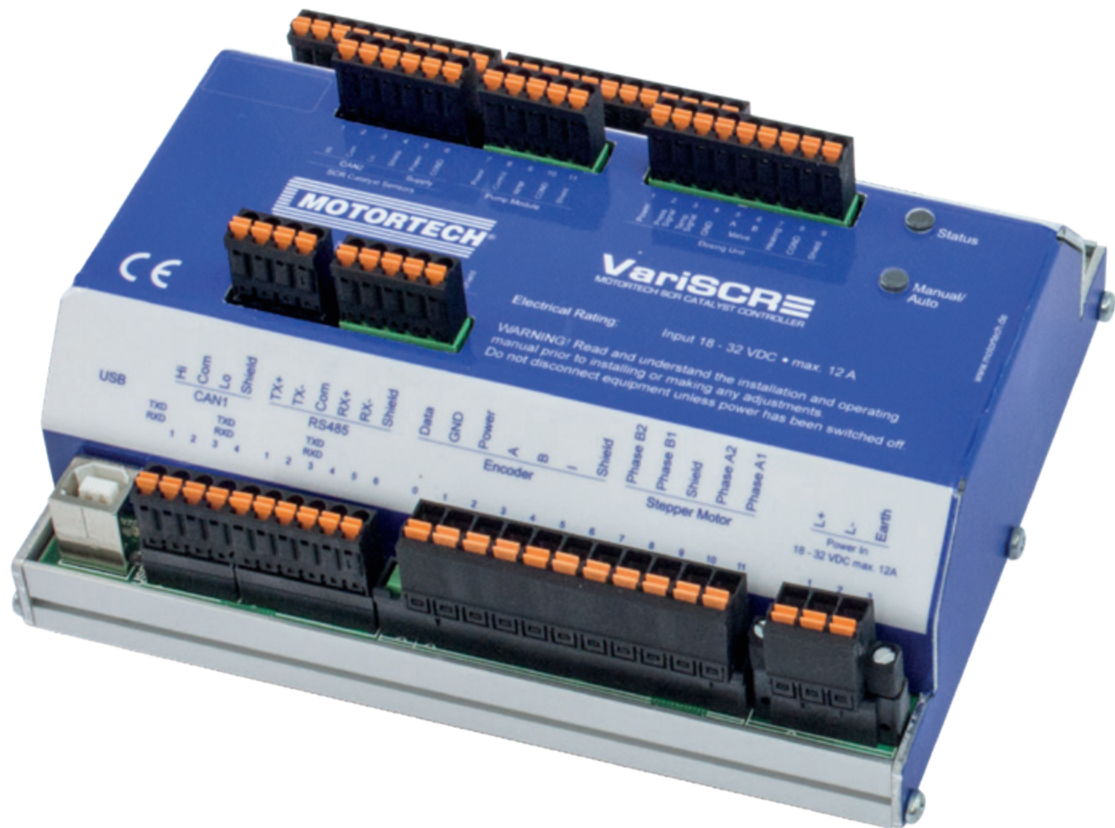


VariSCR NO_x Emission Controller

for SCR Catalytic Converters



Mode of Operation

VariSCR

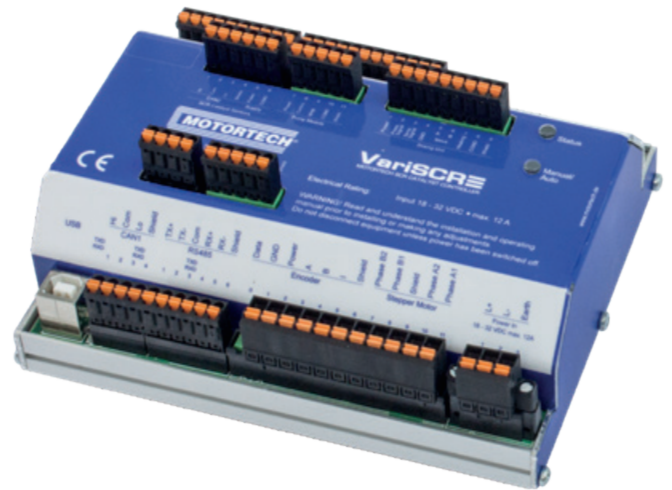
MOTORTECH NO_x EMISSION CONTROLLER

VariSCR NO_x Emission Controller for SCR Catalytic Converters

MOTORTECH developed the new NO_x emission controller VariSCR to satisfy the increasing immission protection requirements in the future.

After a transition time up to 2018, NO_x reduction from a current 500 mg/m³ to 100 mg/m³ for natural gas CHP applications (based on a reference oxygen content of 5% by volume) will become obligatory for new and existing CHP plants. To bring about constant reduction of NO_x-emissions in the SCR (Selective Catalytic Reduction) system, AdBlue®, a solution of 32.5% urea in water, will be injected into the exhaust gas flow in front of the SCR catalytic converter. The urea is converted into ammonia through thermolysis and hydrolysis. In the SCR catalytic converter, the ammonia then reduces the nitrogen oxides to water and nitrogen.

Besides the algorithms for NO_x reduction, the software also contains controllers for controlling the pump module to maintain constant delivery pressure, the heating controller for the dosing unit as well as optionally the fill-level monitoring in the AdBlue®-storage tank.



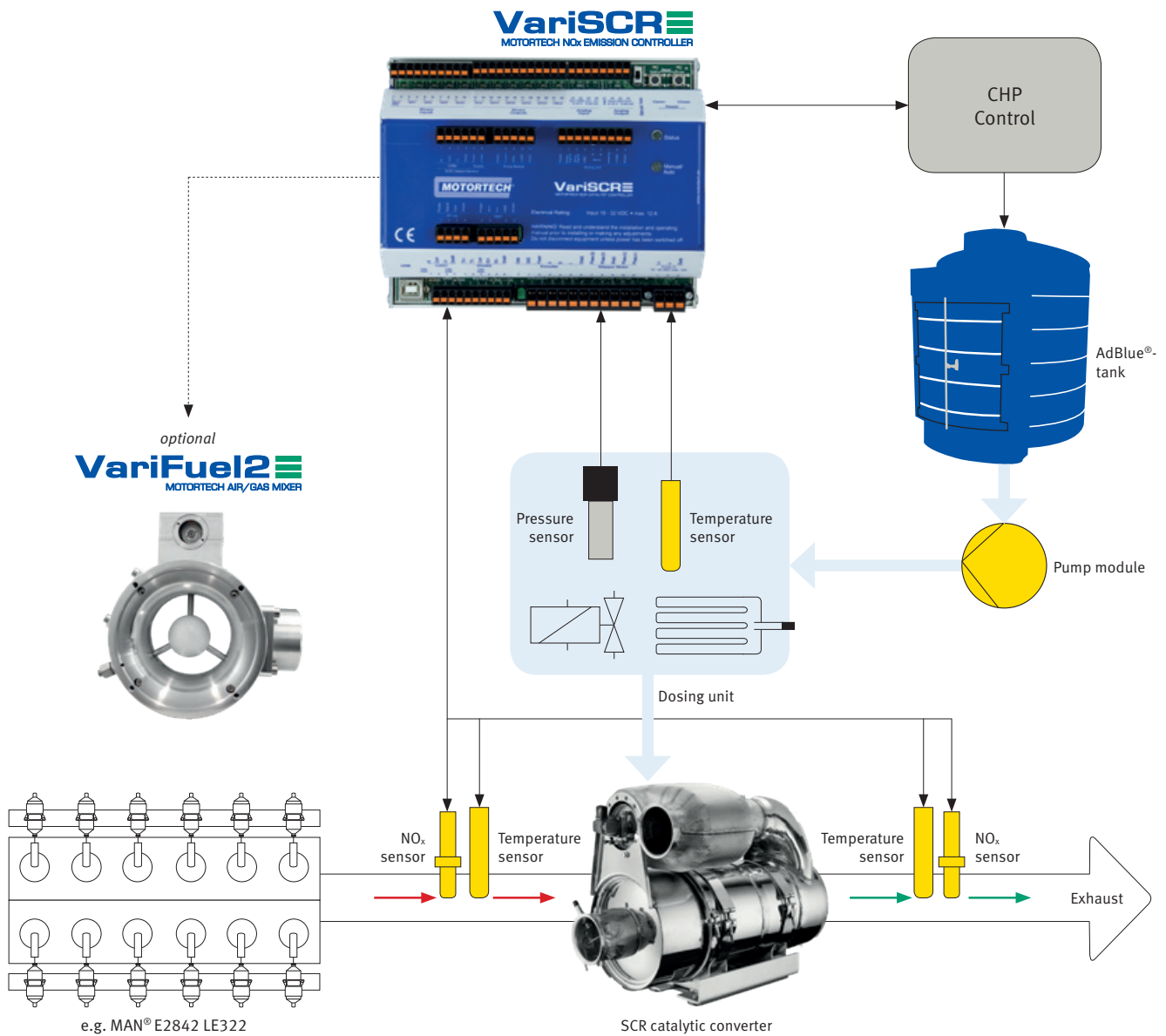
Available Components:

- VariSCR NO_x emission controller
- wiring harness for pump module
- wiring harness for dosing unit
- sensor harnesses

Features

- Read out of the NO_x sensors in front of and behind the catalytic converter
- Control of the urea injection to the NO_x set-point value through monitoring of the raw and target emission after the SCR catalytic converter
- Control of the urea pump for controlling and monitoring the AdBlue® injection quantity, temperature, and the delivery pressure
- Regulation of the AdBlue® heating and circulation
- Fault detection and diagnostics
- Connection to the higher level control via CAN-Bus

System Overview



Technical data

- 18 to 32 VDC power supply
- -20 °C to +60 °C (-4 °F up to 140 °F) permitted ambient temperature
- 0 to 20 mA/0 to 10 V analog input and output, freely configurable
- 5 digital inputs, 5 to 32 V, compatible, galvanic separation
- 6 digital outputs, up to 32 V, 100 mA, galvanic separation

Interfaces

- 2 CAN Bus 2.0b interfaces (CANopen protocol)
- RS485 interface (Modbus RTU)
- USB 1.1 interface

Configuration

- Using the graphical user interface MICT (MOTORTECH Integrated Configuration Tool)


Housing

- Protection class IP 20
- Dimensions 160 x 126 x 62 mm (6.3 x 5.0 x 2.4 inches)



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Distribution partner for DENSO spark plugs



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