

## КОНТРОЛЛЕР ВНЕШНИХ УСТРОЙСТВ RS-485

### Назначение:

Контроллер внешних устройств КВУ работает по интерфейсу RS485 совместно с конвертером USB-RS485 (HUB RS485) и обеспечивает управление 8 независимыми нагрузками.

Внешний вид устройства

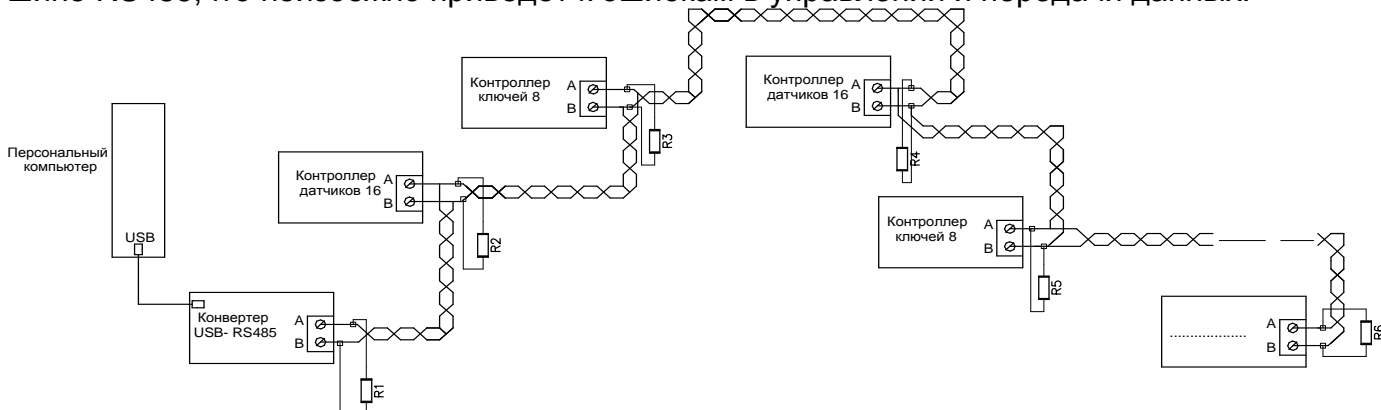


### Особенности устройства:

1. Каждый выход контроллера представляет собой нормально разомкнутый сухой контакт с коммутируемым током 3А напряжением до 36 В.
2. Контроллер является адресным устройством. Адрес каждого устройства устанавливается DIP-переключателем. Максимальное количество контроллеров на линии 32.
3. В качестве линии связи контроллера с HUB RS485 используется двухпроводная витая пара протяженностью до 1200 метров.
4. Питание контроллера может осуществляться как от сети переменного тока 220В, через клемму X3, так и от источника постоянного напряжения 12В (от 11 В до 15В) через клеммы X12. Полярность подключения 12В указана на корпусе устройства.
5. Контроллер предназначен для установки внутри помещения и рассчитан на круглосуточный режим работы. Установка устройства производится в металлический щитовой шкаф, с креплением на DIN- рейку. Также необходимо произвести заземление через земляной контакт клеммы X3
6. Конструкция контроллера не предусматривает его использование в условиях воздействия агрессивных сред, пыли, а также в пожароопасных помещениях.

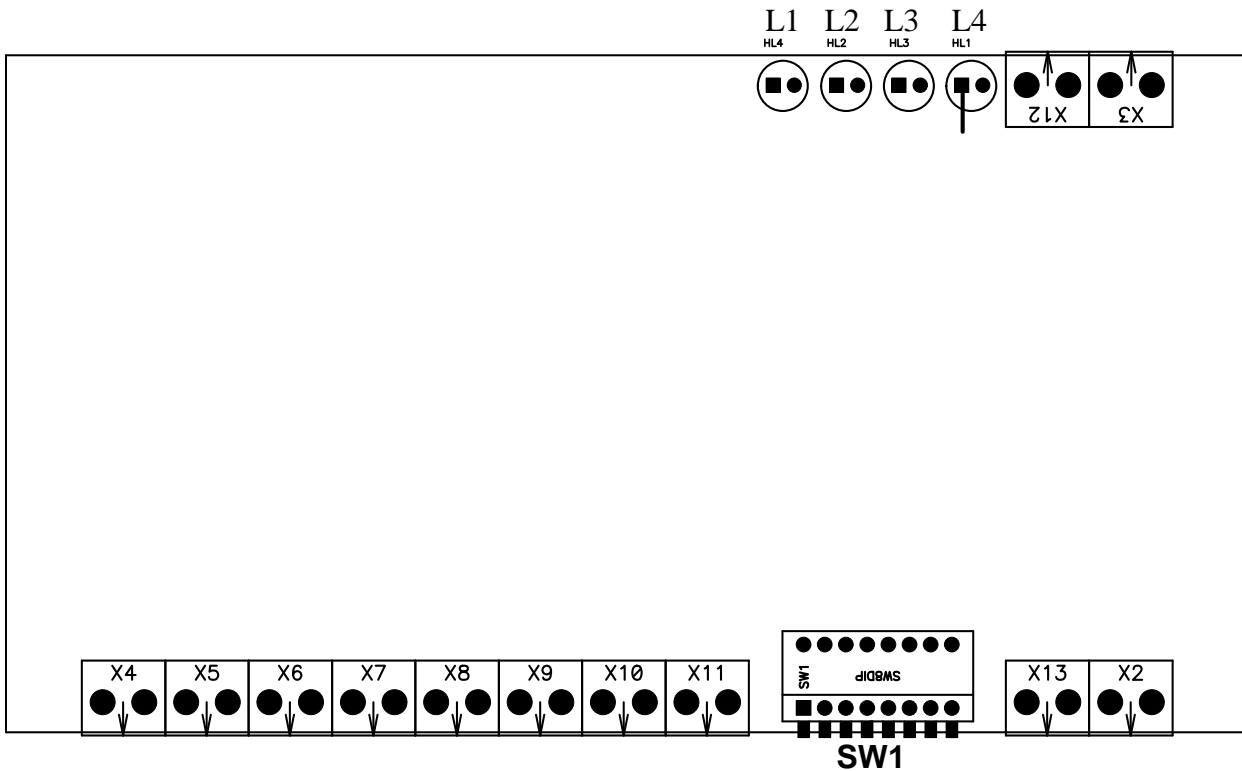
### Рекомендации по подключению интерфейса RS485:

Подключению витой пары необходимо производить к контактам А и В соответственно на всех устройствах. При протяженности линии более 100 метров требуется применение резисторов-терминаторов сопротивлением 120 Ом согласно приведённой ниже схеме (см.рис 2). Иначе возможно искажение цифровых сигналов на шине RS485, что неизбежно приведёт к ошибкам в управлении и передачи данных.



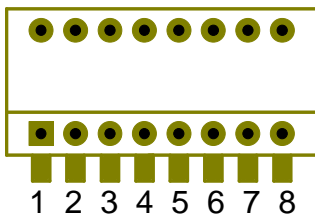
R1-R6- резисторы сопротивлением 120 Ом

рис.2



На плате устройства установлены следующие разъёмы и элементы :

- L1 - индикатор передачи по RS485
- L2 - индикатор приёма по RS485
- L3 - индикатор отсутствия активности на шине
- L4 – индикатор наличия питания
- X4-X11- выходы сухих нормально разомкнутых контактов реле
- X3 – клемма подключения 220В
- X12 – клемма подключения 12В
- X13 – выход сигнала отсутствия активности на шине
- X2 – подключение RS485
- SW1 – переключатель адреса



адрес выставляется в двоичной форме включением соответствующих разрядов

Адрес		Конфигурация переключателя адреса							
		1	2	3	4	5	6	7	8
0	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
21	ON	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
22	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF
23	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF

25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
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45	ON	ON	ON	ON	ON	OFF	ON	OFF	OFF
46	OFF	ON	ON	ON	OFF	ON	OFF	OFF	OFF
47	ON	ON	ON	ON	OFF	ON	OFF	OFF	OFF
48	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
49	ON	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
50	OFF	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
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187	ON	OFF	OFF	ON	ON	OFF	ON	ON

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215	ON	ON	ON	OFF	ON	OFF	ON	ON
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217	ON	OFF	OFF	ON	ON	OFF	ON	ON
218	OFF	ON	OFF	ON	ON	OFF	ON	ON
219	ON	OFF	OFF	ON	ON	OFF	ON	ON
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223	ON	ON	ON	ON	ON	OFF	ON	ON
224	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
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251	ON	OFF	OFF	ON	ON	ON	ON	ON
252	OFF	OFF	ON	ON	ON	ON	ON	ON
253	ON	OFF	ON	ON	ON	ON	ON	ON
254	OFF	ON	ON	ON	ON	ON	ON	ON

Состояние ON и OFF отмечено на переключателе

### Основные технические характеристики:

- Напряжение питания AC, В ..... ~220
- Ток потребления (max), mA ..... 30
- Напряжение питания DC, В..... 12
- Ток потребления (max), mA ..... 300
- Количество коммутируемых каналов ..... 8
- Ток коммутации при напряжении, А  
36 VDC ..... 3
- Удаленность контроллера  
от конвертором USB-RS485, м .....до 1200
- Габариты ( Д x Ш x В ), мм ..... 155 x 85 x 60