

SIEMENS
Ingenuity for life

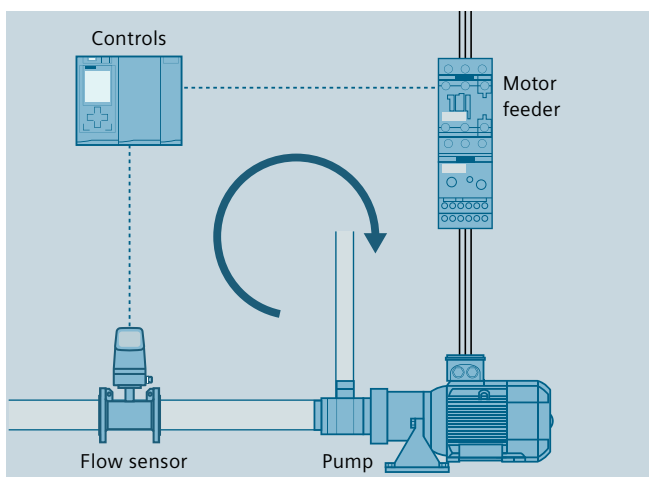
A monitoring technology that sets new standards

SIMOCODE pro redefines dry running protection for pumps in hazardous areas

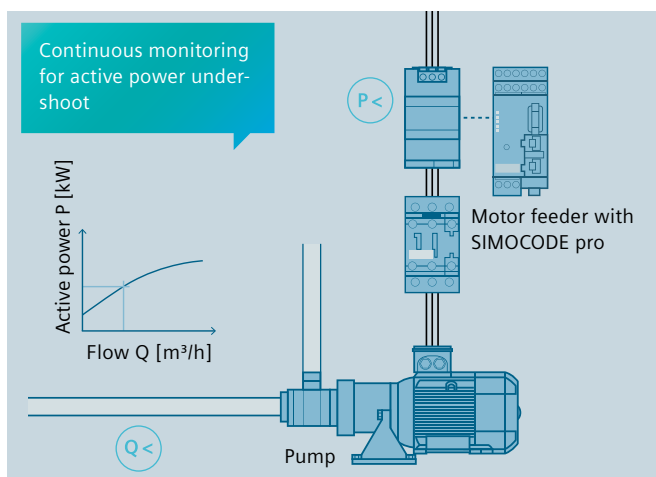
State-of-the-art technology

Certified according to ATEX and IECEx

Safety is the top priority in the oil/gas and chemical industries. This is because flammable media are used in hazardous areas, and are transported by means of pumps. Reliable dry running protection is a must. With SIMOCODE pro, Siemens delivers an innovative monitoring technology that breaks with conventional pump monitoring – and redefines dry running protection in hazardous areas.



Conventional dry running monitoring with a sensor



Active power-based dry running protection

A novelty in this field

Up to now, centrifugal pumps in hazardous areas have been protected from dry running by special sensors. However, these sensors are susceptible to faults and require intensive maintenance. With the active power-based dry running detection for centrifugal pumps in hazardous areas, Siemens introduces an absolute novelty to the market.

Whereas conventional dry running detection is performed by a dry running sensor via the process control to the pump, SIMOCODE pro monitors the status of the pump via the active electrical power consumption of the pump motor. This eliminates the need to install additional monitoring devices or sensors to detect dry running of the pump. The result: You ensure reliable explosion protection in accordance with ATEX and IECEx criteria and save costs and time for commissioning and maintenance.

Your benefits through active power-based dry running protection



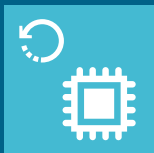
Earlier fault detection

- Direct conclusions concerning the flow rate can be drawn from the active power consumption of the pump motor
- Reliable prevention of dry running of the pump and therefore less damage to the pump



Cost and time savings

- No maintenance effort due to the elimination of mechanical wear of the sensors
- No additional sensor required



Reduction of hardware

- No need for additional sensors and mechanical components
- Simplified engineering



Reliable monitoring of the system

- Compliance with ATEX and IECEx criteria
- Reliable and automatic pump switch-off in the event of inadmissible operating conditions

Active power-based dry running protection in hazardous areas – the technology behind it

SIMOCODE pro enables dry running protection of centrifugal pumps through active power monitoring and motor switch-off in compliance with the Ex b type of protection. This applies to centrifugal pumps with progressive flow characteristics, which are also suitable for pumping flammable media and are installed in hazardous areas.

The amount of active power allows conclusions to be drawn about the flow rate in the pump. If the flow rate decreases, the active power consumption of the pump motor also decreases. If the active power, and thus the flow rate, falls below a minimum value, the pump is switched off automatically.

When determining the limit values to be monitored, the user is supported by a menu-guided teach-in process in the engineering software. Sensors that are usually used to monitor dry running of the pump are no longer required.

The active power is detected via special current/voltage detection modules which are approved for use as monitoring devices to protect pumps installed in hazardous areas against dry running.

Basic units	
3UF7011-1AB00-0	SIMOCODE pro V PN 24 V
3UF7011-1AU00-0	SIMOCODE pro V PN 110 – 240 V
Current/voltage modules for dry running protection	
3UF7120-1AA01-0	0.3 to 4 A, straight-through transformer
3UF7121-1AA01-0	3 A to 40 A, straight-through transformer
3UF7122-1AA01-0	10 A to 115 A, straight-through transformer
3UF7123-1AA01-0	20 A to 200 A, straight-through transformer
3UF7123-1BA01-0	20 A to 200 A, bus connection
3UF7124-1BA01-0	63 A to 630 A, bus connection

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