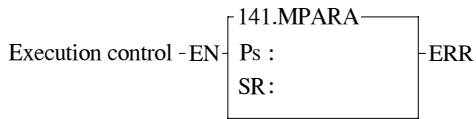


FUN 141 MPARA	Motion Parameter Setting for High Speed Pulse Output	FUN 141 MPARA
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Ps: The set number of Pulse Output (0~3).  
 SR: Starting register for parameter table, it has totally 18 parameters which controlled by 24 registers.

	Range	HR	DR	ROR	K
Ope- rand		R0   R3839	D0   D3999	R5000   R8071	
Ps					0~3
SR		○	○	○	

**Instruction explanation**

- 1.This instruction is not necessary if the system default for parameter value is matching what users need. However, if it needs to open the parameter value to do dynamic modification, this instruction is required.
- 2.This instruction incorporates with FUN140 for positioning control purpose, one axis only needs one instruction.
3. Whether the execution control input “EN” = 0 or 1, anyway, this instruction will be performed.
4. When there is error in parameter value, the output indication “ERR” will be ON, and the error code is appeared in the error code register.

Explanation for the parameter table:

SR = Starting register of parameter table, suppose it is R2000.

R2000 (SR+0)	0~2	Parameter 0	System default =1
R2001 (SR+1)	1~65535 Ps/Rev	Parameter 1	System default =2000
DR2002 (SR+2)	1~999999 μM/Rev	Parameter 2	System default =2000
	1~999999 mDeg/Rev		
	1~999999 × 0.1 mInch/Rev		
R2004 (SR+4)	0~3	Parameter 3	System default =2
DR2005 (SR+5)	1~921600 Ps/Sec	Parameter 4	System default =512000
	1~153000		
DR2007 (SR+7)	1~921600 Ps/Sec	Parameter 5	System default =141
	1~153000		
R2009 (SR+9)	Reserved	Parameter 6	System default =0
R2010 (SR+10)	0~32767	Parameter 7	System default =0
R2011 (SR+11)	0~30000	Parameter 8	System default =5000
R2012 (SR+12)	0~1	Parameter 9	System default =0
R2013 (SR+13)	-32768~32767	Parameter 10	System default =0
R2014 (SR+14)	-32768~32767	Parameter 11	System default =0
R2015 (SR+15)	0~30000	Parameter 12	System default =0
R2016 (SR+16)	Reserved	Parameter 13	System default =1
DR2017 (SR+17)	0~4294967295	Parameter 14	System default =0
DR2019 (SR+19)	Reserved	Parameter 15	System default =20000
DR2021 (SR+21)	Reserved	Parameter 16	System default =1000
R2023 (SR+23)	Reserved	Parameter 17	System default =10

FUN 141 MPARA	Motion Parameter Setting for High Speed Pulse Output	FUN 141 MPARA
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Explanation for the parameter:

- Parameter 0: The setting of unit, its default is 1.
  - When the setting value is 0, the moving stroke and speed setting in the positioning program will all be assigned with the unit of mm, Deg, Inch, so called machine unit.
  - When the setting value is 1, the moving stroke and speed setting in the positioning program will all be assigned with the unit of Pulse, so called motor unit.
  - When the setting value is 2, the moving stroke setting in the positioning program will all be assigned with the unit of mm, Deg, Inch, and the speed setting will all be assigned with the unit of Pulse/Sec, which is called as compound unit.

Parameter 0, unit setting	“0” machine unit	“1” motor unit	“2” compound unit
Parameter 1, 2	Must be set	No need to set	Must be set
Parameter 3, 7, 10, 11	mm · Deg · Inch	Ps	mm · Deg · Inch
Parameter 4,5,6,15,16	Cm/Min · Deg/Min · Inch/Min	Ps/Sec	Ps/Sec

- Parameter 1: Pulse count/1-revolution, its default is 2000, i.e. 2000 Ps/Rev.
  - The pulse counts needed to turn the motor for one revolution  
A= 1~65535 (for value greater than 32767, it is set with hexadecimal) Ps/Rev
  - When Parameter 14 = 0, Parameter 1 is the setting for Pulse /Rev
  - When Parameter 14 ≠ 0, Parameter 14 is the setting for Pulse/Rev
- Parameter 2: Movement/1 revolution, its default is 2000, i.e. 2000 Ps/Rev.
  - The movement while motor turning for one revolution.  
B=1~999999 μM/Rev  
1~999999 mDeg/Rev  
1~999999 × 0.1 mInch/Rev
- Parameter 3: The resolution of moving stroke setting, its default is 2.

Parameter 0 Parameter 3	Set value=0, machine unit; Set value=2, compound unit;			Set value=1, motor unit
	mm	Deg	Inch	Ps
Set value =0	× 1	× 1	× 0.1	× 1000
Set value =1	× 0.1	× 0.1	× 0.01	× 100
Set value =2	× 0.01	× 0.01	× 0.001	× 10
Set value =3	× 0.001	× 0.001	× 0.0001	× 1

- Parameter 4: The limited speed setting, its default is 512000, i.e. 512000 Ps/Sec.
  - Motor and compound unit: 1~921600 Ps/Sec.
  - Machine unit: 1~153000 (cm/Min, × 10 Deg/Min, Inch/Min).  
However, the limited frequency can't be greater than 921600 Ps/Sec.  

$$f_{max} = (V_{max} \times 1000 \times A) / (6 \times B) \leq 921600 \text{ Ps/Sec}$$

$$f_{min} \geq 1 \text{ Ps/Sec}$$

Note: A = Parameter 1 or Parameter 14 , B = Parameter 2.

FUN 141 MPARA	Motion Parameter Setting for High Speed Pulse Output	FUN 141 MPARA
<ul style="list-style-type: none"> <li>● Parameter 5: Initiate/Stop speed, the default = 141. <ul style="list-style-type: none"> <li>• Motor and compound unit: 1~921600 Ps/Sec.</li> <li>• Machine unit: 1~15300 (cm/Min, ×10 Deg/Min, Inch/Min). However, the limited frequency can't be greater than 921600 Ps/Sec.</li> </ul> </li>   <li>● Parameter 6: Reserved, the default = 0.</li>   <li>● Parameter 7: Backlash compensation, the default =0. <ul style="list-style-type: none"> <li>• Setting range: 0~32767 Ps.</li> <li>• While backward traveling, the traveling distance will be added with this value automatically.</li> </ul> </li>   <li>● Parameter 8: Acceleration/Deceleration time setting, the default = 5000, and the unit is mS. <ul style="list-style-type: none"> <li>• Setting range: 0~30000 mS.</li> <li>• The setting value represents the time required to accelerate from idle state upto limited speed state or decelerate from the limited speed state down to the idle state.</li> <li>• The acceleration/deceleration is constant slope depending on Parameter 4 / Parameter 8</li> <li>• When Parameter 12 = 0, Parameter 8 is the deceleration time</li> <li>• There will have the auto deceleration function for short stroke movement.</li> </ul> </li>   <li>● Parameter 9: Coordinnate direction setting, the default =0. <ul style="list-style-type: none"> <li>• Setting value =0, while in forward pulse output, the current Ps value is adding up. While in backward pulse output, the current Ps value is deducting down.</li> <li>• Setting value =1, while in forward pulse output, the current Ps value is deducting down. While in backward pulse output, the current Ps value is adding up.</li> </ul> </li>   <li>● Parameter 10: Forward movement compensation, the default = 0. <ul style="list-style-type: none"> <li>• Setting range: -32768~32767 Ps.</li> <li>• When it is in forward pulse output, it will automatically add with this value as the moving distance.</li> </ul> </li>   <li>● Parameter 11: Backward movement compensation, the default =0. <ul style="list-style-type: none"> <li>• Setting range: -32768~32767 Ps.</li> <li>• When it is in backward pulse output, it will automatically add with this value as the moving distance.</li> </ul> </li>   <li>● Parameter 12: Deceleration time setting, the default =0, and the unit is mS. <ul style="list-style-type: none"> <li>• Setting range: 0~30000 mS.</li> <li>• When Parameter 12 = 0, Parameter 8 is the deceleration time</li> <li>• When Parameter 12 ≠ 0, Parameter 12 is the deceleration time</li> </ul> </li>   <li>● Parameter 13: Reserved.</li>   <li>● Parameter 14: Pulse count/1-revolution, the default = 0. <ul style="list-style-type: none"> <li>• The pulse counts needed to turn the motor for one revolution</li> <li>• When Parameter 14 = 0, Parameter 1 is the setting for Pulse /Rev</li> <li>• When Parameter 14 ≠ 0, Parameter 14 is the setting for Pulse/Rev</li> </ul> </li> </ul>		

## NC Positioning Instruction

- Parameter 15: Reserved, it is recommended to be used as return home speed, the default = 20000 Ps/Sec.
- Parameter 16: Reserved, it is recommended to be used as slow down speed while returning home , the default = 1000 Ps/Sec.
- Parameter 17: Reserved.