

## TECH NOTE :: Switch DSE protocol Ethercat <-> Profinet

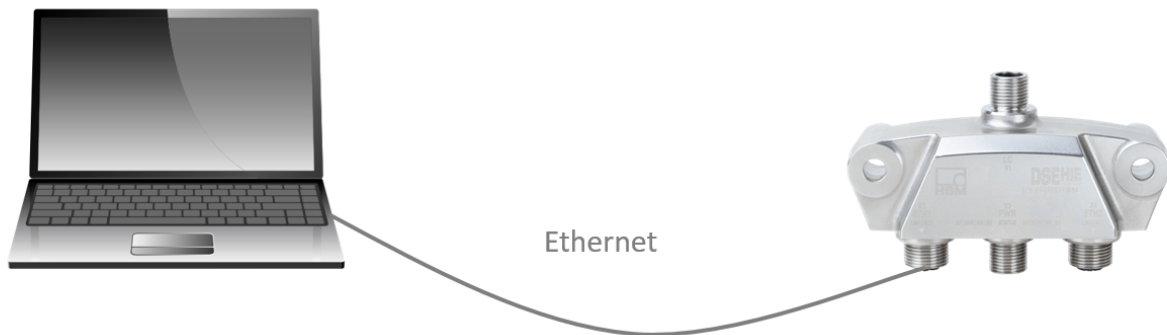
Version: 2022-09-17

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Status: HBM: Public

### Brief description

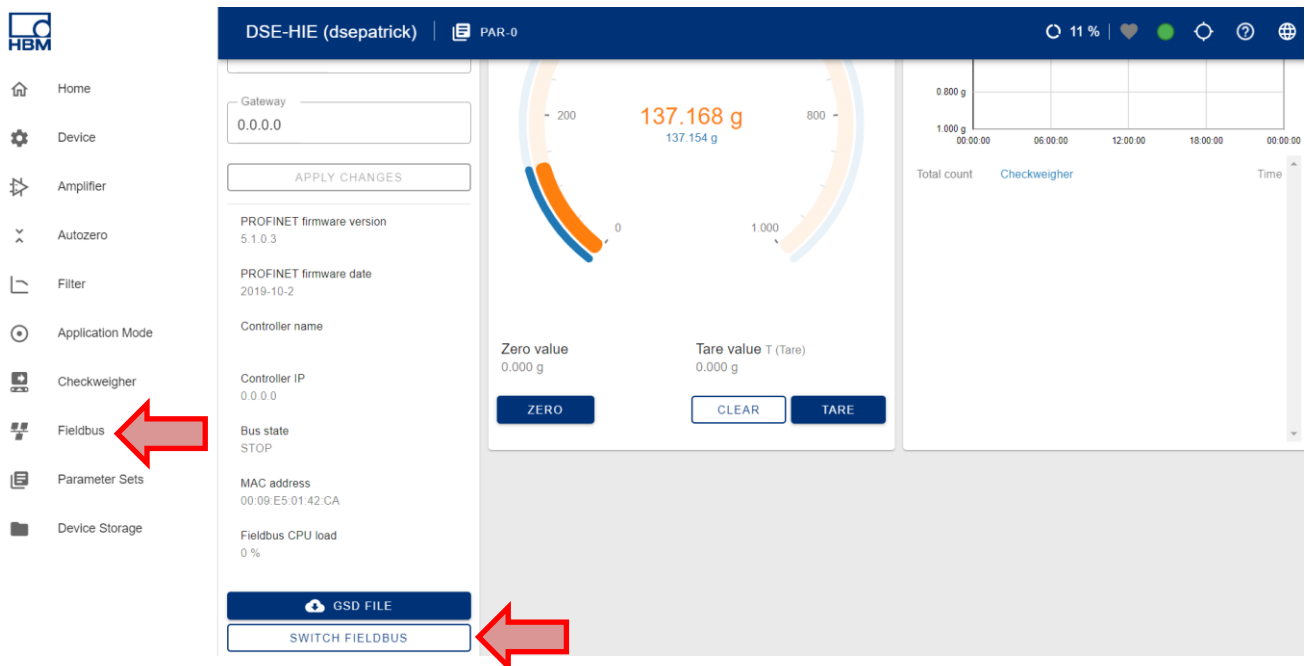
This is an instruction for changing the fieldbus protocol of DSE.



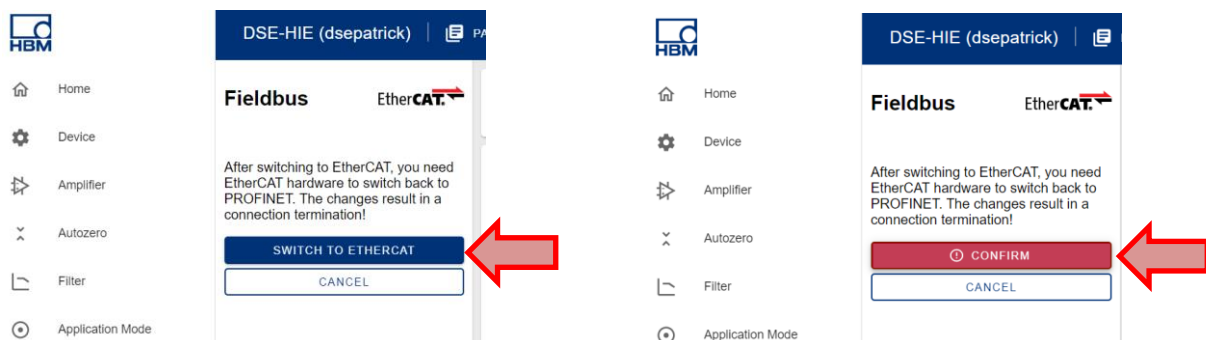
## Change protocol

### Profinet to EtherCAT

- Open the DSE webserver



- new window has been opened




Finally, the device must be restarted. To do this, simply disconnect the power supply and restore it after approx. 5 seconds. During the following boot process, the power supply must not be interrupted!


As soon as the device is started, the EtherCAT protocol is activated and the DSE web server is no longer accessible.

**Alternative:**

- Open the DSE webserver
- Add od to the url (e.g. <http://172.21.64.194/od>)
- Username: HBMdevel
- Write the value 9 to the object with index 0x3f00 and subindex 9



0x3f00	0x08	R	R	string	1	stack date	2019-10-2	
0x3f00	0x09	RW	R	U16	1	Protocol Switch	9	0x0015
0x3f00	0x14	R	R	U32	1	comm state	2	0x00000002



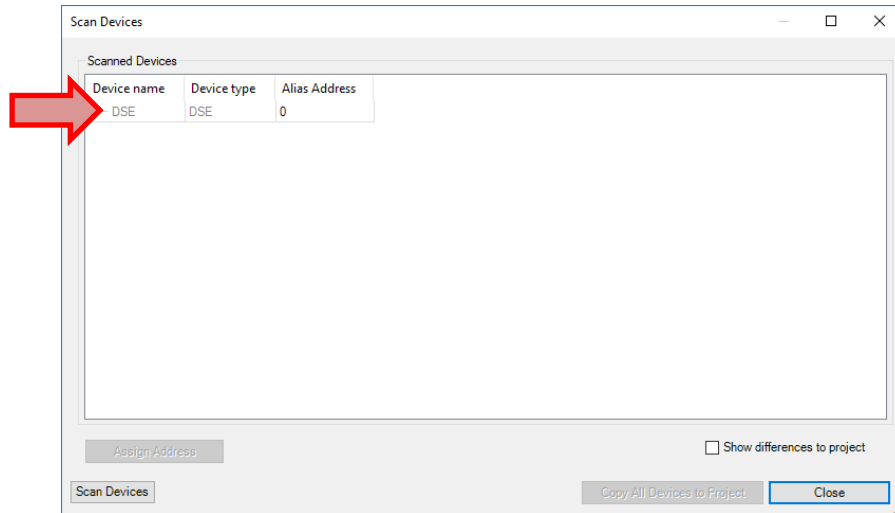
Finally, the device must be restarted. To do this, simply disconnect the power supply and restore it after approx. 5 seconds. During the following boot process, the power supply must not be interrupted!

As soon as the device is started, the EtherCAT protocol is activated and the DSE web server is no longer accessible.

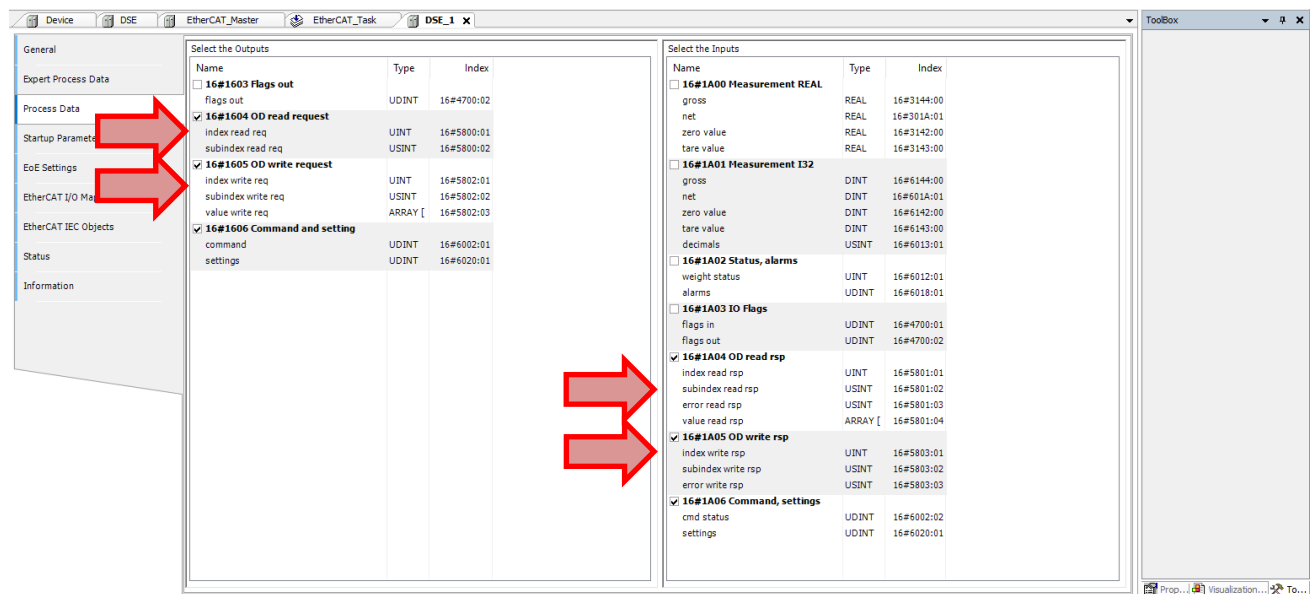
### *EtherCAT to Profinet*

In this example the Codesys software is used




























- Start the PLC software
- Add the EtherCAT master interface
- Browse for the DSE








- Select the necessary objects for the transmission



- Turn the operation mode to RUN
- Write the following parameters in the following order
  - Index write req: 16#6137 or 24887 (hex or dec)
  - Subindex write req: 0
  - Value write req []: array entries are transmitted simultaneously
    - 0: 68
    - 1: 49
    - 2: 83
    - 3: 50
    - 4: 69
    - 5: 51
    - 6: 68
    - 7: 52
    - 8: 83
    - 9: 53
    - 10: 80
    - 11: 54

Find		Filter	Show all	Add FB for IO Channel...		Go to Instance			
Variable	Mapping	Channel	Address	Type	Current Value	Prepared Value	Unit	Description	
		index write req	%QW24	UINT	24887			index write req	
		subindex write req	%QB50	USINT	0			subindex write req	
		value write req	%QB51	ARRAY [0..23] OF BYTE				value write req	
		value write req[0]	%QB51	BYTE	0	68			
		value write req[1]	%QB52	BYTE	0	49			
		value write req[2]	%QB53	BYTE	0	83			
		value write req[3]	%QB54	BYTE	0	50			
		value write req[4]	%QB55	BYTE	0	69			
		value write req[5]	%QB56	BYTE	0	51			
		value write req[6]	%QB57	BYTE	0	68			
		value write req[7]	%QB58	BYTE	0	52			
		value write req[8]	%QB59	BYTE	0	83			
		value write req[9]	%QB60	BYTE	0	53			
		value write req[10]	%QB61	BYTE	0	80			
		value write req[11]	%QB62	BYTE	0	54			
		value write req[12]	%QB63	BYTE	0				
		value write req[13]	%QB64	BYTE	0				
		value write req[14]	%QB65	BYTE	0				
		value write req[15]	%QB66	BYTE	0				
		value write req[16]	%QB67	BYTE	0				
		value write req[17]	%QB68	BYTE	0				
		value write req[18]	%QB69	BYTE	0				
		value write req[19]	%QB70	BYTE	0				
		value write req[20]	%QB71	BYTE	0				
		value write req[21]	%QB72	BYTE	0				
		value write req[22]	%QB73	BYTE	0				
		value write req[23]	%QB74	BYTE	0				

- Now set all values to zero and send them to the device
- Write the following parameters in the following order
  - Index write req: 16#3f00 or 16128 (hex or dec)
  - Subindex write req: 9
  - Value write req []: array entries are transmitted simultaneously
    - 0: 21

Find <input type="text"/>		Filter	Show all	Add FB for IO Channel...		Go to Instance		
Variable	Mapping	Channel	Address	Type	Current Value	Prepared Value	Unit	Description
		index write req	%QW24	UINT	16128			index write req
		subindex write req	%QB50	USINT	9			subindex write req
		value write req	%QB51	ARRAY [0..23] OF BYTE				value write req
		value write req[0]	%QB51	BYTE	0	21		
		value write req[1]	%QB52	BYTE	0			

Finally, the device must be restarted. To do this, simply disconnect the power supply and restore it after approx. 5 seconds. During the following boot process, the power supply must not be interrupted!

As soon as the device is started, the Profinet protocol is activated and the DSE web server accessible.

## Disclaimer

These examples are for illustrative purposes only. They cannot be used as the basis for any warranty or liability claims.