

3-4 Selecting the operation type

The table below show a list of operation types that can be selected in direct data operation or stored data operation. Use the "Direct data operation operation type" command and the "Operation data R/W" command to set.

Setting value		Operation types
Motion extension mode	Normal	
0 (00h)	–	Deceleration rate stop (according to the specified operation profile) *
–	1 (01h)	Absolute positioning
–	2 (02h)	Incremental positioning (based on demand position)
–	3 (03h)	Incremental positioning (based on actual position)
–	4 (04h)	Incremental positioning (based on target position)
–	5 (05h)	Incremental positioning speed control (based on demand position)
–	6 (06h)	Incremental positioning speed control (based on actual position)
39 (27h)	7 (07h)	Continuous operation (position control)
–	8 (08h)	Wrap absolute positioning
–	9 (09h)	Wrap proximity positioning
–	10 (0Ah)	Wrap absolute positioning (FWD)
–	11 (0Bh)	Wrap absolute positioning (RVS)
–	12 (0Ch)	Wrap absolute push-motion
–	13 (0Dh)	Wrap proximity push-motion
–	14 (0Eh)	Wrap push-motion (FWD)
–	15 (0Fh)	Wrap push-motion (RVS)
48 (30h)	16 (10h)	Continuous operation (speed control)
49 (31h)	17 (11h)	Continuous operation (push-motion)
50 (32h)	18 (12h)	Continuous operation (torque control)
51 (33h)	19 (13h)	Continuous operation (cyclic speed control)
–	20 (14h)	Absolute positioning push-motion
–	21 (15h)	Incremental positioning push-motion (based on demand position)
–	22 (16h)	Incremental positioning push-motion (based on actual position)
–	23 (17h)	Incremental positioning push-motion (based on target position)
31 (1Fh)	–	Deceleration rate stop (according to the operation profile during operation) *
32 (20h)	–	Immediate stop *

* In the case of stored data operation, it is the operation type that is used when the operation data is linked. Therefore, the motor will not stop even if the START input is turned ON during operation.



- Refer to p.68 for the motion extension mode.
- The Motion extension mode and continuous operation (cyclic speed control) are effective for the driver version 3.00 or later.



When combining a 400 W motor with a gear, use the motion extension mode. When the 400 W motor with a gear is used in a normal state, the motor may be damaged if it rapidly decelerates while the demand velocity is significantly different from the actual velocity.

3-5 Operation type and position loop

The table below shows operation types that the position loop is enabled.

Direct data operation Stored data operation		FW/RV operation	Drive profile	Operation types	Position loop
Operation types setting value		Input signal (□: FW or RV)	Operation mode		
Motion extension mode	Normal				
0 (00h)	—	—	—	Deceleration rate stop (according to the specified operation profile)	*1
—	1 (01h)	—	pp	Absolute positioning	Enabled
—	2 (02h)	□-JOG-P	pp	Incremental positioning (based on demand position)	Enabled
—	3 (03h)	—	pp	Incremental positioning (based on actual position)	Enabled
—	4 (04h)	—	pp	Incremental positioning (based on target position)	Enabled
—	5 (05h)	—	pv	Incremental positioning speed control (based on demand position)	—
—	6 (06h)	—	pv	Incremental positioning speed control (based on actual position)	—
39 (27h)	7 (07h)	□-POS	pv	Continuous operation (position control)	Enabled
—	8 (08h)	—	pp	Wrap absolute positioning	Enabled
—	9 (09h)	—	pp	Wrap proximity positioning	Enabled
—	10 (0Ah)	—	pp	Wrap absolute positioning (FWD)	Enabled
—	11 (0Bh)	—	pp	Wrap absolute positioning (RVS)	Enabled
—	12 (0Ch)	—	pp	Wrap absolute push-motion	*2
—	13 (0Dh)	—	pp	Wrap proximity push-motion	*2
—	14 (0Eh)	—	pp	Wrap push-motion (FWD)	*2
—	15 (0Fh)	—	pp	Wrap push-motion (RVS)	*2
48 (30h)	16 (10h)	□-SPD □-JOG □-JOG-H	pv	Continuous operation (speed control)	—
49 (31h)	17 (11h)	□-PSH	—	Continuous operation (push-motion)	—
50 (32h)	18 (12h)	—	—	Continuous operation (torque control)	—
51 (33h)	19 (13h)	—	—	Continuous operation (cyclic speed control)	—
—	20 (14h)	—	pp	Absolute positioning push-motion	*2
—	21 (15h)	—	pp	Incremental positioning push-motion (based on demand position)	*2
—	22 (16h)	—	pp	Incremental positioning push-motion (based on actual position)	*2
—	23 (17h)	—	pp	Incremental positioning push-motion (based on target position)	*2
31 (1Fh)	—	—	—	Deceleration rate stop (according to the operation profile during operation)	*1
32 (20h)	—	—	—	Immediate stop	*1

*1 A state of the position loop is based on the operation type before starting stop operation.

*2 In positioning push-motion operation, the position loop is enabled only for the following time period when operation is stopped.

1 ms or less or the setting time of the drive-complete delay time