

RUGGEDIZED MOTION CONTROLLER

High-performance control for harsh environments



The Ruggedized Motion Controller is part of our motion controller offering and designed for high speed control and extreme environmental conditions. It is suitable for use with both electric and hydraulic motion systems. It can be mounted directly at the machine without the need for an extra electronic cabinet.

To enable a flexible communication, several models with different interfaces are available:

- EtherCAT master functionality for real time communications to valves, drives and external I/O
- EtherCAT slave for real time communications to a PLC host system
- CAN/CANopen interface for communications e.g. to sensors
- Profibus-DP slave interface to a PLC host system
- Ethernet connection for programming, debugging and visualization
- USB 1.1 host interface

The motion controller has the same high computing power as the other Moog motion controllers and is freely programmable with the powerful IEC 61131 development environment Moog Axis Control Software (MACS).

The innovative combination of ruggedized design, advanced computing power and flexible fieldbus support makes the Ruggedized Motion Controller an excellent choice for most high performance embedded control solutions.

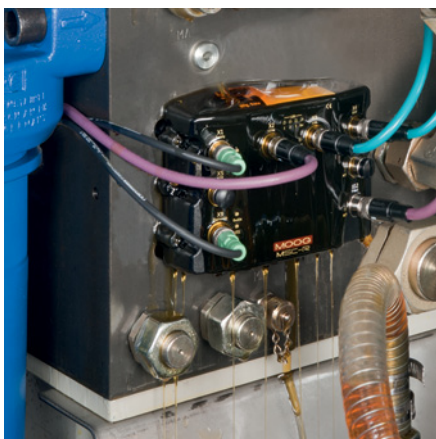
ADVANTAGES

- Special housing with a high degree of protection (IP67) for use in wet and dirty environments
- Extended operating temperature range
- High vibration resistance (30 g vibration, 50 g shock) for use in harsh environments
- Extended resistance against fluid contamination and corrosion
- Flexible communication through various fieldbuses
- Advanced computing power
- Integrated PLC functionality

APPLICATIONS

- Wind turbines
- Presses and metal forming
- Heavy industry (steel, aluminium)
- Test and simulation systems
- Chemical industry
- Robotics

It works in most demanding places



SPECIFICATIONS

TECHNICAL DATA

Dimensions W x H x D	161 x 58 x 105 mm (6.3 x 2.3 x 4.1 in)
Operating temperature range	-40 to +70 °C (-40 to +158 °F)
Degree of protection	IP67
Shock resistance	50 g, 6 directions, 3 ms
Vibration resistance	30 g, 3 axis, 10 Hz to 2 kHz, 10 sweeps
Resistance to fluid contamination	Resistant to: brake fluid, cooling liquid (glysantin), cutting compound, defrost, Diesel, drilling fluid, hydraulic oil (HLPD 32), Isopropanol 100%, machine cleaner, super fuel unleaded, synthetic motor oil, transmission fluid
Adhesiveness of surface coating	0 (cross-cut value)
Supply voltage	24 V _{DC}
Processor	PowerPC Processor, 32 bit, RISC architecture with floating point unit
Memory	128 MB RAM, 32 MB Flash EEPROM, data retention typically 10 years
Mounting	Direct mounting with 4 x M5 screws DIN rail mounting kit, order number CA94286-001
Standards	
Equipment requirements and tests	IEC 61131-2
Electromagnetic compability: Interference emission/immunity	EN 61000-6-4/EN 61000-6-2
Shock/vibration resistance	IEC 60068-2-27/IEC 60068-2-6
Insulation strength	IEC 61131-2, test voltage 500 V _{DC}
Resistance to corrosion	EN ISO 9227, neutral salt spray
Resistance to fluid contamination	EN ISO 2812-4, drip and blot method
Adhesiveness of surface coating	EN ISO 2409, cross-cut test



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INTERFACE DATA

CAN	Up to 1 MBit/s 24 V proof, non-isolated
Ethernet	10/100 MBit/s, isolated
EtherCAT master	100 MBit/s, isolated
EtherCAT slave	100 MBit/s, isolated
Profibus-DP slave	Up to 12 MBit/s, isolated
USB	V1.1 host interface, 24 V proof, non isolated
Digital I/O	Two signals individually configurable in MACS as input or output Permanently short-circuit protected, thermal overload protection Input signal: Type 1 according to IEC 61131-2, isolated Output signal: Maximum 0.5 A, isolated

ORDERING INFORMATION

Ordering number	Interfaces of Ruggedized Motion Controller
D136-003-001	1x EtherCAT master, 2x CAN, 1x Profibus-DP slave
D136-003-002	1x EtherCAT master, 2x CAN
D136-003-004	1x EtherCAT master, 1x CAN, 1x EtherCAT slave
D136-003-005	2x EtherCAT master, 1x CAN, 1x Profibus-DP slave

This technical data is based on current available information and is subject to change at any time. Specifications for specific systems or applications may vary.

MOOG