



WINCH INSTRUCTION MANUAL

PowerWinch

PW12000 / PW13000

PW12000SR / PW13000SR



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Thank you for purchasing PowerWinch and congratulations on the excellent choice! We are convinced that it will be of reliable use for a long time, and each use will be a pleasant experience.

General safety rules

WARNING! Prior to working with the winch, please refer to and comply with the safety rules in this manual. Any improper use of the winch can lead to a serious threat to the user and/or third parties.

1. Proper clothing

- Do NOT wear loose clothing or jewellery as they can be caught up in the movable parts of the winch.
- Use thick gloves when working with rope. Never grab the rope with your bare hands.
- When working with the winch always wear anti-slip footwear.

2. Keep a safe distance.

- Make sure that there are no bystanders near the rope. A sufficient distance equals to 1.5 times the length of the rope.
- Never cross or stand on the stretched rope.
- Maintain a stable body posture, and be careful not to fall on the rope.

A BROKEN ROPE CAN CAUSE SERIOUS INJURIES AND EVEN DEATH.

3. Take care of the cable for the remote controller.

- NEVER carry or move the winch using the cable! Do not pull the cable to unplug the remote controller from the socket.
- Keep the cable away from sources of high temperature, oil and sharp surfaces.
- If you are using the remote controller inside a vehicle, lead the cable through the window - do not trap it in a door.

4. Do not overload the winch.

- If the engine warms up to such a degree that it cannot be touched, immediately stop the pulling process and allow it to cool down.
- Immediately stop the pulling process when the engine is stopped because it cannot pull such a large weight (use a pulley block).
- DO NOT exceed the specified maximum pull force of the device.
- Avoid jerking.

The pull force value of the winch specified in the manual is the maximum force - not the working force.



5. Avoid accidental start-up.

- Use the main breaker switch for the winch on the positive power lead.
- Always disconnect the transmission (the clutch lever must be in the OUT position) when you are not using the winch.
- After finishing your work, switch off the radio control remote with the button placed thereon.

6. Take care of the technical condition of the winch.

- Before starting the work, check the condition of the winch - any damage should be repaired as soon as possible in an authorized service centre, and replace worn parts on a regular basis.
- Use original spare parts only.

7. The rope must be correctly wound on the drum.

- When working with the winch always use protective gloves.
- Always wind the rope on the winch under a specific load.
- Wind the rope at a right angle to the axis of the drum, control the rope so that it does not wound on the drum in one place only - it may damage the winch or result in a body injury or death.
- When winding the last metre of the rope do not hold it with your hand - use a special belt on a hook. • During operation of the winch it is necessary to slightly load the rope with a blanket or a plastic sheet in case it breaks.
- The rope must always be wound from the bottom of the winch.

Principles of safe winch handling

WARNING! Prior to using the winch, read all the principles of its safe operation. Proper use, maintenance and storage of the winch have a significant impact on its efficiency and lifetime.

- Small irregularities in rope winding are not a problem if the rope does not accumulate on one side of the drum. If this happens, unwind the rope and move the hook point closer to the longitudinal axis of the vehicle.
- Keep the remote controller in a safe place (both the wired one and the wireless one). Inspect it before connecting.
- First, connect the remote controller, and then turn on the clutch!
- NEVER move the clutch lever when the engine is rotating.
- NEVER move the clutch lever under load.
- NEVER fasten the hook directly behind the rope, for example, after wrapping it around a tree, as this will damage the rope.
- Observe the winch during operation maintaining a safe distance. Stop the pulling process every few meters to make sure that the rope is being wound properly and evenly.
- Over 2/3 of the maximum pull force of the winch always use the pulley block to double the pull force. This significantly increases its life. The pulley block can also facilitate uniform rope winding on the winch drum.
- Use branded shackles, pulley blocks and belts only; their breaking loads must match the parameters of the winch (if in doubt, contact your distributor).
- NEVER unwind the entire rope! There ALWAYS must be at least 5 turns on the drum, otherwise the rope attachment to the drum will be pulled out which may result in a serious injury and damage to the equipment.



- The maximum pull force of the winch can be achieved on the first turn of the rope on the drum only. When pulling heavy loads, unwind as much rope from the drum as possible or use the pulley block.
- Hang a heavy blanket or a specially designed plastic sheet on the line (at about half of its length). If the rope breaks it will be directed to the ground.
- Wind the rope on the drum tightly, turn to turn, thereby reducing the possibility of the top layer of the rope falling into between the lower turns. If this happens, try to release the rope by pressing the winding and unwinding buttons for short periods. NEVER release the rope under load using your hand!
- Insert chocks under the wheels of vehicles standing on a hill.
- Battery:
 - The battery must be in a good condition and of adequate capacity (Ah). Avoid contact with the electrolyte.
 - Always wear eye protection when working with battery.
 - When handling the winch, leave the engine running to charge the battery.
- Rope:
 - Make sure it is properly fixed to the drum and there are no signs of damage.
 - Do not use the rope if it is frayed and single pieces of wires protrude from it.
 - Do not use the winch rope as a tow rope (do not tow using the winch).
 - Do not replace the original rope with a rope with a lower strength (before replacing the rope, contact your distributor).
 - The rope life depends primarily on the usage.
- NEVER exceed the maximum pull force of the winch.
- When in the pulling process do not "help" with the wheels.
- When working with the winch avoid any jerks as they can damage the winch, break the rope, and cause serious injuries.
- NEVER use the winch for vertical lifting.
- NEVER use the winch for lifting or transporting people.
 - NEVER move the winch behind the lever clutch.

Getting started

The best way to become familiar with the winch is to carry out a series of calm attempts before there is a real need to use it. Plan every attempt, and during the process pay attention to the sounds made by the winch depending on the load, and try to remember them because this knowledge will be of help later.

1. Block the vehicle in place using the hand brake or chocks placed under the wheels.
2. Unwind the amount of rope needed to fasten the other end to the hook point.

WARNING! There must be a minimum of 5 turns of the rope on the drum! Do not unwind the rope with the engine, instead use the lever clutch for free rope unwinding:

- A. Disconnect the clutch by moving the lever to OUT. Now, you can easily unwind the rope from the drum with your hands.
- B. After unwinding the rope to the required length, turn on the clutch by moving the lever to the IN position. The winch is ready for operation.

WARNING! Before you start the pulling process, make sure that the clutch is fully ON!



3. Check the correctness of connection of power cables.
4. Plug the remote controller into the socket on the box with relays. We recommend controlling the winch from the inside of the vehicle for increased safety if the rope breaks.
5. Prior to the pulling process, set the transmission into neutral and turn on the engine.
6. Control the winch using the IN and OUT buttons. Periodically, check that the rope is correctly wound on the drum.

WARNING! Remember to keep a safe distance from the winch and the rope.

7. Always unplug the remote controller after work.

8. Using the wireless remote controller.

- A. Turn on the remote controller by pressing the ON button.
- B. Turn on the clutch of the winch transmission. Pressing and holding the IN and OUT buttons, respectively, will wind and unwind the rope.

WARNING!

- When not using the winch, always turn off the remote controller. Otherwise, the winch may be accidentally activated.
- ALWAYS turn off the remote controller between successive uses of the winch, even when the break time between them is short.
- ALWAYS unplug the wired remote controller before using the wireless remote controller! However, if you are using the wired remote controller, ALWAYS turn off the wireless remote controller.

WARNING!

- Before pulling out a vehicle, ALWAYS put the gearbox of the car into the neutral position.
- NEVER fasten the hook directly behind the rope after wrapping it around its hook point, e.g. a tree.
- BE CAREFUL not to trap your fingers, jewellery, loose clothing or hair in the rotating drum. The best is not to approach the rotating drum at all.
- DO NOT allow anyone to stand or pass near the rope during the pulling process. Keep a safe distance yourself.
- ALWAYS remove the plug of the remote controller from the socket when you are not using the winch. The remote controller takes a small amount of electricity from the battery, and its accidental start-up can damage the winch.

6. Winch maintenance

We recommend using the winch once a month. This will allow maintaining the transmission fully lubricated so that the winch is always ready to use. If you do not need to use the winch, for maintenance purposes unwind 15 metres of the rope using the engine, turn off the clutch and manually unwind 5 metres, and then turn on the clutch and wind the rope with the engine.

If you plan to use the winch in harsh conditions (mud and water), after the use you should dry, clean and lubricate it.



The wire rope of the winch should be periodically maintained using an appropriate rope agent. If the rope is frayed, replace it.

Periodically, check electrical contacts and connections and, if necessary, clean and lubricate them.

TROUBLESHOOTING

Fault	Possible cause	Repair
The engine does not work or works only in one direction.	Damaged or blocked relay;	(1)! WARNING: Turn off the clutch before taking the step to prevent the start-up of the drum. If the relay blocks once it will probably block again and it must be replaced immediately. Tap the relay to release the suspended links. Check them by applying voltage to the small relay output. Make sure that the relay is properly grounded. If the relay is not blocked it will click loud at the first turn. (2) Replace the relay. (3) Check the connections. (4) Check the grounding between the negative battery cable and the relay base.
THE WINCH DOES NOT TURN OFF	The relay is locked in the "on" position.	If the relay is blocked in the "on" position, change the working direction of the rope until the power cable is disconnected.
THE ENGINE GETS OVERHEATED	(1) Long use. (2) Damaged engine.	(1) Allow it to cool. (2) Return to an Authorized Repair Centre.
THE ENGINE IS WORKING BUT WITH INSUFFICIENT POWER OR ROPE SPEED	(1) Weak battery. (2) The cable between the battery and the winch is too long. (3) Poor battery condition. (4) Incorrect grounding.	(1) Recharge or replace the battery. (2) Use a larger diameter cable. (3) Check battery poles for corrosion. Clean, re-tighten, and cover with a thin layer of grease to prevent further corrosion. (4) Inspect and clean the connections.
THE ENGINE IS RUNNING BUT THE DRUM IS NOT ROTATING	(1) The clutch is not turned on.	(1) Turn on the clutch.
THE WINCH IS WORKING IN REVERSE DIRECTION	(1) Engine wires are reversed. (2) Incorrectly connected relays.	(1) Check the connections. (2) Check the connections.



Winch assembly

1. Assembly

The winch must be mounted on a flat steel surface with strength adequate for the maximum pull force of the winch. All mounting screws must be placed in the same plane to avoid deformation and damage to the winch. The mounting method must not affect the operation of the sensor system responsible for triggering the safety "airbags".

Make sure that the area of installation has appropriate dimensions.

If you intend to make the mounting plate yourself, we recommend using a steel sheet with a thickness of 6 mm or more, depending on the winch model. If the mounting plate is improperly designed or poorly made it can damage the equipment, and this always results in loss of warranty!

The winch should be tightened using the supplied steel screws and spring washers. Original screws are adapted to the 6 mm plate - when using a thicker plate replace the screws with new ones with a suitable length and the same hardness. Mount the guide in a way that ensures proper winding of the rope on the drum. The screws that mount the roller guide must not touch the mounting feet of the winch.

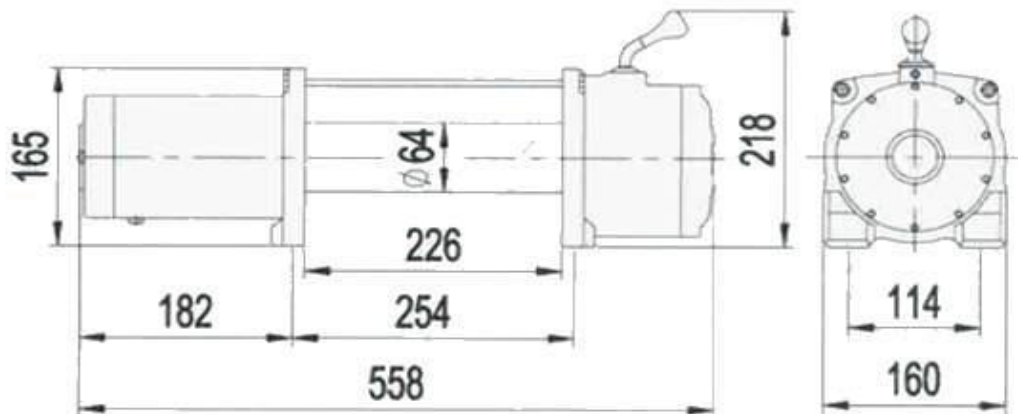


LEGEND:

Płyta montażowa – mounting plate
Śruba – screw
Odlew wspierający – supporting cast
Podkładka – washer
Podkładka zabezpieczająca – lock washer



2. Dimensions PW12000 / PW13000



3. Lubrication

All the moving parts of the winch are factory lubricated and require no further maintenance during the warranty period. The wire rope requires periodic soaking in light oil.

WARNING! Winches that are used over a rough terrain must be periodically dried, cleaned, and lubricated.

4. Installation of the rope

Unwind a new wire rope on the surface avoiding the formation of knots and kinks. After unwinding, the rope of the winch is not covered by the warranty - check the rope before the first use.

5. Mounting the box with relays

WARNING! The box with relays can be mounted directly to the winch or a vehicle itself in many ways. Choosing the best mounting method should always be dictated by practical requirements for the use of the winch.

6. Connecting the power supply

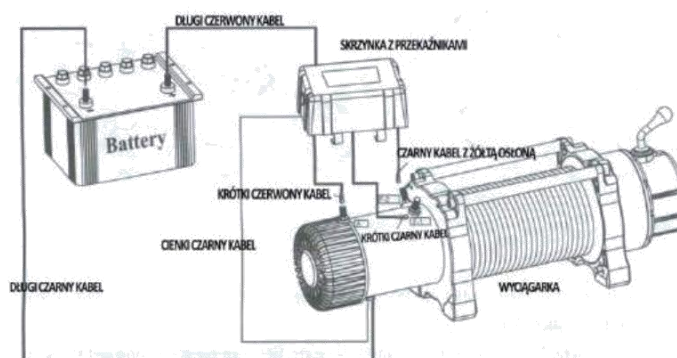
WARNING! Carefully read the following information before starting the connection process! **All the screws on the engine have been equipped with a nut and a lock nut - when tightening the wires**

BE SURE to hold the lock nut with a wrench so as not to overtighten the screw. Overtightening the screws can damage the internal electrical connections in the engine!!! If the supplied cables are too short, adjust their cross section along with increasing the length!!!

WARNING! All connections should be securely tightened using screws with spring washers. Improperly made connections may result in sparks, short circuits, and may supply too low current to the engine of the winch!



PW12000, PW13000

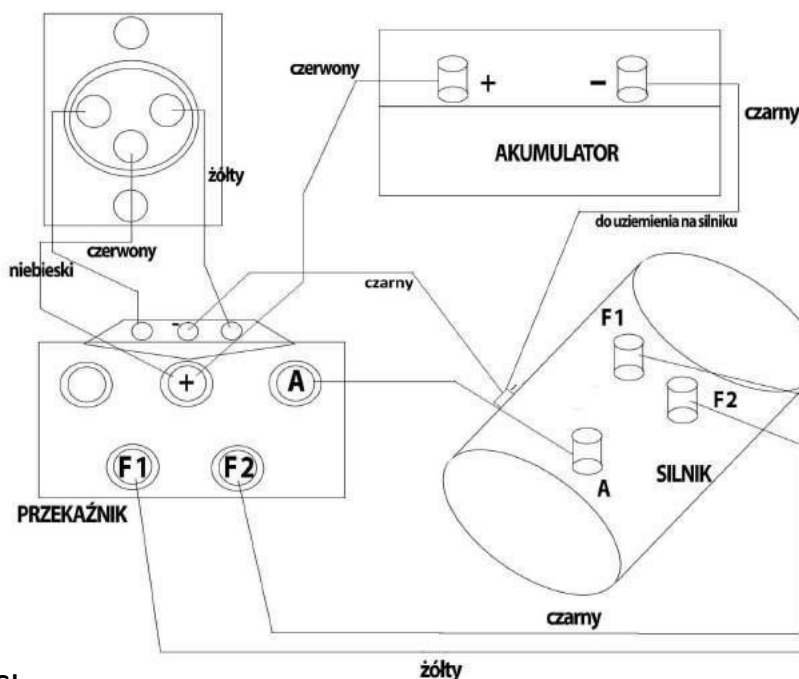


LEGEND:

Długi czarny kabel – long black cable
Cienki czarny kabel – thin black cable
Krótki czerwony kabel – short red cable
Długi czerwony kabel – long red cable
Skrzynka z przekaźnikami – box with relays
Czarny kabel z żółtą osłoną – black cable with yellow shield
Wyciągarka - winch

1. The RED short wire from the box with relays must be connected to terminal A of the engine
2. The BLACK short wire with the YELLOW shield must be connected to terminal F2 of the engine
3. The BLACK short wire with the BLACK shield must be connected to terminal F1 of the engine
4. The RED long wire must be connected to the (+) pole of the battery
5. The BLACK long wire - connect one end to the screw under the engine, and the other to the (-) pole of the battery
6. The BLACK thin wire must be connected to the bolt under the engine

Engine connection, remote controller receiver connection (optional), protection against overheating (optional), sockets



LEGEND:

Niebieski – blue
Czerwony – red
Żółty – yellow
Czarny – black
Silnik – engine
Przełącznik – relay
Akumulator – battery
Do uziemienia na silniku – to be grounded on the engine

WARNING!

- Make sure that the cables are not exposed to damage by contacting, e.g. hot elements.
- If there is corrosion in place of the connections it will weaken the performance of the winch, and can cause a short circuit or damage.
- Clean all planes of connections (contacts) on a regular basis.
- If you work in a salty environment, use silicone to protect metal connections.
- Smaller winches can be mounted on an adapter put on the tow bar of a trailer.

Technical specifications for the PowerWinch series

Pull force on individual layers

	PW12000	PW12000 SR	PW13000	PW13000 SR
Pull force	5443 kg	5443 kg	5907 kg	5907 kg
Engine	6 KM/12V 8.1 KM/24V serial sealed	6 KM/12V 8.1 KM/24V serial sealed	6.5 KM/12V 8.5 KM/24V serial sealed	6.5 KM/12V 8.5 KM/24V serial sealed
Transmission	3-stage planetary	3-stage planetary	3-stage planetary	3-stage planetary
Ratio	265:1	265:1	265:1	265:1
Clutch	Ergonomic Turned	Ergonomic Turned	Ergonomic Turned	Ergonomic Turned
Brake	Automatic Drum	Automatic Drum	Automatic Drum	Automatic Drum
Guide	Roller	Slide	Roller	Slide
Rope	9.5mm x 28m	10mm x 24.5m	9.5mm x 28m	10mm x 24.5m
Dimensions Drum	64mm x 226mm	64mm x 226mm	64mm x 226mm	64mm x 226mm
Dimensions	548mm x 160mm x 218mm	548mm x 160mm x 218mm	548mm x 160mm x 218mm	548mm x 160mm x 218mm
Screw spacing mounting	254mm x 114.3mm	254mm x 114.3mm	254mm x 114.3mm	254mm x 114.3mm
Net weight	40 kg	30 kg	40 kg	30 kg

Rope speed and power
consumption

	PW12000	PW13000
Pull force	5443 kg	5907 kg
Winding speed of rope without load (0 kg) metres per minutes	7	6.5
Winding speed of rope with full Load in metres per minutes	0.9	0.8
Current consumption without load	12V 80A 24V 45A	12V 80A 24V 45A
Current consumption with full load	12V 360A 24V 240A	12V 415A 24V 270A

	PW12000	PW13000
Pull force on layer 1	5443 kg	5907 kg
Pull force on layer 2	4490 kg	4821 kg
Pull force on layer 3	3765 kg	4095 kg
Pull force on layer 4	3175 kg	3542 kg

WARNING!!!

Threats and dangers related to the use of the winch described in this manual do not cover all types of situations that may arise. Extreme caution when working with the winch is very important. If you are in doubt concerning any of the items in the manual, please contact us.

Thank you for purchasing our winch and we wish you satisfactory and safe operation!



WARRANTY CARD POWERWINCH

Sales document No.:

Date -

S/N:

The wire rope is not covered by the warranty after the first use. Before the first use, check the rope.

Terms of warranty

1. The warranty period is 24 months from the date of handing out the product shown on the proof of purchase.
2. We provide good quality winches, and any defects or damage observed during the warranty period will be removed free of charge.
3. The warranty does not cover any parts that are subject to normal wear during operation: bearings, friction linings, faded inscriptions, corrosion of the wire rope and the roller guide.
4. The warranty does not cover mechanical damage and damage caused by improper use or overload of the winch. It does not cover damage caused by an accidental activation of the winch.
5. To consider and investigate the warranty, the winch must be delivered for repair to the PowerWinch Repair Centre.
6. Repairs will be made within 14 days from the date of an effective delivery of the winch along with the required documents. This period may be extended if it is impossible to repair the winch for reasons beyond the fault of the Seller, e.g. if parts must be shipped. The Client will be informed about the extended repair period in writing, by telephone or via e-mail.
7. The warranty period will be extended with the period from the date of acceptance of the winch to the service until the repairs are completed. This rule does not apply if the repair is not a warranty repair.
8. The Client shall have the right to exchange the winch for a new one if the defect cannot be removed. If it is impossible to exchange the winch for the same type, a winch with the most similar technical parameters will be offered. Such action is considered a fulfilment of the guarantor's obligations.
9. A warranty repair will be denied if:
 - There is no warranty card when submitting a repair
 - Modifications or amendments have been made in the warranty card or it has been damaged in a way that makes it impossible to read the data
 - Factory or other identification marks are missing and the winch cannot be identified with the warranty card
 - Inappropriate use or use that is inconsistent with the manual for use, storage and maintenance of the winch have been observed or if the repairs, modifications, etc. had been made by an unauthorized service company or unauthorized people
 - Improper installation
10. In case of unfounded complaints, we reserve the right to charge the Client with reasonable warranty costs and transportation costs.
11. The guarantor shall not be liable for loss of time and/or lost profit of a real nature or a virtual nature, as well as other damages which are the result of the product's defects or complaints.
12. If you do not accept the terms of the warranty, please return the winch within 30 days from the date of purchase. The winch cannot have any traces of use.
13. To all cases that are not described in the terms of this warranty, the provisions of the Civil Code shall apply. Winches that are not collected from the Service within 3 months shall be scrapped.



DECLARATION OF CONFORMITY

Declaration of Conformity

01/11/2014

Manufacturer	4x4 Terenowiec Sp. z o.o. Owner of PowerWinch® Klimeckiego 8 30-705 Kraków
Product	Automobile electric winch PW12000, PW12000SR, PW13000, PW13000SR
Compliance with standards	2006/42/EC - Machinery Directive 2004/108/EC - EMC Directive 2006/95/EC - Low-voltage Directive

The products listed in this document meet the requirements of the afore-mentioned standards in paragraphs related to the products.

Signature

Date 20/10/2014

Jacek Korzeniowski
Korzeniowski
Prezes Zarządu