

Automation, Connectivity and  
Electrification of Mobile Machines



SOLUTIONS FOR AUTOMATION OF MOBILE MACHINES  
Central Controllers

TECHNICAL DATA **ESX-3XL**



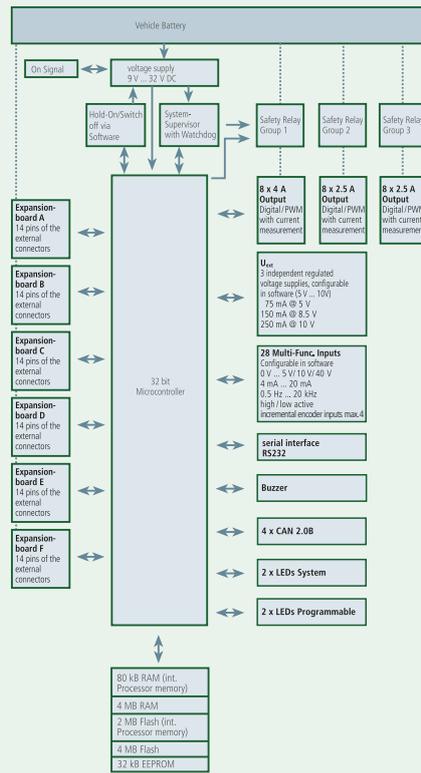
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## Central Controller ESX-3XL

### Technical Data

Processor System	
Processor	32Bit controller, 150MHz, separate system supervisor with programmable watchdog
SRAM	4 MByte external memory, 80 kByte internal memory
Flash	4 MByte external memory, 2 Mbyte internal flash memory
FRAM / EEPROM	32 kByte
Interfaces	
CAN-Bus	4 separate CAN, 2.0 B interfaces Full CAN, Low-/High-Speed up to 1 MBit/s
RS232	programmable Baud rate up to 115 kBit/s
Expansion Possibilities	6 modules for additional inputs and outputs or other functionalities
Inputs/Outputs (Base configuration 52, max. 136)	
Analog- / digital inputs	<b>max. 28 analog inputs</b> , 4 mA ... 20 mA or 0 V ... 5 V / 10 V / 40 V, 12 Bit, cut off frequency 100 Hz, short circuit protected, inbuilt diagnosis <b>max. 28 digital inputs</b> , high / low active configurable, short circuit protected, inbuilt diagnosis
RPM / frequency inputs	<b>max. 28 RPM/frequency inputs</b> , high / low active configurable, cut off frequency 20 kHz, short circuit protected, inbuilt diagnosis
Incremental inputs	<b>max. 4 incremental encoder inputs</b> , (2 channels each) cut off frequency 20 kHz, short circuit protected
Digital- /PWM-outputs with current measurement	<b>8x4 A</b> , high-side, 0 % ... 100 %, short circuit protected, built-in diagnosis <b>16x2,5 A</b> , high-side, 0 % ... 100 %, short circuit protected, built-in diagnosis
Voltage Output	<b>3 independent, regulated voltage supplies</b> programmable 5 V ... 10 V
Expansion possibilities	<b>max. 6 modules</b> , each serving up to 14 Inputs/Outputs, e.g. for digital or analogue I/Os PVG-outputs for Danfoss-Valves, inputs for encoders, motor bridges, communication interfaces or customer specific design
System Data	
Voltage supply	8 ... 32 VDC
Indicators	Buzzer, 4 Status LEDs (two color)
Current consumption	200 mA (24 V) ... 350 mA (12 V), Stand-by < 1 mA
Mechanical Data	
Connectors	2x81 pol. automotive connectors (Tyco / AMP)
Housing	IP67 and IP69K, die-cast aluminium, GORE-TEX®-Membrane for pressure equalisation
Weight	approx. 2.5 kg (5.5 lbs)
Dimensions	approx. 248 mm x 217 mm x 51 mm (approx. 9.76" x 8.54" x 2.01")
Environmental	
Standards	Qualified to the applicable for the automotive, agricultural and construction industries, CE approved
Operating Temperature	-40 °C ... +85 °C (-40 °F ... 185 °F) housing temperature
Software	
Programming	Freely programmable in "C" (high level API-library included) or with CODESYS V3 (IEC61131) Application Libraries and Tool Chain

# Block diagram





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