Quick Start Guide
Replacement of SE-B* with CM-RC-02

Please use this document only as additional information to the KT-240.
All safety instructions of the KT-240 have to be considered. This document describes the “protection Mode (SE-B)” of the CM-RC-02 for the replacement of SE-B* devices.

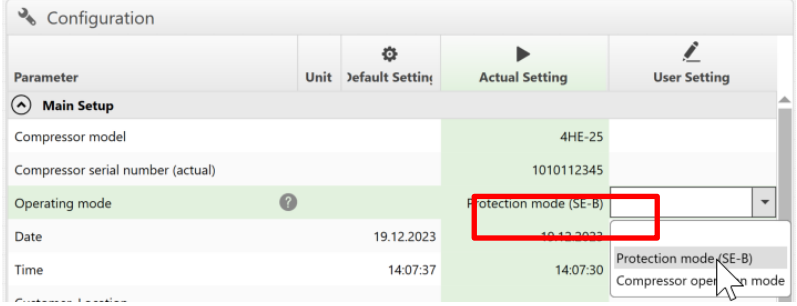
First set-up “Protection Mode (SE-B)”

For the replacement of the SE-B* protection device, the CM-RC-02 has the “Protection Mode (SE-B)” selectable .
In Protection Mode (SE-B) the CM-RC-02 module monitors only the motor winding temperature (including an optional PTC discharge gas sensor). Oil heater, oil monitoring and discharge gas temperature monitoring are not supported with the “Protection Mode (SE-B)”. The switching outputs and inputs are also not configurable.

BEST and BEST APP
To ensure that the CM-RC-02 module can be used as an replacement of a SE-B* protection device, the “Protection Mode (SE-B”) is available. The operating mode can be selected by BEST or BEST APP. When the CM-RC-02 is ordered ex-factory in “Protection Mode (SE-B)” the mode is already set. This is indicated with a yellow point on the CM-RC-02. A configuration in BEST is not necessary.

CM-RC-02 in protection mode (left) and compressor operating mode (right)

Configuration with BEST:
In the „Main Setup“ menu, the „Protection Mode (SE-B)“ function can be selected under the „Operating mode“ menu:



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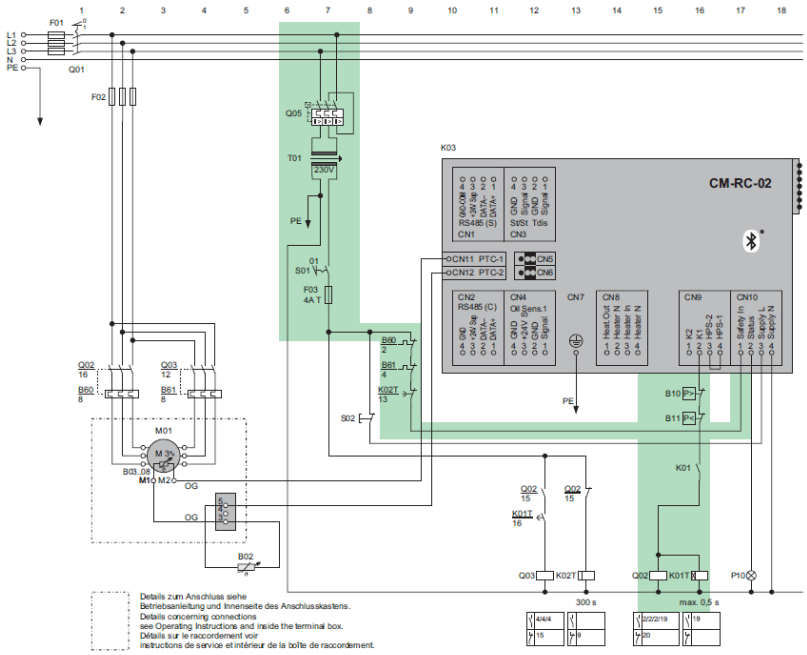
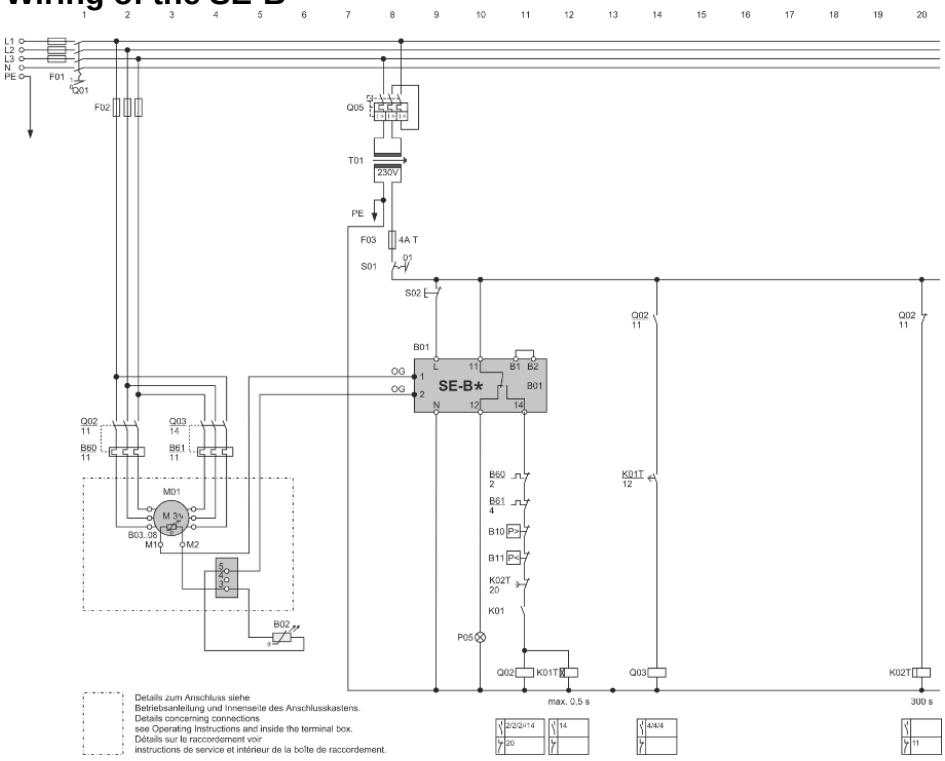
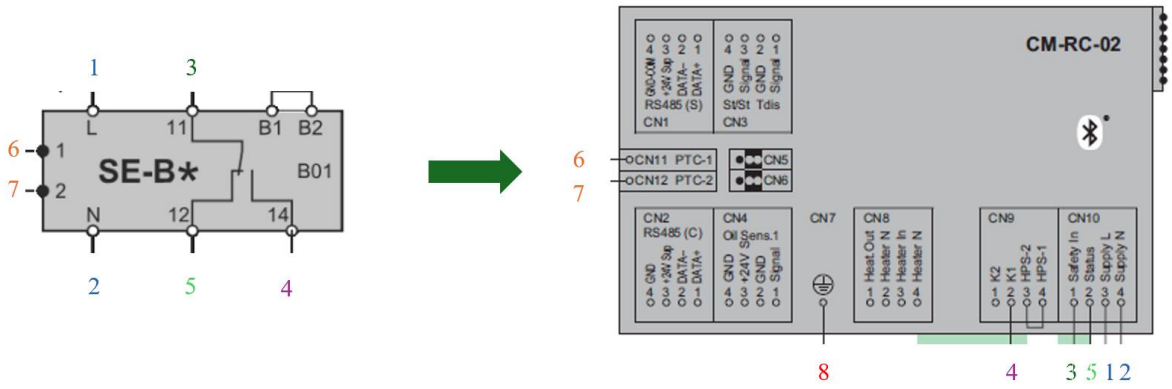
Wiring of the CM-RC-02



Wiring of the SE-B*



Replacement of an SE-B* device with CM-RC-02



For an existing installation with a SE-B* device, the connections can be used for the implementation of the CM-RC-02.

Nr.1 and Nr.2: The module must be connected to the supply voltage via terminals CN10:3 and CN10:4
Nr.3: Terminal CN10:1 is provided for the safety circuit.
Nr.4: If no alarm is active on the CM-RC-02, the voltage of the safety circuit is available at CN9:2. The compressor is ready for use. If the input of the safety circuit is unavailable, drops out during operation or an alarm on the CM-RC-02 is active, the module will inhibit the CN9:2 output.
Nr.5: An Alarm output is available on CN10:2.
Nr.6 and Nr.7: The IQ-module is connected to the Motor-PTC Sensor for motor temperature monitoring via terminals CN11 and CN12 (orange cable)
Nr.8: Protective earth conductor needs to be connected on the CM-RC-02 according the operating instructions KB-100, KB-120 or KB-130.

Please note that all other connections (e.g. heater on CN8) are not active in protection mode.

For the allowed connections on the CM-RC-02 please have view on chapter 3 “Technical data” from KT240-2.

Abstract from the KT-240-2:

3.1 Compressor module (K03)

Operating voltage	115 .. 230 V ±10%, 50/60 Hz, max. 600 VA suitable for TN, TT and IT systems
Fuse required (F03)	4 A time-lag at 230 V / 8 A time-lag at 115 V
Schutzart	IP66: Module housing screwed on compressor in its state of delivery IP20: In module housing without cover and spare part board
Place of installation and storage	Permitted ambient temperature: -30°C .. +70°C Permitted relative humidity: up to 95% (IEC60068-2-30) Maximum allowable altitude: 4000 m
EMC	The compressor module complies with the EU EMC Directive 2014/30/EU Emitted interference EN61000-6-3 Immunity for residential, commercial and light-industrial environments Interference immunity EN61000-6-2 and EN61000-6-7 Immunity for industrial environments
Bluetooth interface	Bluetooth transmitter: class 2, power: max. 2 mW range max. 10 m depending on vicinity Can be deactivated, see chapter Deactivating the Bluetooth interface, page 53. For further information and standards, see the manufacturer's declaration of conformity.

3.2 Inputs and outputs for compressor start and operation

Power voltage supply of compressor module	Terminal strip CN10, terminals 3 and 4 Continuous current max. 2.5 A
Earth connection	Terminal strip CN7
Relay outputs for motor contactors	Terminal strip CN9, terminals 1 and 2 Continuous current max. 2.5 A Switching voltage 240 V AC Switching capacity 300 VA, inductive (NC contact: D300, NO contact: C300)
Input signal of safety chain	Terminal strip CN10, terminal 1 115 .. 230 V ±10% 50/60 Hz
Status signal output	Terminal strip CN10, terminal 2 115 .. 230 V ±10%, 50/60 Hz. max. 2.5 A (C300) Signal is configurable, factory setting "collective fault" (P10) In protection mode and in the spare part factory setting, the contact on terminal 2 is used exclusively as a signal output for the safety chain.

Quick links:
Short videos of the installation:
KW-242 - Maintenance Instructions KW-242-1 (bitzer.de)

Landing page with relevant documentation including KT 240-2:
IQ MODULE (bitzer.de)