



## **WSX Sidemount Owner's Manual**



## INTRODUCTION

Congratulations and thank you for choosing Apeks. Your buoyancy compensator meets all existing standards for quality and performance and has been designed and manufactured with the greatest care.

## COPYRIGHT NOTICE

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## WARNINGS, CAUTIONS AND NOTES

Pay special attention to information provided in warnings, cautions and notes that are accompanied by one of these symbols:



**A WARNING** indicates a procedure or situation that, if not avoided, could result in serious injury or death to the user.



**A CAUTION** indicates any situation or technique that could cause damage to the product and could subsequently result in injury to the user.



**A NOTE** is used to emphasize important points, tips and reminders.

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## GENERAL PRECAUTIONS AND WARNINGS

 **WARNING:** Before using this buoyancy compensator (BC), you must receive instruction and certification in SCUBA diving and buoyancy control from a recognized training agency. Use of SCUBA equipment by uncertified or untrained persons is dangerous and can result in serious injury or death.

 **WARNING:** The use of some equipment requires additional training beyond that of conventional SCUBA instruction. Be sure to obtain the appropriate instruction from a recognized training agency based on the type of diving equipment being used.

 **WARNING:** Read this owner's manual completely before attempting to use your BC and become familiar with it first in a controlled environment such as a swimming pool. Doing this will allow you to weight yourself properly and to become comfortable with using its many features and adjustments. Improper use of this BC could result in serious injury or death.

 **WARNING:** Before every dive, perform a complete pre-dive inspection according to the procedures prescribed in this manual, to ensure that all components are functioning properly and no signs of damage or leaks are present. If you find that your BC is not functioning properly or is damaged, remove it from service until it can be repaired by an Authorized Apeks Dealer or Distributor.

 **WARNING:** DO NOT inhale from your oral inflator. The BC may contain harmful contaminants or gases, which could cause suffocation or injury.

 **WARNING:** This BC is designed for use with compressed air or Nitrox/EAN (enriched air nitrox) mixtures not exceeding 40% oxygen. Any use of gas mixtures with increased oxygen content or the addition of helium or other substances may cause corrosion, deterioration and/or premature aging of the BC leading to component failure of the metal and rubber parts. The component failures could lead to a loss of buoyancy control and/or pressure integrity of the BC resulting in injury or death. Non-standard breathing mixtures may also present a risk of fire or explosion. The use of Nitrox/EAN requires additional training. Failure to observe this warning may result in injury or death. Use only nitrogen/oxygen mixtures containing no more than 40% oxygen.

 **WARNING:** This is NOT a life jacket: It does not guarantee a head-up position of the wearer at the surface. It is not designed to provide face-up flotation in all situations; therefore it does not meet U.S. Coast Guard regulations for a life preserver or personal flotation device (PFD). If you become unconscious in the water without a buddy present to immediately give assistance, you may suffer serious injury or death from drowning.

 **WARNING: TEMPERATURE LIMITATIONS:** This BC should be exposed to temperatures no lower than -4°F (-20°C) and no higher than 150°F (65°C).

**!** **WARNING:** Special instruction and procedures are needed when diving in cold water (temperatures below 50° F / 10° C). This instruction is beyond the scope of this manual. Use of this product without proper instruction in cold water diving techniques could result in serious injury or death. Consult an Authorized Apeks Dealer or Distributor prior to using this product in cold water.

**!** **WARNING:** Your BC is not a lift bag. **DO NOT** use it to bring heavy objects to the surface. Doing so may cause permanent damage to the BC and could also result in serious injury or death due to arterial gas embolism or decompression sickness.

**!** **WARNING:** In an emergency such as an out of air situation or uncontrolled descent, it is important to remove and jettison weight immediately. **DO NOT** depend solely on using your BC power inflator to lift you to the surface.

**!** **WARNING:** In the event of an uncontrolled, rapid ascent, it is important to immediately begin venting air from the BC. Continue venting air to slow your ascent rate if neutral buoyancy cannot be reestablished.

**!** **WARNING:** Although this manual provides some basic guidelines for certain buoyancy control techniques, it is not a substitute for training from a professional diving instructor. Failure to weight yourself properly may create a hazardous condition that could lead to serious injury or death. If you are unsure how to weight yourself in order to achieve optimum buoyancy underwater and on the surface, do not dive until you have obtained the necessary instruction from your diving instructor or an Authorized Apeks Dealer or Distributor.

CE Conformity - This BC conforms to EN 1809: 2014.

It was controlled by the l'Institut National de Plongée Professionnelle, organisme notifié n°0078, entrée n°3 Port de La Pointe Rouge 13008 Marseille -France.

If you have any questions regarding your buoyancy compensator or these instructions, please contact your Authorized Apeks Dealer or Distributor. This information is available on the Apeks website at: [www.apeks.co.uk](http://www.apeks.co.uk)

## WSX SIDEMOUNT COMPONENTS



**Figure 1**

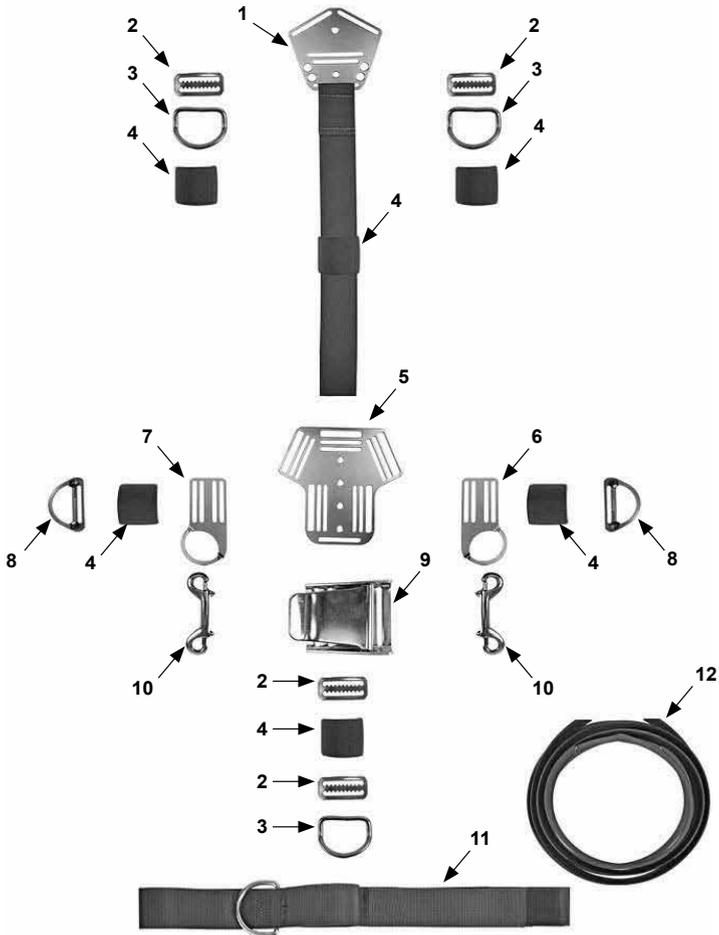
WSX Sidemount is made up of the following main components (**Fig. 1**):

- (1) Harness
- (2) Grommet Strip
- (3) Spine Pack
- (4) Aircell
- (5) \*Trim Weight Pockets

- (6) Accessory Pocket
- (7) Large Bungee Kit
- (8) Small Bungee Kit
- (9) Hardware Kit

*\*Trim weight pockets are sold separately*

## WSX SIDEMOUNT COMPONENTS



**Figure 2**

WSX Sidemount Harness is made up of the following hardware components (**Fig. 2**):

- |                      |                             |
|----------------------|-----------------------------|
| (1) Upper Plate      | (7) Drop D-ring Right       |
| (2) Slide            | (8) SlideLock D-ring        |
| (3) Bent D-ring      | (9) Buckle S/S              |
| (4) Elastic Retainer | (10) Double Snap Hook       |
| (5) Lower Plate      | (11) Crotch Strap w/ D-ring |
| (6) Drop D-ring Left | (12) Harness Webbing        |

## DONNING AND ADJUSTMENT PROCEDURES



**NOTE:** Make all harness adjustments prior to attaching the spine pack and aircell to the harness.

1. Place your arms through the harness torso straps as if you were putting on a jacket.
2. Bring the crotch strap up between your legs and insert the buckle through the loop in the crotch strap. Insert the free end of the waistband webbing through the buckle, then tighten the waistband webbing and fasten the buckle.
3. The harness should be snug through the shoulders, waist and crotch straps, but not over-tightened so that it feels restrictive.
4. If necessary, readjust the harness as needed.

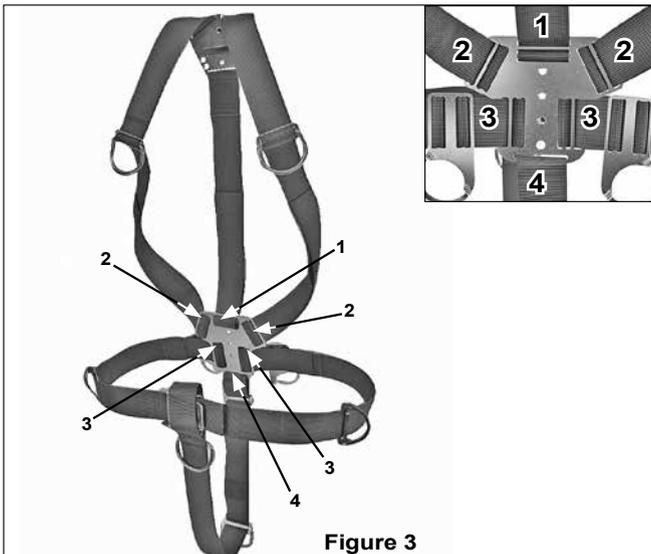
### Harness Adjustment

The harness may be adjusted for size at any one of the lower plate central adjustment points (**Fig. 3**) using the following procedure:

1. Remove the webbing from the elastic loop retainer.
2. Adjust the webbing through the lower plate and metal slide (*crotch strap only*) as needed.
3. Don harness and check for appropriate fit. Repeat process if further adjustment is needed.
4. Secure the webbing through the metal slide (*crotch strap only*) and elastic loop retainers when finished with adjustment.

### Harness Adjustment Points

1. Dorsal adjustment point - Height adjustment
2. Shoulder straps adjustment point - Height adjustment
3. Waist strap adjustment point - Width adjustment
4. Crotch strap adjustment point - Height adjustment



**Figure 3**

## BASIC SETUP

### Attaching the MP Hose to the First Stage

Apeks recommends that you take your BC, together with your regulator, to your Authorized Apeks Dealer or Distributor for the installation of the MP inflator hose. If this is not possible, carefully perform the steps in the following procedure.

1. Remove the MP hose from the inflator quick disconnect (QD) fitting.
2. Remove the port plug from a MP port on the regulator using the appropriate size hex key (*Fig. 4*).
3. Check the hose o-ring is present and in good condition. Screw the threaded end of the hose into the port and tighten to 40 in lb (4.5 Nm) with a 9/16" wrench.



Figure 4

**WARNING:** DO NOT connect the inflator hose to a high pressure (HP) port (greater than 200 psi / 14 bar). This may cause the hose to burst when pressurized, which can result in serious injury. If you are unsure which regulator port is medium pressure (MP) or high pressure (HP), consult your Authorized Apeks Dealer or Distributor before attaching the hose.

### Attaching the Spine Pack and Aircell to the Harness

1. Disconnect the dorsal webbing from the lower plate (*See Harness Adjustment Points*).
2. Insert the harness webbing through the appropriate webbing loops on the spine pack.

**NOTE:** Some adjustment configurations prevent the use of some web loops.

3. Reconnect the dorsal webbing to the lower plate.
4. Secure the spine pack and aircell to the upper and lower plates (*Fig. 5*) using a notched screwdriver, 3mm hex key and hardware kit.

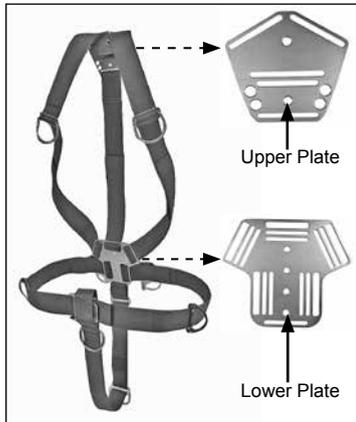


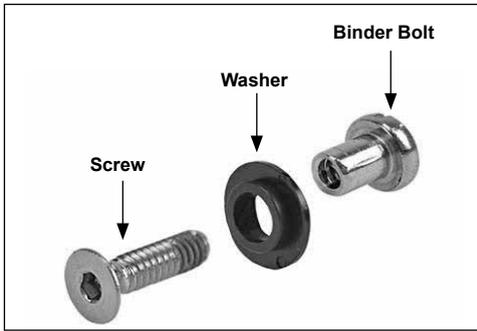
Figure 5

**NOTE:** The lower attachment point of the aircell may also be secured with a length of small bungee.

**NOTE:** Multiple configurations are possible when assembling the harness, spine pack and aircell. For this reason, Apeks leaves assembly options to user preference. To assist with mounting options and proper positioning, grommet strips and different length screws in the hardware kit will allow for multiple hardware configurations.



**NOTE:** When assembling the screws through either plate, the screw head should face the back of the user and the flat side of the washer should be positioned against the binder bolt head (Fig. 6).



**Figure 6**

### Attaching the Accessory Pocket

The accessory pocket is attached to the right and left drop d-rings on the rear of the harness using the double snap hooks (Fig. 7).



**Figure 7**

### Attaching the Bungee Kit

The large and small bungee kits can be set-up and attached to the harness according to user preference (Fig. 8).



**Figure 8**

## WEIGHT INTEGRATION FEATURES



**WARNING:** The negative buoyancy of the weight plus the negative buoyancy of the cylinder (when full) should not exceed the BC's positive buoyancy. The inability to achieve neutral buoyancy while at depth or positive buoyancy on the surface may lead to a hazardous situation that could lead to serious injury or death.

### Loading Weight into the Non-Releasable Weight Pouches

To install weight into the weight pockets, disconnect the hook and loop on the flap, secure the block weight under the elastic retainer, fold the flap over the pocket and reconnect the hook and loop. Each weight pocket on the spine pack comes equipped with an elastic retainer band inside to hold the weights securely in place (*Fig. 9*).

Two removable trim weight pockets (*sold separately*) can be mounted to the BC in a variety of different locations. To insert weight into the trim pockets, disconnect the flap buckle, slide in the block weight, fold the flap over the pocket and reconnect the buckle.

The weight pockets are designed to hold single rectangular block weights. To avoid accidental loss of weight, the best fit and ease of insertion, Apeks strongly advises against using small bullet-shaped weights and soft weight. Refer to **BC Specifications Chart** for maximum weight pocket capacity.

Because the weight is non-releasable, it is extremely important to check your buoyancy in a controlled environment such as a swimming pool while wearing the BC attached to a fully charged cylinder(s) and your exposure suit.



**WARNING:** Before every dive, it is important to make sure each weight pocket is secured, in order to prevent the weight from falling out. Involuntary release of weight from the pockets underwater can cause a sudden increase in buoyancy causing a rapid ascent, which could lead to serious injury or death due to arterial gas embolism, decompression sickness or drowning.



Figure 9

## INFLATION METHODS

### Power Inflation (Fig. 10)

For the power inflator to operate, the medium pressure (MP) inflator hose must be connected. To connect the MP hose, grip the grooved sleeve at the connection fitting **(a)** with your thumb and forefinger and slide the sleeve back. Place the connection fitting over the quick disconnect fitting **(b)** on the inflator and firmly push inward while releasing the sleeve. Check to ensure that the hose is securely attached. After the hose is attached to the power inflator, pressurize the first stage regulator by slowly opening the cylinder valve.

To inflate your BC with medium pressure air, depress the power inflator button **(c)**. Do not hold the inflator button depressed continuously underwater, as this could cause you to become excessively buoyant. Instead, inflate the BC in short bursts until you become neutrally buoyant.

The inflator can be connected to either the right or left side by removing and switching the universal pull dump to the opposite side.

Methods for securing the power inflator to the BC are left to user preference.

The working pressure of the inflator is as follows: 103 PSI (7 BAR) minimum to 294 PSI (20 BAR) maximum.

### Oral Inflation (Fig. 10)



**WARNING:** Do not rely on the power inflator as the only means to inflate your BC. It is important to practice the technique of orally inflating your BC so that you are prepared for any type of malfunction or out of air situation that could render the power inflator inoperable. You may otherwise be unable to achieve positive buoyancy in an emergency, which could lead to serious injury or death.

To orally inflate your BC, place your lips on the oral inflator mouthpiece **(e)** and exhale a small amount of air into the mouthpiece to purge any water that may still be in the housing. While continuing to exhale into the mouthpiece, depress the oral inflator button **(d)** to inflate the BC. Immediately after exhaling, release the oral inflator button to prevent air from escaping.

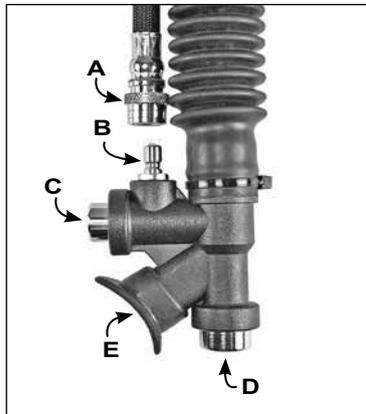


Figure 10

## DEFLATION METHODS

Throughout the course of a dive, it will be necessary to release air from the BC using one of the methods described in the following instructions. Each method uses a valve that is in a different location. The method you choose at any time may depend on whether you are making your initial descent feet-first, head-first or maintaining neutral buoyancy underwater. Always remember to utilize the valve that is at the highest point on the BC, depending on your position in the water.

### Deflation (Oral Inflater)

Lift the inflator body to its highest possible position (above the head). Press the oral inflater button (**d**) to start venting air. To close the valve, release the oral inflater button (**Fig. 11**).

The deflation rate of the bladder is as follows: 20 Newtons per second.

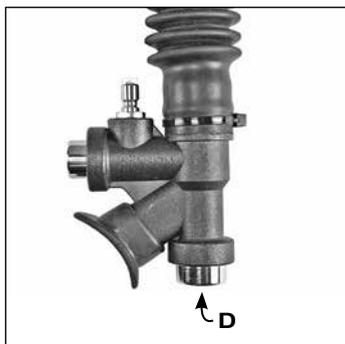


Figure 11

### Deflation (Dump Valve)

Your BC comes equipped with a combination dump valve / over pressure relief (OPR) valve. The primary function is to relieve excess air pressure inside the bladder. If the internal pressure exceeds the spring pressure, the OPR valve automatically opens to release air, preventing damage to the bladder. The dump valve can also be opened manually by pulling on the pull knob and cord assembly to quickly dump air from the BC. To close the dump valve, release the knob and cord assembly (**Fig. 12**).



Figure 12



**CAUTION:** The proper function of the over pressure relief (OPR) valve is vital to prevent damage to the bladder. Unauthorized service or tampering may render this valve inoperable and could cause the bladder to leak or burst. This type of damage is not repairable and is not covered under warranty.

## BUOYANCY AND CYLINDER CAPABILITIES

A tag attached to each BC contains specific information regarding the characteristics of your particular model BC, such as buoyancy and cylinder capabilities (**Fig. 13**). It is important to review this information in order to know the proper cylinder sizes that may be used and to ensure the amount of weight being used does not exceed the buoyancy of the BC.



**Figure 13**

**NOTE:** The BC tag above is an example only. Reference the specific tag located on your model BC.

**WARNING:** When fully charged and worn together, multiple cylinders may create enough negative buoyancy to counteract the amount of buoyancy your BC can provide. At depth, this can lead to a dangerous situation if your wetsuit becomes compressed and you can no longer achieve positive buoyancy by jettisoning weight (if applicable). The excess weight of multiple cylinders may also lead to structural failure of the backpack or harness. Such an event while diving may separate you from your primary air source and could lead to serious injury or death.

### Multiple Cylinder Set-up

Before adapting your BC for use with multiple cylinders, it is important to compare the buoyancy of your particular BC size and model with the specifications of the cylinders, the amount of weight you will carry and the type of exposure suit you will wear.

Your BC's backpack or harness may also have certain weight limitations depending on the size and model, as multiple cylinders vary in both size and weight. To ensure your safety, confirm the approved multiple cylinder configuration using the **BC Specifications Chart**.

### BC SPECIFICATIONS CHART

WSX Sidemount			
BC Size	Trim Weight	Weight Pocket Type	Cylinder Capacity
One Size Fits All	10 lb (4.5kg) (Removable)	15 lb (6.8 kg) (Spine Pack)	 D max.: 20.5 cm (8.1 in.) Cap.: 15 L (max.)   D max.: 20.5 cm (8.1 in.) Cap.: 2 x 15 L (max.)

## PRE-DIVE INSPECTION

Before each use, the BC must be given a thorough visual inspection and functional test. NEVER dive with a BC that shows signs of damage to its bladder, valves or any components until it has received a complete inspection and service from an Authorized Apeks Dealer or Distributor.

1. Visually inspect the entire BC for cuts, punctures, frayed seams, excessive abrasion, missing hardware or other damage of any kind.
2. Connect the inflator to a source of clean air, via the MP quick disconnect hose. Inflate the BC intermittently to ensure that the airflow is unobstructed and that the airflow stops completely when the inflator is released (**See Inflation Methods**).
3. Manually operate the dump valve by pulling on the pull knob and cord assembly to release air from inside the BC and then fully inflate the BC until the OPR valve opens (**See Deflation Methods**). Examine the operation of the OPR / dump valve by repeatedly inflating the BC to ensure the valve opens to relieve excess pressure, yet closes immediately afterwards to allow the bladder to remain taut and fully inflated.
4. Push the oral inflator button to ensure a rapid and unobstructed exhaust is present from the valve (**See Deflation Methods**). Fully inflate the BC once again and disconnect the MP hose from the power inflator. Let the BC stand for 10 minutes and listen for any leaks.



**WARNING: If you can hear any leaks or if the bladder begins to deflate within 10 minutes, DO NOT attempt to use the BC until it has received a complete inspection and service.**

## POST-DIVE CARE & MAINTENANCE

1. Avoid prolonged exposure to direct sunlight and extreme heat. Nylon fabric can quickly fade when exposed to the sun's ultraviolet rays and extreme heat may damage the welded bladder seams.
2. Avoid repeated or prolonged use in heavily chlorinated water, which can cause the BC fabric to discolor and decay prematurely.
3. Do not allow the BC to chafe against any sharp objects or rough surfaces that could abrade or puncture the bladder. Do not set or drop heavy objects such as block weights on the BC.
4. Avoid any contact with oil, gasoline, aerosols or chemical solvents.
5. To preserve the life of the bladder, rinse it inside and out with fresh water after every day of use, using the following procedure:
  - a) Pressurize the inflator with medium pressure (MP) air via the MP hose.



**CAUTION: Before rinsing, ensure that the inflator is pressurized with air. This will prevent debris and contaminants from entering the valve mechanism if the inflator is accidentally depressed.**

- b) Using a garden hose, direct water through the oral inflator mouthpiece to flush the interior of the bladder and then thoroughly rinse the exterior of the BC.
- c) Completely drain the bladder of water either through the oral inflator or through the OPR / dump valve.
- d) After rinsing, inflate the BC and allow it to dry inside and out.

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## **STORAGE**

Store the BC partially inflated, away from direct sunlight and in a clean, dry area. Do not store the BC in an enclosed space, such as a car trunk, where temperatures may fall below 0°F (-18°C) or rise above 120°F (49°C).

## **DEALER INSPECTION AND SERVICE**

1. It cannot be assumed that the BC is in good working order on the basis that it has received little use since it was last serviced. Remember that prolonged or improper storage can still result in internal corrosion and/or deterioration of o-ring seals and valve springs, as well as bladder seam degradation.
2. It is imperative that you obtain prescribed dealer service for your BC at least once a year from an authorized dealer, including a general air leak inspection and complete overhaul of the power inflator and over pressure relief (OPR) valve. Your BC may require this service more frequently, depending on the amount of use it receives and the environmental conditions it is used in.
3. If the BC is used for rental or training purposes in salt, chlorinated or silted fresh water, it will require prescribed dealer service every three to six months. Use in chlorinated water will greatly accelerate the deterioration of most components and require more frequent service.
4. **DO NOT** attempt to perform any disassembly or overhaul service of your BC. Doing so may cause the BC to dangerously malfunction and will render the warranty null and void. All service must be performed by an Authorized Apeks Dealer or Distributor.

## **WARRANTY**

Product registration and warranty information can be found on the Apeks website at [www.apeks.co.uk](http://www.apeks.co.uk)

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[www.apeks.co.uk](http://www.apeks.co.uk)