

Integral EvoxX C power calculation

SCHRACK
SECONET

project:	Domov Božice, příspěvková organizace	valid for IRP 8.4.x
editor:	Ing. Libor Lahodný	calc date: 26.09.2023

battery configuration: OK OK OK PRAVDA PRAVDA

battery type:	Yuasa NP 17-12i	nominal capacity	17 Ah	PSU nom. current:	4 A
battery pairs:	2	total capacity:	34 Ah	back-up time	72 h
		back-up time - Alarm:	1 h	back-up time - special detectors sys. (SDS):	72 h

configuration sub control unit: Displaylight mode: Std idle current: alarm current:

control panel type:	B9-CII	1	8,00	8,0	27,0
EPI #1-3:	B5-EPI-FPCZ	(-)	6,00	6,0	6,0
basic controller unit:	B9-BCU-X2	1,00	62,00	62,0	62,0
Slot 2	B6-NET2-485		53,00	53,0	53,0
	B9-PSU		13,00	13,0	13,0
					161,0

+ 0 SFP modules idle current: alarm current: 0 quantity: idle current: alarm current:

+ 4 MMI Bus devices		idle current:	alarm current:	MMI-EQ	quantity:	idle current:	alarm current:	EPI
(max. 15 TN pro MMI-Bus, max. 8 BDF pro TZ, max. 8 FBF pro TZ)					1			
MMI Bus in Verwendung		2,500	2,500	15	1	2,50	2,50	
B8-MMI-CIP	(ext.panel)	30,000	50,000	1	4	120,00	200,00	1
B8-MMI-CIP+PDR	(ext. panel + printer)	32,000	52,000	1		0,00	0,00	1
B5-MMI-HCIP	(High-End panel)	97,000	97,000	1		0,00	0,00	0
B3-MMI-FPA	(Austria)	14,000	30,000	2		0,00	0,00	0
(-)	(-)	0,000	0,000	0		0,00	0,00	0
B3-MMI-UIO	(1x UIO)	14,000	46,000	2		0,00	0,00	0
B3-MMI-EAT64	(2x UIO)	28,000	92,000	4		0,00	0,00	0
B3-MMI-IPEL	(2x UIO)	28,000	92,000	4		0,00	0,00	0
B5-MMI-PIP	(floor indication panel)	30,000	50,000	1		0,00	0,00	1
(-)	(-)	0,000	0,000	0		0,00	0,00	0
(-)	(-)	0,000	0,000	0		0,00	0,00	0
(-)	(-)	0,000	0,000	0		0,00	0,00	0

<- Numbers of MMI devices (expand with [+])

+ 0 EPI Bus devices on MMI bus idle current: alarm current: 4 1 1 1 sub-total: 264,5 363,5 mA

peripherals:

X-Line/ DAI/ SXI:

X-Line: 2	X-Line DAI-mode	DAI-Loop 0
IR [mA] 30	IR [mA] 24	IR [mA] 25
ILED [mA] 13	ILED [mA] 24	ILED [mA] 24
IALtyp [mA] 130	IALtyp [mA] 90	IALtyp [mA] 60
IALmax [mA] 170	IALmax [mA] 110	IALmax [mA] 90
(DC-DC converter efficiency of 70%)		
X-Line detector (typ) ³	(MTD,MCP,CMD,...)	0,120 2,500 1 160 27,43 27,43
MTD533X-Sx(typ)	Detector w. Siren (typ. vol.)	0,150 4,00 1 10 2,14 57,14
LED current (incl. Indicator)	BX-UIP, USB501-20	0,000 1,00 0 0,00 0,00
BX-Sirenen (typ)	BX-Sirenen (typischer Mix)	0,500 4,00 6 0,00 0,00
BX I/O modules (typ)	(O1,I2,OI3,IM4,REL4,IOM....)	0,550 0,55 4 5 3,93 3,93
BX-AIM (input)	BX-AIM (input)	6,500 8,50 5 0,00 0,00
BX-AIM (MG option)	BX-AIM (MG option)	1,800 8,50 5 0,00 0,00
BX-MDI8	BX-MDI8 (supplied by BMZ!)	0,450 0,45 4 0,00 0,00
BX-WGW	BX-WGW	8,000 8,00 18 0,00 0,00
BX-O2I4	BX-O2I4	0,630 0,63 4 0,00 0,00
(-)	(-)	0,000 0,00 0 0,00 0,00
sub-total: 33,50 88,50 mA		

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Primary input and Series 13x/ 52x lines (EIO a. BX-MDI8)	MDI8	intern	
idle current:	alarm current:	quantity:	quantity:
(max. 1 alarms per line + 5 /MDI8)	0	0	0
		sub-total:	0,00 0,00 mA

other current - miscellaneous by the panel (with the full back-up time of: 72h)

monitored outputs	idle current:	alarm current:	quantity:	idle current:	alarm current:
OUT LB1	1,000	40,000	2	2,00	80,00
OUT LB2	3,000	100,000		0,00	0,00
OUT LB3	12,000	500,000		0,00	0,00

external Devices, power supplied by PSU (VEXT)

(e.g. sirens, door holding magnets, FBP, modems...)

Enter here:	0,00	0,00	mA
sub-total:	2,00	80,00	mA

other current - SDS (special detector systems)

SDS which are power supplied
by the panel (with SDS back-up time of: 72h)

(e.g. aspirating smoke detector,...)

Enter here:			mA
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RESULTS (SDS included)

	idle current:	alarm current:
SUMME:	0,300	0,452 A

Details:

min. charging current (80% in 24h)	nominal capacity * 0,05	1,70 A
needed battery capacity "idle"	quiescent current * back-up time "quiescent"	21,60 Ah
needed battery capacity "idle SDS"	quiescent current SDS* back-up time "quiescent SDS"	0,00 Ah
needed battery capacity "alarm"	alarm current * back-up time "alarm"	0,45 Ah
needed battery capacity - total	("quiescent" + "quiescent SDS" + "alarm")	22,05 Ah
free available alarm current	max. output current - alarm current	3,55 A
free available idle current, buffered	(eff. bat. capacity - needed bat. capacity) / back-up time	0,17 A
free available quiescent current, unbuffered	max. output current - quiescent cur. - min. charging cur.	2,00 A
max. value at PSU battery current measuring	B8-PSU - built in current measuring per SW	-- mV
idle current at PSU battery current measuring	B8-PSU - built in current measuring per SW	-- mV
max. back-up time	(battery capacity - battery capacity "alarm") / idle current (L3)	111,8 h

<- (expand with [+])

back-up time ("quiescent"+"alarm") (=111,8h)	eff. battery capacity > required battery capacity	OK
battery charge >80% capacity in 24h	(max. output cur. - quiescent cur.) > min. charging cur.	OK
Power supply unit load	(Alarm current < max. PSU current)	OK