



IO-Key: Individual Asset Monitoring Solution Overview

Solution Number: TDSOL-199

Solution Overview

Minimum requirements, maximum benefit: A mobile network – that's all the io-key needs to do its job. The IoT gateway sends the data directly from IO-Link VVB vibration sensors to the cloud. It does not matter to the io-key if it is in a sea container, in a supply silo in the middle of hectares of arable land or in a remote machine far from existing IT infrastructures. This data can then be visualised on IFM's cloud platform with dashboards created to fit the needs of the operator or other stakeholders with the option to pass that data to other customer systems if needed.

In other words: With the io-key the IIoT is always there where you need it. This opens new opportunities in machine monitoring – and innovative approaches for increased customer service.

Customer Challenges

The key challenge for manufacturers has always been to monitor relative low costs rotating assets such as motors, pumps, & fans. These assets although relatively low cost can have a huge financial impact on production rates if they fail and is why in many cases most manufacturers will run to failure or have periodic maintenance measurement methods to try and predict failure.

These methods at best will only find a percentage of failure as periodic measurement depends on the frequency that can be achieved and the consistency of the reading. Many failures occur due to inconsistent readings due to measurements taken when equipment not under load and / or the asset start to fail sometime after readings are taken.



Features and Benefits

Simple: No Fuss Installation

With io-key, you will opt right from the beginning for an easy-to-handle, yet powerful form of process and plant monitoring. A power supply and an available GSM network – this is all that io-key requires to transmit the data of the connected IO-Link sensors to the cloud. There is no need for complex connection to the company network or to a controller.

Convenient: email/SMS Alerting

The clear dashboard allows the user to set limit values for the connected sensors with just a few mouse clicks. If these limit values are exceeded, the user will be alerted by email or text message. Moreover, all kinds of data can be summarised and exported automatically in the form of reports.

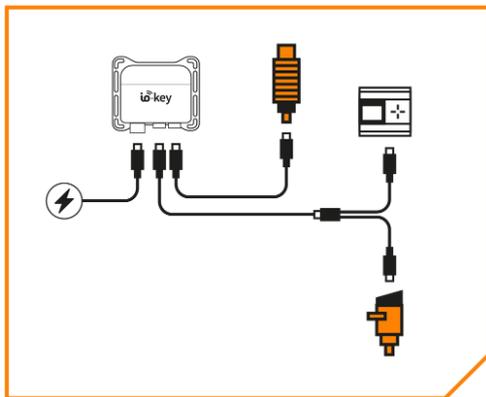
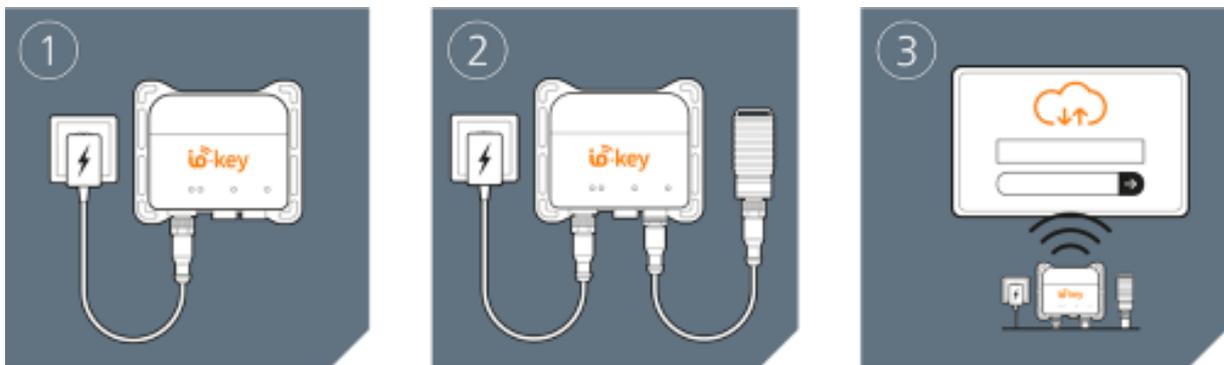
Powerful: Rugged and Versatile

Whether in a dusty environment or outdoors, thanks to protection rating IP65, io-key is the perfect solution for all kinds of applications. Thanks to two sensor connections, a great variety of monitoring scenarios can be implemented

System Components

The io-key recognises up to two connected IO-Link sensors and sends their process values automatically via GSM mobile network to the cloud where the data is stored. The user can visualise and analyse the data via a web-based dashboard.

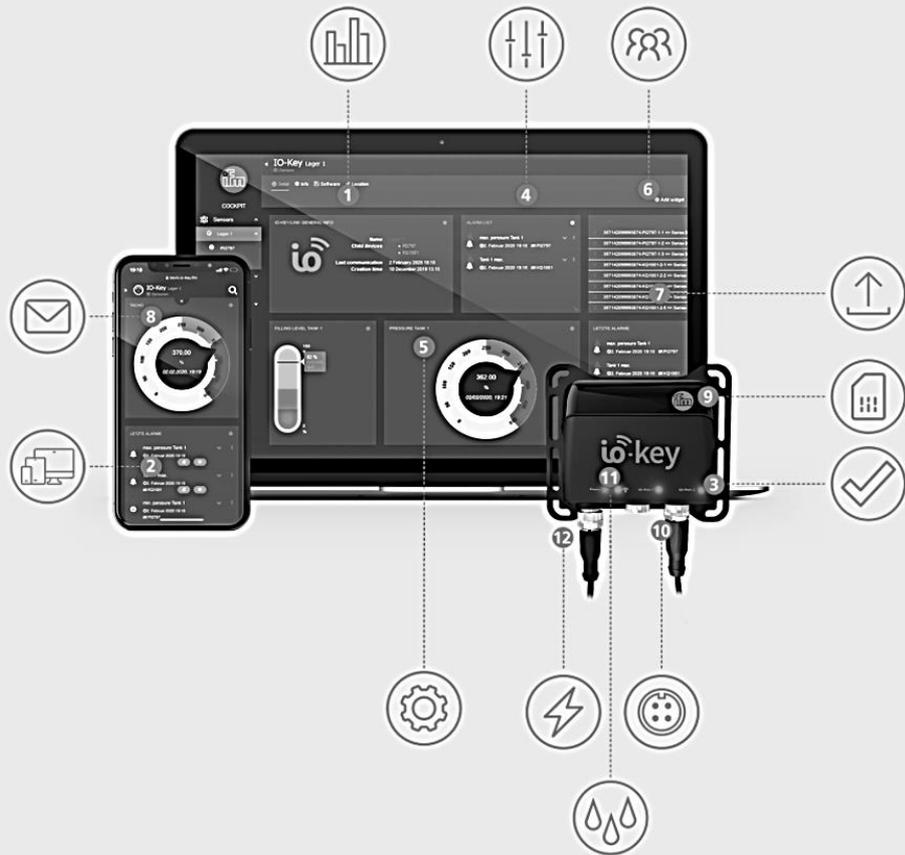
Sensor information can be collected directly and sent to the cloud without requiring any connection to a controller, PC or company network. Apart from voltage supply and GSM network availability, the io-key requires no infrastructure. ifm offers two versions of the io-key with different radio modules and data tariffs for European and global mobile networks. As all ifm products, the io-key is a sturdy unit and has a high protection rating of IP 65. Hence, it can be used in harsh industrial environments.



Monitoring of old machines via radio gateway

Up until now, it was common to connect the IO-Link sensor directly to the PLC. However, since the PLC only processes the switching signals, about 95 percent of the process information will be lost. By using io-key, this digital information can now be transferred directly from the process to the cloud and then be used for more accurate machine analysis.

1. Adjustable dashboard with individual sensor data view (colours, graphics etc.)
2. Mobile view for monitoring from anywhere
3. The sensor connected to the io-key is identified in the cloud without further parameter setting
4. Definition of switching and control tasks that are carried out independently and in real time on the edge device
5. Suitable indication of every sensor type
6. Cloud environment with multi-client capability
7. Report and export functions for current and historical data
8. E-mail and SMS notification in case of alarms
9. Integrated SIM card, EU-wide NB IoT and 2G
10. 2 x M12 IO-Link port
11. IP65 industrial housing
12. Power supply (24 V DC, M12 port)



How Can Tech Data Help?

Tech Data has invested in a depth of resource to support IoT opportunity across EMEA and is able to support its value-added reseller customer in the following areas:

- End Customer solution positioning
- Opportunity Qualification
- Pre-Sales Solution positioning and design
- Business Outcome planning.
- Commercial Support

Next Steps

If you believe you have an opportunity or customer you believe is well suited to this solution or would simply like more information. Contact your local Tech Data account manager and we will ensure our dedicated IoT team supports your requirements.

About Tech Data

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