

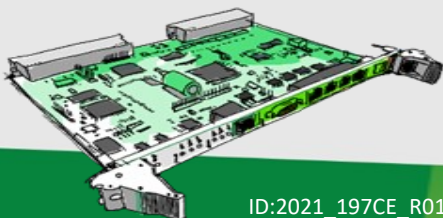
Power Source Board BB0004P1 of Control System SandRA Z200 line

The Power Source Board **BB0004P1** belongs to process stations **SandRA Z200** family that excels in its performance, reliability and safety and therefore it is an ideal solution for conventional power industry and industry. During the development and production of our products, we draw on the experience gained from our more than **50 years** of activities in the of automation.

The Power Supply Board serves for filtration, galvanic isolation and consequent unification of supply voltage for power supplying of **Z200** family boards. The Power Source contains an independent **diagnostic part** which processes internal and external signals which are then made available on the internal communication bus. Internal diagnostic signals provide information about the function of the Power Source. External diagnostic signals are conveyed to the power supply input via the appropriate adapter at the rear of the **Z200** rack.



- Designed for 19" rack
- Board dimensions 160 x 233 mm
- Input voltage 24V
- 200W Power
- EMI filter
- Diagnostic part
- Construction and Circuit design enables Hot Swap functions



Mechanical Parameters and Weight

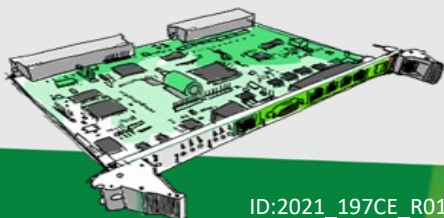
Parameter	Specifications	Min.	Type	Max.	Units
Board dimensions			160 x 233		mm
Panel dimensions ¹			4TE x 6HE		
Weight			650		g

¹Designed for 19" rack

Electrical Parameters

Input parameters of the Power Source

Parameter	Specifications	Min.	Type	Max.	Units
Input voltage		18	24	30	Vdc
	U _{in} = 18V				
	P _{nom}		13		
	P _o (including diag)		1		
Input current	U _{in} = 24V				
	P _{nom}		10		Adc
	P _o (including diag)		0,65		
	U _{in} = 30V				
	P _{nom}		8		
	P _o (including diag)		0,5		
Max. pulse voltage 1,2/50μs	Sym. excitation (+U _{in} /-U _{in})			1 2	kV kV
Resistance against fast transient pulses 5/50μs	Sym. and asym. excitation			2	kV
Limitation of inrush current (inrush limiting)				2	A
Undervoltage blocking— switch off		13,5	14,1		Vdc
Undervoltage blocking— switch on			15,8	16,5	Vdc
Overvoltage blocking		31,1		34,4	Vdc



Output parameters of the Power Source

Parameter	Specifications	Min.	Type	Max.	Units
Output voltage U_N	$P_O - P_{nom}$	21,5	24	26,5	Vdc
Max. output current I_N	at P_{nom}	8,1	8,5	8,8	Adc
Output voltage ripple				100	mV _{p-p}
Output active power P_{nom}				200	W
Effectivity (including diagnostic)	at P_{nom}			85	%

Diagnostics of the source

Parameter	Note
Internal diag. signals	Internal measurement of supply part of the Power Source
External diag. inputs	8 x Binary input (conveyed via clamps in the adaptor)
HW key inputs	8bit key (set by the switch at the adaptor)

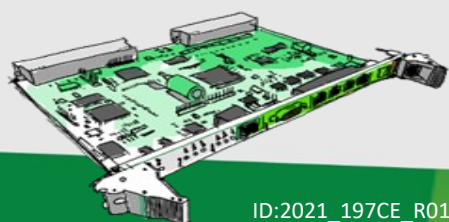
* all diagnostic information is accessible for CPU via internal communication bus of the system

Internal diagnostic channels

Parameter	Specifications	Min.	Type	Max.	Units
Temperature of the supply part T_{PWR}	$T_a=70\text{ }^\circ\text{C}$			125	$^\circ\text{C}$
Temperature of the diagnostic part T_{CORE}	$T_a=70\text{ }^\circ\text{C}$			85	$^\circ\text{C}$
Presence of output voltage U_N		21,5	24	26,5	V
Output current I_N				8,8	A
Supply for int. diag		21,5	24	26,5	V

External diagnostic channels

Parameter	Specifications	Min.	Type	Max.	Units
Number of external diagnostic outputs			8		vstup
Logical levels					
log. H		10	24	30	V
log. L			0	6	V
Current consumption of ext. diag	$U_{i0}=24\text{V}$		2,5		mA
Time constant of external input			3		ms



Parameter	Specifications	Min.	Type	Max.	Units
HW key (identification code of the rack)	Log. Level is set at the adaptor		8		input
Power supply of the source diagnostic part U_{i0}	Applicable for ext. Diagnostic and HW key	18	24	30	V
Current consumption of diagnostic	$U_{i0}= 24V$ Inputs of ext. diag and HW key in log. 1			80	mA

Protection

Parameter	Specifications	Units	Note
Built-in input fuse	F 10A/65V		Internal safety fuse
Input polarity reversal protection			Internal safety fuse +transil
Temperature excess (dcdc)	typ 125	°C	Reversible temperature fuse
Protection against overload (I_{in})	typ 8,5	A	Automatic restoration

General

Parameter	Specifications	Min.	Type	Max.	Units
Ambient temperature (source) T_a				70	°C
Insulation strength power supply input / power supply output / internal diagnostics / external diagnostics / PE		700			Vdc/1min

This document is applied to the Power Source Board BB0004P1 product and follows up on the document "Technical conditions Z200" no. 4-5397 of which it has been an integral part..

