

EX-WP10

EX 10-litre pressurised washer tank

Installation Manual



Note: To ensure proper operation, please read this manual thoroughly before using the product and retain the information for future reference.

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EX-WP10

Installation Manual v5

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Although considerable care has been taken to ensure a correct and suitably comprehensive description of all relevant product components, this manual may nonetheless contain errors and inaccuracies. We invite you to offer your suggestions and comments by email via t.writing@tkhsecurity.com. Your feedback will help us to further improve our documentation.

How to contact us

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1 EX-WP10 - Installation manual

Preserve this manual as a reference for future needs.

	<p>Used electrical, electronic and stainless steel products should not be mixed with general waste. For proper treatment, recovery and recycling of old products, take them to applicable collection points, in accordance with your national legislation and the Directives 2011/65/EU and 2012/19/EU.</p> <p>By disposing of these products correctly, you help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. For more information about collection and recycling of old products, contact your local municipality or your waste disposal service. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.</p>
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The manufacturer declines all liability for any consequence resulting from improper installation practices, tampering or improper uses of the product.

The descriptions and illustrations contained in this manual are not binding. The manufacturer reserves the right to make any alterations deemed appropriate for the technical, manufacturing, and commercial improvement of the product, while leaving the essential product features unchanged, at any time and without undertaking to update the present publication.

Important: Carefully check the attached Electrovalve "Operating Instructions". In case of doubt, refer to that document.

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1.1 Description


The EX-WP10 stainless steel pressurised washer system with integral solenoid valve has been developed to be used with CCTV cameras in industrial, marine, and highly corrosive environments. The supplied washer system pairs preferably with Siquira camera housings or alternatively with housings which have no washer facility. The fluid tank is a 10-litre manually pressurised unit with built-in pressure gauge. The solenoid control voltage must be connected to the terminal box of the solenoid through suitable power cables. An AISI316L stainless steel compact cabinet protects the unit from the environmental agents.


This product must only be installed by suitably trained personnel in accordance with the relevant code of practice (for example, EN60079-14). These instructions are intended for their sole use.


1.2 Certifications

Ingress protection (EN 60529)	Solenoid valve: <ul style="list-style-type: none">• EX-WP10 Ex e: IP67• EX-WP10 Ex d: IP66/IP67 Cabinet: not rated
Rating (EX-WP10 Ex e)	 II 2G Ex e mb IIC Gb T4 /  II 2D Ex t IIIC Db IP67
Rating (EX-WP10 Ex d)	 II 2G Ex d IIC Gb T6 /  II 2D Ex tb IIIC Db IP66/67
EMC	EN 61000-6-4:2007 + A1:2011 EN 55022:2010 + AC:2011 EN 61000-3-2:2014 EN 61000-3-3:2013 EN 50130-4:2011 + A1:2014 EN 61000-6-2:2005 + AC:2005
LVD	EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + AC:2011 + A2:2013
RoHS	2011/65/EU
WEEE	2012/19/EU

1.3 Install the system

	<ul style="list-style-type: none"> • Prior to installation and operation, carefully read all instructions in this manual and heed all warnings.
	<ul style="list-style-type: none"> • Unpack this equipment and handle it carefully. If the package appears to be damaged, notify the shipper immediately.
	<ul style="list-style-type: none"> • Use the original packaging to transport the unit. Disconnect power supply before moving it. In case of returning the equipment, the original packaging must be used.
	<ul style="list-style-type: none"> • Make sure that the installation surface can support at least four times the weight of the unit in normal operating conditions. In case of excessive external stress (vibration, strong winds or impact, for example), the equipment may need additional means of protection.
	<ul style="list-style-type: none"> • Proper stainless steel hardware should be carefully chosen to fasten the unit to the surfaces.
	<ul style="list-style-type: none"> • Use caution when lifting and assembling the unit. It is recommended that non-slip protective gloves be worn during installation. The unit could bear sharp edges.
	<ul style="list-style-type: none"> • Keep the unit empty until the end of the installation.
	<ul style="list-style-type: none"> • The unit is intended to be used with water or with water solutions: denser mixtures could obstruct the nozzle. If the solution used has residual, it must be filtered before use. Do not use inflammable liquids, hydrogen peroxide (nor similar substances that give off oxygen), corrosive substances, liquids containing ammonia, solvents and liquids containing solvents, viscous or greasy liquids, liquids that form residues (dyes and greases).
	<ul style="list-style-type: none"> • The safety valve must not be bypassed or made inoperative.
	<ul style="list-style-type: none"> • Observe the legal requirements of your country for accident prevention and check the tank regularly.
	<ul style="list-style-type: none"> • Stainless steel reservoir: keep the O-rings, the safety valve, and the internal of the tank clean. When opening/closing the reservoir, pay attention to the correct placement of the O-rings in their seatings.
	<ul style="list-style-type: none"> • Use appropriate tools for the purpose. The particular nature of the site where the device is to be installed may require special tools for installation. Tightening/loosening the screws using automatic tools such as drill drivers may result in damaged threads.
	<ul style="list-style-type: none"> • This equipment has been designed to fit in harsh environments requiring little or no maintenance. Suggested inspection interval is 6 months, but extremely harsh environments may require more frequent inspection and maintenance checks. On each inspection check the O-ring seals. Replace them if necessary. Check cables, electrical connections, and mounting hardware for integrity and tightness. Replace or tighten any damaged/loose part.

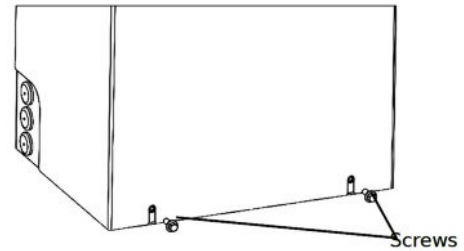
	<ul style="list-style-type: none"> • Before performing any operation, turn off the power. The installation of the unit can be performed only by qualified personnel in accordance with the relevant code of practice (e.g., EN60079-14) and with all the relevant local and national standards including but not limited to the use of special pipes, tapes, sealants, cables and glands. Do not connect the unit to a supply circuit unless the installation is completed.
	<ul style="list-style-type: none"> • Carefully check the supply voltage marked on the label. An incorrect power supply voltage may damage the unit. Do not overload the terminal connection, as it may cause a fire or electrical shock hazard.
	<ul style="list-style-type: none"> • Fasten all the cables inside the housing with cables ties or other fixing means to avoid the electrical contact with surrounding parts in case cables get loose.
	<ul style="list-style-type: none"> • Electrical connections (such as plugs and cords) must be protected from potential hazardous environmental factors (e.g. foot traffic, hitting objects).
	<ul style="list-style-type: none"> • Make sure that the unit case is properly earthed, connecting all the earth ground studs. Earth cable should be about 10 mm longer than the other cables on the connector, in such way that it will not be accidentally disconnected if the cable is stretched or pulled.
	<ul style="list-style-type: none"> • When leaving the unit unused for long periods, disconnect supply cables.

	<ul style="list-style-type: none"> • Do not connect the unit to a supply circuit unless the installation is completed.
	<ul style="list-style-type: none"> • It is recommended that all the connections are performed and tested on a safe area laboratory before installing on field.
	<ul style="list-style-type: none"> • If antifreeze and/or detergent additives have to be used, they must have a kindling point 50 °C higher than the maximum permitted operating temperature. Do not use liquid that could cause ignition of the atmosphere.
	<ul style="list-style-type: none"> • The electric connections between the solenoid valve and the Pan&Tilt unit must be housed in an explosion-proof junction box, suitable to the explosive atmosphere in which the units will be used.

INSTALLATION PROCEDURE

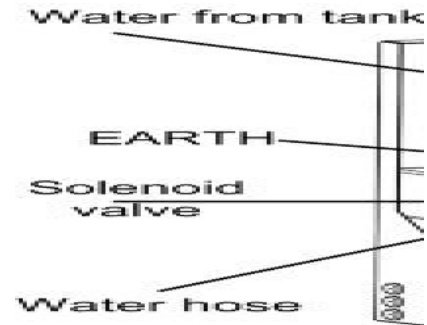
1. Open the cabinet

- Loosen the two M6 screws to remove the cover and to access the internal parts.
Do not remove the screws.



2. Perform the electrical connection

- Connect the solenoid valve either to a telemetry or a proper switching system.
The connection must be performed via the solenoid valve cable gland (included).
- Check the valve label for the correct supply voltage.
When supply voltage is provided, the solenoid valve will open letting the water output.

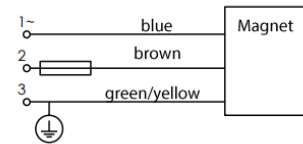


Important: Make sure that you properly connect the protective earth to every marked point.

3A. EX WP10 Ex e

Connect the 24 Vac washer control from the EX camera:

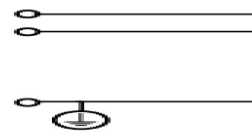
- Connect neutral to Pin 1
- Connect line to Pin 2, fused with a 1 A fuse.
- Connect GND to Pin 3.



3B. EX WP10 Ex d

Connect the 24 Vac washer control from the EX camera:

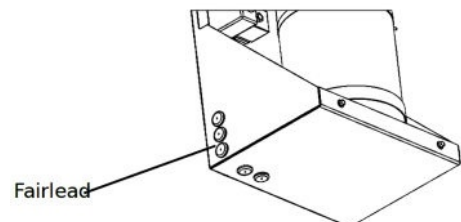
- Connect the 24 Vac washer control between pin 1 and 2
- Install a 1 A fuse between Line and the pin.
- Connect GND to Pin 3.



4. Pass the cables

There are five fairleads. Two of these are placed at the bottom and three are on the side of the frame.

- Push the cable and the water hose to enter the cabinet.
No cable gland is required for cable entry into the cabinet.



5. Fill the tank

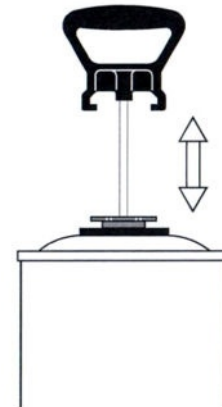
- a) Pull the red safety valve to make sure that the pump is not under pressure.
- b) Rotate the pumping element counterclockwise to unscrew and remove it.
- c) Fill the tank with a maximum of 10 litres of liquid.
The quantity of washing cycles with a single refill is about 200-500 (results may vary depending on camera height, pressure, water level).
- d) Fix the pumping element, checking that the O-ring and its seating are clean.
- e) Pressurise, only using the pumping element.



Important: Do not force the safety valve. Do not unscrew the hand pump when the tank is under pressure. The unit is intended to be used with water or with water solutions: denser mixtures could obstruct the nozzle. If the solution used has residual, it must be filtered before use. Do not use inflammable liquids, hydrogen peroxide (nor similar substances that give off oxygen), corrosive substances, liquids containing ammonia, solvents and liquids containing solvents, viscous or greasy liquids, liquids that form residues (dyes and greases).

6. Use the pump

- a) Unlock the pump handle by pushing it down and rotating it.
- b) After a few moments, pull the safety valve to check that it is not blocked and that air goes out.
- c) Pump until the desired pressure is reached.
Maximum pressure is 4 bar.
- d) Lock the handle.
When the camera water jet weakens, it is necessary to restore the internal pressure.
- e) Close the cabinet.



1.4 Maintenance and filter replacement

This equipment has been designed to fit in harsh environments requiring little or no maintenance. Suggested inspection interval is six months, but extremely harsh environments may require more frequent inspection and maintenance checks. On each inspection check the proper working of the red safety valve. Also, on each inspection check O-ring seals. Replace them if necessary. Check tank, hand pump and pressure gauge integrity. If any damage is noticed, please contact Siqura for spare parts.

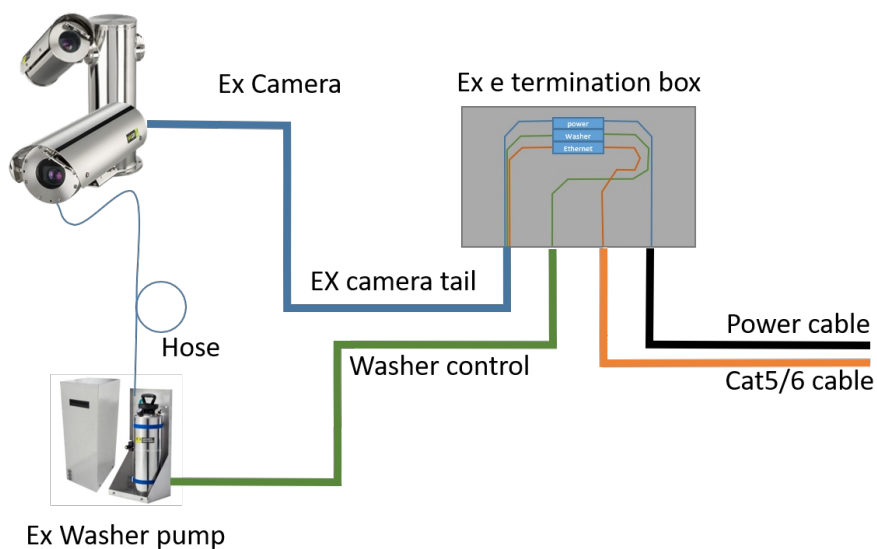
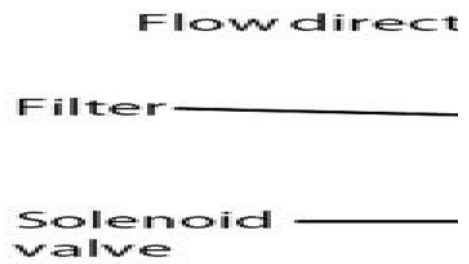
Check cables, electrical connections and mounting hardware for integrity and tightness. Replace or tighten any damaged/loose part.

Check the filter between the tank and the solenoid valve. It is suggested to replace the filter on a yearly basis. Replacement interval may be shorter, depending on the level of impurities in the water.

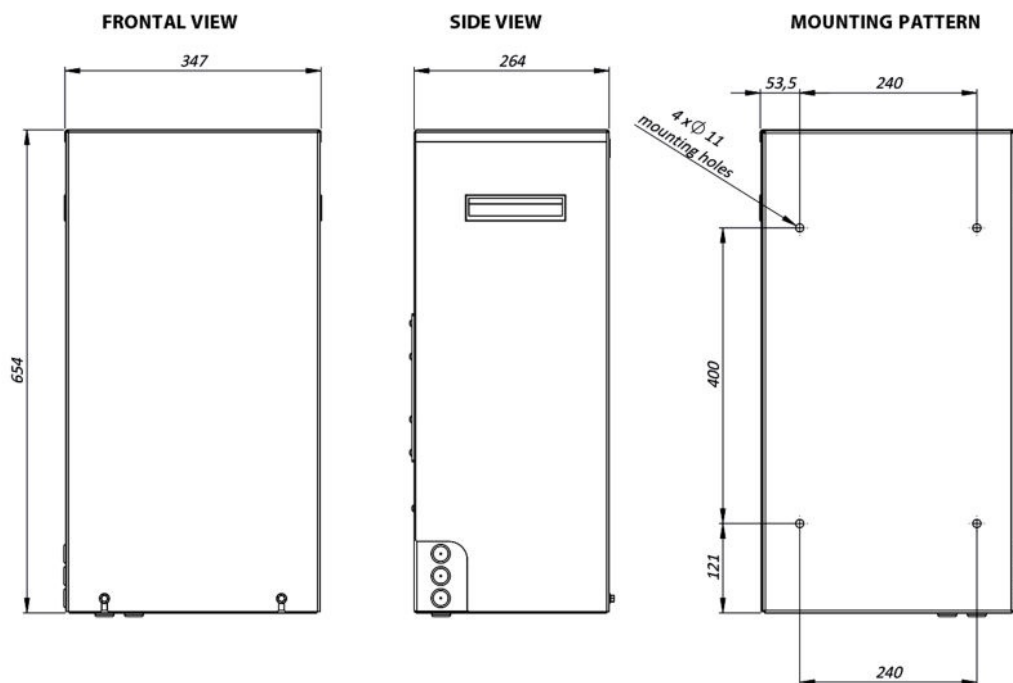
Replace the filter

- a) Pull the red safety valve on top of the tank to make sure that the pump is not under pressure.
- b) Disconnect the filter from the hoses through the quick connect fittings.
- c) Connect the new clean filter.

Important: Do not disconnect the filter if the tank is under pressure. When connecting the new filter, pay attention to the arrows marked on the filter body. These indicate the water flow. Connect the two hoses to the filter according to the arrows / water flow direction.



1.5 Dimensions



Dimensions in millimetres – Tolerances according QMS – Design and product specifications subject to change without notice