



Wire Feed Motor Current Monitoring System Improves Robotic Welding Performance

COMPANY DESCRIPTION

A large manufacturer produces hundreds of parts for an industrial distributor of multiple vehicle types.

CHALLENGES

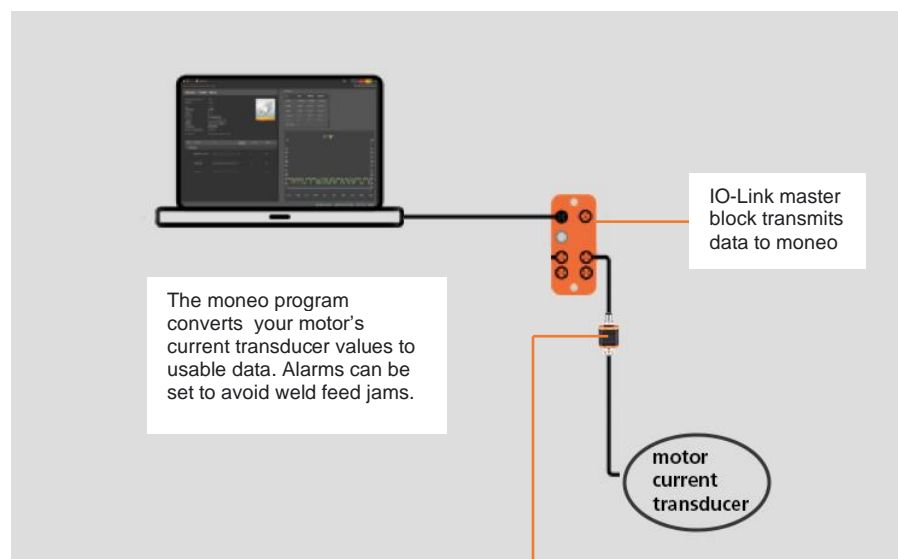
- Throughout the plant, automated robotic welding systems are utilized. The motor supplying wire feed to the welding gun often wears.
- Irregular wire feeding causes the wire to buckle and jam. This means unplanned stoppages and downtime of the welding cell, resulting in significant costs.
- Today's transducers used for controlling the welding motor current, provide no warning of over-draw or under-draw current, which is the underlying cause of jams and uneven wire feed.

DISCOVER MONEO — SYSTEM MONITORS ROBOTIC WELD FEED IN REAL-TIME, CONVERTS CURRENT TRANSDUCER VALUES TO USEFUL DATA AND CALCULATES SAVINGS

- ifm's moneo real-time monitoring system indicates the current draw of the weld feed motor and displays your transducers values as data, allowing you to predict problematic wire feed.
- Overload and underload conditions of the motor are detected.
- ifm's DP2200 converter translates your transducer analog signal as current or voltage signals.
- moneo software provides analysis and trending of performance.
- Integrated alarm management enables fast reaction to changing process parameters for current motor efficiency and performance.
- moneo system is capable of saving permanent data recordings and database storage.
- Independent system with CPU appliance with pre-loaded software is easy to use; no need for a plc.

ifm's moneo Real-Time Monitoring System improves robot welding performance by monitoring the current of weld feed speed to the welding gun. Overload and underload spikes are identified and allows the operator the opportunity to correct the wire feed for uninterrupted production.

moneo | RTM System Structure

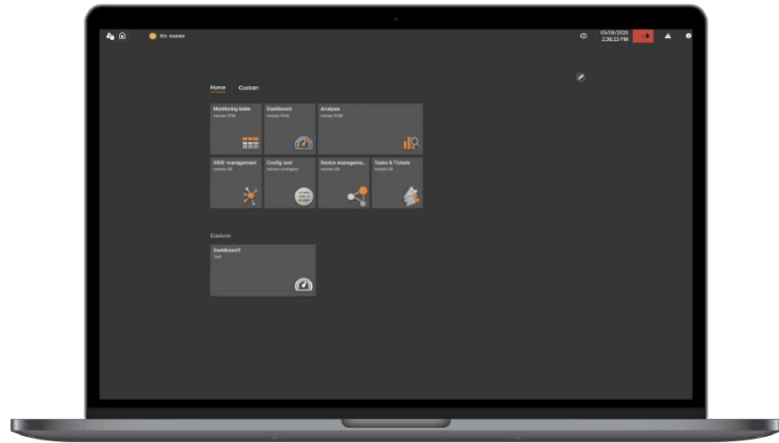


ifm's DP220 adapter translates the analog signal from your transducer sensor via IO-Link and moneo converts it to usable information.

moneo | RTM

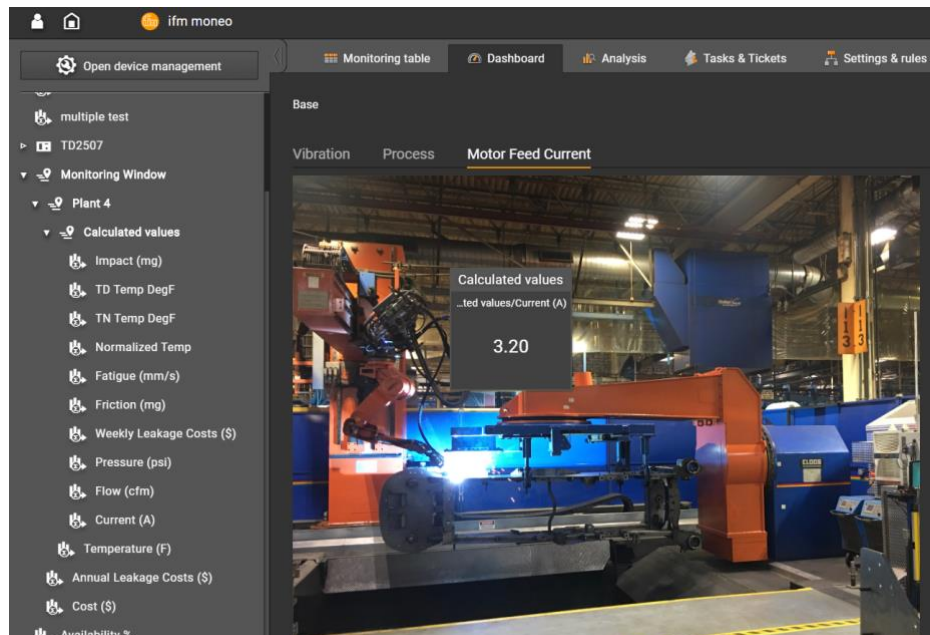
User-friendly software helps you align efficiency goals within one system.

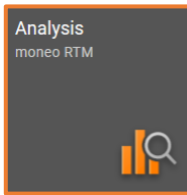
Monitoring table
Analysis
Dashboard
Tasks and Tickets
IODD Management
Config Tool
Device Management



COCKPIT

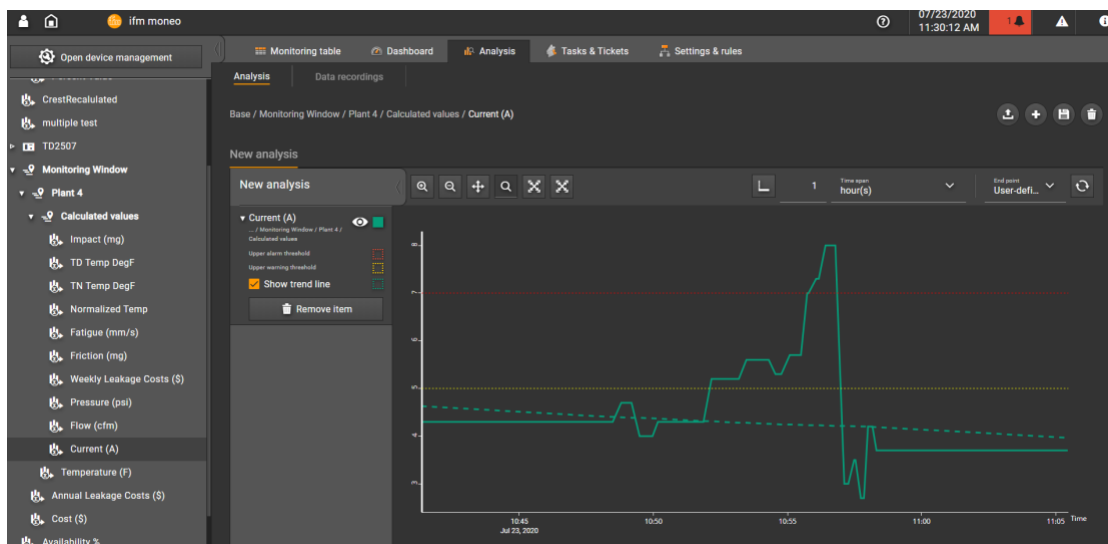
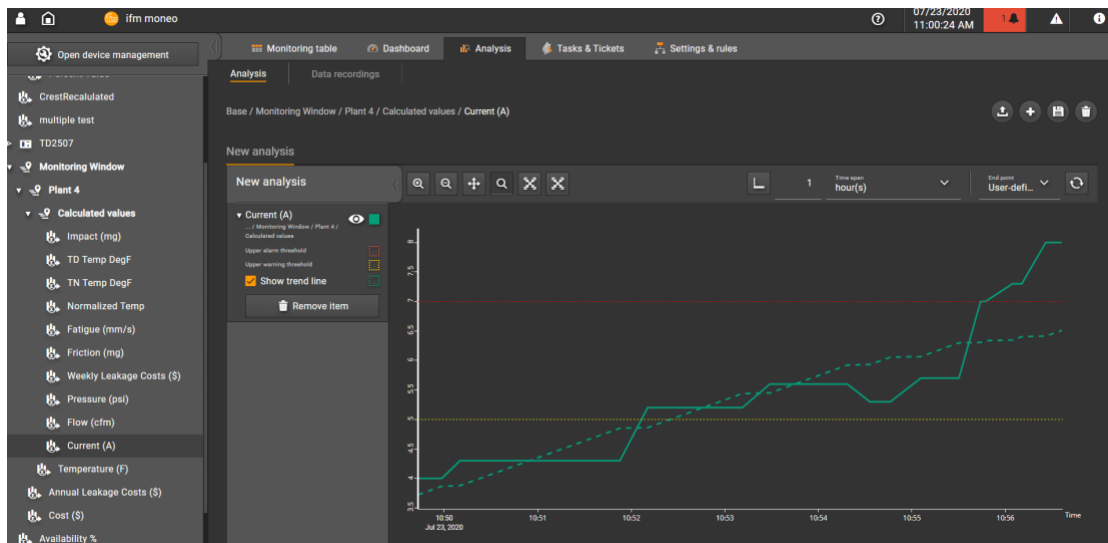
- Creation of customer-specific dashboards by drag and drop.
- Integration of plant graphics for better visualization of the measuring points.
- Clear representation of the system status across all sensors.
- Traffic light function for quick detection of motor issue.





ANALYSIS

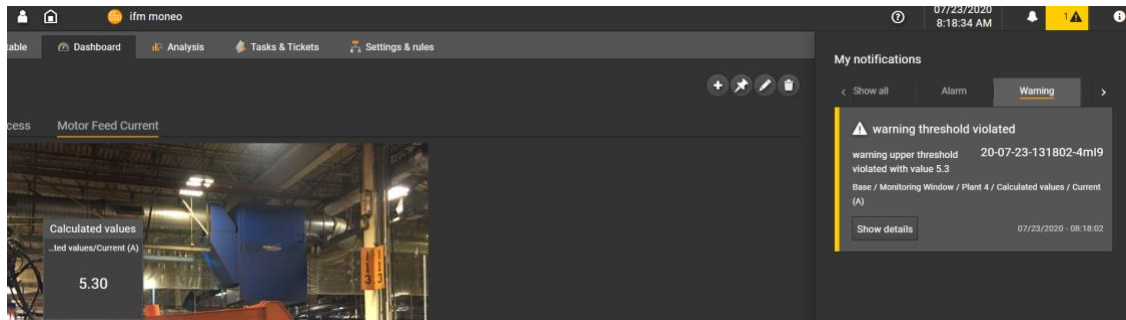
- Representation of relevant sensor values in the analysis chart.
- Visualization of the time of wear or failure.
- Correlation of true current measurements.





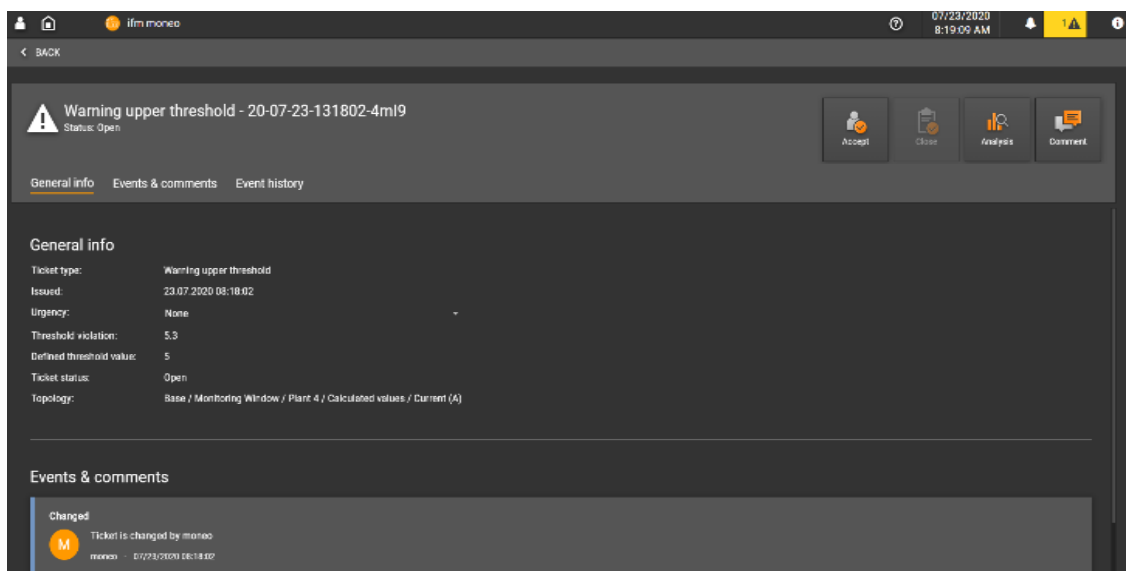
TASKS AND TICKETS

- Integrated alarm function for limit value monitoring is available.
- An automated ticket in the event of an alarm can be generated.
- Alarm-escalation strategies can be set.
- Early detection of damage cases and malfunctions can be programmed.



TASKS AND TICKETS DETAILS

- Using a predefined wizard, an alarm strategy can be configured.
- A generated alarm ticket over a lifetime can be managed.
- Comments can be added to the ticket, for example, the cause of the error or a maintenance strategy.
- The time of the limit violation in the data analysis can be viewed via an analysis button.

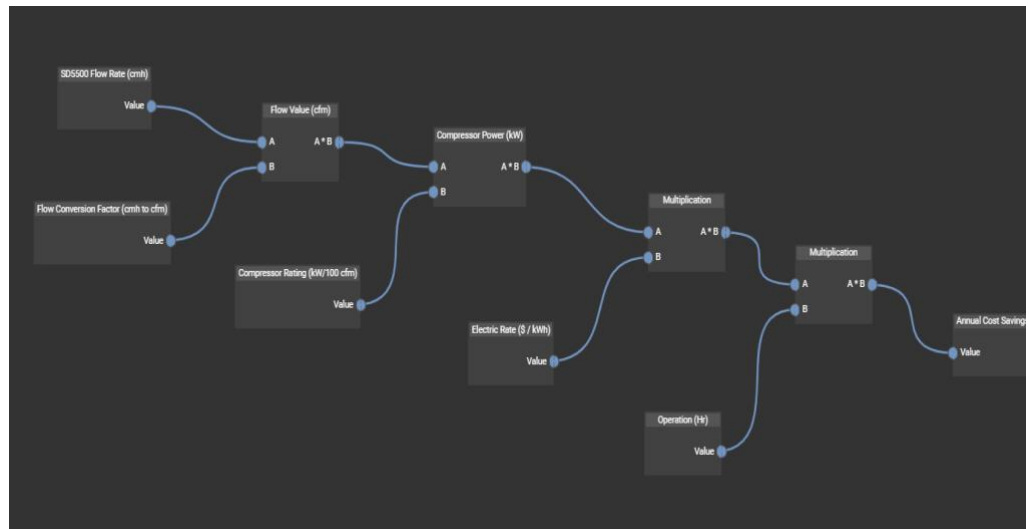


Calculated values
Create extra information
by combining data
sources




CALCULATED VALUES

- Process information through simple configuration of sensor data.
- Correlating mA output values to true current measurement.



Overview of moneo |RTM System Components for Improving Weld Feed Robot Performance

Sensor	Product Picture	Item Number
IO-Link Analog Converter		DP 2200