

Datasheet Correction: Programmable Motor Driver (PMD)

We would like to inform customers the corrections of the following datasheets. If you have any questions or require any further information, please contact your local sales office.

**1. Products**

TMP89FM82DUG, TMP89FM82TDUG

**2. Correction**

The function of Programmable Motor Driver (PMD) use are changed.

To use the Programmable Motor Driver (PMD), please keep the following restrictions and use.

Notice

### (1) 9.3.1 Configuration of the position detection unit

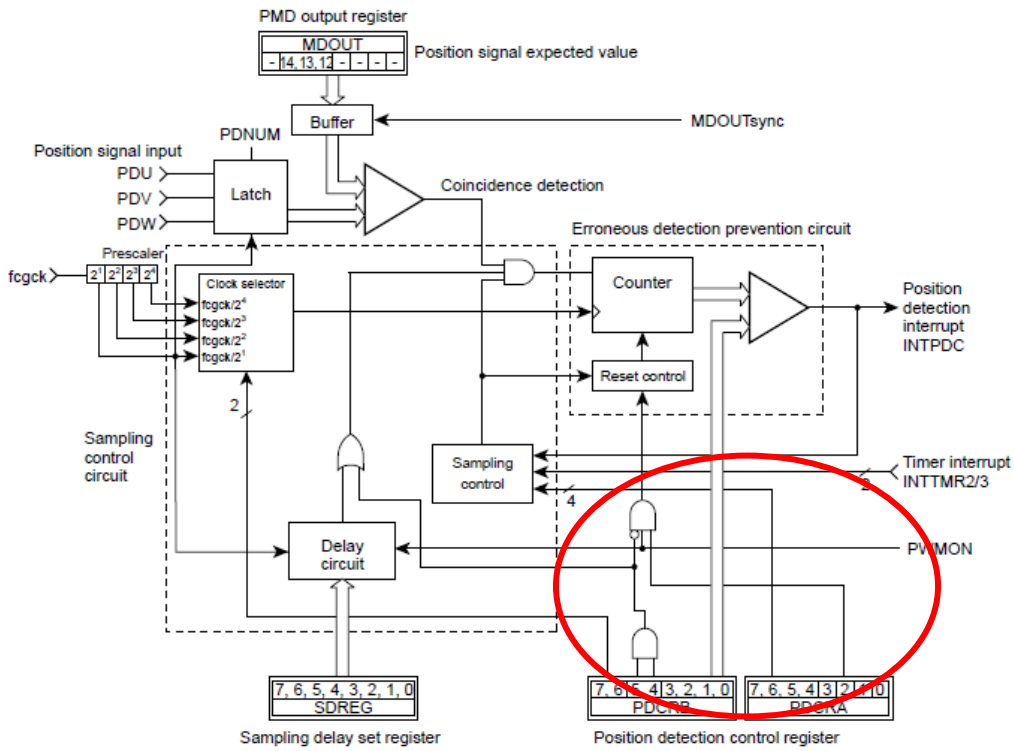


Figure 19-4 Configuration of the Position Detection Circuit

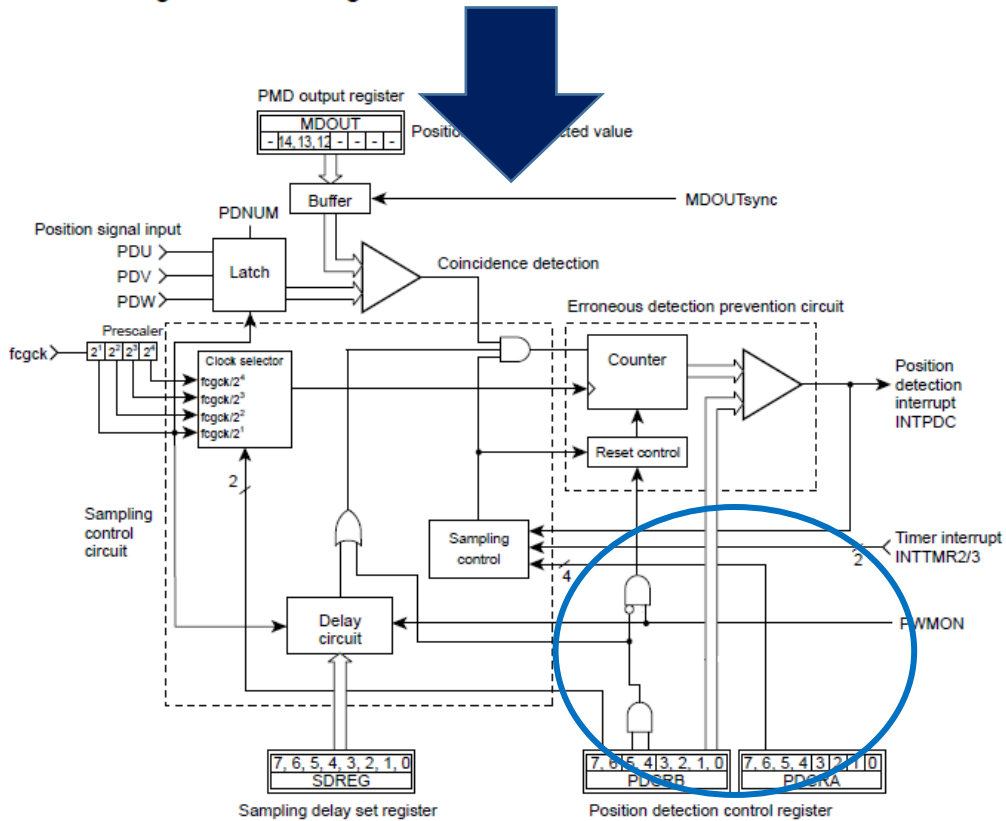


Figure 19-4 Configuration of the Position Detection Circuit

## (2) 19.3.2 Position Detection Circuit Register Functions

### ■ Function of bit2

#### Error

2	RCEN	Recount occurrences of matching when PWM is on	By setting "1",the match count is Recounted for each PWM on. (when recounting occurrences of matching, the count is reset each time PWM turns off). When this bit is set to "0", occurrences of matching are counted continuously when PWM is on (counting is held when PWM is off).
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#### Correct

2	RCEN	Recount occurrences of matching when PWM is on	"1" is prohibition of a setup. When this bit is set to "0", occurrences of matching are counted continuously when PWM is on (counting is held when PWM is off).
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### ■ Register

PDCRA (0x0EC0)

7	6	5	4	3	2	1	0	
SWSTP	SWSTT	SPTM3	STTM2	PDNUM	RCEN	DTMD	PDCEN	(Initial value: 0000 0000)

#### Error

7	SWSTP	Stop sampling in software	0: No operation 1: Stop sampling	W
6	SWSTT	Start sampling in software	0: No operation 1: Start sampling	
5	SPTM3	Stop sampling using Timer 3	0: Disable 1: Enable	
4	STTM2	Start sampling using Timer 2	0: Disable 1: Enable	
3	PDNUM	Number of position signal input pins	0: Compare three pins (PDU/PDV/PDW) 1: Compare one pin (PDU) only	R/W
2	RCEN	Recount occurrences of matching when PWM is on	0: Continue counting from previously PWM on 1: Recount each time PWM turns on	
1	DTMD	Position detection mode	0: Normal mode 1: Safety mode	
0	PDCEN	Enable/Disable position detection function	0: Disable (Sampling starts) 1: Enable	



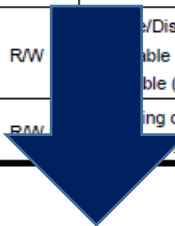
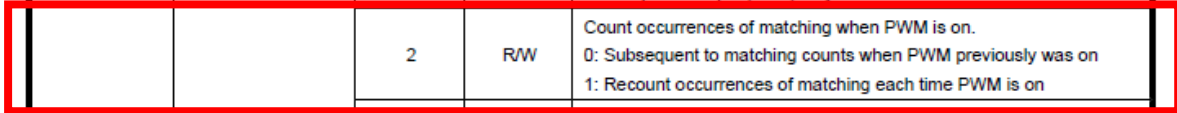
#### Correct

2	RCEN	Recount occurrences of matching when PWM is on	0: Continue counting from previously PWM on 1: Reserved (Prohibit)	R/W
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**(3) 19.7.2 Motor Control Circuit Control Registers**

Name	Address	Bit	R or W	Description
PDCRC	0x0EC2	5, 4	R	Detect the position-detected position. 00: Within the current pulse 01: When PWM is off 10: Within the current pulse 11: Within the preceding pulse
		3	R	Monitor the sampling status. 0: Sampling idle 1: Sampling in progress
		2 to 0	R	Holds the status of the position signal input during unmatched detection mode. Bits 2, 1, and 0: W, V, and U phases
PDCRB	0x0EC1	7, 6	R/W	Select the sampling input clock [Hz]. 00: f <sub>cgck</sub> /2 01: f <sub>cgck</sub> /2 <sup>2</sup> 10: f <sub>cgck</sub> /2 <sup>3</sup> 11: f <sub>cgck</sub> /2 <sup>4</sup>
		5, 4	R/W	Sampling mode. 00: When PWM is on 01: Regularly 10: When lower phases are turned on
		3 to 0	R/W	Detection position match counts 1 to 15.
PDCRA	0x0EC0	7	W	0: No operation 1: Stop sampling in software
		6	W	0: No operation 1: Start sampling in software
		5	R/W	Stop sampling using Timer 3. 0: Disable 1: Enable
		4	R/W	Start sampling using Timer 2. 0: Disable 1: Enable
		3	R/W	Number of position signal input pins. 0: Compare three pins (PDU/PDV/PDW) 1: Compare one pin (PDU) only
		2	R/W	Count occurrences of matching when PWM is on. 0: Subsequent to matching counts when PWM previously was on 1: Recount occurrences of matching each time PWM is on
		1	R/W	Position detection mode. 0: Ordinary mode 1: Unmatch detection mode
		0	R/W	Enable/Disable position detection function. 0: Enable 1: Disable (Sampling starts)
SDREG	0x0EC3	7 to 0	R/W	Sampling delay time. Resolution: 250ns/f <sub>cgck</sub> (resolution 250ns at f <sub>cgck</sub> = 8 MHz).

Error



Correct

PDCRA	0x0EC0	2	R/W	Count occurrences of matching when PWM is on. 0: Subsequent to matching counts when PWM previously was on 1: Reserved (Prohibit)
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