PM6306 PROGRAMMABLE AUTOMATIC RCL METER   DC-1MHz   *Programming Card*
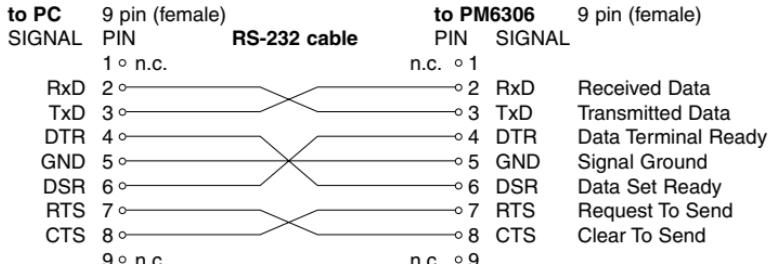*4822 872 10146*
960508

IEEE-488 INTERFACE

AH1	acceptor handshake
SH1	source handshake
L4	listener function
T6	talker function
RL1	local/remote
	with local lockout
SR1	service request (SRQ)
DC1	device clear
DT1	device trigger
PPO	no parallel poll
CO	no controller function
E2	tri-state drivers

Addresses: 1 to 30

RS-232 INTERFACE

to PC	9 pin (female)		**to PM6306**	9 pin (female)	
SIGNAL	PIN	**RS-232 cable**	PIN	SIGNAL	
	1 ○ n.c.		n.c. ○ 1		
RxD	2 ○		○ 2	RxD	Received Data
TxD	3 ○		○ 3	TxD	Transmitted Data
DTR	4 ○		○ 4	DTR	Data Terminal Ready
GND	5 ○		○ 5	GND	Signal Ground
DSR	6 ○		○ 6	DSR	Data Set Ready
RTS	7 ○		○ 7	RTS	Request To Send
CTS	8 ○		○ 8	CTS	Clear To Send
	9 ○ n.c.		n.c. ○ 9		

Baud rate: 110, 150, 300, 600, 1200, 2400, 4800, 9600, 19200
Data bits: 7 or 8   **Stop bits:** 1 (2 for 110 baud only)
Parity: odd, even or no   **Xon/Xoff handshake:** on or off
Hardware connection: 3 or 7 wires   **Hardware handshake:** DSR/DTR or CTS/RTS

Special Interface Functions

IEEE-488		RS-232
GTL	go to local	**ESC 1**
GTR	go to remote control	**ESC 2**
DCL	device clear	**ESC 4**
LLO	local lockout	**ESC 5**
★ **STB?**	read status byte query	**ESC 7**
DTR	device trigger	**ESC 8**

Common Commands and Queries in Accordance with IEEE-488.2

★ **CLS**	Clear Status Command		★ **RST**	Reset Command
★ **ESE**	Event Status Register Enable		★ **SAV**	Save Command
★ **ESR?**	Standard Event Status Register Query		★ **SRE**	Service Request Enable
★ **IDN?**	Identification Query		★ **STB?**	Read Status Byte
★ **LRN?**	Learn Mode		★ **TRG**	Trigger Command
★ **OPC**	Operation Complete Command		★ **TST?**	Selftest Query
★ **RCL**	Recall Command		★ **WAI**	Wait-to-Continue

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Device Specific Commands

Normal operation:

Command	Description
MODE?	asks for measurement mode
AUTO	automatic measurement mode
SER	sets serial measurement mode
PARAL	sets parallel measurement mode
PARAM?	asks for selected parameter
PARAM QUA	quality factor is displayed
PARAM DISS	dissipation factor is displayed
PARAM PHA	phase angle is displayed
PARAM IMP	impedance is displayed
PARAM VOL	voltage is displayed
PARAM CUR	current is displayed
PARAM AUTO	sets to mode selected before
FRE <NRf>	sets test signal frequency
FRE?	asks for test signal frequency
AC_LEV <NRf>	sets AC test signal level
AC_LEV?	asks for AC test signal level
DC_LEV <NRf>	sets DC test signal level
DC_LEV?	asks for DC test signal level
DC_BIAS?	asks for DC bias
DC_BIAS OFF	DC bias off
DC_BIAS INT	DC bias internal
DC_BIAS EXT	DC bias external
BIAS_VOL <NRf>	sets internal DC bias voltage
BIAS_VOL?	asks for DC bias voltage level
TEST_SIG?	asks for test signal
TEST_SIG AC	AC test signal
TEST_SIG DC	DC test signal
SET_FIX?	asks for correction factor
SET_FIX <NRf>	sets correction factor for ground capacitance
AVG?	asks for averaging
AVG <NRf>	increased averaging
AVG OFF	normal averaging
TRIM SINGLE	open/short - circuit trimming
TRIM ALL	

Command	Description
CONTA_CHE	contact check
DEV OFF	switches DEVIATION mode off
DEV ON	switches DEVIATION mode on
DEV?	asks if DEVIATION is on or off
REF_CAP <NRf>	sets capacitance reference value
REF_INDU <NRf>	sets inductance reference value
REF_RESI <NRf>	sets resistance reference value
SET_REF	sets current parameter and value for reference
REF?	asks for reference
COM?	asks for component parameters
RESI?	asks for resistance value
CAP?	asks for capacitance value
INDU?	asks for inductance value
IMP?	asks for impedance value
QUAL?	asks for quality factor value
DISS?	asks for dissipation factor value
PHA?	asks for phase angle value
VOL?	asks for measured voltage
CUR?	asks for measured current
DEV_RES?	asks for deviation in %
CONTI	continuous measurements
SIN	single measurement
TRIG	starts single measurement
POS_FIX?	asks for fixed parameter
POS_FIX R	fixes to resistance
POS_FIX C	fixes to capacitance
POS_FIX L	fixes to inductance
POS_FIX CL	fixes to capacitances or inductances
POS_FIX OFF	switches the function off
POS_FIX ON	switches the function on
MEA_FAST?	asks for fast measurement
MEA_FAST ON	fast measurement on
MEA_FAST OFF	fast measurement off
ERR?	asks for error message

Binning:

Command	Description
BIN ON	binning mode on
BIN OFF	normal measurement mode
BIN <NRf>	allocates data to selected bin
BIN?	asks for the bin the component is allocated to
BIN_DIS <NRf>	disables selected bin
BIN_EN <NRf>	enables selected bin
BIN_SET? <NRf>	asks for selected bin set
BUF_BIN? <NRf>	asks for the selected bin from the buffer for editing
BUF_CLR	deletes buffer for editing
BIN_ERA <NRf>	deletes selected bin set
BIN_STO <NRf>	stores bin set
BIN_RCL <NRf>	loads bin set into register 0 for binning
BUF_RCL <NRf>	loads bin set into buffer for editing
BIN_ABS	input of absolute value
BIN_REL	nominal value, tolerance in %
RESI <NRf>	resistances, nominal
CAP <NRf>	capacitances, nominal
INDU <NRf>	inductances, nominal
IMP <NRf>	impedances, nominal
QUAL <NRf>	quality factor, nominal
DISS <NRf>	dissipation factor, nominal
PHA <NRf>	phase angle, nominal

for input of absolute values skip <NRf>

Command	Description
LIM_HI <NRf>	upper limit
LIM_LO <NRf>	lower limit

<NRf> means flexible numeric representation, e.g. RESI 1000 or RESI 1000.0 or RESI 1.0E3 for 1 kΩ