

## PROFIBUS

(new functionality valid from ServoOne Firmware 2.25-00, ServoOne junior Firmware 1.15-00)

Controlword(STW)

Overview:

Bit	Significance	
	Speed control mode	Positioning mode
0	ON / OFF	
1	No Coast Stop / Coast Stop (no OFF2 / OFF 2)	
2	No Quick Stop / Quick Stop (no OFF3 / OFF 3)	
3	Enable Operation / Disable Operation	
4	Enable Ramp Generator / Reset Ramp Generator	Do Not Reject Traversing Task / Reject Traversing Task
5	Unfreeze Ramp Generator / Freeze Ramp Generator	No Intermediate Stop / Intermediate Stop
6	Enable Setpoint / Disable Setpoint	Activate Traversing Task (0 -> 1 and 1 -> 0))
7	Fault Acknowledge (0 -> 1)	
8	Jog 1 ON / Jog 1 OFF	
9	Jog 2 ON / Jog 2 OFF	
10	Control By PLC / No Control By PLC	
11	Device-specific	Start Homing Procedure / Stop Homing Procedure
12	Relative positioning	
13	Start immediately on change of position, velocity and acceleration	
14	Speed control mode	
15	Relative positioning will be taken immediately after Start	

**Explanation: Left of the slash is the meaning of the bit-value = 1, right for the bit-value = 0**

With the parameter COM\_DP\_CtrlConfig the bits 6 and 8 can be configured:

Bit Number	value = 0 (Default- value)	value = 1
6	Activate positioning set at rising and falling (Profile 4.0).	Activate positioning only at rising edge (Profile 4.1).
8	The Jog Mode is <b>manufacturer specific</b> .	<b>Jog Mode works like described in Profile 4.1</b>

## Jog Mode in Speed Control Mode

Bit 8 and 9 of the control word provides a jog mode in the speed control mode:

*When bit 8 of parameter **COM\_DP\_CtrlConfig** is set to FALSE, the Jog Mode is manufacturer specific.*

- When bit 8 is set to TRUE, the drive takes the speed value from parameter **COM\_DP\_RefJogSpeed1**.
- When bit 9 is also set to TRUE, the drive takes the speed value from parameter COM\_DP\_RefJogSpeed2
- Is bit 9 set to FALSE, now COM\_DP\_RefJogSpeed1 is active.
- When bit 9 is set to TRUE, the negated value of COM\_DP\_RefJogSpeed1 is active.
- When bit 8 is also set to TRUE, the negated value of **COM\_DP\_RefJogSpeed2** is active.
- Set bit 8 to zero, COM\_DP\_RefJogSpeed1 is active.

*When bit 8 of parameter **COM\_DP\_CtrlConfig** is set to TRUE, Jog Mode works like described in Profile 4.1:*

- The jog mode can only be activated, when the motor is standstill
- Bits 4 up to 6 of the controlword must be FALSE.
- When bit 8 is set to TRUE, the drive takes the speed value from parameter COM\_DP\_RefJogSpeed1
- When bit 9 is set to TRUE, the drive takes the speed value from parameter COM\_DP\_RefJogSpeed2

## Jog Mode in position control mode

Same behavior like in speed control mode. Bits 4 and 5 must be set.

The Parameter COM\_DP\_RefJogSpeed1 and COM\_DP\_RefJogSpeed2 are process data.