Title: Can the motor brake output (/BK) on an EtherCAT SERVOPACK be controlled by the EtherCAT Master?

Product(s): SGDV EtherCAT, SGD7 EtherCAT	**Doc. No.** SRV-JA8244

Yes. The EtherCAT Master can control all the physical outputs on the SERVOPACK. However, the SERVOPACK masks output SO1 by default. SO1 is the default output for motor brake (/BK).

In order to control the motor brake output on the EtherCAT SERVOPACK (if using the default parameter for brake assignment Pn50F.2 = 1), the Digital Output Bit Mask (60FE:02) needs to be set to allow writing to that output.

Example: Set 60FE:02 from old value 0x000C0000, to new value 0x000E0000.

After doing that, you will be able to control the brake output with 60FE:01.

If the SERVOPACK status output functions in Pn50E, Pn50F, and Pn510 are assigned, the status will be output using the set value of this function as well as OR logic from the EtherCAT Master value of 60FE:01.

For output mapping, refer to the Digital Outputs (60FEh) section of the user's manual (Sigma-5 SIEPC72082904 / Sigma-7 SIEPS80000155).

Index	Sub	Name	Data Type	Access	PDO Mapping	Value	EEPROM
60FEh	0	Number of entries	USINT	RO	No	2	No
	1	Physical outputs[1]	UDINT	RW	Yes	0 to 0xFFFFFFFF (Default: 0)	No
	2	Bit mask[2]	UDINT	RW	No	0 to 0xFFFFFFFF (Default: 0x000C0000)	Yes

∗1.   Data description of Physical outputs:

Bit	Signal	Description
0 to 16	–	Reserved
17	SO1	0: Switch off, 1: Switch on
18	SO2	0: Switch off, 1: Switch on
19	SO3	0: Switch off, 1: Switch on
20 to 31	–	Reserved

∗2.   Data description of Output mask:

Bit	Signal	Description
0 to 16	–	Reserved
17	SO1	0: Disable physical output, 1: Enable
18	SO2	0: Disable physical output, 1: Enable
19	SO3	0: Disable physical output, 1: Enable
20 to 31	–	Reserved