IEEE 488

IEC 625

9499 470 18511

830330

1. PROGRAMMING THE PM2528

Function	ISO 7 bit code	Description
V⎓	F00	
V ~	F01	
V≂	F02	
Ω 2W	F03	
Ω 4W	F04	
A⎓	F05	Function
A≂	F06	
°C	F07	
Vhf	F08	
Vpeak ^	F09	
Vpeak v	F10	
Vpeak ◊	F11	
Range (see table "range code")	R0	Autoranging
	R1	Lowest range
	:	
	:	
	R8	Highest range
Data ready request	D0	- Data is output immediately after the measurement is terminated, if addressed as talker. - No request for service
	D1	- Data is not output automatically after a measurement is terminated. Output only occurs after the measurement has been ended and the PM2528 is addressed as talker. - Service Request message is sent to indicate the termination of the measurement.

PROGRAMMING cont.

Function	ISO 7 bit code	Description
High speed mode	SØ	Normal speed mode (integration time 100ms)
	S1	High speed mode (integration time 20ms)
High resolution mode	HØ	Normal resolution
	H1	High resolution
Offset mode		Short circuit input terminals 0 and V Ω of the PM2528. Select V⎓, autoranging, high resolution mode. Offset mode is not indicated at the front of the PM2528 or in the device status data.
	O1O1	Input offset voltage is compensated.
	OØOØ	Offset voltage is no longer compensated.
		Note: Function O1O1 is a toggle function. This means that the first time O1O1 is sent offset is compensated. *The second time O1O1 is sent or OØOØ offset is no longer compensated.*
Relative reference mode	O1	Relative reference mode: the measured value is stored in the memory of the PM2528 once after a command.
	OØ	No relative reference mode.
		NOTE: Relative reference mode is indicated by the offset LED.
Start mode	TØ	Internal start
	T1	External start via IEC-bus interface
	T2	External start via IEC-bus interface or BNC on the rear of the PM2528
Start command	E1	Starts a measurement
	GET	Group Execute Trigger: starts a measurement

NOTE: In the programming table Ø = zero
O = letter

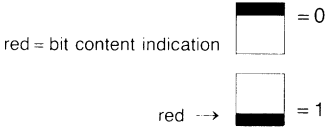
Function	Function Code	R0	R1	R2	R3	R4	R5	R6	R7	R8
	Range code									
V⎓	F00					200mV	2000mV	20V	200V	2000V
V ~	F01	AUTO				200mV	2000mV	20V	200V	2000V
V≂	F02	RANGING				200mV	2000mV	20V	200V	2000V
Ω 2W	F03		200Ω	2000Ω	20kΩ	200kΩ	2000kΩ	20MΩ	200MΩ	2000MΩ
Ω 4W	F04		200Ω	2000Ω	20kΩ	200kΩ	2000kΩ			
A⎓	F05			2μA	20μA	200μA	2000μA	20mA	200mA	2000mA
A≂	F06			2μA	20μA	200μA	2000μA	20mA	200mA	2000mA
°C	F07									2000°C
Vhf	F08					200mV	2000mV			
Vpeak ^	F09						2000mV	20V	200V	2000V
Vpeak v	F10						2000mV	20V	200V	2000V
Vpeak ◊	F11						2000mV	20V	200V	2000V

2. DELIMITERS

Input delimiters: Not required, all delimiters are allowed

Output delimiter: ETX ^ END

3. SETTINGS



A5 → A1 = Address 1 or 0

TON = Talk only 0 = OFF
1 = ON

SRQ off = Service request off 0 = Service Request facility enabled
1 = Service Request facility disabled

NOTE: The switches are located at the rear of the PM2528

4. OUTPUT DATA

Measurement data

The numeric representation of the decimal output data is an explicit point scaled representation, loosely called floating point.

Data examples

Char. No.	1	2	3	4	5	6	7	8	9	10	11	12 and EOI Line
Data	+	1	2	.	8	3	4	6	E	+	0	ETX ∧ END
	SP	1	2	8	.	3	4	6	E	+	3	ETX ∧ END

Device status data

DIO bits	8 (128)	7 (64)	6 (32)	5 (16)	4 (8)	3 (4)	2 (2)	1 (1)
	EX	RQS	AL	BSY	EF3	EF2	EF1	EF0

Error codes (AL = 1)

EF3	EF2	EF1	EF0	
0	0	0	1	Overload
0	0	1	0	Crest factor exceeded
0	0	1	1	Overload and crest factor exceeded
0	1	0	0	Illegal digit (Programming error)

Function codes (AL = 0)

Function	EF3	EF2	EF1	EF0
V⎓	0	0	0	0
V ~	0	0	0	1
V⎓~	0	0	1	0
Ω 2W	0	0	1	1
Ω 4W	0	1	0	0
A⎓	0	1	0	1
A⎓~	0	1	1	0
°C	0	1	1	1
Vhf	1	0	0	0
Vpeak ^	1	0	0	1
Vpeak ∨	1	0	1	0
Vpeak ◊	1	0	1	1

Extension bit (EX)

EX = 0 Normal mode
EX = 1 Relative reference mode