

1. ПРЕДНАЗНАЧЕНИЕ

1.1. DM50M-TCP (counter)

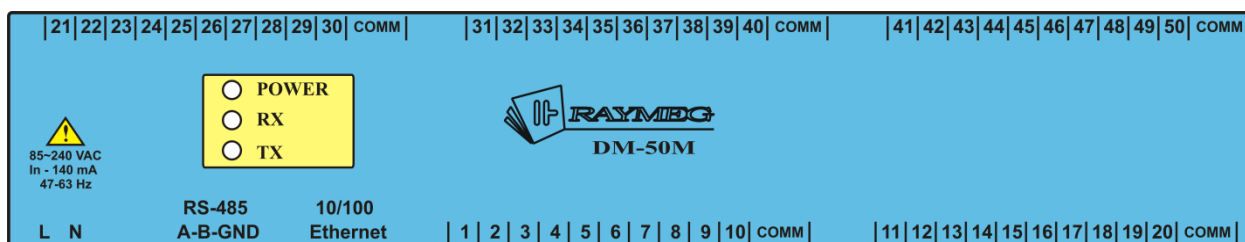
Много електромери имат импулсен изход, пропорционален на измерената енергия. Контролерът DM50M е един вид концентратор с 50 входа(opto-coupled), за следене и регистриране на тези импулси в броячен режим. Всеки от 50-те потенциални входа е асоцииран към клетка от енерго-независима памет, организирана в 32 бита(4 байта). Всеки запис може да съдържа 4,294,967,295 импулси. След достигане на тази стойност паметта, респективно брояча започва от нула. Като втори атрибут към всеки вход има и регистър за коефициента на делене за конкретния вход(4 байта). Минималната дължина на импулса е 30ms, а минималното време между два импулса е 4ms. Област на приложение: изграждане на централизиран системи за отчитане на енергопотребление. Може да се интегрира и в други видове потребление, като например: газ, вода, и т.н.

1.2. DM50-TCP (state control)

Контролера следи състоянието на входовете, като всяка промяна се запазва до прочитането на регистрите от потребителя. Минималната дължина на импулса е 20ms. Област на приложение: изграждане на BMS(Building Management Systems), за следене на състоянието(I/O) на автоматични прекъсвачи, защиты, аларми, датчици и др.

2. ТЕХНИЧЕСКИ ДАННИ

2.1. Описание на входно/изходните терминали.



L N клемма(2) - ел.захранване 220÷240VAC;

A-B-GND клемма(3) – BUS485;

Ethernet - Ethernet комуникационен вход (RJ45 конектор);

1...50 клемма(2) - 50 входа за импулси(DM50M), или 50 входа за следене на състояние;

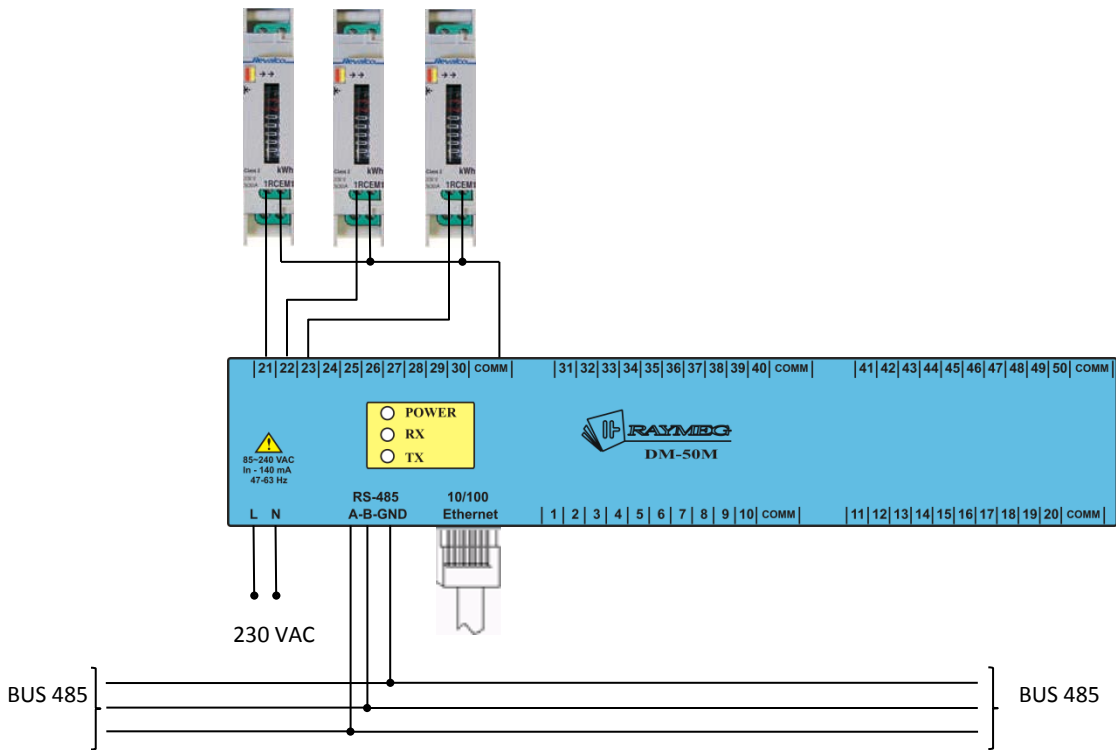
COMM клемма (2) - общи вход за всеки 10 входа;

POWER LED - светодиод (червен), показва наличие на захранващо напрежение;

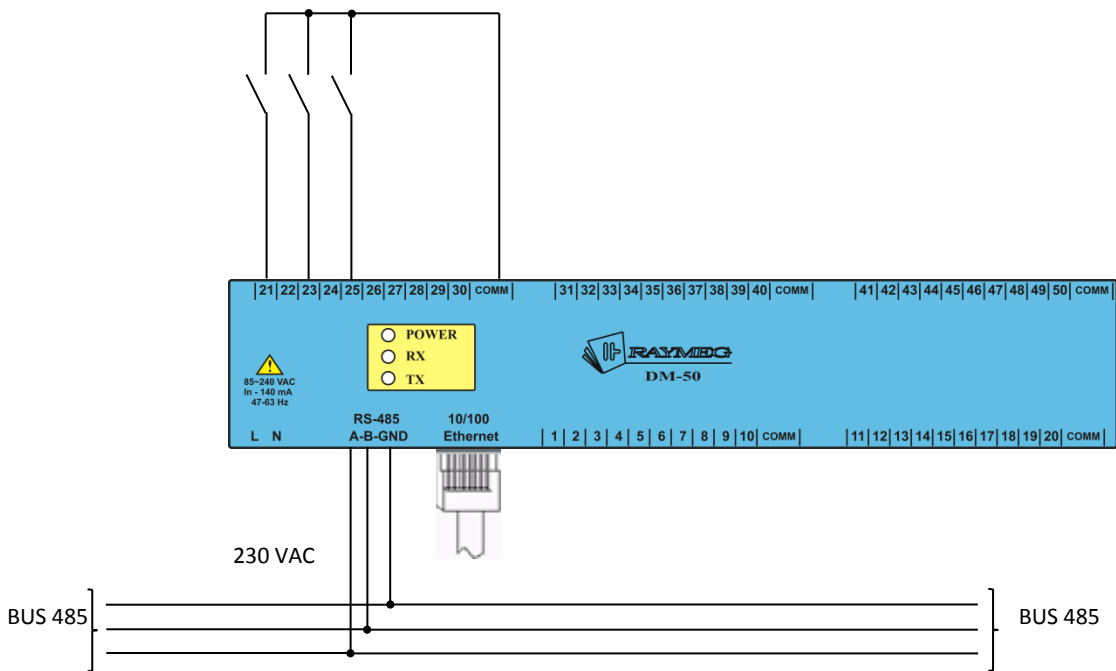
RX LED - светодиод (зелен), показва наличие на комуникация – приемане на сигнал по RS485;

TX LED - светодиод (жълт), показва наличие на комуникация – предаване на сигнал по RS485;

2.2. Електрическа схема – DM50M-TCP (примерно свързване на електромер(1RCM1)).



2.3. Електрическа схема – DM50-TCP.



3. КОМУНИКАЦИЯ

Network protocol: RS-485 Communication Protocol: MODBUS® RTU

MODBUS® FUNCTIONS:

- 04 = READ INPUT REGISTER;
- 16(10HEX) = PRESET MULTIPLE REGSTERS

Network protocol: Ethernet (cable) Communication Protocol: MODBUS® TCP/IP

MODBUS® FUNCTIONS:

- 04 = READ INPUT REGISTER;
- 16(10HEX) = PRESET MULTIPLE REGSTERS

Регистри достъпни за четене и запис за DM50M-TCP(counter)

Address	Words	Description	Format
1	2	Recording 32 bits input 1	Unsigned long
3	2	Recording 32 bits input 2	Unsigned long
5	2	Recording 32 bits input 3	Unsigned long
7	2	Recording 32 bits input 4	Unsigned long
9	2	Recording 32 bits input 5	Unsigned long
11	2	Recording 32 bits input 6	Unsigned long
13	2	Recording 32 bits input 7	Unsigned long
15	2	Recording 32 bits input 8	Unsigned long
17	2	Recording 32 bits input 9	Unsigned long
19	2	Recording 32 bits input 10	Unsigned long
21	2	Recording 32 bits input 11	Unsigned long
23	2	Recording 32 bits input 12	Unsigned long
25	2	Recording 32 bits input 13	Unsigned long
27	2	Recording 32 bits input 14	Unsigned long
29	2	Recording 32 bits input 15	Unsigned long
31	2	Recording 32 bits input 16	Unsigned long
33	2	Recording 32 bits input 17	Unsigned long
35	2	Recording 32 bits input 18	Unsigned long
37	2	Recording 32 bits input 19	Unsigned long
39	2	Recording 32 bits input 20	Unsigned long
41	2	Recording 32 bits input 21	Unsigned long
43	2	Recording 32 bits input 22	Unsigned long

Продължава на стр.5

Продължение от стр.4

Регистри достъпни за четене и запис за **DM50M-TCP(counter)**

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Address	Words	Description	Format
45	2	Recording 32 bits input 23	Unsigned long
47	2	Recording 32 bits input 24	Unsigned long
49	2	Recording 32 bits input 25	Unsigned long
51	2	Recording 32 bits input 26	Unsigned long
53	2	Recording 32 bits input 27	Unsigned long
55	2	Recording 32 bits input 28	Unsigned long
57	2	Recording 32 bits input 29	Unsigned long
59	2	Recording 32 bits input 30	Unsigned long
61	2	Recording 32 bits input 31	Unsigned long
63	2	Recording 32 bits input 32	Unsigned long
65	2	Recording 32 bits input 33	Unsigned long
67	2	Recording 32 bits input 34	Unsigned long
69	2	Recording 32 bits input 35	Unsigned long
71	2	Recording 32 bits input 36	Unsigned long
73	2	Recording 32 bits input 37	Unsigned long
75	2	Recording 32 bits input 38	Unsigned long
77	2	Recording 32 bits input 39	Unsigned long
79	2	Recording 32 bits input 40	Unsigned long
81	2	Recording 32 bits input 41	Unsigned long
83	2	Recording 32 bits input 42	Unsigned long
85	2	Recording 32 bits input 43	Unsigned long
87	2	Recording 32 bits input 44	Unsigned long
89	2	Recording 32 bits input 45	Unsigned long
91	2	Recording 32 bits input 46	Unsigned long
93	2	Recording 32 bits input 47	Unsigned long
95	2	Recording 32 bits input 48	Unsigned long
97	2	Recording 32 bits input 49	Unsigned long
99	2	Recording 32 bits input 50	Unsigned long
101	2	Recording coefficients input 1	Unsigned long
103	2	Recording coefficients input 2	Unsigned long
105	2	Recording coefficients input 3	Unsigned long
107	2	Recording coefficients input 4	Unsigned long
109	2	Recording coefficients input 5	Unsigned long
111	2	Recording coefficients input 6	Unsigned long
113	2	Recording coefficients input 7	Unsigned long
115	2	Recording coefficients input 8	Unsigned long
117	2	Recording coefficients input 9	Unsigned long
119	2	Recording coefficients input 10	Unsigned long
121	2	Recording coefficients input 11	Unsigned long
123	2	Recording coefficients input 12	Unsigned long

Продължение от стр.5

Регистри достъпни за четене и запис за **DM50M-TCP(counter)**

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Address	Words	Description	Format
125	2	Recording coefficients input 13	Unsigned long
127	2	Recording coefficients input 14	Unsigned long
129	2	Recording coefficients input 15	Unsigned long
131	2	Recording coefficients input 16	Unsigned long
133	2	Recording coefficients input 17	Unsigned long
135	2	Recording coefficients input 18	Unsigned long
137	2	Recording coefficients input 19	Unsigned long
139	2	Recording coefficients input 20	Unsigned long
141	2	Recording coefficients input 21	Unsigned long
143	2	Recording coefficients input 22	Unsigned long
145	2	Recording coefficients input 23	Unsigned long
147	2	Recording coefficients input 24	Unsigned long
149	2	Recording coefficients input 25	Unsigned long
151	2	Recording coefficients input 26	Unsigned long
153	2	Recording coefficients input 27	Unsigned long
155	2	Recording coefficients input 28	Unsigned long
157	2	Recording coefficients input 29	Unsigned long
159	2	Recording coefficients input 30	Unsigned long
161	2	Recording coefficients input 31	Unsigned long
163	2	Recording coefficients input 32	Unsigned long
165	2	Recording coefficients input 33	Unsigned long
167	2	Recording coefficients input 34	Unsigned long
169	2	Recording coefficients input 35	Unsigned long
171	2	Recording coefficients input 36	Unsigned long
173	2	Recording coefficients input 37	Unsigned long
175	2	Recording coefficients input 38	Unsigned long
177	2	Recording coefficients input 39	Unsigned long
179	2	Recording coefficients input 40	Unsigned long
181	2	Recording coefficients input 41	Unsigned long
183	2	Recording coefficients input 42	Unsigned long
185	2	Recording coefficients input 43	Unsigned long
187	2	Recording coefficients input 44	Unsigned long
189	2	Recording coefficients input 45	Unsigned long
191	2	Recording coefficients input 46	Unsigned long
193	2	Recording coefficients input 47	Unsigned long
195	2	Recording coefficients input 48	Unsigned long
197	2	Recording coefficients input 49	Unsigned long
199	2	Recording coefficients input 50	Unsigned long
201	2	Recording status controller	Unsigned long

Регистри достъпни за четене DM50-TCP(state control)

Address	Words	Description	Format
1	2	Bits 31...0 = Input status 1....32	Unsigned long
2	2	Bits 31...20 = Input status 33....50	Unsigned long