4.1.2 The two operating modes of the IEEE 488 Interface

The IEEE 488 interface of the PT/RG can perform the following functions:

SH1;AH1;T5;L4;SR1;RL1;PP0;DC1;DT1;C0;E2.

It has two modes of operation.

The first one is called "Talker/Listener" and allows the user to dialogue with the host computer. To receive messages the PT/RG must be addressed as a Listener. The PT/RG reacts to the standard IEEE 488 functions such as REMOTE, LOCAL etc. It is also possible for the user to access data contained in the PT/RG; in this case the instrument must be addressed as a Talker.

The second mode is called "Talker only". It consists of the PT/RG sending the last measured value to the IEEE 488 bus at regular intervals. In this mode any incoming messages are ignored and it is not possible to use the field regulation functions.

This mode is used to connect the PT/RG to a printer without neeeding an external controller. To select this mode, microswitch A7 must be set to 1. The message format is described in section 6.2.1. The intervals between each output can be defined by the microswitches A1 to A5 as shown in section 4.2.1.

4.2 MICROSWITCH SETTINGS

4.2.1 Microswitch block "A" (link with host computer)

The first 8 microswitches of bock "A" have different functions according to the interface which is used to link to the host computer. Microswitches 9 and 10 do not change their function.

BLOCK "A"

RS 232 C LINK WITH HOST

	"0"	"1"	SW.	
	BAUD RATE (SEE 4.2.2)		1	0
			2	/
			3	/
NUMBER OF BITS	7	8	4	/
STOP BITS	1	2	5	0
PARITY	NO	YES	6	0
PARITY	EVEN	ODD	7	0
MODE	AUTONOMOUS (1)	CONVERSATIONAL	8	/

IEEE 488 LINK WITH HOST

	"0"	"1"	SW.
	DEVICE ADDRESS OR PRINTING RATE (SEE 4.1.1)		1
			2
			3
			4
			5
	ALWAYS 0		6
MODE	TALKER / LISTENER	TALKER ONLY	7
CR-LF	NO	YES	8 (2)

	"0"	"1"	SW.	
HOST LINK	RS232C	IEEE 488	9	0
MPS DIGITAL LINK	NO	YES	10	0

(1) In this case microswitches B1 to B5 must be used to set the printing rate according to the table shown in section 4.1.1.

(2) Microswitch 8 in the case of the IEEE 488 interface allows the user to include the two ASCII characters CR and LF at the end of a message.

4.2.2 Microswitch block "B"

Block "B" of microswitches allows the user to set the status of the RS 232 C link with the MPS and to choose the mode of correction, linear or digital.

In the autonomous RS 232 C mode (printer) which is obviously not possible in the regulation mode, block "B" allows the printing rate to be set.

BLOCK "B"

	"0"	"1"	SW.
	BAUD RATE (SEE BELOW)		1 2 3
NUMBER OF BITS	7	8	4
STOP BITS	1	2	5
PARITY	NO	YES	6
PARITY	EVEN	ODD	7
CORREC-TION	LI-NEAR	DIGI-TAL	8
	NOT USED		9 10

NOTE

Switches B1 to B7 refer to the RS 232 C link with the MPS.

BAUD RATE SELECTION

MICROSWITCH			BAUDS
3	2	1	
0	0	0	300
0	0	1	300
0	1	0	600
0	1	1	1200
1	0	0	2400
1	0	1	4800
1	1	0	9600 ←
1	1	1	19200

When J11 is open and J12 is closed, the linear voltage output supplies 0 to +10 V (1 mA).

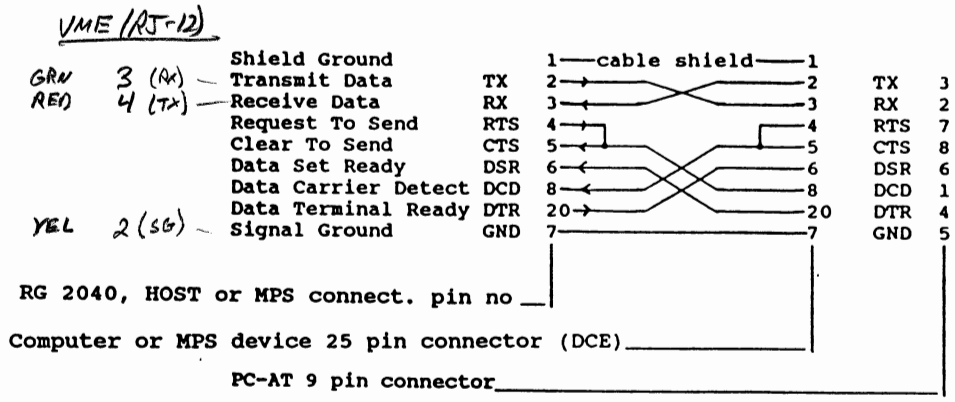
When J13 is closed and J14 is open, the linear current output supplies ±20 mA (8 V) as the factory setting.

When J13 is open and J14 is closed, the linear current output supplies ±2 mA (8 V).

- Reinstall the RG 2040 module in the instrument's crate following the inverse procedure.

7.3 RS 232C CONNECTOR

The PT/RG is a DCE device; the connectors for serial communication are a sub-D 25 male connector for the host and a sub-D 25 female connector for the MPS. We recommend the following pin to pin connections:



Host connector

Jumper J6 .... CLOSED = CTS disable
OPEN = CTS enable
Jumper J7 .... CLOSED = DCD disable
OPEN = DCD enable

MPS connector

Jumper J8 .... CLOSED = CTS disable
OPEN = CTS enable
Jumper J9 .... CLOSED = DCD disable
OPEN = DCD enable