AC500
Technical data

EtherCAT modules

Type		CI511-ETHCAT	CI512-ETHCAT
Communication interface			
Protocol		EtherCAT slave with CAM-Switch configurable function on the digital outputs	
ID Device configuration		Address is defined by position on Ethernet bus	
Field bus connection on TUs		2 x RJ45 with switch functionality for simple daisy chain on TU507-ETH or TU508-ETH	
Number of channels per module			
Digital	inputs	8	8
	outputs	8	8
Analog	inputs	4	–
	outputs	2	–
Digital configurable channels as inputs or outputs	DC (configurable	–	8
Additional configuration of channels as			
Fast counter (onboard I/O)		–	
Occupies max. 1 DO or DC when used as counter		–	
Connection			
Local I/O extension		●	
Max. number of extension modules		max. 10 x S500 extension modules (standard or eCo modules allowed). Fast counter from digital IO modules can be also used.	
Via terminal unit TU5xx		●	
Digital inputs			
Input signal voltage		24 V DC	
Input characteristic acc. to EN 61 132-2		Type 1	
0 signal		-3...+5 V DC	
Undefined signal state		5...15 V DC	
1 signal		15...30 V DC	
Residual ripple, range for	0 signal	-3...+5 V DC	
	1 signal	15...30 V DC	
Input time delay (0 -> 1 or 1 -> 0)		8 ms typically, configurable from 0.1 up to 32 ms	
Digital outputs			
Transistor outputs 24 V DC, 0.5 A		●	
Readback of output		–	● (on DC outputs)
Outputs, supplied via process voltage UP		●	
Switching of 24 V load		●	
Output voltage at signal state 1		Process voltage UP - 0.8 V	
Output current			
Nominal current per channel		500 mA at UP = 24 V DC	
Maximum (total current of all channels)		8 A	
Residual current at signal state 0		< 0.5 mA	
Demagnetization when switching off inductive loads		By internal varistors	
Analog inputs AI		Max. number per module and with regard to the configuration: AIs / Measuring points	
Signal configuration per AI		4	–
0...10 V / -10 V... +10 V		4 / 4	–
0...20 mA / 4...20 mA		4 / 4	–
RTD using 2/3 wire needs 1/2 channel(s)		4 / 2	–
0...10 V using differential inputs, needs 2 channels		4 / 2	–
-10...+10 V using differential inputs, needs 2 channels		4 / 2	–
Digital signals (digital input)		4 / 4	–
Data when using the AI as digital input			
Input	time delay	8 ms typically, configurable from 0.1 up to 32 ms	–
	signal voltage	24 V DC	–

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Outputs, single configurable as:			
Possible configuration per AO		●	–
-10…+10 V		●	–
0…20 mA / 4…20 mA		●	–
Output resistance (load) when used as current output		0...500 Ω	–
Output loading capability when used as voltage output		±10 mA max.	–
Potential isolation			
Per module		●	●
Between Ethernet interface against the rest of the module		●	●
Between the channels	input	–	–
	output	–	–
Voltage supply for the module		By external 24 V DC voltage via terminal UP	
Process voltage UP			
Nominal voltage		24 V DC	
Current consumption on UP			
min. (module alone)		0.260 A	
max. (min. + loads)		0.260 A + load	
Reverse polarity protection		●	
Fuse for process voltage UP		10 A miniature fuse	
Approvals		See detailed page 238 or www.abb.com/plc	