

MOTUS® C14

The new dimension
of motor starters



GAME CHANGER

The new motor starter with C14-Technology

- 01 C14-Technology
- 02 Space-saving
- 03 Diagnostics and process data
- 04 Interactive operation concept
- 05 Device versions
- 06 Basic systems

The C14-Technology delivers an extremely fast short-circuit handling. In case of a fault, the circuit protection takes place in 10 microseconds. It reacts faster than any fuse, and that happens with minimal let-through energy.

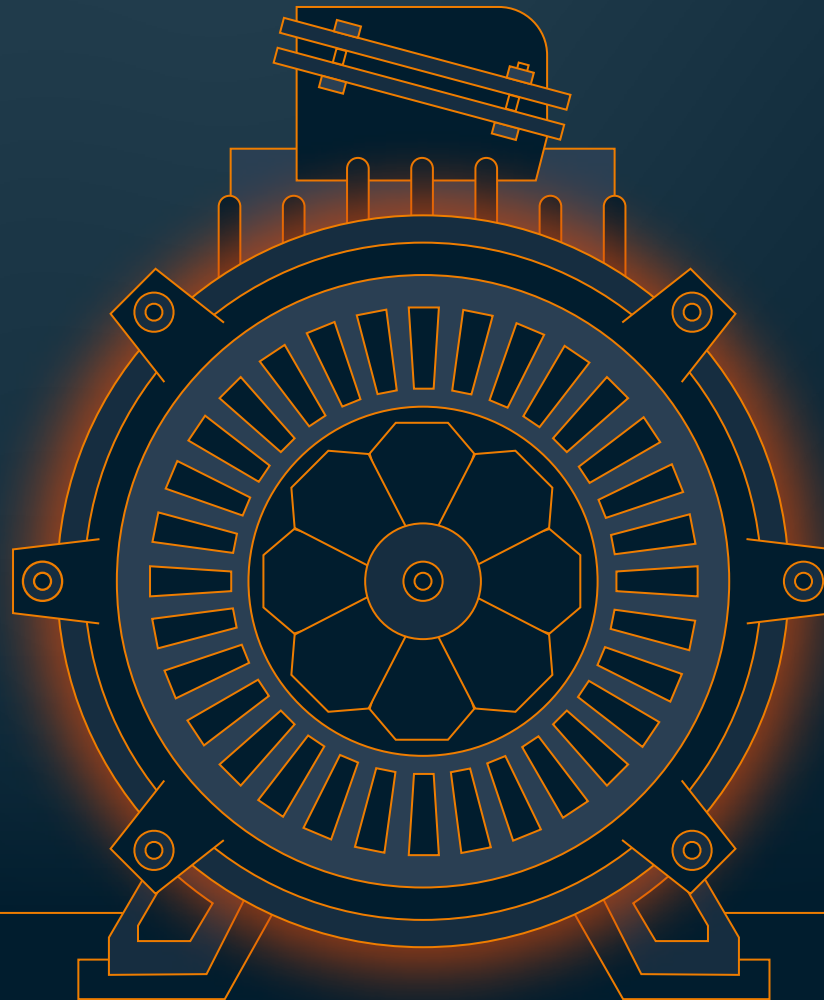
The new C14-Technology ensures the product is intrinsically safe. It can be switched on again after the short circuit has been cleared.

C14-TECHNOLOGY

short-circuit
detection



extremely fast
short-circuit handling



low system stress through
low I^2t value



re-energising possible
after error elimination



INTRINSICALLY SAFE AND RESTARTING POSSIBLE

The short-circuit detection with the integrated measurement technology takes only 10 microseconds. Due to the extremely fast circuit protection and corresponding low I^2t value, the device is only minimally stressed. C14-Technology enables coordination type 2 so the device remains ready for operation after short-circuit handling and can therefore be switched on again.

SPACE-SAVING



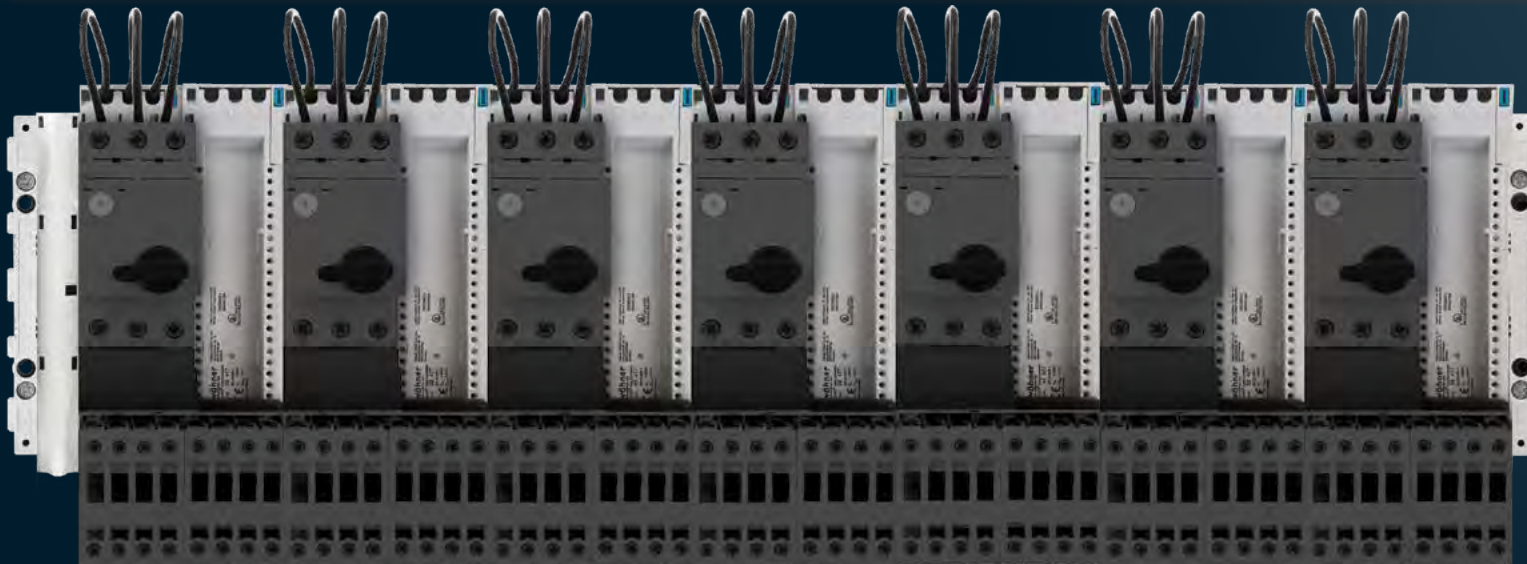
MOTUS® C14
75 %
space-saving

SPACE-SAVING AND HIGHLY EFFICIENT

- low power dissipation
- adaptive temperature rise management

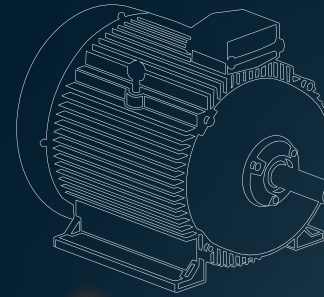
EASY MOUNTING AND DISMOUNTING

- connection possible due to standardised CrossLink® interface on all basic systems
- pluggable load connection
- pluggable connection for conventional control or IO-Link wiring



conventional design

DIAGNOSTICS AND PROCESS DATA



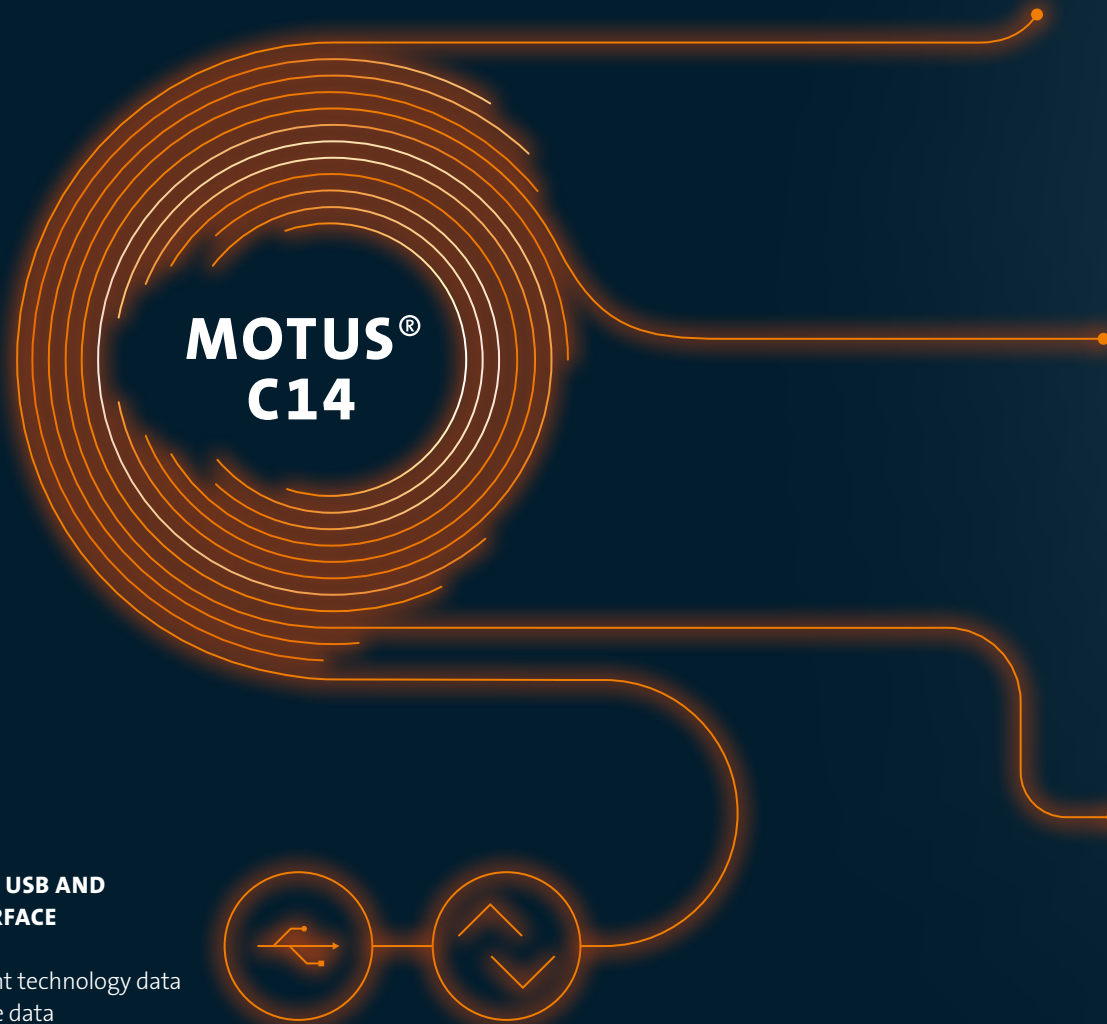
SYSTEM ENVIRONMENT DIAGNOSTICS: MOTOR

Motor starting:

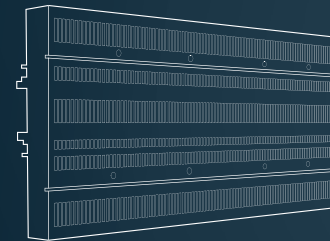
- check motor supply cable
- check load available

Motor mode:

- check asymmetrical load
- check overcurrent due to mechanical overload, wear or winding short-circuit

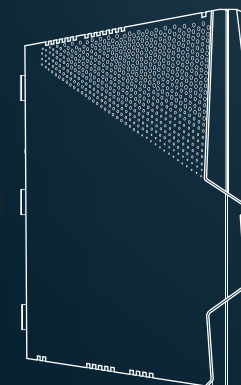


MOTUS[®]
C14



SYSTEM ENVIRONMENT DIAGNOSTICS: BUSBAR

- overvoltage
- undervoltage
- phase failure



SELF-DIAGNOSTICS

- by initial commissioning
- by restart after short circuit
- in case of overtemperature in the device

DATA LOGGING

- access to internal real-time data: current, voltage, power
- number of short circuits
- last fault messages
- last warning messages
- last process data before switching off
- data analysis, e.g. for predictive maintenance

READOUT VIA USB AND IO-LINK INTERFACE

- service data
- measurement technology data
- maintenance data

EASY OPERATION, EASY PARAMETERISATION



Icons immediately display type of errors in case of faults.

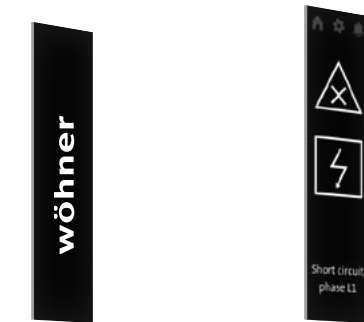
Using the arrow keys, direct parameterisation is possible.

INTERACTIVE OPERATING CONCEPT INCLUDED

The interactive menu navigation of the commissioning assistant makes it easier to enter the parameters and immediately detects errors, preventing incorrect setup of the device to a minimum. Settings can be changed for the MOTUS®C14 Connect Plus directly by using the arrow keys on the device or, as by all device versions, via the user interface of the ServiceTool. Furthermore, parameterisation is possible via the communication interface.

The solution assistant displays possible error causes. Stored values can be retrieved from the data logging for error analysis and predictive maintenance.

ALL ON THE SCREEN: THE DISPLAY OF THE MOTUS® C14 CONNECT PLUS



Initialisation

Fault message “short circuit”

- short circuit in motor or supply cable
- fault message “device switches off” (red device lighting)
- solution assistant indicates troubleshooting after pressing main button
- acknowledgement of the fault message via central control or directly on the main switch of the device

- **Warning and fault message “overtemperature”**
 - checking the permitted temperature of internal components by self-diagnostics
 - warning message “temperature too high” (yellow device lighting)
 - fault message “device switches off” (red device lighting)
 - acknowledgement of the fault message via central control or directly on the main switch of the device



Warning and fault message “undervoltage”

- checking the permitted supply voltage by system diagnostics
- warning message “supply voltage” too low
- fault message “device switches off” (red device lighting)
- acknowledgement of the fault message via central control or directly on the main switch of the device

Warning and fault message “asymmetry”

- checking the symmetry of the currents by system diagnostics
- warning message “asymmetry supply” or “asymmetry load” (yellow device lighting)
- fault message “device switches off” (red device lighting)
- acknowledgement of the fault message via central control or directly on the main switch of the device

ALL ON THE SCREEN: THE DISPLAY OF THE MOTUS® C14 CONNECT PLUS



Warning message "STOP"

- the warning message indicates that there is no safety release and that the motor cannot be switched on
- if there is no safety release during operation, the device switches off the motor



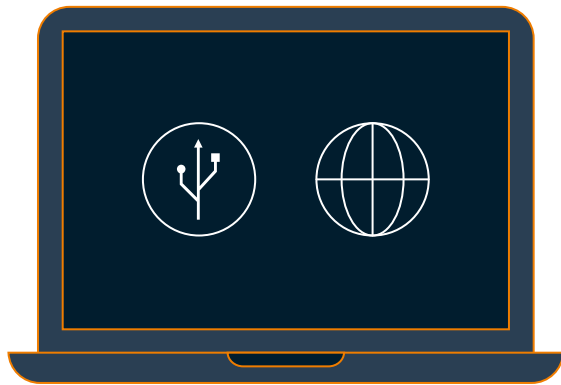
Operating message

- motor on
- motor in direct rotation
- tripping characteristic "Class 10A"
- rated current "2.3 A"
- motor load "70 %"

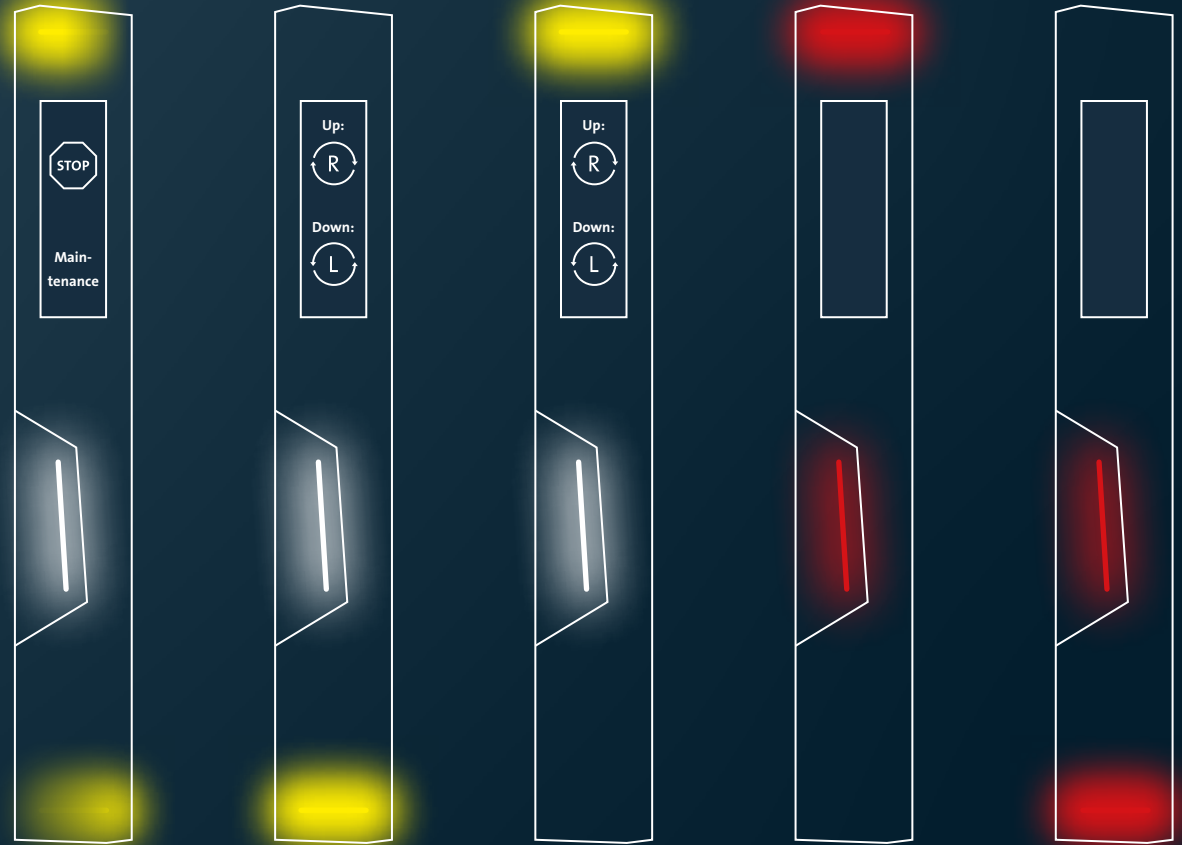
Operating message

- motor on - soft start
- motor in reverse rotation
- tripping characteristic "Class 10A"
- rated current "2.3 A"
- motor load "70 %"

THE SIGNALLING OF THE MOTUS® C14



The fault messages can be retrieved via the ServiceTool, transmitted via the communication interface or evaluated via analogue relay outputs.



In manual operation white signalling on the button. Yellow signalling on the device alternately up or down. Message displays direct or reverse rotation.

White signalling on the button. Yellow signalling on the device alternately up or down. Service message on the display.

Red signalling on the button and on the device up or down, depending on the type of error. Relevant warning message on the display. These errors cause the device being switched off.

DEVICE VERSIONS



MOTUS®C14 CONNECT PLUS

The premium version is available in currents 2.6 A, 6.6 A and 12.0 A. It can be used for motors IE2, IE3 and IE4 as direct and reversing starter or for switching 1-pole or 3-pole resistive loads. Using the display and the arrow keys, parameterisation can be done directly on the device. Using the communication interface, the device can be directly connected to a PLC and measurement data can be retrieved.

display

communication interface

measurement technology

LED signalling

8 motor tripping classes

soft start

MOTUS®C14 CONNECT

Direct and reversing starter in currents 2.6 A and 6.6 A. Applicable as motor starter for motors IE2, IE3 and IE4, or for switching 1-pole or 3-pole resistive loads. Using communication interface, the device can be directly connected to a PLC and measurement data can be retrieved.

communication interface

measurement technology

LED signalling

8 motor tripping classes

soft start

C14-TECHNOLOGY IN COMPARISON

10

C14-TECHNOLOGY



⌚ microseconds extremely fast switch-off time in case of fault

2000

FUSE-LINK



⌚ microseconds switch-off time in case of fault

5000

CIRCUIT BREAKER



⌚ microseconds switch-off time in case of fault

TECHNICAL DETAILS MOTUS® C14

rated operating voltage 130 V - 500 V (IEC)
130 V - 480 V (UL)

	Connect	Connect Plus
rated operating current for motors	2.6 A / 1.1 kW 6.6 A / 3.0 kW	2.6 A / 1.1 kW 6.6 A / 3.0 kW 12.0 A / 5.5 kW (on request)

	Connect	Connect Plus
rated operating current for resistive loads	2.6 A / 1.8 kW 6.6 A / 4.5 kW	2.6 A / 1.8 kW 6.6 A / 4.5 kW 12.0 A / 8.3 kW (on request)

short-circuit resistance 100 kA, coordination type 2

control voltage 24 V DC

electrical switching cycles > 30 million

connection plugs control circuit: 0.2 - 1.5 mm² (solid, flexible) / AWG 24 - 16
load circuit: 0.2 - 2.5 mm² (solid, flexible) / AWG 24 - 14

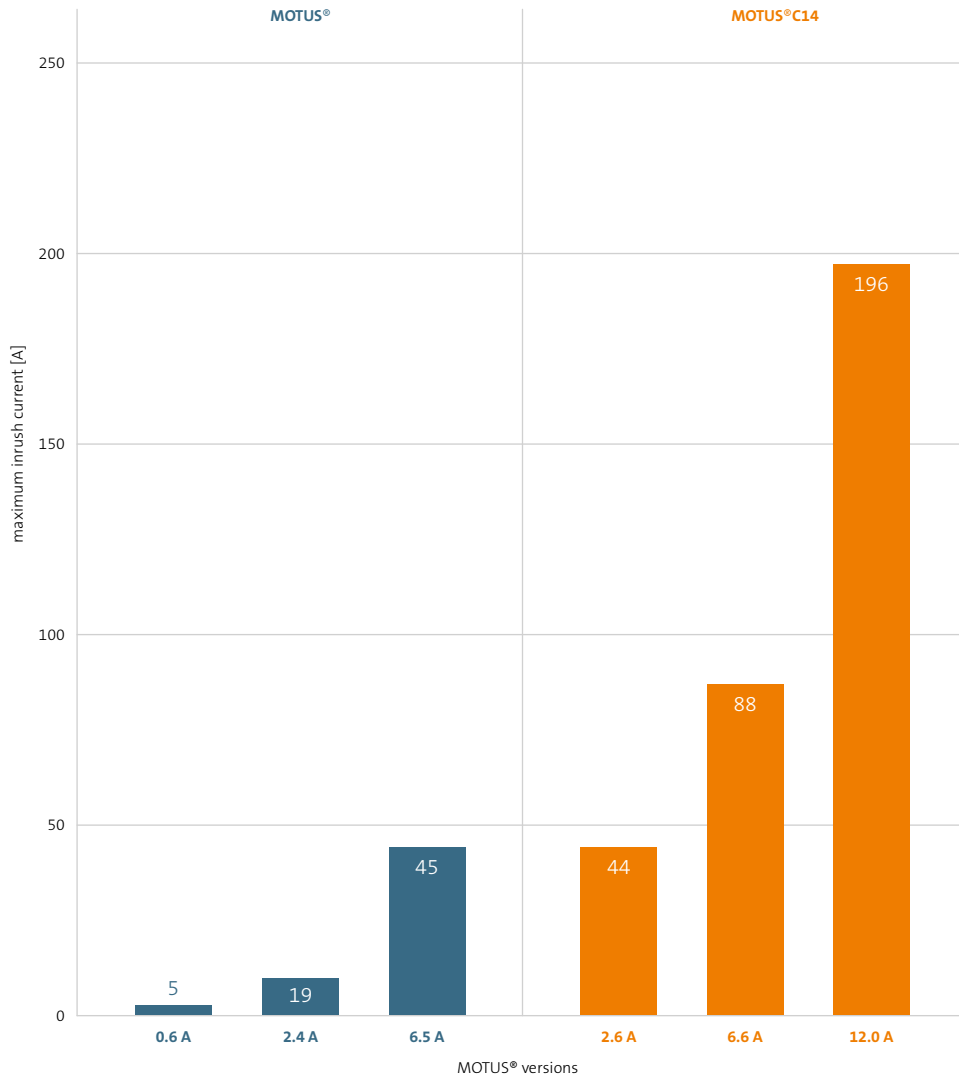
dimensions (w x h x d) CrossBoard®: 22.5 x 160 x 130 mm
30Compact: 22.5 x 160 x 130 mm + 14 mm adapter
60Classic: 22.5 x 200 x 130 mm + 14 mm adapter

approvals IEC / EN 60947-4-2 / -3
UL listed

types FuSi (functional safety) and ATEX on request

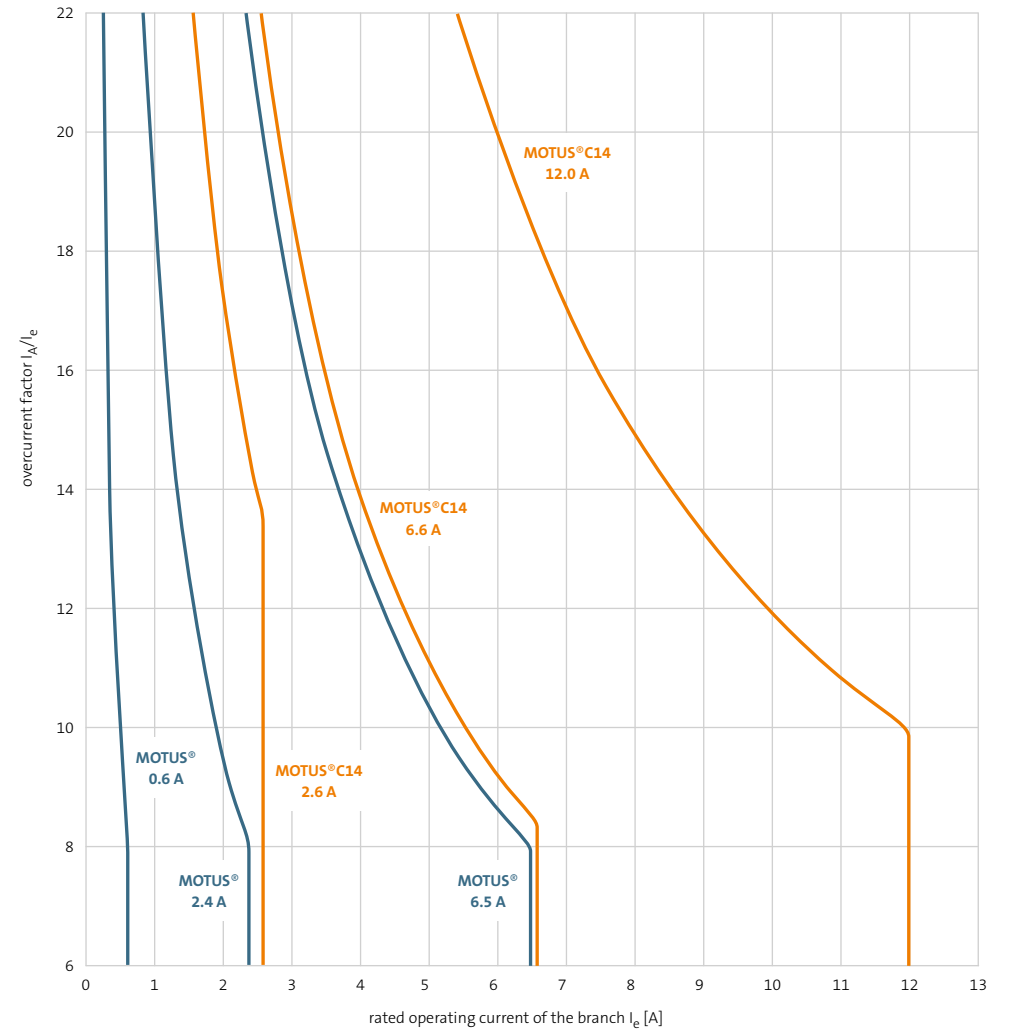
MAXIMUM INRUSH CURRENTS OF THE VERSIONS MOTUS® | MOTUS®C14

Bar chart shows the maximum inrush currents in cold state for a single start



CURRENT CHARACTERISTICS OF THE VERSIONS MOTUS® | MOTUS®C14

Permissible repeatable overcurrent factor to rated operating current (AC-53a)



BASIC SYSTEMS

The MOTUS®C14 product series is equipped with a CrossLink® interface and can therefore be used on all Wöhner basic systems. It can be directly connected to the CrossBoard® and with basic system adapter also to the other systems 30Compact, 60Classic, 185Power and Panel.



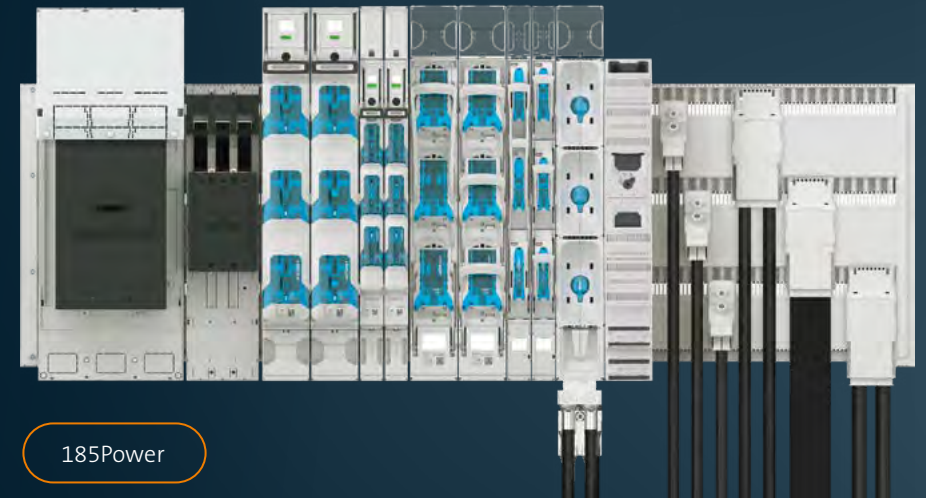
CrossBoard®



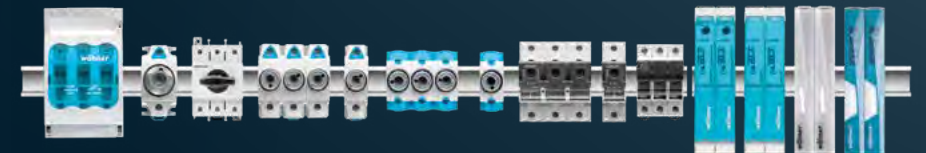
30Compact



60Classic



185Power



Panel

MOTUS®C14 CrossBoard

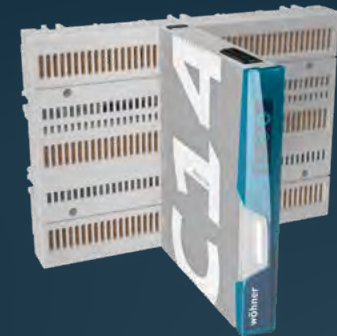
MOTUS®C14 Connect Plus - Electronic motor starter, 3-pole, for motors IE2, IE3, IE4 or resistive loads, with IO-Link interface, with display, with CrossLink® interface

Part No.	Type
36258	electronic unit direct and reversing starter 0.1 - 2.6 A / switch for resistive loads 0.1 - 2.6 A
36262	electronic unit direct and reversing starter 0.1 - 6.6 A / switch for resistive loads 0.1 - 6.6 A
36266 (on request)	electronic unit direct and reversing starter 0.1 - 12.0 A / switch for resistive loads 0.1 - 12.0 A

MOTUS®C14 Connect - Electronic motor starter, 3-pole, for motors IE2, IE3 and IE4 or resistive loads, with IO-Link interface, with CrossLink® interface

Part No.	Type
36246	electronic unit direct and reversing starter 0.1 - 2.6 A / switch for resistive loads 0.1 - 2.6 A
36250	electronic unit direct and reversing starter 0.1 - 6.6 A / switch for resistive loads 0.1 - 6.6 A

starter current ratings valid for motors IE2



MOTUS®C14 30Compact

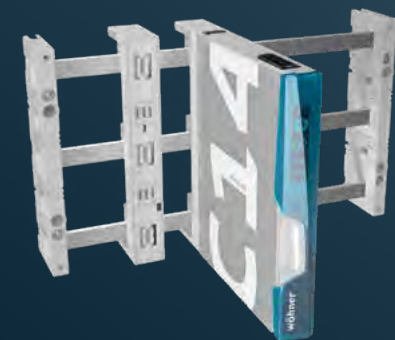
MOTUS®C14 Connect Plus - Electronic motor starter, 3-pole, for motors IE2, IE3, IE4 or resistive loads, with IO-Link interface, with display, with CrossLink®Technology

Part No.	Type
36256	direct and reversing starter 0.1 - 2.6 A / switch for resistive loads 0.1 - 2.6 A
36260	direct and reversing starter 0.1 - 6.6 A / switch for resistive loads 0.1 - 6.6 A
36264 (on request)	direct and reversing starter 0.1 - 12.0 A / switch for resistive loads 0.1 - 12.0 A

MOTUS®C14 Connect - Electronic motor starter, 3-pole, for motors IE2, IE3, IE4 or resistive loads, with IO-Link interface, with CrossLink®Technology

Part No.	Type
36244	direct and reversing starter 0.1 - 2.6 A / switch for resistive loads 0.1 - 2.6 A
36248	direct and reversing starter 0.1 - 6.6 A / switch for resistive loads 0.1 - 6.6 A

starter current ratings valid for motors IE2



MOTUS®C14 60Classic

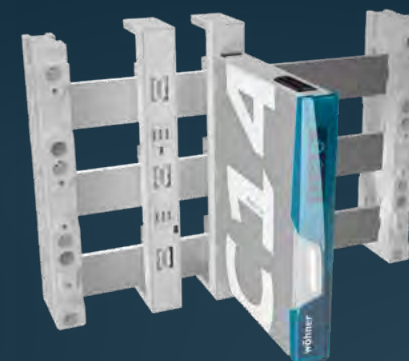
MOTUS®C14 Connect Plus - Electronic motor starter, 3-pole, for motors IE2, IE3, IE4 or resistive loads, with IO-Link interface, with display, with CrossLink®Technology

Part No.	Type
36257	direct and reversing starter 0.1 - 2.6 A / switch for resistive loads 0.1 - 2.6 A
36261	direct and reversing starter 0.1 - 6.6 A / switch for resistive loads 0.1 - 6.6 A
36265 (on request)	direct and reversing starter 0.1 - 12.0 A / switch for resistive loads 0.1 - 12.0 A

MOTUS®C14 Connect - Electronic motor starter, 3-pole, for motors IE2, IE3, IE4 or resistive loads, with IO-Link interface, with CrossLink®Technology

Part No.	Type
36245	direct and reversing starter 0.1 - 2.6 A / switch for resistive loads 0.1 - 2.6 A
36249	direct and reversing starter 0.1 - 6.6 A / switch for resistive loads 0.1 - 6.6 A

starter current ratings valid for motors IE2



MOTUS®C14 Panel

MOTUS®C14 Connect Plus - Electronic motor starter, 3-pole, for motors IE2, IE3, IE4 or resistive loads, with IO-Link interface, with display, with CrossLink®Technology

Part No.	Type
36255	direct and reversing starter 0.1 - 2.6 A / switch for resistive loads 0.1 - 2.6 A
36259	direct and reversing starter 0.1 - 6.6 A / switch for resistive loads 0.1 - 6.6 A
36263 (on request)	direct and reversing starter 0.1 - 12.0 A / switch for resistive loads 0.1 - 12.0 A

MOTUS®C14 Connect - Electronic motor starter, 3-pole, for motors IE2, IE3, IE4 or resistive loads, with IO-Link interface, with CrossLink®Technology

Part No.	Type
36243	direct and reversing starter 0.1 - 2.6 A / switch for resistive loads 0.1 - 2.6 A
36247	direct and reversing starter 0.1 - 6.6 A / switch for resistive loads 0.1 - 6.6 A

starter current ratings valid for motors IE2



BROOME10® CrossBoard

BROOME10® CrossBoard - Power supply,
with CrossLink® interface*

Part No.	Type
36200	24 V DC, 10.0 A, with push-in terminals

* BROOME20 CrossBoard® - Power supply 20.0 A on request



MOTUS® CrossBoard

MOTUS® CrossBoard - Hybrid motor starter, 3-pole, with reversing function, for motors IE2, IE3, IE4 or resistive loads,
with CrossLink® interface

Part No.	Type
36109	electronic unit direct and reversing starter 0.075 - 0.6 A / switch for resistive loads 0.075 - 0.6 A
36110	electronic unit direct and reversing starter 0.18 - 2.4 A / switch for resistive loads 0.18 - 2.4 A
36111	electronic unit direct and reversing starter 1.5 - 6.5 A / switch for resistive loads 1.5 - 9.0 A

MOTUS® CrossBoard - Hybrid motor starter, 3-pole, with reversing function, for motors IE2, IE3, IE4 or resistive loads,
with IO-Link interface, with CrossLink® interface

Part No.	Type
36130	electronic unit direct and reversing starter 0.18 - 3.0 A / switch for resistive loads 0.18 - 3.0 A
36131	electronic unit direct and reversing starter 1.5 - 7.0 A / switch for resistive loads 1.5 - 9.0 A

starter current ratings valid for motors IE2



OMUS® CrossBoard

OMUS® CrossBoard - Hybrid switch for resistive loads, 3- or 1-pole switchable,
with CrossLink® interface

Part No.	Type
36154	switch for resistive loads 25.0 A, for applications IEC
36159	switch for resistive loads 20.0 A, for applications UL



MOTUS® 60Classic

MOTUS® 60Classic - Hybrid motor starter, 3-pole, with reversing function, for motors IE2, IE3, IE4 or resistive loads, with CrossLink®Technology

Part No.	Type
36102	direct and reversing starter 0.075 - 0.6 A / switch for resistive loads 0.075 - 0.6 A
36105	direct and reversing starter 0.18 - 2.4 A / switch for resistive loads 0.18 - 2.4 A
36108	direct and reversing starter 1.5 - 6.5 A / switch for resistive loads 1.5 - 9.0 A

MOTUS® 60Classic - Hybrid motor starter, 3-pole, with reversing function, for motors IE2, IE3, IE4 or resistive loads, with IO-Link interface, with CrossLink®Technology

Part No.	Type
36125	direct and reversing starter 0.18 - 3.0 A / switch for resistive loads 0.18 - 3.0 A
36128	direct and reversing starter 1.5 - 7.0 A / switch for resistive loads 1.5 - 9.0 A

starter current ratings valid for motors IE2



OMUS® 60Classic

OMUS® 60Classic - Hybrid switch for resistive loads, 3- or 1-pole switchable, with CrossLink®Technology

Part No.	Type
36153	switch for resistive loads 25.0 A, for applications IEC
36158	switch for resistive loads 20.0 A, for applications UL



MOTUS® Panel

MOTUS® Panel - Hybrid motor starter, 3-pole, with reversing function, for motors IE2, IE3, IE4 or resistive loads, with CrossLink®Technology

Part No.	Type
36100	direct and reversing starter 0.075 - 0.6 A / switch for resistive loads 0.075 - 0.6 A
36103	direct and reversing starter 0.18 - 2.4 A / switch for resistive loads 0.18 - 2.4 A
36106	direct and reversing starter 1.5 - 6.5 A / switch for resistive loads 1.5 - 9.0 A

MOTUS® Panel - Hybrid motor starter, 3-pole, with reversing function, for motors IE2, IE3, IE4 or resistive loads, with IO-Link interface, with CrossLink®Technology

Part No.	Type
36123	direct and reversing starter 0.18 - 3.0 A / switch for resistive loads 0.18 - 3.0 A
36126	direct and reversing starter 1.5 - 7.0 A / switch for resistive loads 1.5 - 9.0 A

starter current ratings valid for motors IE2

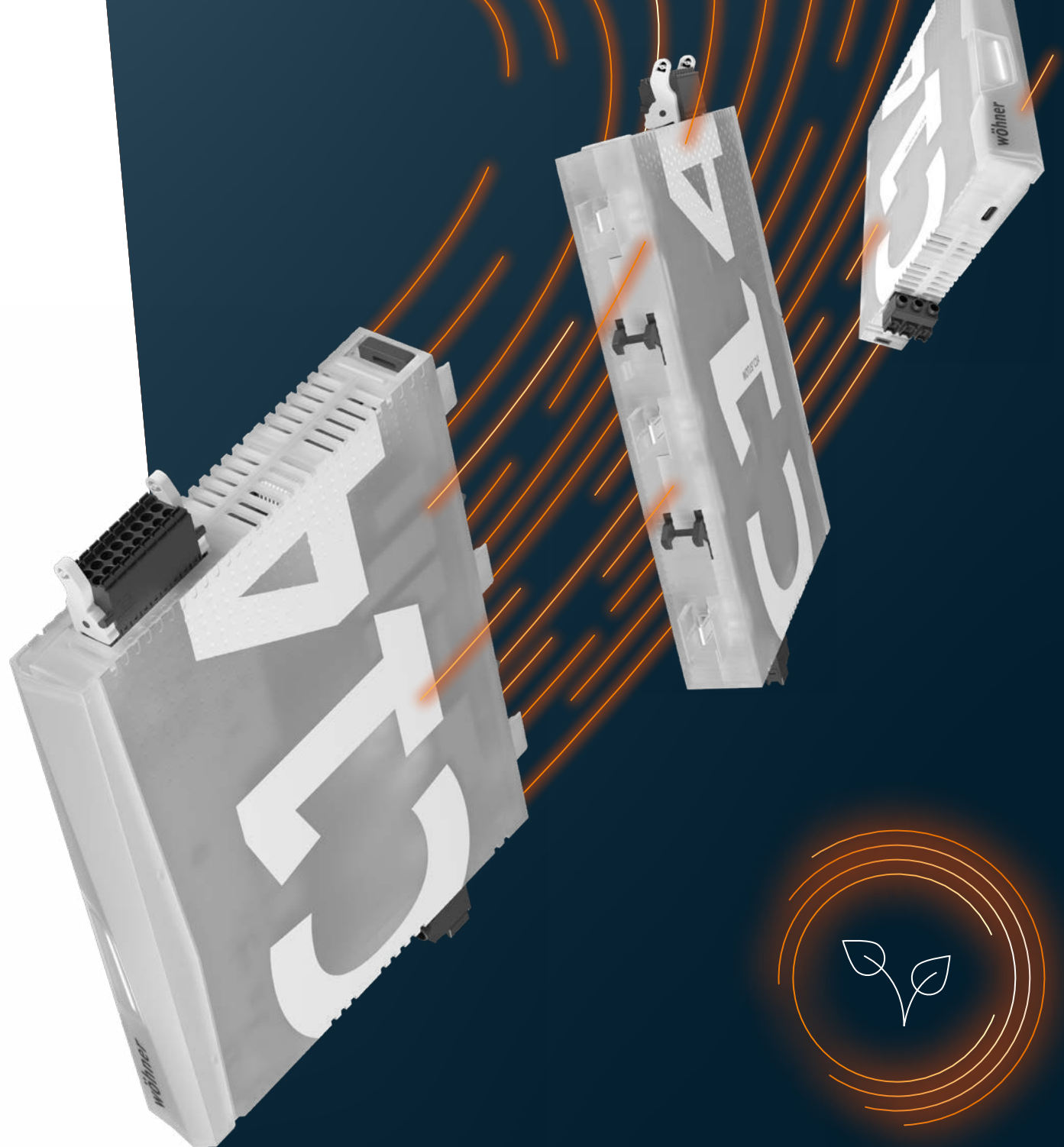


ON PRINCIPLE SUSTAINABLE

Wöhner as a family owned company with a tradition of more than 90 years is committed to sustainable development. In view of the rapid global climate change and the need for new ecological solutions we make our contribution to sustainability with products for the future.

Our products meet the requirements of our customers in the best possible way. These requirements nowadays include the observance of sustainability criteria. We therefore take into consideration specifically and systematically sustainability aspects in our supply chains, in our production processes and in our products.

In addition, the MOTUS®C14 uses the latest technologies that account for its high energy efficiency.



PRETTY SMART! OUR CONFIGURATOR



CONFIGURATOR

- 3D planning tool with realistic appearance
- guidance by technical parameters
- technical documentation

AUGMENTED REALITY

- presentation of a virtual control cabinet in a real room
- import of projects planned by yourself in the configurator possible

Try out our configurator:

<https://qrco.de/configurator-en>



Further information
about the **MOTUS® C14**
can be found at
www.motus-c14.com

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