PMB

PRO-NET master board.

The PRO-NET master executes the application program, stores data and communicates with a PC.

Application programs are written with PROWIN. Please refer to the PROWIN manual for detailed information. A finished program is loaded into the master and the master executes the program. The master does this by interpreting the instructions of the program. If for example a 'GET' instruction is encountered, the master sorts out the channel that must be 'GET', send out the instructions over the PRO-NET network to actually obtain this channel from the I/O board that is addressed.

The master has memory of approximately 100.000 samples in which data can be stored. Data is stored in records of maximally 127 samples. The memory is non-volatile (RAM with battery back-up.) The back-up battery is charged when the system is powered. It will retain the memory contents for approximately 2 months after the system is switched off. If the master is not used for a long period of time, the battery can be switched off by removing a jumper.

Besides the data memory, the master holds the following tables:
- Errors: contains the last 10 error messages generated by the application program (such as overflows on inputs, I/O controllers that do not respond, etc.)
- Events: contains time and date of important events (such as re-programming, program start and stop, etc.)
- Status: contains the program state (run/stop), number of bytes in the data base, time and date and four flags that can be filled by the application program. These flags can be used to show frequently required information, program status, debug information, etc.

The master has a communication port for a PC. This is the port through which the programs are loaded into the master and through which the information described above can be obtained from the master during program execution. Data can be retrieved through this port.

There are jumpers on the master that can be read out by the application program. These jumpers can be used to enable variants in an application program without having to re-program the master. They can also be used to identify a system if several systems are in use.

There are jumpers on the master to set the network speed and the speed of the PC interface.

There are PRO-NET option boards that must be connected to the master. These boards are connected to the expansion connector on the front of the printed circuit board. Boards that connect to the master are the LED board and the printer board.

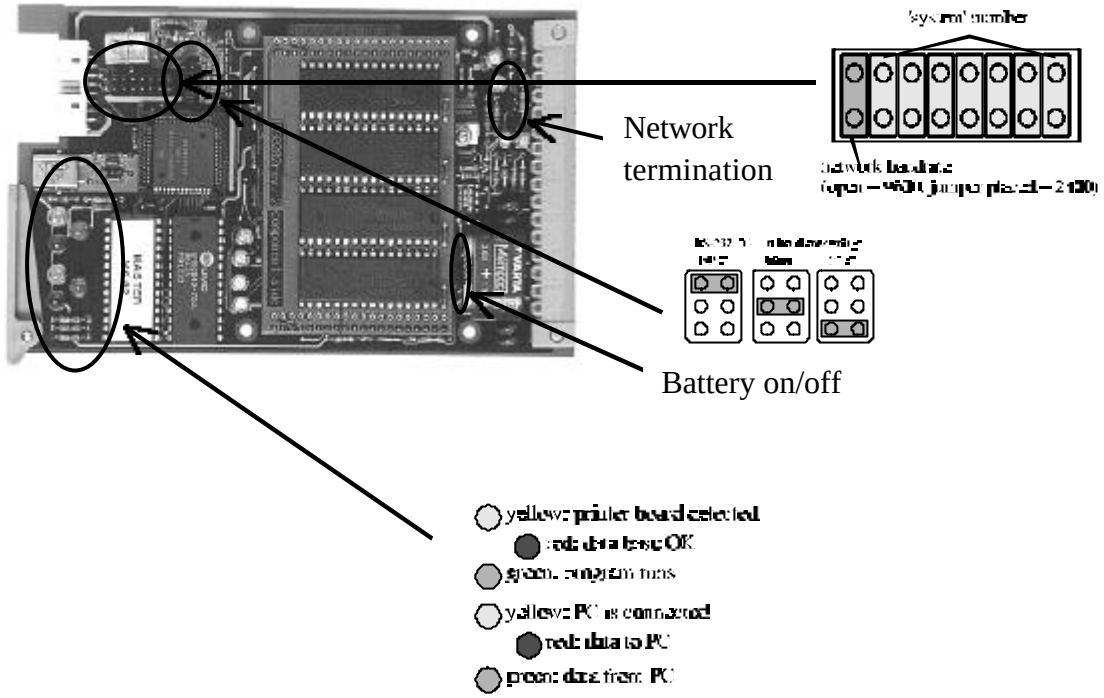
The technical specifications are:
Width in TE's (see PRW)

Power requirements:	+/-15VDC, 60 mA.
Memory capacity:	100.000 samples
Jumpers:	network speed (2400 or 9600 baud)
	PC port speed (2400, 9600 or 19200 baud)
	System number
Operating temperature:	-10...+50^{o}C
Storage temperature:	-20...+70^{o}C

The signal connections are:

Connector pin number	Signal
1	0 V system
2	- 15 V DC
3	+ 15 VDC
4	Network loop +
5	Network ground
6	Network loop -
7	+5 VDC
8	RxD (to PC TxD)
9	0 V RS-232
10	TxD (to PC RxD)
11	0 V system
12	+5 VDC
13	RS-232 DTR
14	0 V system
15	RS-232 DSR
16	0 V system

The jumpers are set as follows:



The network termination jumper can be placed if there are communication errors on a long network (100's of meters). The resistor terminates the network with the correct impedance.

The 'system' number is a system variable (see Programming PRO-NET'). The jumper setting is read in when the system is powered.

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