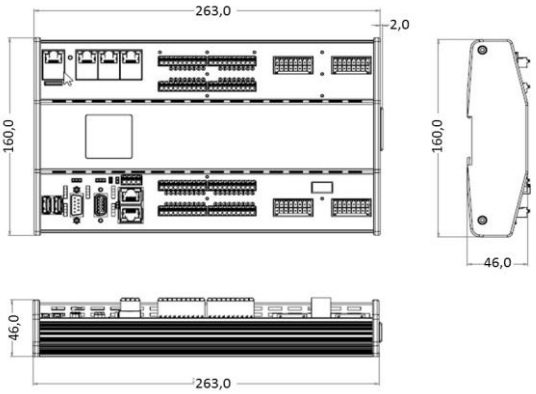

robusto control

● Ethernet Switch ● Passive cooled CPU unit
● Universal design

Specification		
Processor		Cortex-A9, Single Core, 800 MHz
Real-time clock		available, with goldcap buffered up to 4 weeks
Memory		1 GByte RAM,4 GByte Flash, (2 Gbyte Flash available, data endurance: 100.000 erase and write cycles, data retension: 10 years)
Memory expansion		via USB-Stick on the USB-Host interface
Memory expansion via µSD-card-socket	optional	with µSD card (max. 2 GB) or µSDHC card (max. 32 GB)
Speed class:		recommended: class 2 with 2 MB/s minimum speed
Buffering		512 KByte retain data in flash
Software		
Operating system		Embedded Linux 4.00
PLC programming		CODESYS V3 (CS3)
HMI programming		CODESYS V3 WebVisu (WV)
Interface		
Ethernet		1 x 100/1000BASE-T, RJ45 3 x 10/100BASE-T, RJ45 with switch functionality
	optional	1 x 100/1000BASE-T, RJ45 1 x 10/100BASE-T, RJ45 2 x 10/100BASE-T, RJ45 with Profinet functionality
Serial interfaces		1 x D-Sub-9 plug (male) with multiple function: 1 x RS232 with galv. isolation, 1 x RS485 with galv. isolation, termination ON-OFF
		1 x RS485 with galv. Isolation, D-Sub-9 socket (male); termination ON-OFF
Fieldbus interfaces		2 x CAN acc. to ISO11898 with galv. isolation, 2x RJ45, 2 x termination ON-OFF
USB		2 x USB-2.0 hub device type A

Functions	
Operating mode switch	RUN-STOP-RESET
Profinet-RT Controller	Via CODESYS configurator
Profinet-RT Device	Via FPGA IP / IEC library
CANopen Master	Via IEC Library or CODESYS configurator
CANopen Slave	Via CODESYS configurator
Ethernet TCP-Modbus Client or Server	Via IEC Library
Modbus RTU Slave or Master	Via IEC Library
Order-No.:	
25150.0300	robusto master - RMC503
Environment/ mechanical values	
Supply voltage	24 VDC (-15% / +20%) SELV with polarity reversal
Power consumption (duration/start-up)	0,8 A / 1,0 A
Housing	robusto heat sink with device lid
Protection class	IP20, acc. to EN 60529
Mounting	snap-in mounting on top-hat rail DIN EN 60715
Outside dimensions in mm (w x h x d)	263 x 160 x 50,8
Weight approx.	1200 g
Operating temperature	0°C…50°C (depending on position)
Storage temperature	-20°C... 70°C
Relative humidity for operation	10%...85% non-condensing
Relative humidity for storage	5%...85% non-condensing
Cooling	Passive heat sink
Diagnostic	
LEDs	LEDs for operating- and status indication; LED status for digital in- and outputs
Digital Inputs	
Number	32 in 4 blocks à 8 inputs
Input voltage	24 VDC with blockwise galvanic isolation, EN61131-2 Typ 1
Frequency max.	1 kHz
Connection	4 x socket 10-pole; contact spacing 3,5 mm, conductor crosssection up to 0,2 … 1,5 mm², 8 A WAGO: 714-110 and 714-140
Digital Outputs	
Number	32 in 4 blocks à 8 outputs
Output voltage	24 VDC with galvanic isolation
Output current	0,5 A
Total current (per DIN)	Current per group (8 outputs) max. 2 A
Ohmic load	At least 50 Ohm
Switching frequency by ohmic/inductive load	1 kHz
Short circuit	Current limiting up to 0,7 A per channel
Thermal Protection	Thermal protection of 120°C ;reconnecting of 100°C. additionally protection per group with a fuse of 5 A.
Connection	4 x socket 10-pole; contact spacing 3,5 mm, conductor crosssection up to 0,2 … 1,5 mm², 8 A WAGO: 714-110 and 714-140

Analog Inputs

Number: 16

Analog input types of sensors:
Ni1000 / Ni1000-TK5000
NTC-10K-Carel
PT1000 2-wire
PT100 2-wire
TC TYP K (NI-CrNi), TC Typ L (Fe-CuNi), TC Typ S (Pt-RhPt)
Voltage : 0...+ 10 VDC
Current : 0...+ 20 mA
Resistance : 0.. 200 kOhm, 0..500 Ohm

Conversion time: 100 ms of all analog channels

	Sensor range: up:	Sensor range: to:	Value range:	Resolution:	Resolution A/D converter:	Accurancy:
Range of measurement voltage	0(4) mA	20 mA	20 mA	± 0,0100	± 0,0003	± 0,0203 mA
Range of measurement current	0 mV	10 V	10 V	± 5,00 mV	± 0,19 mV	± 10,19 mV
Range of measurement temperature						
Pt100	-50°C	350°C	400°C	± 0,5000 K	± 0,0900 K	± 2,0000 K
Pt1000	-20°C	100°C	120°C	± 0,0500 K	± 0,0090 K	± 0,3706 K
NTC	-20°C	100°C	120°C	± 0,0500 K	± 0,0250 K	± 0,4950 K
Ni1000	-20°C	100°C	120°C	± 0,0500 K	± 0,0072 K	± 0,3639 K
Ni1000TK5000	-20°C	100°C	120°C	± 0,0500 K	± 0,0072 K	± 0,3639 K
TC TYP K (NI-CrNi)	-100°C	1300°C	1400°C	± 0,0200 K	± 0,0900 K	± 2,0000 K
TC Typ L (Fe-CuNi)	-100°C	900°C	1000°C	± 0,0200 K	± 0,0900 K	± 2,0000 K
TC Typ S (Pt-RhPt)	0°C	1600°C	1600°C	± 0,0200 K	± 0,0900 K	± 2,0000 K
Range of measurement resistance	0 Ω	200 kΩ	200 kΩ	200 Ω	± 3 Ω	± 4 kΩ
	0 Ω	500 Ω	550 Ω	0,01 Ω	± 0,156 mΩ	± 0,8 Ω

Input impedance
0(4)…20 mA < 150 Ohm
0…10 V > 10 kOhm

Measuring current Ni1000, PT1000, Ohm < 1 mA

A/D-converter analog input: 16-bit

Processing time: 100 ms of all analog channels

Connection: 2 x socket 8-pole; contact spacing 3,5 mm,
conductor crosssection up to 0,08 … 1,5 mm², 8 A
WAGO: 713-1408 / female multipoint connector 713-1108

Analog Outputs

Number: 16

Analog output type of sensor:
Voltage : 0...+ 10 VDC
- 10 ...+ 10 VDC (optional)
Current: 0…+ 20 mA (optional)
4…+ 20 mA (optional)

DA-converter analog output: 12-bit

Resolution: ± 5mV

Accuracy: ± 10mV

Power load: < 10 mA

Processing time: 100 ms of all analog channels

Connection: 2 x socket 8-pole; contact spacing 3,5 mm,
conductor crosssection up to 0,08 … 1,5 mm², 8 A
WAGO: 713-1408 / female multipoint connector 713-1108

Standards	
Product standards	
	EN61131-2:2007
Immunity and interference	
	EN61000-6-2:2011
	EN61000-6-3:2011

E601333-2.0

Do you have questions, requests or suggestions?
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