

# NB/NK motor protection

## Electronic pump protection made simple

NB and NK pumps are specially built to handle large volumes in heavy-duty applications. They are designed to last, but external factors such as variations in power supply can still cause wear and tear on motors. So to prolong pump life and ensure reliability, we created the new MP 204 motor protection unit.

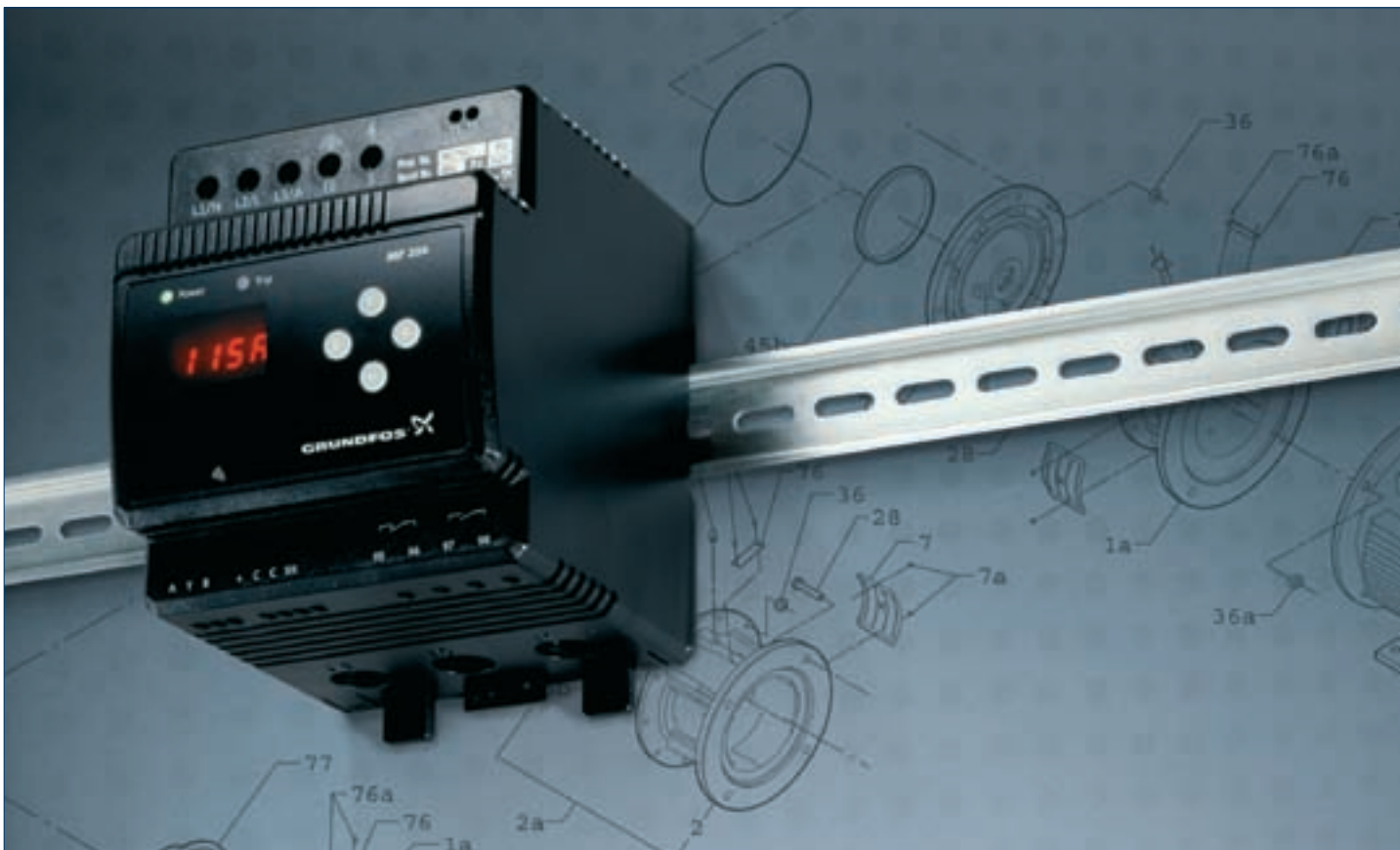
Made especially for pumps by pump specialists, the MP 204 brings you pump protection that is as simple to use as it is efficient. Our engineers crammed it full of all the protection features you need – but kept it easy to install, set, and use.

## Protect your pumps against external threats

The MP 204 protects pump motors against undervoltage, overvoltage and other variations in power supply. So even if your external power supply is not entirely steady, your NB and NK pumps will remain as reliable as ever.

The PTC feature ensures that the pump is stopped if it becomes too hot – for example if a foreign object jams the pump. And as reduced power consumption is a strong indication that the pump is about to run dry, the MP 204 will immediately stop the pump if the power consumption drops below 60%.

All this in a unit that can be set up for operation in just 2 minutes.



# Made for pumps by pump experts

## Complete package from one supplier

Grundfos is the only pump manufacturer to offer the full package of pumps, pump motors, and motor protection, ensuring seamless integration with your NB or NK pumps.

## Simple set-up a priority

Simple installation and set-up was a major priority for the MP 204 designers. Mounting is done by means of four screws or by sliding the unit onto a mounting rail, and the entire set-up can be completed in just two minutes. The simple menu is used to set four parameters: rated motor amps, nominal voltage, trip class, and no. of motor phases. After just 120 seconds of setting, the unit is ready to go.

## Access more functions with the R 100 remote control

The R 100 remote control from Grundfos gives you access to even more options. For example, you can adjust factory settings, carry out service and troubleshooting, and get readouts of data stored in the MP 204 unit.

## Ready for bus communication

While many customers require motor protection only, the MP 204 is also prepared for expansion. It allows for monitoring and communication via GENibus – a special Grundfos BUS for exchange of pump data, alarms, status information, and setpoints. This enables users to connect the MP 204 to e.g. SCADA systems.



## Handles currents up to 1,000A

On its own, the MP 204 will handle currents up to 120A. For applications involving currents up to 1,000A, the unit can be fitted with external current transformers available from stock at Grundfos.

## Technical data – MP 204

• Enclosure class:	IP 20
• Ambient temperature:	-20 to +60°C
• Relative humidity:	99%
• Voltage range:	80-610VAC
• Current range:	3-999A
• Frequency:	47 – 63 Hz
• IEC trip class:	1 – 45
• Special Grundfos trip class:	0.1 – 30 s
• Voltage variations:	-25/+15% of nominal voltage
• Approvals:	EN 60947, EN 60355, UL/CSA 508
• Marking:	SE, cUL, C-tick

## Monitoring parameters

• Insulation resistance before start-up.
• Temperature (Tempcon, PT sensor and PTC/thermal switch)
• Overload / underload
• Overvoltage / undervoltage
• Phase sequence
• Phase missing
• Power factor (cos φ)
• Power consumption
• Harmonic distortion
• Current asymmetry
• Run and start capacitor (single-phase)
• Operating hours and number of starts