

## Raport z pomiarów okablowania sieci – system okablowania strukturalnego KRONE TrueNET

MIEJSCOWOŚĆ: GRODZISK MAZOWIECKI

OBIEKT: SPECJALISTYCZNY SZPITAL ZACHODNI im. JANA PAWŁA II  
ODDZIAŁ KARDIOLOGII INWAZYJNEJ

ADRES INWESTYCJI: ul. Daleka 11, 05-825 Grodzisk Mazowiecki

DATA WYKONANIA: 23 lipca 2009r.

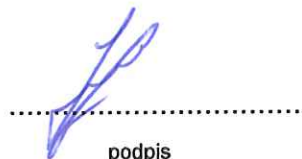
Badania i pomiary wykonał:

Jerzy Zagórowski

Licencja Certyfikowanego Instalatora

ADC KRONE TrueNet

Certyfikat Nr Cc1924590006



podpis

TELECOM CONSULTING Sp. z o.o.

02-793 Warszawa  
ul. Belgradzka 4/3

TELECOM CONSULTING  
PENTASCANNER+ CABLE CERTIFICATION REPORT  
\*CAT5e Channel Autotest

Circuit ID: D2 0/37	Date: 23.07.2009
Test Result: PASS	Cable Type: *Cat 5e UTP
Owner: JERZY ZAGOROWSKI	NVP: 72
Serial Number: 38P96CB0055	Gauge:
Inj. Ser. Num: 38J96B00205	Manufacturer:
SW Version: V04.21	Connector:
	User:

Building:	Floor:
Closet:	
Rack:	Hub:
Slot:	Port:

Test		Expected Results		Actual Test Results				
Wire Map		Near: 12345678S		Near: 12345678S				
		Far: 12345678S		Far: 12345678S				
				Pr 12	Pr 36	Pr 45	Pr 78	
Length	m	0.0 - 100.0		52.3	50.9	49.9	51.7	
Prop. Delay	ns	0 - 32767		242	236	231	239	
Impedance	ohms	80 - 125		106	107	108	105	
Resistance	ohms	0.0 - 18.8		9.0	8.7	8.5	8.8	
Capacitance	pF	10 - 5600		2394	2269	2211	2369	
Attenuation	dB			9.0	8.8	8.6	9.1	
@Freq	MHz			98.0	99.0	96.0	96.0	
Limit:	dB	Cat 5 Channel		23.7	23.8	23.5	23.5	
PENTA Pair Combinations			12/36	12/45	12/78	36/45	36/78	45/78
NEXT Loss		dB	41.6	41.9	48.3	33.5	41.9	38.5
Freq( 1.0-100.0)		MHz	96.9	95.5	75.5	99.3	99.5	99.9
Limit: Cat 5 Channel+0.0		dB	27.3	27.4	29.2	27.1	27.1	27.1
Active ACR		dB	32.7	33.4	41.1	25.1	33.3	29.4
Frequency		MHz	97.0	96.0	76.0	100.0	95.0	100.0
Limit: Derived		dB	3.7	3.9	8.8	3.1	4.1	3.1
INJ Pair Combinations			12/36	12/45	12/78	36/45	36/78	45/78
NEXT Loss		dB						
Freq( 1.0-100.0)		MHz						
Limit: Cat 5 Channel+0.0		dB						
Active ACR		dB						
Frequency		MHz						
Limit: Derived		dB						

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

TELECOM CONSULTING  
PENTASCANNER+ CABLE CERTIFICATION REPORT  
\*CAT5e Channel Autotest

Circuit ID: D2 0/38	Date: 23.07.2009
Test Result: PASS	Cable Type: *Cat 5e UTP
Owner: JERZY ZAGOROWSKI	NVP: 72
Serial Number: 38P96CB0055	Gauge:
Inj. Ser. Num: 38J96B00205	Manufacturer:
SW Version: V04.21	Connector:
	User:

Building:	Floor:
Closet:	
Rack:	Hub:
Slot:	Port:

Test	Expected Results		Actual Test Results				
Wire Map		Near: 12345678S	Near: 12345678S				
		Far: 12345678S	Far: 12345678S				
			Pr 12	Pr 36	Pr 45	Pr 78	
			-----	-----	-----	-----	
Length	m	0.0 - 100.0	52.5	50.9	50.1	51.9	
Prop. Delay	ns	0 - 32767	243	236	232	240	
Impedance	ohms	80 - 125	104	107	108	105	
Resistance	ohms	0.0 - 18.8	8.9	8.8	8.4	8.6	
Capacitance	pF	10 - 5600	2452	2280	2246	2393	
Attenuation	dB		9.1	8.8	8.6	9.3	
@Freq	MHz		99.0	98.0	98.0	99.0	
Limit:	dB	Cat 5 Channel	23.8	23.7	23.7	23.8	
PENTA Pair Combinations		12/36	12/45	12/78	36/45	36/78	45/78
		-----	-----	-----	-----	-----	-----
NEXT Loss	dB	43.0	42.4	50.3	34.9	44.0	38.9
Freq( 1.0-100.0)	MHz	98.3	96.7	37.1	98.9	98.7	95.5
Limit: Cat 5 Channel+0.0	dB	27.2	27.3	34.4	27.1	27.2	27.4
Active ACR	dB	34.8	33.4	41.2	26.1	34.8	29.9
Frequency	MHz	98.0	97.0	96.0	99.0	99.0	96.0
Limit: Derived	dB	3.5	3.7	3.9	3.3	3.3	3.9
INJ Pair Combinations		12/36	12/45	12/78	36/45	36/78	45/78
		-----	-----	-----	-----	-----	-----
NEXT Loss	dB						
Freq( 1.0-100.0)	MHz						
Limit: Cat 5 Channel+0.0	dB						
Active ACR	dB						
Frequency	MHz						
Limit: Derived	dB						

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

TELECOM CONSULTING  
PENTASCANNER+ CABLE CERTIFICATION REPORT  
\*CAT5e Channel Autotest

Circuit ID: D2 0/39	Date: 23.07.2009
Test Result: PASS	Cable Type: *Cat 5e UTP
Owner: JERZY ZAGOROWSKI	NVP: 72
Serial Number: 38P96CB0055	Gauge:
Inj. Ser. Num: 38J96B00205	Manufacturer:
SW Version: V04.21	Connector:
	User:

Building:	Floor:
Closet:	
Rack:	Hub:
Slot:	Port:

Test		Expected Results		Actual Test Results			
Wire Map		Near: 12345678S	Near: 12345678S				
		Far: 12345678S	Far: 12345678S				
			Pr 12	Pr 36	Pr 45	Pr 78	
Length	m	0.0 - 100.0	18.7	18.2	17.9	18.4	
Prop. Delay	ns	0 - 32767	86	84	83	85	
Impedance	ohms	80 - 125	105	105	108	104	
Resistance	ohms	0.0 - 18.8	3.6	3.5	3.0	3.3	
Capacitance	pF	10 - 5600	858	824	801	853	
Attenuation	dB		3.2	3.1	3.1	3.4	
@Freq	MHz		93.0	91.0	93.0	100.0	
Limit:	dB	Cat 5 Channel	23.1	22.9	23.1	24.0	

PENTA Pair Combinations		12/36	12/45	12/78	36/45	36/78	45/78
<hr/>							
NEXT Loss	dB	38.9	40.2	46.8	34.0	42.6	41.6
Freq( 1.0-100.0)	MHz	99.9	94.5	89.1	97.7	95.7	94.9
Limit: Cat 5 Channel+0.0	dB	27.1	27.5	27.9	27.2	27.4	27.5
<hr/>							
Active ACR	dB	35.8	37.1	43.9	31.0	39.4	38.4
Frequency	MHz	100.0	95.0	89.0	98.0	96.0	95.0
Limit: Derived	dB	3.1	4.1	5.3	3.5	3.9	4.1

INJ Pair Combinations		12/36	12/45	12/78	36/45	36/78	45/78
<hr/>							
NEXT Loss	dB						
Freq( 1.0-100.0)	MHz						
Limit: Cat 5 Channel+0.0	dB						
<hr/>							
Active ACR	dB						
Frequency	MHz						
Limit: Derived	dB						

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

TELECOM CONSULTING  
PENTASCANNER+ CABLE CERTIFICATION REPORT  
\*CAT5e Channel Autotest

Circuit ID: D2 0/40	Date: 23.07.2009
Test Result: PASS	Cable Type: *Cat 5e UTP
Owner: JERZY ZAGOROWSKI	NVP: 72
Serial Number: 38P96CB0055	Gauge:
Inj. Ser. Num: 38J96B00205	Manufacturer:
SW Version: V04.21	Connector:
	User:

Building:	Floor:
Closet:	
Rack:	Hub:
Slot:	Port:

Test	Expected Results		Actual Test Results			
<hr/>						
Wire Map		Near: 12345678S	Near: 12345678S			
		Far: 12345678S	Far: 12345678S			
<hr/>						
			Pr 12	Pr 36	Pr 45	Pr 78
<hr/>						
Length	m	0.0 - 100.0	18.7	18.2	18.0	18.4
Prop. Delay	ns	0 - 32767	86	84	83	85
Impedance	ohms	80 - 125	104	106	107	104
Resistance	ohms	0.0 - 18.8	3.7	3.4	3.1	3.3
Capacitance	pF	10 - 5600	871	812	825	865
Attenuation	dB		3.2	3.2	3.2	3.4
@Freq	MHz		96.0	91.0	93.0	96.0
Limit:	dB	Cat 5 Channel	23.5	22.9	23.1	23.5

PENTA Pair Combinations	12/36	12/45	12/78	36/45	36/78	45/78
<hr/>						
NEXT Loss dB	37.1	41.5	44.7	34.8	42.3	39.5
Freq( 1.0-100.0) MHz	94.3	94.3	87.5	97.3	90.3	99.9
Limit: Cat 5 Channel+0.0 dB	27.5	27.5	28.1	27.3	27.8	27.1
<hr/>						
Active ACR dB	34.2	38.7	41.6	31.8	39.1	36.1
Frequency MHz	94.0	95.0	88.0	98.0	90.0	100.0
Limit: Derived dB	4.3	4.1	5.6	3.5	5.1	3.1

INJ Pair Combinations	12/36	12/45	12/78	36/45	36/78	45/78
<hr/>						
NEXT Loss dB						
Freq( 1.0-100.0) MHz						
Limit: Cat 5 Channel+0.0 dB						
<hr/>						
Active ACR dB						
Frequency MHz						
Limit: Derived dB						

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

TELECOM CONSULTING  
PENTASCANNER+ CABLE CERTIFICATION REPORT  
\*CAT5e Channel Autotest

Circuit ID: D2 0/31	Date: 23.07.2009
Test Result: PASS	Cable Type: *Cat 5e UTP
Owner: JERZY ZAGOROWSKI	NVP: 72
Serial Number: 38P96CB0055	Gauge:
Inj. Ser. Num: 38J96B00205	Manufacturer:
SW Version: V04.21	Connector:
	User:

Building:	Floor:
Closet:	
Rack:	Hub:
Slot:	Port:

Test		Expected Results		Actual Test Results			
Wire Map		Near: 12345678S		Near: 12345678S			
		Far: 12345678S		Far: 12345678S			
				Pr 12	Pr 36	Pr 45	Pr 78
Length	m	0.0 - 100.0		38.2	37.1	36.6	37.8
Prop. Delay	ns	0 - 32767		177	172	169	175
Impedance	ohms	80 - 125		103	107	104	104
Resistance	ohms	0.0 - 18.8		6.6	6.7	6.0	6.5
Capacitance	pF	10 - 5600		1782	1694	1683	1749
Attenuation	dB			6.9	6.7	6.4	6.8
@Freq	MHz			98.0	100.0	96.0	96.0
Limit:	dB	Cat 5 Channel		23.7	24.0	23.5	23.5

PENTA Pair Combinations		12/36	12/45	12/78	36/45	36/78	45/78
NEXT Loss	dB	41.1	41.8	44.9	35.4	44.0	41.5
Freq( 1.0-100.0)	MHz	92.3	92.5	94.9	99.9	91.5	84.1
Limit: Cat 5 Channel+0.0	dB	27.7	27.7	27.5	27.1	27.7	28.4
Active ACR	dB	35.0	35.7	38.2	28.7	37.6	35.6
Frequency	MHz	92.0	93.0	95.0	100.0	92.0	84.0
Limit: Derived	dB	4.7	4.5	4.1	3.1	4.7	6.7

INJ Pair Combinations		12/36	12/45	12/78	36/45	36/78	45/78
NEXT Loss	dB						
Freq( 1.0-100.0)	MHz						
Limit: Cat 5 Channel+0.0	dB						
Active ACR	dB						
Frequency	MHz						
Limit: Derived	dB						

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

TELECOM CONSULTING  
PENTASCANNER+ CABLE CERTIFICATION REPORT  
\*CAT5e Channel Autotest

Circuit ID: D2 0/32	Date: 23.07.2009
Test Result: PASS	Cable Type: *Cat 5e UTP
Owner: JERZY ZAGOROWSKI	NVP: 72
Serial Number: 38P96CB0055	Gauge:
Inj. Ser. Num: 38J96B00205	Manufacturer:
SW Version: V04.21	Connector:
	User:

Building:	Floor:
Closet:	Hub:
Rack:	Port:
Slot:	

Test	Expected Results	Actual Test Results			
Wire Map	Near: 12345678S	Near: 12345678S			
	Far: 12345678S	Far: 12345678S			
		Pr 12	Pr 36	Pr 45	Pr 78
Length	m   0.0 - 100.0	38.1	36.6	36.4	37.5
Prop. Delay	ns   0 - 32767	176	169	168	173
Impedance	ohms   80 - 125	101	106	104	103
Resistance	ohms   0.0 - 18.8	6.5	6.3	5.9	6.2
Capacitance	pF   10 - 5600	1814	1679	1668	1757
Attenuation	dB	7.3	6.4	6.7	6.7
@Freq	MHz	100.0	95.0	100.0	97.0
Limit:	dB   Cat 5 Channel	24.0	23.4	24.0	23.6

PENTA Pair Combinations		12/36	12/45	12/78	36/45	36/78	45/78
NEXT Loss	dB	40.3	42.0	46.7	33.8	40.3	36.5
Freq( 1.0-100.0)	MHz	96.3	98.7	80.9	90.1	94.1	97.3
Limit: Cat 5 Channel+0.0	dB	27.4	27.2	28.7	27.9	27.5	27.3
Active ACR	dB	33.7	35.0	40.2	27.6	33.9	30.2
Frequency	MHz	99.0	99.0	100.0	90.0	98.0	97.0
Limit: Derived	dB	3.3	3.3	3.1	5.1	3.5	3.7

INJ Pair Combinations		12/36	12/45	12/78	36/45	36/78	45/78
NEXT Loss	dB						
Freq( 1.0-100.0)	MHz						
Limit: Cat 5 Channel+0.0	dB						
Active ACR	dB						
Frequency	MHz						
Limit: Derived	dB						

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

TELECOM CONSULTING  
PENTASCANNER+ CABLE CERTIFICATION REPORT  
\*CAT5e Channel Autotest

Circuit ID: D2 0/33	Date: 23.07.2009
Test Result: PASS	Cable Type: *Cat 5e UTP
Owner: JERZY ZAGOROWSKI	NVP: 72
Serial Number: 38P96CB0055	Gauge:
Inj. Ser. Num: 38J96B00205	Manufacturer:
SW Version: V04.21	Connector:
	User:

Building:	Floor:
Closet:	Hub:
Rack:	Port:
Slot:	

Test	Expected Results	Actual Test Results			
Wire Map	Near: 12345678S	Near: 12345678S			
	Far: 12345678S	Far: 12345678S			
		Pr 12	Pr 36	Pr 45	Pr 78
Length	m   0.0 - 100.0	44.5	43.3	42.4	44.0
Prop. Delay	ns   0 - 32767	206	200	196	204
Impedance	ohms   80 - 125	107	107	108	106
Resistance	ohms   0.0 - 18.8	7.7	7.5	7.0	7.4
Capacitance	pF   10 - 5600	2042	1918	1872	1983
Attenuation	dB	7.9	7.6	7.3	7.8
@Freq	MHz	100.0	98.0	99.0	100.0
Limit:	dB   Cat 5 Channel	24.0	23.7	23.8	24.0

PENTA Pair Combinations		12/36	12/45	12/78	36/45	36/78	45/78
NEXT Loss	dB	40.0	41.0	43.5	34.0	44.4	38.2
Freq( 1.0-100.0)	MHz	99.1	79.7	91.1	99.9	63.5	90.3
Limit: Cat 5 Channel+0.0	dB	27.1	28.8	27.8	27.1	30.4	27.8
Active ACR	dB	32.4	34.2	35.8	26.4	38.1	30.6
Frequency	MHz	99.0	80.0	97.0	100.0	100.0	98.0
Limit: Derived	dB	3.3	7.8	3.7	3.1	3.1	3.5

INJ Pair Combinations		12/36	12/45	12/78	36/45	36/78	45/78
NEXT Loss	dB						
Freq( 1.0-100.0)	MHz						
Limit: Cat 5 Channel+0.0	dB						
Active ACR	dB						
Frequency	MHz						
Limit: Derived	dB						

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



TELECOM CONSULTING  
PENTASCANNER+ CABLE CERTIFICATION REPORT  
\*CAT5e Channel Autotest

Circuit ID:	D2 0/34	Date:	23.07.2009
Test Result:	PASS	Cable Type:	*Cat 5e UTP
Owner:	JERZY ZAGOROWSKI	NVP:	72
Serial Number:	38P96CB0055	Gauge:	
Inj. Ser. Num:	38J96B00205	Manufacturer:	
SW Version:	V04.21	Connector:	
		User:	

Building:	Floor:
Closet:	
Rack:	Hub:
Slot:	Port:

Test	Expected Results		Actual Test Results			
Wire Map	Near:	12345678S	Near: 12345678S			
	Far:	12345678S	Far: 12345678S			
			Pr 12	Pr 36	Pr 45	Pr 78
Length	m	0.0 - 100.0	44.5	43.4	42.6	44.0
Prop. Delay	ns	0 - 32767	206	201	197	204
Impedance	ohms	80 - 125	104	106	106	104
Resistance	ohms	0.0 - 18.8	7.6	7.4	7.1	7.3
Capacitance	pF	10 - 5600	2077	1965	1942	2043
Attenuation	dB		8.0	7.8	7.5	8.0
@Freq	MHz		100.0	94.0	100.0	100.0
Limit:	dB	Cat 5 Channel	24.0	23.2	24.0	24.0

PENTA Pair Combinations		12/36	12/45	12/78	36/45	36/78	45/78
NEXT Loss	dB	43.2	42.1	43.3	33.4	42.0	37.2
Freq( 1.0-100.0)	MHz	84.1	92.1	83.7	99.3	82.5	96.3
Limit: Cat 5 Channel+0.0	dB	28.4	27.7	28.4	27.1	28.5	27.4
Active ACR	dB	36.3	34.9	36.4	25.8	34.7	29.6
Frequency	MHz	84.0	92.0	84.0	100.0	100.0	97.0
Limit: Derived	dB	6.7	4.7	6.7	3.1	3.1	3.7

INJ Pair Combinations		12/36	12/45	12/78	36/45	36/78	45/78
NEXT Loss	dB						
Freq( 1.0-100.0)	MHz						
Limit: Cat 5 Channel+0.0	dB						
Active ACR	dB						
Frequency	MHz						
Limit: Derived	dB						

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Szafa rozdzielcza wisząca 19"/18U 600x500x870  
Szafa "D2", PD11 - Kardiologia Inwazyjna i Izba Przyjęć Oddziału  
Dziecięcego - Budynek D, Poziom 0

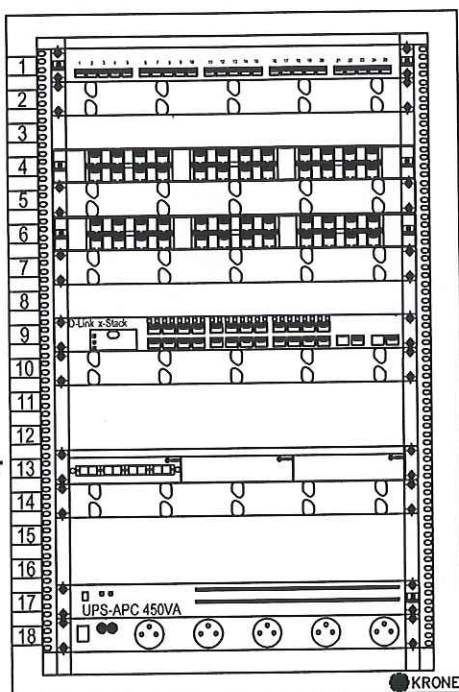
Kabel telefoniczny 28x2x0,5 na  
poziom -1, do szafy F2 w Serwerowni

24xF/UTP - Poziom 0 budynek D

16xF/UTP - Poziom 0 budynek D

Przełącznik D-Link DES 3526

1 x Światłowód 6G 50/125 do szafy "F2"  
w Serwerowni, poziom -1



Panel rozdzielczy 19"/1U - 25xRJ45 kat.3, Krone 6690 1 025-00

Organizer kabli krosujących 19"/1U

Panel rozdzielczy 19"/1U-24xRJ-K45 HK STP FS 568A/B NEW DESIGN

Organizer kabli krosujących 19"/1U

Panel rozdzielczy 19"/1U-24xRJ-K45 HK STP FS 568A/B NEW DESIGN

Organizer kabli krosujących 19"/1U

Przełącznik 24xRJ45 +2 Combo/MiniGIBIC (SFP) 19"/1U

Organizer kabli krosujących 19"/1U

Panel rozdzielczy światłowodowy 8xSC w obudowie 19"/1U

Organizer kabli krosujących 19"/1U

Zasilacz awaryjny 19"/1U

Panel zasilający 19"/1U

TELECOM CONSULTING Sp. z o.o. 02-793 Warszawa, ul. Belgradzka 4/3		stadium D. PW.
Temat:	Wykonanie kolejnego etapu sieci komputerowej	skala 1 : 10
Obiekt:	SZPZOK Szpital Zachodni w Grodzisku Mazowieckim	data 07.2009
Projektował:	Jerzy Zagórowski	
Opracował:		Nr rys. 7.2 rewizja 2
Nazwa rysunku	Widok szafy dystrybucyjnej "D2" 19"/18U w punkcie dystryb. PD11 ODDZIAŁ KARDIOLOGII INWAZYJNEJ BUDYNEK "D" POZIOM 0	

Tabela 15. Zestawienie przyłączy PL - 2xRJ45 do szafy dystrybucyjnej "D2" w punkcie dystrybucyjnym PD11, Budynek D, Poziom 0, Oddział Kardiologii Inwazyjnej i Izba Przyjęć Oddziału Dziecięcego -p. 117-Magazyn Bielizny

Lp	Nr Pokoju	Ilość PEL w pokoju	Piętro	OPIS Gniazda i portu w panelu	Pozycja w szafie	Nr Portu w panelu	Uwagi (Pole Switcha, pozycja w szafie/nr portu)
<b>Poziom 0, Budynek D</b>							
<b>Izba Przyjęć Oddziału Dziecięcego</b>							
1	Pokój Badań	1	0	D2 0/01, D2 0/02	4	1, 2	14 listopada 2007
2	Rejestracja z Zapleczem (p. 127B i p.128)	2	0	D2 0/03, D2 0/04	4	3, 4	
3			0	D2 0/05, D2 0/06	4	5, 6	
4	Pokój zabiegowy (p.131)	1	0	D2 0/07, D2 0/08	4	7, 8	
5	Pokój badań (p.130)	1	0	D2 0/09, D2 0/10	4	9, 10	
6	Izolatka (p.129)	1	0	D2 0/11, D2 0/12	4	11, 12	
<b>Oddział Kardiologii Inwazyjnej</b>							
7	Pokój lekarski (p.124)	1	0	D2 0/13, D2 0/14	4	13, 14	
8	Sala chorych 1-łóżkowa (p.123)	1	0	D2 0/15, D2 0/16	4	15, 16	
9	Sala chorych 1-łóżkowa (p.122)	1	0	D2 0/17, D2 0/18	4	17, 18	
10	Sala wzmożonego nadzoru kardiologicznego (p.113)	1	0	D2 0/19, D2 0/20	4	19, 20	
11	Pokój Ordynatora (p.109)	1	0	D2 0/21, D2 0/22	4	21, 22	
12	Pokój lekarza dyżurnego (p.103)	1	0	D2 0/23, D2 0/24	4	23, 24	
13	Pokój pielęgn. Oddziałowej i Sekretarki Medyczny (p.102)	1	0	D2 0/25, D2 0/26	6	1, 2	
14	Punkt Pielęgniarski	1	0	D2 0/27, D2 0/28	6	3, 4	
15	Gabinet zabiegowy (p. 121)	1	0	D2 0/29, D2 0/30	6	5, 6	
16	Sterownia (p.120)	2	0	D2 0/31, D2 0/32	6	7, 8	lipiec 2009
17			0	D2 0/33, D2 0/34	6	9, 10	lipiec 2009
18	Pokój lekarski (p.124)	1	0	D2 0/35, D2 0/36	6	11, 12	
19	Pomieszczenie techniczne	1	0	D2 0/37, D2 0/38	6	13, 14	lipiec 2009
20	Depozyt ubrań (p.135)	1	0	D2 0/39, D2 0/40	6	15, 16	lipiec 2009
21	rezerwa				6	17, 18	
22	rezerwa				6	19, 20	
23	rezerwa				6	21, 22	
24	rezerwa				6	23, 24	
<b>Razem PL na Poziomie "0"</b>		<b>20</b>					

**UWAGA:** nowe przyłącza wydzielono kursywą

lipiec 2009