CANopen PDO

The mode of operation is mapped at index 0x6060 subindex 0 with size of 1 byte.
For example: Profile position is 1, Profile velocity is 3, Torque profile is 4.

The Control Word is mapped at index 0x6040 subindex 0 with size of 2byte.
The Status Word is mapped at index 0x6041 subindex 0 with size of 2byte.

STATUS WORD Register

BIT Number	Description	Mode of operation
11	STATUSWORD_INTERNAL_LIMIT_ACTIVE	
12	STATUSWORD_IP_MODE_ACTIVE	Interpolated positioning
12	STATUSWORD_SPEED	Profile velocity
13	STATUSWORD_MAX_SLIPPAGE_ERR	Profile velocity
12	STATUSWORD_HOMING_ATTAINED	Homing
13	STATUSWORD_HOMING_ERROR	Homing
12	STATUSWORD_SETPOINT_ACK	Profile positioning
13	STATUSWORD_FOLLOWING_ERROR	Profile positioning

CONTROL WORD Register

BIT Number	Description	Mode of operation
0	CTRLWORD_BIT_SWITCH_ON	
1	CTRLWORD_BIT_EN_VOLATGE	
2	CTRLWORD_BIT_QUICK_STOP	
3	CTRLWORD_BIT_EN_OPERATION	
4	CTRLWORD_HOME_START	Homing
4	CTRLWORD_ENABLE_IP_MODE	Interpolated positiong
4	CTRLWORD_NEW_SETPOINT	Profile positioning
5	CTRLWORD_CHANGE_SET_NOW	Profile positioning
6	CTRLWORD_ABS_REL_POSITION	Profile positioning
7	CTRLWORD_BIT_FAULT_RESET	
8	CTRLWORD_BIT_HALT	

Enabling the drive

From the specification when disabled you need to pass to SWITCH ON.
DISABLED to READY TO SWITCH ON then to SWITCHED ON then finally OPERATION ENABLED.

You do that through the controlword where you set bit 1 and bit 2 with bit 0 and bit 3 reset (0x06 READY TO SWITCH ON) then you set bit 0, bit 1 and bit 2 (0x07 READY TO SWITCH ON) then finally bit 0,bit 1,bit 2,bit 3 all set (0x0F OPERATION ENABLED).

EDS (CANopen) file

EDS File:
https://www.nilab.at/download/mbd-tbs1-eds-file/?wpdmdl=2134&refresh=637351b05ed9d1668501936

From:
https://www.nilab.at/dokuwiki/ - **NiLAB GmbH Knowledgebase**

Permanent link:
https://www.nilab.at/dokuwiki/doku.php?id=en:epulse50_dc_servodrive:canopen_pdo

Last update: **2026/09/11 07:53**