

Pumping control with 4G module Replacement Radius control in pressure sewer systems





Simple conversion of existing pumping control cabinets

Controlling and communicating between mini pumping stations and the main control station in pressure sewer systems is of crucial importance. Effective and timely action is necessary in case of malfunction to keep the duration of any disruption of the pressure sewer process to a minimum. Today, much of this communication is channelled through analogue lines. Due to the ISDN/PSTN phase-out, these lines will be eliminated step by step effective from 1 September 2019. For pumping stations, this may require the conversion of current telephone connections to the 4G wireless network. In collaboration with Mous Waterbeheer, a sector-specific module, the SVA-X16, has been developed for controlling mini pumping stations.

The SVA-X16 4G module is one-to-one interchangeable with the Radius system's outdated analogue technology. It includes a new, improved pumping station control unit and a modern, wireless 4G modem. Old functionalities are maintained, the existing magnetic switches, wiring and thermal protection devices are reused. Migration is a question of plug & play. This makes the conversion time short and keeps conversion costs low. The SVA-X16 can be combined with a red light on the panel or in the cabinet.

Completely new control system

The SVA-X16 can also be used as a monitoring and communication unit in completely new control systems for mini pumping stations. By combining the module in a new switching panel with floats, conventional relay technology and thermal protection devices, a completely new pumping station control unit is created. A unique feature of this configuration is that a PLC unit is no longer needed. This makes the setup simple, affordable and easy to maintain. The SVA-X16 contains the monitoring and control functions.

The data is transmitted over the 4G network to the SCADA environment where it is displayed and used to operate the pressure sewer system. When the SCADA system is temporarily unavailable, the pumping stations continue to operate independently.



The Benefits

- ✓ Monitoring mini-pumping station control commands across various locations
- ✓ Real-time online display of pumping station status and immediate insight into issued alerts
- ✓ Repaired alerts are automatically reported closed to the main control station
- ✓ Power failure reporting on each pumping station via emergency power supply

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LTE-M: 4G for IoT

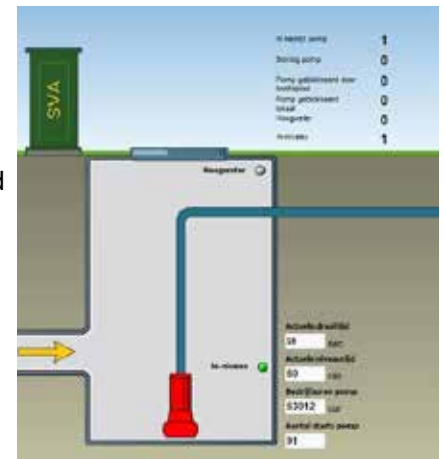
This SVA-X16 4G uses the new LTE-M (in full: LTE Cat-M1) band of the 4G network especially for Internet of Things (IoT) applications. Selecting the right SIM is very important to ensure that our equipment operates correctly and safely. Visit our website for more information about this.

Easy configuration

You can easily configure the SVA-X16 4G using a PC or laptop. Use the free SV-prog software for this (see www.adesys.nl/en/service/downloads). SV-prog gives you a clear overview of the configuration options.

Pumping station connected to your web-based SCADA system

By connecting the SVA-X16 4G to your web-based SCADA system, you are provided with a real-time online display of the status of all your pumping stations and direct insight into any issued alerts. In addition, you can deactivate and reactivate the pumping stations remotely. Aquaweb-based (Mous) and H2gO-based (I-Real) implementations have already been completed. Please contact us to discuss the possibilities of implementing other web-based SCADA systems.



Various malfunction alerts

- **Thermal:** alert after specified number of recovery attempts. Adjustable:
 - » *number of recovery attempts*
 - » *thermal malfunction cooling time; default is 30 minutes*
- **Operating time overrun:** alert when pump runs longer than desirable. Adjustable:
 - » *desired time; default is 120 minutes*
- **Operating time overrun no pump available:** alert when pump is switched off due to excessive operating time. Adjustable:
 - » *can be switched on/off*
- **Level time overrun:** alert when float switch is active longer than set time. Adjustable:
 - » *desired time; default is 240 minutes*
- **High water:** alert when high-water float is active longer than set time. Adjustable:
 - » *desired time; default is 60 minutes*
- **Power failure:** alert is issued immediately when mains voltage fails. Automatically reset when power is restored.

When malfunctions are repaired, they are automatically reported closed to the main control station. The high-water float switches off after a delay once the float switch is also off.

Specifications

System properties

Input/output options	Article number	Contact inputs	Relay outputs
	SVA4002-I-X16	4	2
Communication port	10/100mbit RJ45 for setting with a PC		
Supply voltage	15 - 35VDC / max 8.5W 20 - 30VAC / max 18VA		
Built-in emergency power supply	(charged after a few minutes) so that you can still report in the event of a power failure		
Mobile network	GSM/GPRS/EDGE 850/900/1800/1900MHz (Quadband) Global-band FDD-LTE B1/B2/B3/B4/B5/B8/B12/B13/B17/B18/B19/B20/B25/B26/B28/B39 (B39 Cat-M1 only)		

Enclosure and operating conditions

Enclosure	DIN-rail (TS35)
Dimensions (W x H x D)	23 x 95 x 102 (mm)
Weight	125gr
Operating temperature	-20°C ... +50°C
Air humidity	20 - 85 % (not condensed)

Alert functions

Alert types	<ul style="list-style-type: none">Alert to web-based SCADA system; Aquaweb-based (Mous) and H2gO-based (I-Real) implementations are already complete.Communication via MQTTCentral alert as soon as pumping station failsMalfunction alerts: thermal, operating time overrun, level time overrun and high waterRepaired alerts are automatically reported closed to the main control stationPower failure reporting
SCADA connection	<ul style="list-style-type: none">Graphical representation of status mini pumping stations via web SCADA system (implementation required; contact Adésys to discuss the possibilities)deactivate and reactivate the pumping stations remotely

Note: The specifications mentioned are subject to change. No rights can be derived from it. For product variants contact Adésys.

Also available in this SV-product line:



SVA alarm dialler



SVL Weblogger



SVM 4G modem