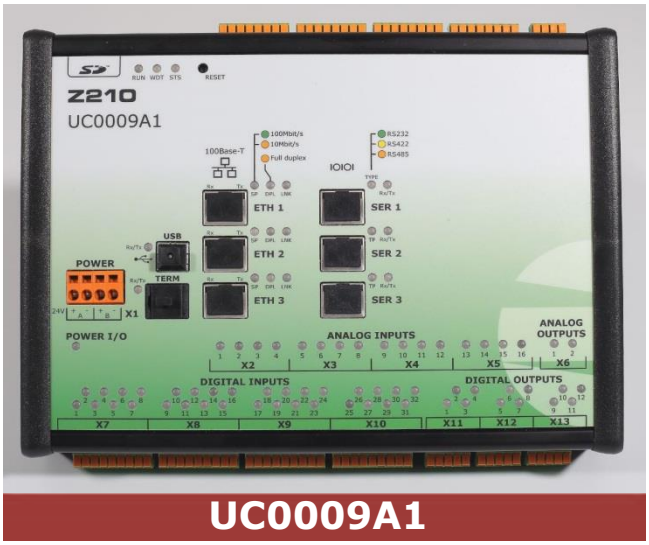
UC0009A1 Control module with integrated I/O

CPU and communications:

- **Processor PowerQUICC II MPC8270 (core PowerPC 603E™ with integrated modules FPU, CPM, PCI and memory controller) on frequency 450 MHz**
- **16 kB data cache, 16 kB instruction cache**
- **128 MB memory SDRAM with support ECC**
- **128 MB memory FLASH**
- **2 MB backup memory SRAM**
- **backup circuit RTC**
- **SD card slot**
- **USB interface**
- **3 channels Fast Ethernet 100BASE-TX**
- **3 channels serial interface + terminal**
- **Galvanic isolation of communication´s interface from the system**
- **Assembly of the module onto the DIN bar**



UC0009A1

Module UC0009A1 is a basic user programmable unit of the set Z210, which enables control of analog and digital inputs and outputs, and communication with other elements. It enables to connect external equipment by means of serial channels, Ethernet interface. Construction and circuit design enable separate installation of the module onto the DIN bar.

Mechanical parameters and weight					
Parameter	**Condition**	**Min.**	**Type**	**Max.**	**Units**
Module demensions (HxWxT)			183,5x227x62		mm
Protection			IP20		
Weight			1250		g

Serial interface					
Parameter	**Conditions**	**Min.**	**Type**	**Max.**	**Units**
Number of channels			3		ks
Communications rate	Programmatically adjustable	150		115200	Baud
Number of bits			5,6,7,8		
Number of bit tracks			1, 1 1/2, 2		
Parity			any, even, odd, mark,space		
Flow control			any, Xon/Xoff, RTS/CTS		
Physical interface			RS232, RS422, RS485		
Ending of line			5k (RS232) 120 (RS422/RS458		Ω
Ectric strength			700		V DC

Fast Ethernet 100BASE-TX					
Parameter	**Conditions**	**Min.**	**Type**	**Max.**	**Units**
Number of channels			3		ks
Transmission rate				100	Mbit/S
Dielectric strength			1000		V DC

USB and terminal					
Parameter	**Conditions**	**Min.**	**Type**	**Max.**	**Units**
Transmission rate	TERM (RS-232)			115200	Bd
Transmission rate	USB			12	Mbit/s
Electric strength			1000		V DC

Power supply and consumption					
Parameter	**Conditions**	**Min.**	**Type**	**Max.**	**Units**
Supply voltage		18	24	30	V
Consumption			350	585	mA

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IO signals:

- **IO signals connection (32xDI, 12xDO, 16xAI, 2xAO**
- **Possibility of setting digital filtering ringing to signal edges (valid for DI)**
- **Galvanic isolation of outputs/inputs from system and from each other (by groups)**
- **Visual indication of the Inputs/ outputs on the panel module**
- **Asynchronous counter mode (valid for DI)**
- **Archive of the input signals (valid for DI)**
- **Short circuit proof (valid for DO) protection internal fuse type F**
- **Contactless switching (valid for DO)**
- **Suppression of serial interference 50 Hz (valid for AI)**
- **Resolution 16bits (AI), 12bits (AO)**
- **Galvanic isolation of communication´s interface from the system**
- **Assembly of the module onto the DIN bar**

Integrated digital inputs

Parameter	Condition	Min.	Type	Max.	Units
Number of Inputs			32		
Logic level log. H log. L		11	 24 0	 30 5	V DC
Current consumption inputs	U_{in}= 24V		3,2		mA
Asynchronous counter	16bitů (1-4 DI from each set of eight)			500	Hz
Temperature coefficient decision-making levels			+0,3		%/°C
Range filtering ringing		1		100	ms
Dielectric strenght input/system		1000			V DC
Dielectric strenght input/ input	(galvanically isolated after 8 inputs)	1000			V DC

Integrated digital outputs

Parameter	Condition	Min.	Type	Max.	Units
Number of outputs			12		
Switching voltage output		0	24	80	V DC
Load corrent output				0,5	A
Resistance in conducting state				0,5	Ω
Dielectric strenght output/system		1000			V DC
Dielectric strenght output/ output	(after 4 outputs)	1000			V DC

Integrated analog inputs

Parameter	Condition	Min.	Type	Max.	Units
Number of outputs			16		
Input range		0 (4)		20	mA
Conversion time			100		ms
Input resistance			102		Ω
Accuracy (basic error)	Ambient temp. T_A=23±5°C		0,01	0,05	%
Input data error caused by changing ambient temperatures			0,001	0,005	% / K
Input data error changing by voltage				0,001	% / V
Input data error due to age	1 000 h 8 000 h 225 000 h			0,02 0,05 0,15	%
Suppression 50Hz		71	90		dB
Dielectric strenght input/system		1000			V DC
Dielectric strenght input/ input	(after 4 outputs)	1000			V DC

Integrated analog outputs

Parameter	Condition	Min.	Type	Max.	Units
Number of outputs			2		
Output range		0		20	mA
Load				1,2	kΩ
Setting time	na 0,1% value		10		µs
Accuracy (basic error)	Ambient temp. T_A=23±5°C		0,1	0,3	%
Input data error caused by changing ambient temperatures			0,002	0,005	% / K
Input data error changing by voltage				0,001	% / V
Input data error due to age	1000 h			0,01	%
Dielectric strenght output/system		1000			V DC
Dielectric strenght output/ output		1000			V DC

Z210