

Data sheet MK 20 GR

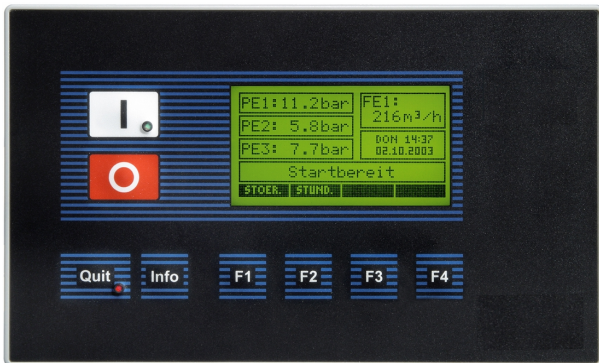


Customized solution or off-the-shelf: The choice is yours!

R-S-I MK20-GR – data sheet

Looking for a quick and reliable solution? – Then rely on our standard products: Our universal controls provide valuable solutions for a wide range of applications. We offer you the benefit from our broad experience of over thirty years. And even with our basic products some variation can be achieved: Each control can be combined with several different types of displays and operating sequences can be configured for individual needs.

Standard Product



The R-S-I MK 20 GR gives you full control of your air compressor at any time for enhanced protection and complete information at a glance.

Hardware

In the standard version the MK 20 GR offers four analog inputs, eight digital inputs, six digital outputs and one serial interface (RS 485):

- Two pressure sensors (line pressure, end pressure) can be connected to the two 4-20mA analog inputs
- Analog inputs no. three and four can be used for two temperature sensors (infineon KTY 11-7 recommended) to continuously monitor airtend and motor temperature
- The first digital input is reserved for an emergency stop button. Its activation will stop the compressor immediately.
- Two digital inputs are specialized for the use with a PTC. This allows you to monitor for excess motor and airtend temperature (or any other temperature you want to keep an eye on) and to stop the compressor in time. No additional thermal overload devices necessary!
- Each of the remaining five digital inputs are programmable and can be used for external control signals (external on/off, load request, ready) used to communicate with a sequencer, or for external maintenance, warning or fault messages. If an input is configured as "external fault", a signal leads to a shut-

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All-purpose compact control for switch cabinet installation. Includes software for a single stage, oil lubricated, rotary screw compressor.

- down. Use these inputs to monitor signals of external devices such as dryers or differential pressure switches.
- The relay outputs no. one, two and three are used for main, star and delta contactor
- Relay output no. four controls the inlet valve
- One relay output can be configured. Choose between: ready (compressor is ready to start), running (the motor is running), load (compressor is on load),
- Relay output no. six can be used to connect an operating or warning lamp. It will be energized if any fault is present.
- The serial interface (RS 485) can be used for software updates and/or network connection (e.g. for communication with a sequencer)
- For upgrading: use our plug-in I/O module to connect one or several of our MK 200 modules for additional inputs and outputs.

Software

The main screen of the MK 20 GR shows actual values of line pressure, end pressure, end temperature and motor temperature as well as the status of the compressor (waiting, ready to start, start up, load/no load, follow up time, soft run-out).

The menu structure is secured via a four-digit code. Three code levels provide full security: After entering the user code most parameters can be set. The manufacturer's code protects settings critical for a specific compressor. The service code allows to set and reset the hours until the next service.

Special features and important parameters of the MK 20 GR:

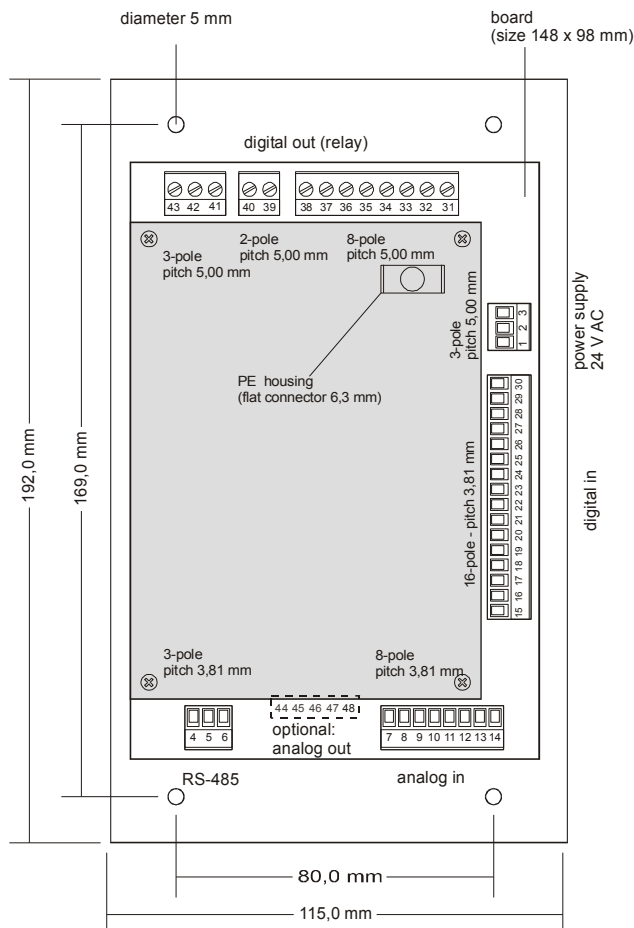
- Start and stop pressure: define your individual range for the line pressure
- Operation mode: choose between continuous or automatic
- Damage prevention: the MK 20 GR protects the compressor by automatically switching it off if the end pressure, the line pressure, the motor or air end temperature exceed the defined limits
- Configuration of digital inputs and outputs: adjust the MK 20 GR to your individual needs: use it together with a sequencer or create additional warnings or faults to protect your compressor or to monitor external devices
- Adjustment of the pressure setpoint: save energy by using the integrated timer to automatically change your pressure setpoint or to switch your compressor on and off (e.g. for the weekend)
- Definition of individual time spans: set your individual star-delta time, follow-up time and soft run-out.
- Monitoring of the compressor: check any time on actual line and end pressure, motor and air end temperature and compressor status
- Service reminder: watch operating hours as well as load hours to see the utilization of your compressor. The MK 20 GR provides a warning (or fault) message in time for the next service.
- Track messages: the failure memory stores all warnings and faults and allows to easier understand occurring problems.
- Do not worry: useful default values for all parameters prevent damages if parameters have been set incompletely.

R-S-I will help you to perform!

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All-purpose compact control for switch cabinet installation. Includes software for a single stage, oil lubricated, rotary screw compressor.

necessary opening in the switch cabinet width x height: 154 x 104 mm
depth of controller: 65,5 mm



Description

All-purpose compact control for switch cabinet installation. Includes software for a single stage, oil lubricated, rotary screw compressor.

Housing – Display – Keyboard

Front plate: ABS plastics, 192 x 115 mm (w x h)

Housing: metal, 104 x 154 x 68,5 mm (h x w x d)

Opening in switch cabinet:
154 x 104 mm (recommended)

Protection class: front cover IP 55
casing IP 40

Display: LCD graphics display, 128 x 64 pixel

Keyboard: membrane keypad with 8 buttons, tactile feedback
1 red failure / alarm LED
1 green operating LED

Operating Conditions

Power supply: 24VAC / 50 - 60 Hz

Operating temperature: 0 ... 60°C

Humidity at 40°C: max. 95%

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All-purpose compact control for switch cabinet installation. Includes software for a single stage, oil lubricated, rotary screw compressor.

Digital Inputs

6x 24VDC

2x 12VDC (PTC)

Digital Outputs

5x relay, NO (normally open) 230VAC

1x relay, CO (change over) 230VAC

Analog Inputs

2x (0)4 ... 20mA

2x KTY

Interfaces

RS 485

Connection

Screw-type terminal block on the rear side

CPU

16 bit, flash memory

battery-buffered real-time clock

EMC

Interference resistance: EN 61000-6-2

Emissions: EN 61000-6-3

Add-ons

Plug-in modules:

2AA 2 analog outputs (0)4...20mA, electrically isolated from CPU

or

I/O bus-module enabling MK 200 I/O add-ons; not in conjunction with 2AA

MK 200 I/O modules (rail mounted):

8E/4RA 8x digital inputs,
4x digital (relay) outputs

12RA 12x digital (relay) outputs

8E/4AE 8x digital inputs,
4x analog inputs with measuring amplifier

4AA 4x analog outputs (0)4...20mA

MK 200 communication modules

Software

Software for a single stage oil-lubricated rotary screw compressor. Code-protected menus in English and German.

Software-update: reprogramming of flash memory possible

Art.-Nr. 002930

R-S-I will help you to perform!