

**CARLO GAVAZZI**  
Automation Components



*Solutions for  
Pumping Systems*



# Your Applications

## Water Treatment Plants

This type of plant goes from simple water lift apparatus to full and complex water treatment systems:

- The **DWA01**, **DWB01**, **DWB02** and **DIB01** power and current relays are the solution to monitor dry running and overload situations without using float or pressure switches.
- Since human supervision/monitoring rarely occurs at remote installations, they are more sensitive to incorrect phase sequence or to phase loss; the **DPA51**, in its small housing, detects all of these failures.
- Starting the pumps can be managed by the **RSHR** softstarter, the **RVF** variable frequency drive, or the **DAC51** star-delta timer.
- The pumps for emptying and filling the basin can be controlled by the **CLD** level relay.



[www.GavazziOnline.com](http://www.GavazziOnline.com)

### *Designed to Market Requirements*

Dedicated application engineering teams design special products upon request from the customer.

### *Solution to Applications Challenges*

Carlo Gavazzi's individual product ranges complement one another, thereby offering the customer all the advantages of a synergistic range of products in terms of application and availability.

### *Guaranteed Reliability*

Each product group is designed and manufactured in a center of excellence to assure that each individual product is the best in its field. Carlo Gavazzi products are subject to stringent quality tests to guarantee they exceed the performance we specify.

Visit [www.GavazziOnline.com](http://www.GavazziOnline.com) to download data sheets or to check price and delivery

# Our Product Range

## Monitoring Controls



Failure conditions for the pump or the motor itself may lead to breakdown, including phase loss, incorrect phase sequence, overload and dry running. The use of monitoring controls is of primary importance to ensure that the pumping system is working correctly.

DPA51  
DPB01  
DIB01/DIB71  
DWA01  
DWB01/DWB02

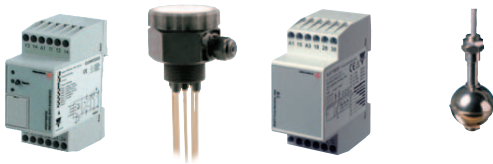
## Soft Starts, Drives, Contactors, Solid State Relays and Electromechanical Relays



The water column positioned over the pump can make the start extremely tough. For this need, and for all those requiring switching, we offer contactors, industrial relays, solid state relays and our new generation softstarters and drives, which minimize the inrush current and torque peaks.

RSE/RSHR  
RVF  
CGMS  
RZ3A  
RM1A  
RCP/RMI/RPY

## Level Relays, Sensors and Pump Alternating Relays



In instances where two or three pumps are used in parallel, the pump alternating relay allows uniform usage of all pumps, and allows all pumps to work together depending upon need. The level control relays for conductive liquids perform the combined functions of filling and emptying with minimum and maximum alarms, capable of controlling two pumps with just one amplifier.

CLD  
CLH  
VN/VP/VT/VH  
DLA71  
ILM

## Timers



Star-delta function as well as several other delay types are easily achieved with our timers in the mini DIN rail mount housing, thus reducing the space required in the panel.

DAA51/DAA71  
DMB51/DMB71  
DAC51

## Digital Panel Meters and Current Transformers



Our digital panel meters display the electrical parameters of the pumping system from current and voltage values to all types of power, pressure, flow, temperature and conductivity. They also give an immediate indication of the operating mode of the system. Alarm outputs are available to trigger the required actions.

LDM35/UDM35  
WM12/WM14  
TADK/TAD  
SCT

## Dupline®



The Dupline installation bus is ideal for irrigation systems for managing the branches on a vast area (up to 64 valves over distances up to 4.3 miles/ 7 Km). Reduces installation costs and increasing the flexibility in agricultural applications, golf courses and many other types of installations.

GH6440442  
GH34850000  
G34860000

# Your Applications



## Fire-fighting Systems

It is paramount that fire-fighting apparatus must always work. In this case you need relays like the **RMI**, **RCP** and **RPY**, to guarantee the operation when necessary.

The **DPB01** over and under voltage relay detects faults in the electrical mains to ensure the maximum efficiency of the system.

The **DLA71** pump alternating relay lets the pumps alternate, thus saving them from wear and tear.

For switching higher amperage pumps, the **CGMS** and **CGC** contactors are a cost-effective and ideal solution.

## Pressurization Systems

A pressurization plant, according to its features, needs several types of components:

- When more than one pump is used, the **DLA71** lets them alternate and if necessary, a rescue pump runs; its small modular housing helps to reduce the cabinet space.
- A pump's start can be managed by the **RSHR** softstarter or **RVF** variable frequency drive. They guarantee starts in any condition, with the minimum wear and without high inrush current.
- The **DPA51** protects against incorrect rotation as well as from single phasing.
- Timers and monitoring relays complete our offering used within the electrical panel.



# Your Applications

## Irrigation Systems

In this type of application the common problem is low voltage (as they are often located in rural areas). This can be monitored by the **DPB01** over and under voltage relay. The **RSHR** softstarter or **RVF** variable frequency drive ensure starting the pump even in bad conditions. If the start choice is star-delta, the **DAC51** is the smallest timer doing this in a mini housing.

The **DAA51** and **DAA71** timers can perform several functions such as delay the start of more than one pump. Furthermore, with the **DHA51**, and its free programming software, it is possible to set specific irrigation timings.

When a big plant needs a complete management system, **DUPLINE** is the sound solution. The free wiring topology and the multi-network configuration provide management of big installation signals including pumping plants, storage tanks, pressure transducers, count of supplied water, weather parameters, etc.

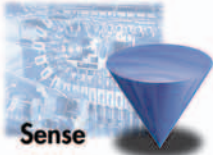


## Swimming Pools

Swimming pools have some problems that can be easily and smartly solved:

- Sometimes the mains aren't good enough to allow direct start, therefore the **DAC51** star-delta timer reduces the inrush current of the main pumps.
- **DLA71**, with no set up and easy and fast connections, allows the pumps alternate.
- Finally, the **RCP**, **RMI** or **RPY** electromechanical relays guarantee the maximum efficiency in every function of starting/stopping.
- The correct level, also for drop spillway pools, can be monitored by the **CLD** level relay.

# The Complete Product Package



## Sense

Inductive Proximity Sensors  
 Tripleshield™ Capacitive Sensors  
 Photoelectric Sensors  
 Inductive Loop Protectors  
 Ultrasonic Sensors  
 Level Sensors  
 Limit Switches  
 Magnetic Switches



## Switch

Solid State Relays  
 Contactors and Overloads  
 Manual Motor Starters  
 Motor Controllers  
 Variable Frequency Drives  
 Electromechanical Relays  
 Pilot Devices  
 Cam Switches  
 Rotary Disconnects



## Control

Energy Management  
 Digital Panel Meters  
 PID Controllers  
 Time Delay Relays  
 Current Monitoring Relays  
 Voltage Monitoring Relays  
 Three Phase Monitoring Relays  
 Signal Conditioners  
 Current Transformers  
 Enclosures



## Safety

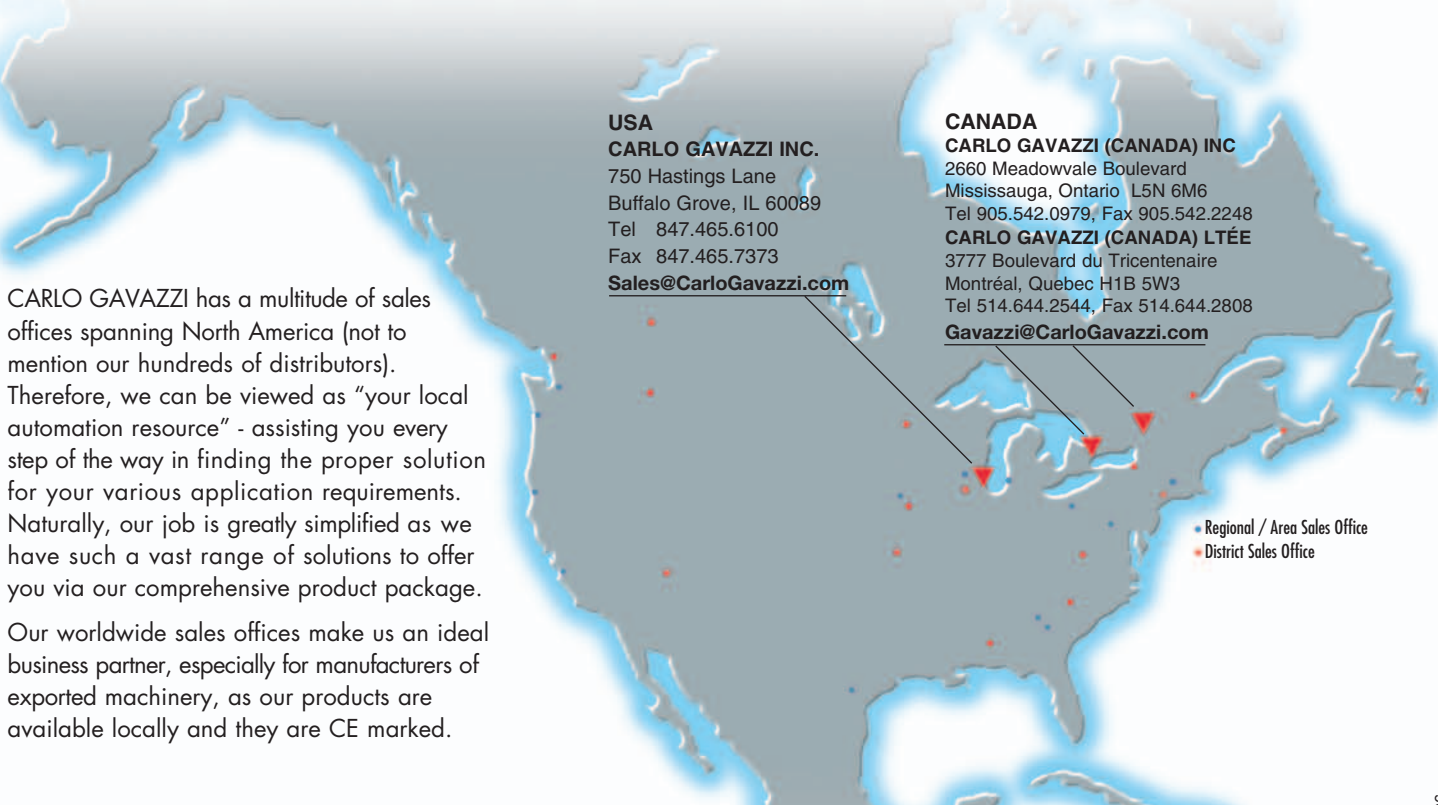
Safety Light Curtains  
 Safety Control Modules  
 Safety Interlock Switches  
 Safety Mat Systems  
 Safety Magnetic Sensors



## Dupline

Dupline Field & Installation Bus  
 Building Automation Systems  
 Elevator Systems

## A Global Force in Industrial Automation



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CARLO GAVAZZI has a multitude of sales offices spanning North America (not to mention our hundreds of distributors). Therefore, we can be viewed as "your local automation resource" - assisting you every step of the way in finding the proper solution for your various application requirements. Naturally, our job is greatly simplified as we have such a vast range of solutions to offer you via our comprehensive product package.

Our worldwide sales offices make us an ideal business partner, especially for manufacturers of exported machinery, as our products are available locally and they are CE marked.

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