



- 8 μ s, duration for position control ●
- integrated according to IEC 61131-3 programmable control unit ●

Specifications	
Control technics	Implemented in the FPGA
Current controlling duration	2.66 μ s
Speed governing duration	4 μ s
Position controlling duration	8 μ s
Memory (optional)	SDRAM 64 Mbyte (128 Mbyte)
Processor	32 Bit NIOS-CPU
Software	
PLC programming (optional)	CODESYS V3
C, C++ and C# programming	User-specific code can be integrated through the elrest application
Interface	
Encoder inputs (optional)	2 x sincos-encoder (1Vss) with Hiperface-interface 2 x sincos-encoder(1Vss) with EnDAT 2.1-communication Alternative: resolver
Incremental encoders (optional)	2 x 1 MHz, RS-485- level
SSI-encoder (optional)	Up to 4 x SSI-encoder
CANopen / CAN / Modbus-RTU (RS-485)	1x RJ45- connector
USB-Device (optional)	Standard USB-interface to connect the PC (USB-Host)
EtherCAT-Slave (optional)	2x RJ45-connections
Temperature sensor motor (KTY)	Connection with pin block clamps
Environment/ Mechanical values	
Power and motorfilter	Integrated
Housing	Metallic
EMC- test	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61800-3, EN 61000-3-11, EN 61000-3-12
IP Rating	IP20 acc. to EN 60529
Mounting	Cabinet installation
Outside dimension in mm (B x H x T)	183 mm x 260 mm x 125 mm (without a heat sink)
Weight approx.	3720 g
Operating temperature	0 °C...50 °C
Surface temperature heat exchanger	10 °C...60 °C
Ordering -number:	
26333.0120	MC3-012 400VAC/12A
26334.0120	MC3-012 400VAC/12A/CS3

Diagnostic	
LEDs	2 x 2 coloured LEDs
Logging	4 channels without any gaps in the controller cycle
Oscilloscope function	CODESYS V3-visualization
Digital Input	
Number	4
Input voltage	24 V DC (18 V...30 V)
Frequency max.	4 x 1 kHz, 2 x 100 kHz
Oversvoltage	43 V
Power loss typ.	0.2 W per input
Digital Output	
Number	4
Output Voltage	24 V DC / 0,5 A
Switching frequency Ohm/ inductive	100 Hz / 0,5 Hz
Reverse Voltage protection	yes
Analogue Input	
Number	1
Measurement voltage	0 V DC...10 V DC (potentiometer)
A/D-Converter	12 Bit
Power range	
Mains Voltage U_N	208 V AC...480 V AC, 3-phases, 47 Hz...66 Hz
Supply Voltage	optionally 24 V DC supply or voltage
Output Voltage	10 kVA...15 kVA (depends on the cool concept)
Phase current	1 A...12 A (depends on the cool concept)
PWM-Frequecy	4 kHz...20 kHz automatic derating on overload
Inter-circle tension	560 V DC at 400 V DC voltage
Power factor	$\lambda > 089$ at 400 V
Accessories Article number	
on enquiry	heat sinks: convection on request
on enquiry	heat sinks with fan: convection on request
on enquiry	Braking resistor 250 W continuous power, 1000 W max. power for 1 s at load resistants = 60 Ω (recommended))
on enquiry	Software-Oscilloscope available in the second quarter of 2013
on enquiry	Extended (external) intermediate circuit: on request
240020204	CAN-cable RJ45/RJ45, 2,0 m, green
240020203	Ethernet-cable RJ45/RJ45, 2,0 m, yellow
Applications	
Encoder speed control	Pump drives (heat-, delivery pumps)
Synchrone- and asynchrone servo drives	Textile industry, wood processing, robotics
Special Driveline Technology	Conveyor technology, linear drives

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Remark: The use of standard CF-cards is generally possible. Anyhow elrest GmbH does not take any responsibility thereby.