Innovative Communication
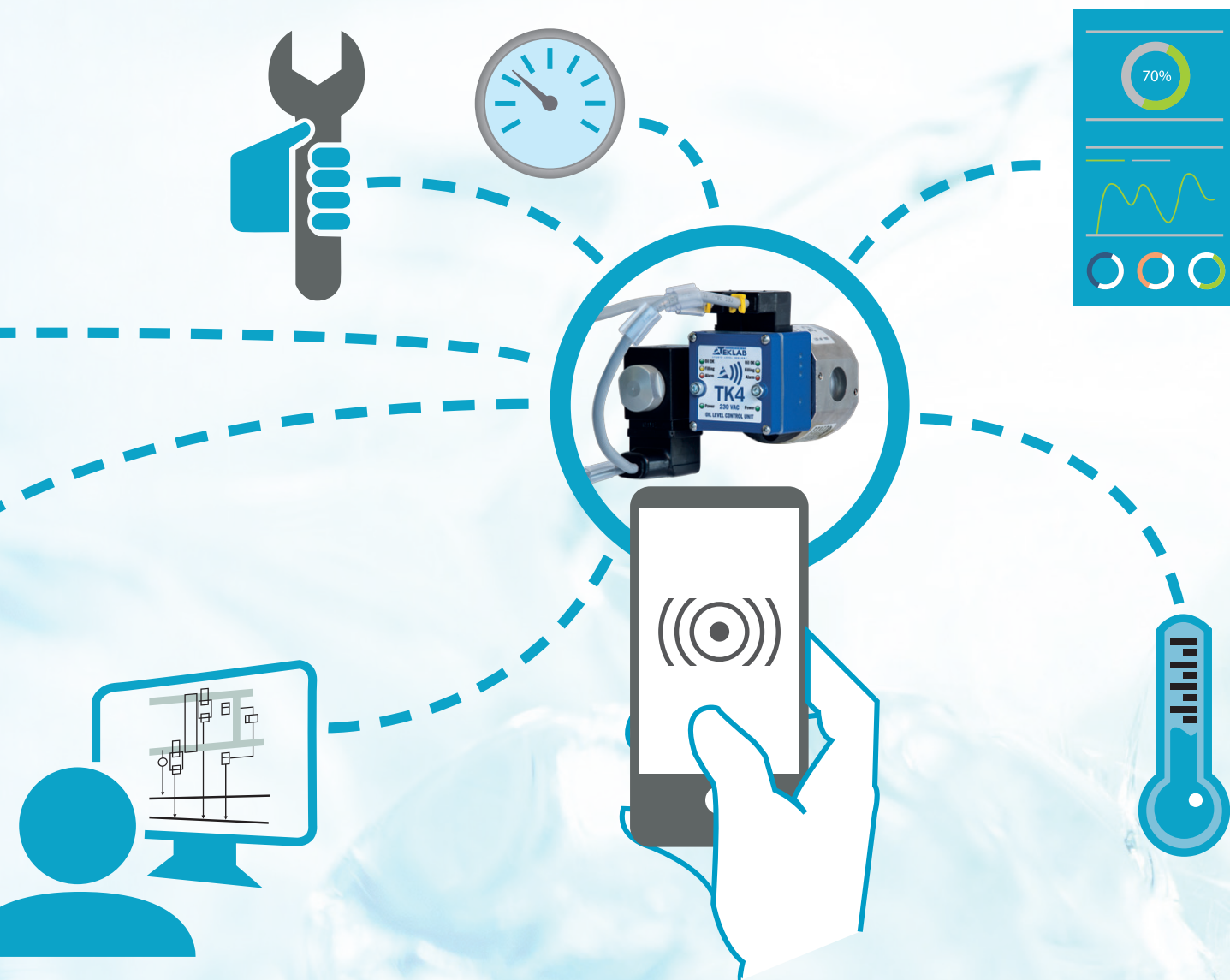## Technology

NANO INTERFACE

Main Features

TK4 combines the established reliability and ease of installation of TK3 and TK3+ with **revolutionary connectivity capabilities** which opens new and interesting usage scenarios for the product.

TK4 in fact integrates a **wireless near field communication protocol** that allows users to interact with the oil level regulator to expand product's features.

The communication technology adopted is:

• **Extremely easy-to-use:** data accessible without disassembling enclosures and connecting cables.

• **Powered / not powered operating:** several information accessible also when the electronics is not powered (useful for quick and easy in-house customization).

• **Highly compact and cost effective:** the product keeps its very compact design and there is no need for expensive devices.

• **Highly safe:** password protected point to point single link with limited range of operation to avoid unwanted changes from unauthorized personnel.

• **Really Flexible:** possibility of modifying functioning parameters and verify working conditions (also in real time) to optimize system's operation.

• **Open for the future:** Teklab is continuously in contact with customers for adding features to the product.

Typical applications are:

- verification of product operation status and system operating conditions during normal maintenance operations.

- functioning timings customization.

- alarm timings customization.

Note. *Customizations possible both "off line" (factory setting before shipping and installation) and "on line" (on the field system adjustment / optimization).*
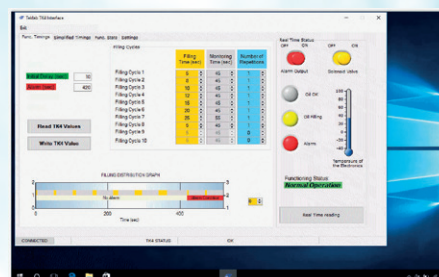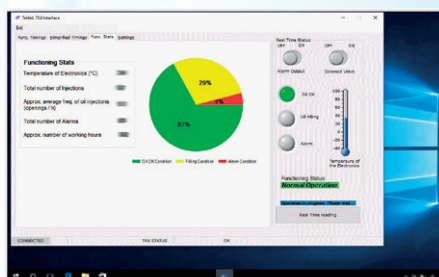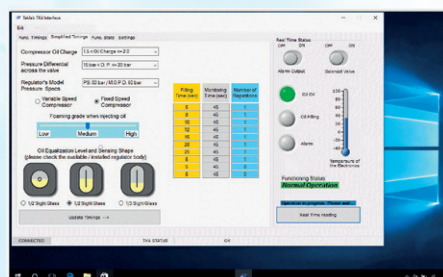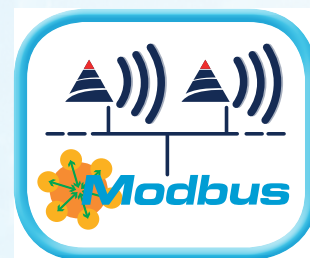

Ordering Codes

PRODUCT	CODE
NANO INTERFACE	TK4-PRG-NANO

TK4MB
Enhanced Oil Level Regulator
# with integrated Modbus RTU Connectivity

Main Features

TK4-MB combines the established reliability and ease of installation of TK3+ **with revolutionary flexibility** of standard TK4 extending its connectivity capabilities through the introduction of wired serial interface based on Modbus RTU protocol.

TK4-MB in fact integrates two possibilities of communication interface:
• A wired serial interface based on Modbus RTU protocol.
• A wireless near field communication protocol that allows users to interact easily and directly with the oil level regulator using a Windows based PC or an Android device (Mobile Phone or Tablet).

The **TK4-MB** is designed to be connected to widely diffused **Modbus RTU networks** as a slave node opening the possibility of having the availability of info about working conditions of the product and thus of the system. Consequently it is possible to have remote monitoring of the compressor pack even further reliable and effective letting it possible to optimize systems performances, to prevent and manage alarms and to elaborate accurate maintenance plans.

Here is an example of typical connection:
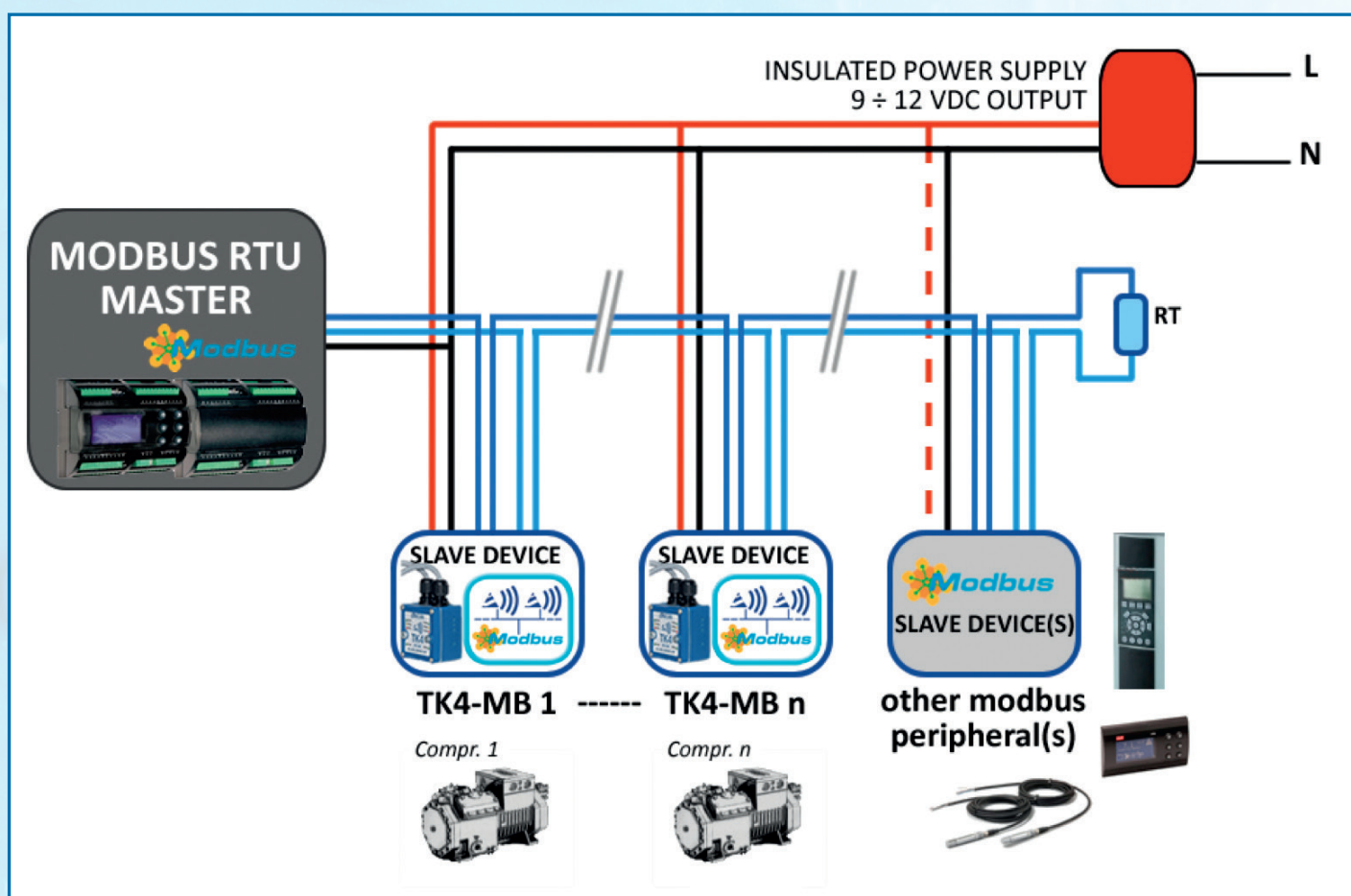
Reading and Writing Register Commands are processed according to standard Modbus RTU protocol (www.modbus.org) to allow easy integration and maximum flexibility.

Example of parameters accessible on the serial bus are: Valve and Alarm contact status, Functioning Timings, Time to Alarm, Logging info, etc.

The wireless proximity communication with the TK4 is established simply connecting the supplied USB dongle to the PC or to the Android device (Tablet or Smartphone) and launching the dedicated App.

This solution is:

- Extremely easy-to-use: data accessible without disassembling enclosures and connecting cables.

- Powered / not powered operating: several information accessible also when the electronics is not powered (useful for quick and easy in-house customization).

- Highly compact and cost effective: the product keeps its very compact design and there is no need for expensive devices.

- Highly safe: password protected point to point single link with limited range of operation to avoid unwanted changes from unauthorized personnel.

- Really Flexible: possibility of modifying functioning parameters and verify working conditions (also in real time) to optimize system's operation.

- Open for the future: Teklab is continuously in contact with customers for adding features to the product.

It can be used for direct customization of working parameters and working serial settings of the Modbus protocol (like Device Address, baud rate, etc) letting it very easy to integrate the product on any system.

Typical applications are:

- verification of product operation status and system operating conditions from remote control rooms (using Modbus interface).

- verification of product operation status and system operating conditions during normal maintenance operations directly on the unit without the needing of any connection (using wireless interface).

- functioning timings customization for system's optimization.

- alarm timings customization for better system's monitoring.