Система автоматизации TROVIS 6600

CPU-модуль
TROVIS 6610

SAMSON

MEMBER OF

ASHRAE **BACnet**
INTEREST GROUP EUROPE

Инструкция по монтажу и эксплуатации

EB 6610 RU

Версия программного обеспечения x.xx

Редакция июнь 2010

TROVIS®
Elektronik from SAMSON

CE

BTL

Примечания и их значение

⚠ *ОПАСНОСТЬ!*
Опасные ситуации, которые могут привести к смерти или тяжёлым травмам

! *ВНИМАНИЕ!*
Предупреждает о материальном ущербе и выходе оборудования из строя

⚠ *ПРЕДУПРЕЖДЕНИЕ!*
Ситуации, которые могут привести к смерти или тяжёлым травмам

ⓘ *Примечание:*
Дополнительная информация

☀ *Рекомендация:*
Практические советы

ⓘ **Внимание:**

CPU-модуль TROVIS 6610 является компонентом системы автоматизации TROVIS 6600.

*Интеграция CPU-модуля TROVIS 6610 с прочими компонентами системы автоматизации TROVIS 6600 (I/O-модули TROVIS 6620, I-модуль TROVIS 6625, веб-терминал TROVIS 6615) подробно описана в **Руководстве по интеграции системы АВ 6600.***

Данное руководство включено в онлайн-документацию программного обеспечения „Графическое проектирование" TROVIS 6690 и может быть предоставлено по запросу.

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1 Общие указания по безопасности

– Монтаж и ввод в эксплуатацию системы автоматизации TROVIS 6610 должны осуществлять только специалисты, имеющие право на проведение монтажных, пусконаладочных работ и эксплуатацию такого оборудования. Под специалистами в настоящей инструкции подразумеваются лица, которые на основе своего специального образования и опыта, а также знаний действующих норм и стандартов, регламентирующих их работу, способны предусмотреть возможные угрозы безопасности персонала.

– Система автоматизации TROVIS 6610 предназначена для использования в силовых электроустановках. При подключении и обслуживании необходимо соблюдать действующие нормы техники безопасности.

– Должны быть обеспечены специальная транспортировка и хранение таких приборов.

2 Общие сведения о системе автоматизации TROVIS 6600

Система автоматизации TROVIS 6600 состоит из автономных автоматических станций, которые, в свою очередь, состоят из CPU-модуля TROVIS 6610, I/O-модулей TROVIS 6620, I-модулей TROVIS 6625 и – дополнительно – веб-терминала TROVIS 6615. Визуализация осуществляется, как правило, в операционной системе Windows®.

Вся система позволяет обрабатывать свыше 20 000 физических параметров. I/O-модули TROVIS 6620 и I-модули TROVIS 6625 используются автономно. Они связываются с CPU-модулем TROVIS 6610 посредством RS-485. CPU-модули TROVIS 6610 взаимодействуют между собой, а также с ведущей станцией при помощи сети Ethernet (BACnet/IP, BACnet/PTP, TCP/IP или Modbus).

Высокий уровень универсальности модулей обеспечивает невысокие по стоимости решения и позволяет с лёгкостью внедрять DDC-концепции с высокой степенью децентрализации.

2.1 Конфигурация системы

Модули системы	
Регулирующая станция	TROVIS-LS
Модули управления	TROVIS-BS
CPU-модуль	TROVIS 6610 (различные варианты)
I/O-модуль	TROVIS 6620 (различные варианты)
I-модуль	TROVIS 6625
Веб-терминал	TROVIS 6615
Программное обеспечение	
Операционная система	как правило, Windows®
Визуализация процесса	например, InTouch от Wonderware
Графическое проектирование	TROVIS 6690
DA-сервер	TROVIS 6691
OPC-сервер	TROVIS 6692
Комплектующие	
Оконцовка шины	1400-9561 (2x в комплекте поставки)
Однопортовый разветвитель шин	1400-6169
Четырёхпортовый разветвитель шин	1400-7140

Основной кабель Modbus	1400-9748
Дополнительный кабель Modbus	1400-9749
Последовательный соединительн. кабель	1400-9750
Кабельный конвертер для двухпроводной цепи	1400-8800
Кабельный конвертер для четырёхпроводной цепи	1400-7308
Соединительные клеммы TROVIS 6610	1991-0133
Соединительные клеммы TROVIS 6620	1991-0134

2.2 Количественные параметры

Модули
32 CPU-модуля TROVIS 6610 на установку
32 I/O-модуля TROVIS 6620 / I-модуля TROVIS 6625 на один CPU-модуль TROVIS 6610
CPU-модуль TROVIS 6610
40 физических точек замера, в том числе:
20 универсальных устройств ввода, каждый настраивается индивидуально как
– аналоговый вход: Pt 1000/–40 до 160 °C / 0 до 2000 Ω; начиная с версии TROVIS 6610-0001 также от 0 до 10 В
– дискретный вход, в т. ч. канал 1 и 2 как счётный вход до 1 кГц (1:1)
12 дискретных выходов · 2 А, 250 В AC (индуктивный)
8 аналоговых выходов · 0 ... 10 В
I/O-модуль TROVIS 6620
20 физических точек замера, в том числе:
10 универсальных устройств ввода, каждое настраивается индивидуально как
– аналоговый вход: Pt 1000/–40 до 160 °C/0 до 2000 Ω; начиная с версии TROVIS 6620-0001 также 0 до 10 V
– дискретный вход, в т. ч. канал 1 и 2 как счётный вход до 1 кГц (1:1)
6 дискретных выходов · 2 А, 250 В AC (индуктивный)
4 аналоговых выходов · 0 ... 10 В
I-модуль TROVIS 6625
20 дискретных входов

2.3 Протяжённость сети (без повторителей, хабов и т. д.)

Ethernet	100BASE-T typ. LAN
I/O-шина	1200 м

2.4 Кабели

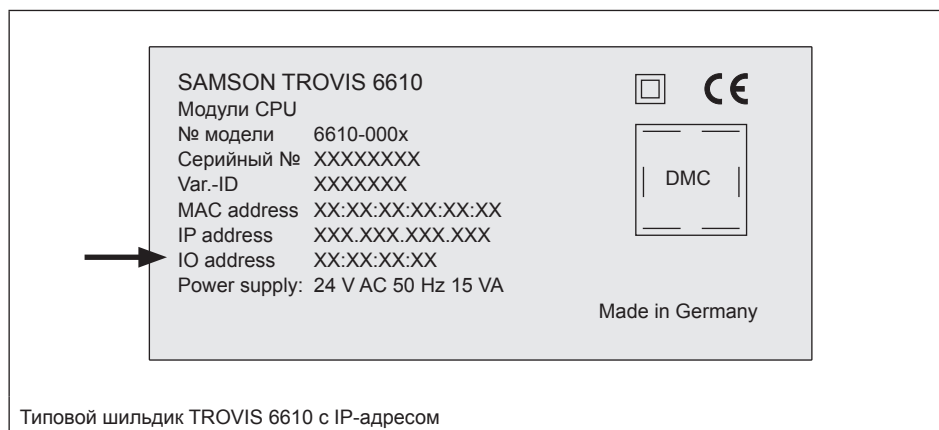|	
24 В AC	1,5 мм² жила
Ethernet	кабель не ниже 5 категории, экранированный (STP)
I/O-шина	Jy(St) Y 2 x 2 x 0,8

2.5 Напряжение питания

24 В AC, макс. 210 ВА для

– 1 CPU-модуль TROVIS 6610 и

– всего 32 I/O-модуля TROVIS 6620 и/или I-модуля TROVIS 6625

3 Рекомендации по работе с CPU-модулем TROVIS 6610

Использование CPU-модуля TROVIS 6610 возможно только при условии, что для выполнения свих задач в сфере автоматического регулирования и контроля систем жизнеобеспечения зданий он был спроектирован при помощи программного обеспечения „Графическое проектирование" TROVIS 6690.

Кроме этого, функциональность устройства (однако, ограниченная) может быть обеспечена при использовании веб-интерфейса. Необходимый для связи с веб-сервером стандартный IP-адрес указан на типовом шильдике модуля.

```
SAMSON TROVIS 6610              ☐   CE
Модули CPU
№ модели      6610-000x
Серийный № XXXXXXXX
Var.-ID        XXXXXXX
MAC address  XX:XX:XX:XX:XX:XX      ┌──────┐
IP address    XXX.XXX.XXX.XXX       │  DMC  │
IO address    XX:XX:XX:XX           └──────┘
Power supply: 24 V AC 50 Hz 15 VA
                                    Made in Germany
```

Типовой шильдик TROVIS 6610 с IP-адресом

3.1 Настройки сети

CPU-модуль TROVIS 6610 поставляется без программного обеспечения оборудования. MAC-адрес и IP-адрес указаны в левой части типового шильдика.

Маска подсети 255.255.0.0, шлюз не назначен. Для изменения сетевых параметров при помощи компьютера необходимо, чтобы компьютер находился в той же подсети, что и соответствующий CPU-модуль TROVIS 6610. Пример:

	CPU-модуль TROVIS 6610	Персональный компьютер или ноутбук
IP-адрес:	172.30.245.10	172.30..XXX.XXX
Маска подсети:	255.255.0.0	255.255.0.0
Шлюз:	0.0.0.0	0.0.0.0

4 Технические характеристики

Питание	
Электропитание	24 В AC (20,4 ... 27,6 В AC)
Частотный диапазон	48 ... 62 Гц
Энергопотребление	15 ВА
Соединение	резьбовой и штекерный зажим 2 pin (зелёный) поперечное сечение провода до 2,5 мм²
Температурный диапазон	
Эксплуатация	0 ... 55 °C
Транспортировка и хранение	–20 ... 70 °C
Относительная влажность воздуха	нормальная, без отпотевания
Электромагнитная совместимость	
Уровень помех	согласно EN 61000-6-3
Помехозащищённость	согласно EN 61000-6-2
Безопасность устройства	
Класс защиты	II согласно EN 61140: 2003
Категория по перенапряжению	II согласно EN 60664-1
Степень загрязнения	2 согласно EN 60664-1
Степень защиты	IP 20 согласно EN 60529
Монтаж	
Габариты вместе с зажимами (мм)	Ш x В x Г: 185 x 130 x 60
Вес	~ 0,7 кг
Монтаж	монтаж на несущую шину (все типы DIN и EN)
Входные/выходные соединения	резьбовые и штекерные зажимы поперечное сечение провода до 2,5 мм²

20 универсальных входов включая 2 счётных (канал 1 и 2)	
ⓘ **Внимание:** *Гальванической развязки между входами, а также с аналоговыми выходами нет!*	
При использовании в качестве дискретных входов:	
Питание дискретных входов	внутреннее, ~ 10 В DC
Ток измерительной цепи при коротком замыкании	500 µA
Входная нагрузка	макс. 100
Минимальная длительность импульса (1:1) (канал 1 и 2)	> 0,5 мс (< 1 кГц) > 500 мс (только для версии TROVIS 6610-0001)
Счётный импульс	со срабатыванием по положительному фронту
Минимальная длительность импульса (канал 3 ... 20)	1 с
Светодиод на модуле для счётных входов	ВКЛ, при замыкании контакта или < 0,4 В ВЫКЛ, при размыкании контакта или > 4 В
Светодиод на модуле для дискретных входов	ВКЛ, при замыкании контакта или < 0,05 В ВЫКЛ, при размыкании контакта или > 1 В
При использовании в качестве аналоговых входов:	
Датчик	
Тип датчика	Pt 1000 в двухпроводном соединении
Входной диапазон	–40 ... +160 °C
Разрешение	10 бит
Точность	< 0,5 % от диапазона измерений
Влияние температуры	< 0,1 % от диапазона измерений на 10 K
Измерительный ток	500 µA
Сопротивление	
Входной диапазон	0 ... 2000 Ω, двухпроводное соединение
Разрешение	10 бит
Точность	< 0,1 % от диапазона измерений
Влияние температуры	< 0,05 % от диапазона измерений на 10 K
Измерительный ток	500 µA

Напряжение (начиная с версии TROVIS 6610-0001)	
Входной диапазон	0 ... 10 В DC
Разрешение	10 бит
Точность	< 0,5 % от диапазона измерений
Влияние температуры	< 0,04 % от диапазона измерений на 10 K
Измерительный ток	10 kΩ
12 дискретных выходов	
Нагрузочная способность реле	250 В AC, 2 A индуктивная нагрузка 250 В AC, 3 A омическая нагрузка
8 аналоговых выходов	
Выходной диапазон	0 ... 10 В DC
Разрешение	10 бит
Точность	< 0,5 % от диапазона измерений
Влияние температуры	< 0,03 % от диапазона измерений на 10 K
Допустимая нагрузка	> 3,3 k
Ток короткого замыкания	5,5 мА
Индикация	
Светодиодная индикация состояния	дискретный вход и выход, рабочий процесс CPU и его нарушения, связь (Rx/Tx) для каждого интерфейса

Интерфейсы	
Уровень управления/CPU-модули TROVIS 6610	
Спецификация	согласно IEEE 802.3
Скорость передачи	10/100 Мбит/с
Протокол	TCP/IP
Соединение	RJ-45, 8-полюсн.
I/O-шина	
Спецификация	RS-485 2-жильный, нечувствительный к полярности
Гальваническая развязка	да
Скорость передачи (кБит/с)	9.6, 19.2, 38.4, 57.6, 115.2
Протокол	SAMSON
Соединение	3-pin штекерно-разъёмные клеммы (зелёного цвета) сечение провода до 2,5 мм²
RS-232	
Спецификация	RS-232 с управляющими линиями RTS/CTS
Гальваническая развязка	нет
Скорость передачи (кБит/с)	9.6, 19.2, 38.4, 57.6, 115.2
Соединение	RJ 45, 8-полюсн.
Modbus	
Спецификация	RS-485, 4-жильн.; 2-жильн. через перемычку
Гальваническая развязка	да
Скорость передачи (кБит/с)	9.6, 19.2, 38.4, 57.6, 115.2
Протокол	Modbus-RTU, Master или Slave
Соединение	RJ-45, 8-полюсн.
USB	
Спецификация	2 x USB 2.0 Full speed 12 Мбит/с, флеш-накопитель, модем (USB Mass Storage, USB CDC/ACM)

5 Монтаж

➔ Перед монтажом CPU-модуля TROVIS 6610 следует записать IP-адрес модуля (типовой шильдик, см. рис. 1, стр. 8), поскольку в дальнейшем он потребуется для проектирования.
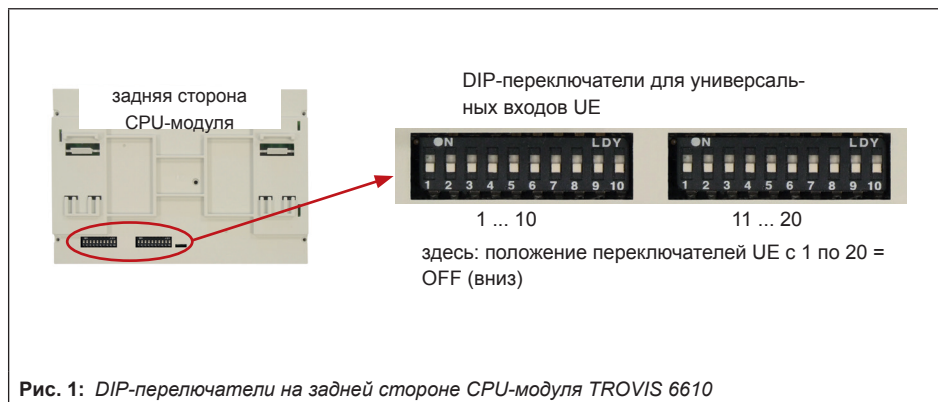
Конфигурация

ⓘ **Внимание:**
 – В **версии TROVIS 6610-0001** при помощи DIP-переключателей можно задать назначение универсального входа, а именно: дискретный вход, вход датчика, сопротивления или потенциальный вход.
 – У **других версий** универсальный вход нельзя использовать как потенциальный вход, поэтому конфигурация не требуется.
 – У **более новых версий** конфигурация осуществляется при помощи «Графического проектирования» TROVIS 6690.

Конфигурирование модуля выполняется при помощи DIP-переключателей, расположенных на тыльной стороне устройства, поэтому данную операцию следует выполнять до монтажа модуля.

Для каждого универсального входа конфигурирование выполняется отдельно. Конфигурация универсальных входов выполняется в направлении слева направо (цифры 1 … 10): входы 1 ... 10 на первом блоке переключателей и входы 11 ... 20 на втором.

Положение переключателей:

– ON: задаёт назначение универсального входа в качестве дискретного, потенциального входа или входа сопротивления
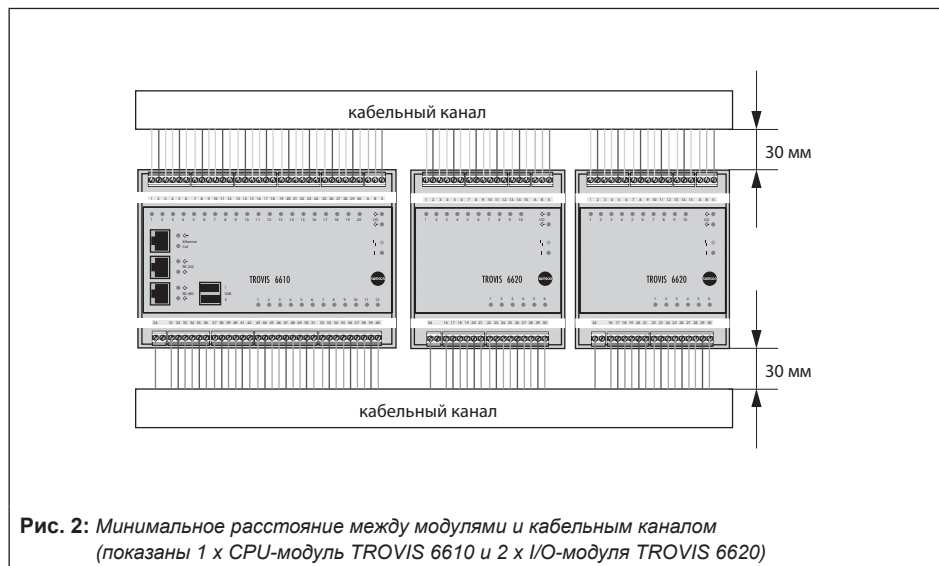– OFF: задаёт назначение универсального входа в качестве потенциального входа

Рис. 1: *DIP-переключатели на задней стороне CPU-модуля TROVIS 6610*

Монтаж

При монтаже модулей необходимо учесть следующее:

➔ Все модули предназначены для монтажа на несущую шину TS 35.

➔ Между зажимами модуля и кабельным каналом необходимо предусмотреть расстояние не менее 30 мм (см. рис. 3)!

➔ Монтаж модуля обычно выполняется в отдельном шкафу КИП.

➔ Вставьте модули сверху на несущую шину, используя фиксаторы, и надавите.

Установка непосредственно на исполнительный механизм также возможна при условии, что обеспечена достаточная защита при помощи разделительной перегородки.

Рис. 2: *Минимальное расстояние между модулями и кабельным каналом*
(показаны 1 x CPU-модуль TROVIS 6610 и 2 x I/O-модуля TROVIS 6620)

Демонтаж

➔ Отожмите фиксаторы на нижней стороне модуля при помощи подходящей отвёртки.

➔ Теперь модуль отсоединён от несущей шины, и его можно снять.
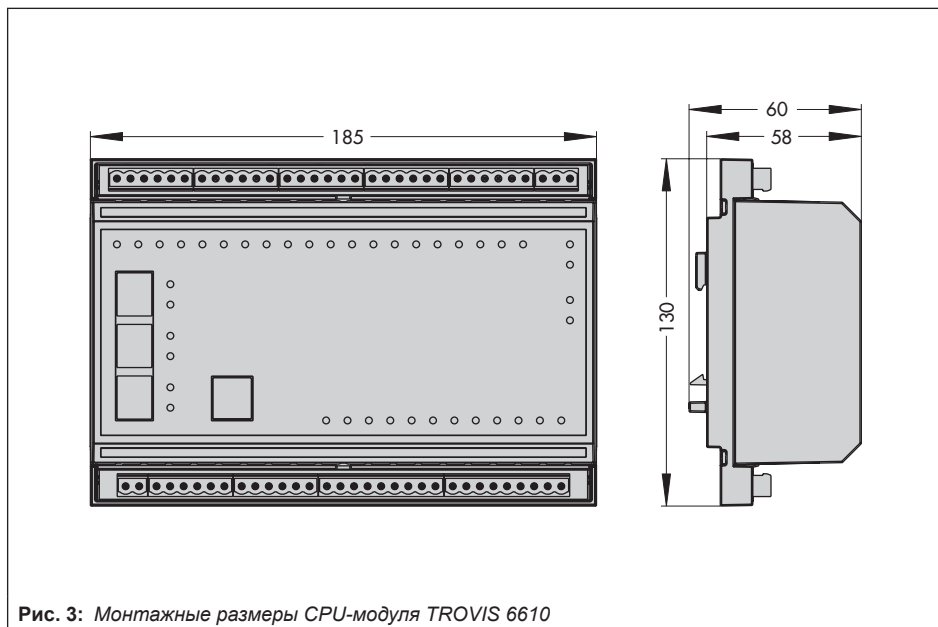
5.1   Монтажные размеры

Рис. 3: *Монтажные размеры CPU-модуля TROVIS 6610*

6 Электрическое соединение

6.1 Питание

Система автоматизации TROVIS 6600 питается от сети 24 В AC.

Электропитание следует рассчитывать в зависимости от потребляемой мощности всех подключённых модулей (см. раздел 6.2).

Для электропроводки следует использовать двойные кабельные зажимы, чтобы при отделении одного из модулей остальные продолжали получать питание (см. рис. 5).

! ***ВНИМАНИЕ!***
Опасность повреждения модулей при неправильном соединении клемм!
Не подключайте клеммы заземления между модулями!

Практическая рекомендация:
Во избежание перенапряжений SAMSON рекомендует использовать защитные разрядники.
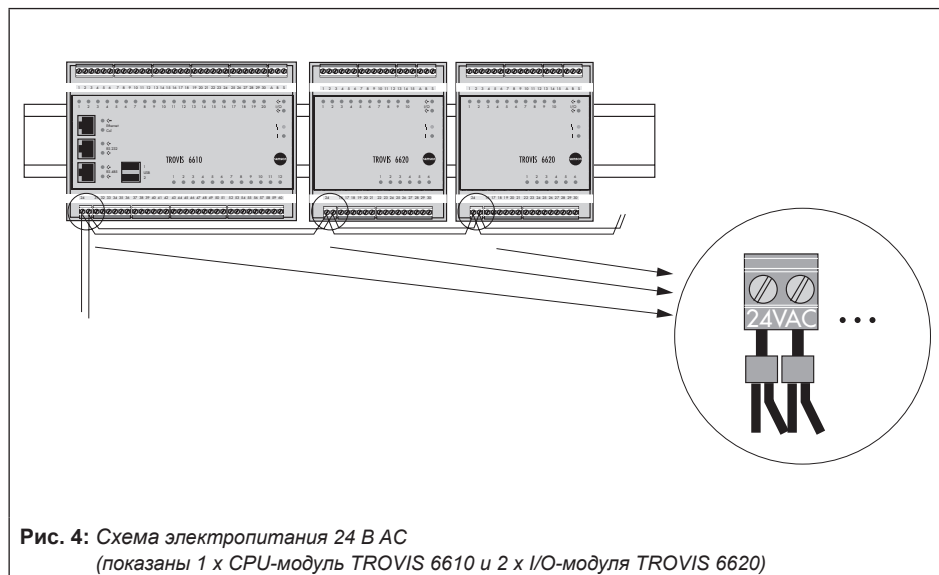

Рис. 4: *Схема электропитания 24 В AC*
(показаны 1 x CPU-модуль TROVIS 6610 и 2 x I/O-модуля TROVIS 6620)

6.2 Расчётные параметры электропитания

К каждому CPU-модулю TROVIS 6610 можно подключить до 32 I/O-модулей TROVIS 6620 и/или I-модулей TROVIS 6625. Напряжение электропитания всех модулей 24 В AC.

Энергопотребление отдельных модулей

Модуль	Напряжение	Энергопотребление
CPU-модуль TROVIS 6610	24 В AC	15 BA
I/O-модуль TROVIS 6620	24 В AC	6 BA
I-модуль TROVIS 6625	24 В DC	8 BA

Суммарная мощность всех подключённых модулей

Тип	Количество	Энергопотребление	Суммарная мощ-ность
CPU-модуль TROVIS 6610	...	15 BA	... BA
I/O-модуль TROVIS 6620	...	6 BA	... BA
I-модуль TROVIS 6625	…	8 BA	… BA
		сумма	... BA
		10 % резерв	... BA
		Всего	... BA

Падение напряжения в сети питания

Чем больше отбираемая мощность из сети электропитания, тем больше в ней падает напряжение или мощность. Падение напряжения рассчитывается следующим образом:

$$U_{RL} = \frac{2 \cdot L \cdot P}{\kappa \cdot A \cdot U_S}$$

U_{RL}: падение напряжения в прямой и обратной линии [В]
L: длина линии электропитания [м]
P: мощность, отбираемая из линии электропитания [BA]
κ: постоянная материала (каппа); для меди 57 [м/Ω • мм²]
A: поперечное сечение провода [мм²]
U_S: напряжение питания системы; здесь 24 В

Рекомендуемая длина линии при высокой мощности

Чтобы обеспечить напряжение питания системы, необходимо учитывать нижний предел допуска трансформатора, а также нижний предел допуска системы.

$$L_{max} \; = \; \frac{U_{RL} \cdot \kappa \cdot A \cdot U_{Trafo}}{2 \cdot P}$$

L_{max}: макс. допустимая длина линии (в одном направлении)
U_{RL}: допустимое падение напряжения (здесь 3,6 В)
κ: постоянная материала (каппа); для меди 57 [м/Ω · мм²]
A: сечение провода [мм²]
U_{Trafo}: вторичное напряжение трансформатора (24 В AC)
P: потребляемая мощность системы (потребителя)

6.3   Назначение клемм

Присоединение выполняется при помощи штекерно-резьбовых клемм с поперечным сечением 2,5 мм²

Клемма	Канал	Соединения CPU-модуля TROVIS 6610
1	1	UE/ZE1
2		GND
3	2	UE/ZE2
4	3	UE
5		GND
6	4	UE
7	5	UE
8		GND
9	6	UE
10	7	UE
11		GND
12	8	UE
13	9	UE
14		GND
15	10	UE
16	11	UE

Клемма	Канал	Соединения CPU-модуля TROVIS 6610
17		GND
18	12	UE
19	13	UE
20		GND
21	14	UE
22	15	UE
23		GND
24	16	UE
25	17	UE
26		GND
27	18	UE
28	19	UE
29		GND
30	20	UE
A		RX/TX A
B		RX/TX B
S		экран
24 В AC	24 В AC 15 ВА	питание
31	21	AA
32		GND
33	22	AA
34	23	AA
35		GND
36	24	AA
37	25	AA
38		GND
39	26	AA
40	27	AA
41		GND
42	28	AA

Клемма	Канал	Соединения CPU-модуля TROVIS 6610
43	29	BA
44		питание каналов 29 и 30
45	30	BA
46	31	BA
47		питание каналов 31 и 32
48	32	BA
49	33	BA
50		питание каналов 33 и 34
51	34	BA
52	35	BA
53		питание каналов 35 и 36
54	36	BA
55	37	BA
56		питание каналов 37 и 38
57	38	BA
58	39	BA
59		питание каналов 39 и 40
60	40	BA

7 Лицензии

Технологии программного обеспечения и программы, используемые в CPU-модуле TROVIS 6610, частично связаны с приведёнными ниже лицензиями. Исходный код компонентов программного обеспечения CPU-модуля TROVIS 6610, связанных с данными лицензиями может быть предоставлен SAMSON по запросу, его также можно найти в интернете по адресу ▶ www.samson.de/support/deser031.htm.

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Version 2, June 1991

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Электрическое соединение

8 Сертификаты BACnet

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Interest Group Europe

GRANT TO USE THE BTL-MARK

The BACnet Interest Group Europe (BIG-EU) grants

SAMSON AG

the right to use the BTL mark for BACnet
conformance tested products for the BACnet conformance of

TROVIS
6610

with
Firmware revision: SAMSON BACstack 1.6
BACnet protocol revision: 4
Device profile: B-BC

BTL™
BACnet TESTING LABORATORIES

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The right granted here to use the BTL mark is limited to the above
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Dortmund, April 6th, 2008
The Executive Board of the BIG-EU

Volker Röhl   *William O. Swan*   *Roger Braun*   *Gijs de Koning*

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WSPCert

Certificate

No. BAC-0105-01

WSPCert attests the conformance of the following BACnet implementation to the BACnet standard ISO 16484-5:2012. The attested conformance refers to the BACnet Interoperability Building Blocks (BIBBs) listed in the annex of this certificate.

The BACnet Building Controller (B-BC)

TROVIS 6610 Automation Station 6610-0002

with the software version:
SAMSON BACstack 2.0

of
SAMSON AG
Postfach 10 19 01, 60019 Frankfurt a.M., Germany

has fulfilled the requirements according to the test standard ISO 16484-6, the BTL Test Plan 12.0 and the Certification Rules of the BACnet Interest Group Europe, see **MBS Test Report No. VG 2012_7573.**

The certificate is valid
until 2015/04/01

Empowered by
BACnet
INTEREST GROUP EUROPE

2013/11/04

Date of initial certification

Dipl.-Ing. G. Weinmann
Head of Certification Body

WSPCert Dr.-Ing. Frank Bitter
Kapuzinerweg 7, 70374 Stuttgart, Germany,
phone:+49 (0)711 9539220, email: info@wspcert.de

Certifcation body
accredited by the DAkkS
according to EN 45011

(((**DAkkS**
Deutsche
Akkreditierungsstelle
D-ZE-11156-01-00

WSPCert

Annex to Certificate No. BAC-0105-01

The certification of the BACnet Implementation

TROVIS 6610-0002 Automation Station

of **SAMSON AG**

refers to the BACnet Interoperability Building Blocks (BIBBs) listed below. BIBBs other than listed are not part of the certification.

BACnet Interoperability Building Blocks	
DS-RP-A	Data Sharing – Read Property – A
DS-RP-B	Data Sharing – Read Property – B
DS-RPM-A	Data Sharing – Read Property Multiple – A
DS-RPM-B	Data Sharing – Read Property Multiple – B
DS-WP-A	Data Sharing – Write Property – A
DS-WP-B	Data Sharing – Write Property – B
DS-WPM-B	Data Sharing – Write Property Multiple – B
DS-COV-A	Data Sharing – COV – A
DS-COV-B	Data Sharing – COV – B
AE-N-I-B	Alarm and Event – Notification Internal – B
AE-N-E-B	Alarm and Event – Notification External – B
AE-ACK-B	Alarm and Event – Acknowledge Alarm – B
AE-ASUM-B	Alarm and Event – Alarm Summary – B
AE-ESUM-B	Alarm and Event Management – Event-Enrollment Summary – B
AE-INFO-B	Alarm and Event – Information – B
SCHED-I-B	Scheduling – Internal – B
SCHED-E-B	Scheduling – External – B
T-VMT-I-B	Trending – Viewing and Modifying Trends Internal – B
T-VMT-E-B	Trending – Viewing and Modifying Trends External – B
T-ATR-B	Trending – Automated Trend Retrieval – B
DM-DDB-A	Device Management – Dynamic Device Binding – A
DM-DDB-B	Device Management – Dynamic Device Binding – B
DM-DOB-B	Device Management – Dynamic Object Binding – B
DM-DCC-B	Device Management – Device Communication Control – B
DM-ATS-A	Device Management – Automatic Time Synchronization – A
DM-TS-A	Device Management – Time Synchronization – A
DM-TS-B	Device Management – Time Synchronization – B
DM-UTC-A	Device Management – UTC Time Synchronization – A
DM-UTC-B	Device Management – UTC Time Synchronization – B
DM-RD-B	Device Management – Reinitialize Device – B
DM-BR-B	Device Management – Backup and Restore – B
DM-R-B	Device Management – Restart– B
DM-LM-B	Device Management – List Manipulation– B
DM-OCD-B	Device Management – Object Creation and Deletion – B

AMEV

Arbeitskreis Maschinen- und Elektrotechnik
staatlicher und kommunaler Verwaltungen

WSPCert

BACnet ZERTIFIZIERUNGSSTELLE

AMEV-Testat für zertifizierte BACnet-Geräte

1. Folgendes BACnet-Gerät ist zertifiziert nach DIN EN ISO 16484-5:

Anbieter	**SAMSON AG**		
Produkt Name	**TROVIS 6610 Automationsstation**		
Produkt Modell Nr.	**6610-0002**		
Standard-Geräteprofil	**B-BC**	**BACnet Protokoll Vers. / Rev.**	**1.12**
Firmware Revision	**SAMSON BACstack 2.0**		

Übertragungsmedium	☒	**BACnet IP (Annex J)**	☐	**BACnet over LonTalk**
	☐	**BACnet MS/TP master**	☐	**BACnet MS/TP slave**
	☐	**MS/TP baud rates:**		
	☐			
Stat. Adresseinbindung	☐	**Ja (nur bei MS/TP)**		
Netzwerkoptionen	☒	**BBMD**	☒	**Anmeldg. durch ext. Geräte**
	☐	**Router, Medium**		
Zeichensätze	☒	**UTF-8**	☒	**ANSI X3.4**
Meldeoptionen	☒	**Intrinsic Reporting**	☒	**Algorithmic Reporting**

2. Das Gerät unterstützt die BACnet-Funktionen gemäß AMEV-Profil:

☐	AMEV-Profil AS-A (Automationsstation mit Basisausstattung)	**Stand**: ....
☒	AMEV-Profil AS-B (Automationsstation mit erweiterter Ausstattung)	**Stand**: V 1.1 21.08.2012
☐	AMEV-Profil ……………………………………………………………………….	**Stand**: ....

3. Grundlagen für das AMEV-Testat:

☒	**Testbericht** des Testlabors MBS vom 07.11.2013 Nr. VG 2012_7573
☒	AMEV-Empfehlung BACnet 2011 V 1.1. Stand: 21.08.2012 (siehe www.amev-online.de)

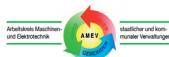**4. Das AMEV-Testat gilt nur in Verbindung mit folgendem Zertifikat:**

☒	Zertifikat Nr. BAC-0105 (siehe http://www.big-eu.org/conformance/eu/index.php)

(Ort, Datum)
Düsseldorf, 28.11.2013

WSPCert
Dr.-Ing. Frank Bitter
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D-70374 Stuttgart
Telefon +49 711 953922-0
Telefax +49 711 953922-66

....
(AMEV Obmann BACnet)

....
(BACnet-Zertifizierungsstelle)

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