust metal enclosure
- > good chemical resistance (see table)
- > Can be used in a wide temperature range
- > EMC basic shielding (optional full shielding)
- > Good processing options
- > Areas of application: Suitable for indoor and outdoor use, special version or Ex version for outdoor use in aggressive or seawater-containing atmospheres

Polyester enclosure

- > plastic enclosure for rough environments
- > good chemical resistance (see table)
- > use in a wide temperature range
- > good insulation properties
- > V-0 version (according to UL)
- > Areas of application: suitable for indoor and outdoor use; standard industrial enclosures

Polycarbonate enclosure

- > lightweight plastic enclosure
- > good chemical resistance (see table)
- > use in a wide temperature range
- > good insulation properties
- > good processing options
- > transparent versions possible (lid)
- > areas of application: suitable for indoor and outdoor use

ABS enclosure

- > plastic enclosure with low weight
- > good chemical resistance (see table)
- > use in standard temperature ranges

Polystyrene enclosure

- > plastic enclosure with low weight
- > good chemical resistance (see table)

Stainless steel enclosures

- > robust metal enclosure
- > very good resistance to chemicals
- > can be used in a wide temperature range up to 200°C
- > EMC basic shielding (optional full shielding)
- > special sizes possible
- > areas of application: Suitable for indoor and outdoor use, special version or Ex version for outdoor use in aggressive or seawater-containing atmospheres

Chemical resistance

Chemicals	Aluminium	ABS	Polycarbonate	Polyester	Polystyrene	Polyamide	Chloroprene	EPDM	NBR	Pocan	Polyurethane	PVC	Silicone
Acetone	+	-	-	-	-	•	+	+	-	+	-	-	•
Formic acid	•	-	30 %	10 %	•	-	+	+	-	10 %	/	<50 %	•
Ammonia	+	-	-	-	+	20 %	+	+	+	10 %	/	•	+
Petrol	+	-	•	+	•	+	+	•	+	+	+	+	+
Benzene	+	-	-	+	-	-	-	-	-	+	+	-	-
Brake fluid	/	/	-	+	/	60°	•	-	/	+	/	/	+
Butane	+	/	+	/	-	+	+	/	+	+	/	50 %	-
Butanol	/	/	/	+	/	+	+	/	-	+	/	•	-
Calcium chloride	+	/	+	+	+	+	/	/	/	10 %	/	+	/
Chlorobenzene	+	-	-	+	-	•	-	-	-	-	-	-	-
Diesel oil	/	+	•	+	•	/	•	•	/	+	+	•	•
Acetic acid	+	10 %	10 %	40 %	+ max. 50 %	-	-	/	-	10 %	/	25 %	-
Formaldehyde	+	+	/	30 %	+ max. 40 %	+	-	/	+	/	/	40 %	+
Frigen 113	/	/	+	+	/	/	+	/	+	+	/	/	/
Fruit juice	/	/	+	+	/	+	+	+	/	-	+	+	+
Glycerine	+	+	•	+	+	+	+	+	+	+	+	+	+
Heating oil	+	•	•	+	•	+	•	•	+	+	+	•	•
Hydraulic oil	/	/	+	+	•	+	+	/	/	+	/	/	•
Potassium hydroxide solution	/	/	-	-	+ max. 50 %	-	+	/	/	10 %	/	+	/
Potassium chloride	•	/	+	+	+	+	+	+	+	10 %	+	+	+
Potassium hydroxide	-	+	/	-	+	/	+	+	+	-	-	/	•
Linseed oil	+	/	+	+	+	+	+	+	+	+	+	+	•
Methanol	+	/	-	-	+	•	+	/	•	+	/	/	+
Methylene chloride	+	/	-	-	-	-	-	/	-	-	-	-	-
Lactic acid	+	+	10 %	+	+ max. 80 %	10 %	+	+	+	/	/	10 %	/
Mineral oils	/	+	+	+	+	+	•	•	+	+	+	+	+
Engine oils	/	/	+	+	+	+	•	•	+	+	+	/	+
Sodium carbonate	•	/	+	+	+	+	/	/	/	10 %	/	/	/
Sodium chloride	•	/	+	+	+	10 %	+	+	+	10 %	+	+	+
Sodium hydroxide	+	+	/	-	/	/	+	+	+	-	-	•	•
Caustic soda	/	-	-	40 %	+ max. 50 %	10 %	50 %	/	-	/	/	60 %	-
Nitric acid	+	30 %	10 %	10 %	+ max. 25 %	-	•	+	•	10 %	-	30 %	-
Hydrochloric acid	/	10 %	20 %	+	+ max. 10 %	-	+	+	< 65 %	10 %	-	30 %	/
Lubricating oil	+	/	+	+	/	+	•	•	+	+	+	+	+
Carbon disulphide	+	/	-	-	-	•	-	/	-	+	/	•	-
Sulphuric acid	•	30 %	50 %	70 %	+ max. 50 %	-	50 %	/	25 %	10 %	/	80 %	25 %
Soap suds	/	/	•	+	/	+	+	/	+	10 %	•	•	+
Washing-up liquid	/	/	+	/	/	/	+	•	/	+	•	/	+
Turpentine oil	/	/	/	+	-	+	-	/	+	+	/	+	-
Carbon tetrachloride	+	-	/	+	-	•	-	-	-	+	-	•	-
Toluene	+	-	-	-	-	+	-	-	-	-	•	-	-
Trichloroethylene	+	-	/	-	-	-	-	-	-	-	-	-	-
Water (distilled water, river water, tap water, sea water)	/	+	+	+	+	+	+	+	80 C°	+	+	40 C°	+
Tartaric acid	/	/	10 %	+	+	+	+	+	+	/	+	10 %	+
Xylene	+	-	-	+	-	+	-	-	-	•	-	-	-
Zinc sulphate	•	/	+	+	+	/	+	+	+	/	/	40 %	+
Citric acid	+	10 %	10 %	+	+	10 %	+	+	+	10 %	/	10 %	+

Explanation of symbols

- + resistant to all concentrations
- % resistant to maximum % concentration
- C° resistant up to maximum C°

- conditionally resistant
- unstable
- / without specification

Unless otherwise stated, the tests were carried out at room temperature. If different media come into contact with each other, the resistances may change. Therefore, we cannot accept any liability for the information provided.

> Industrial enclosures



A Phoenix Mecano Company



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