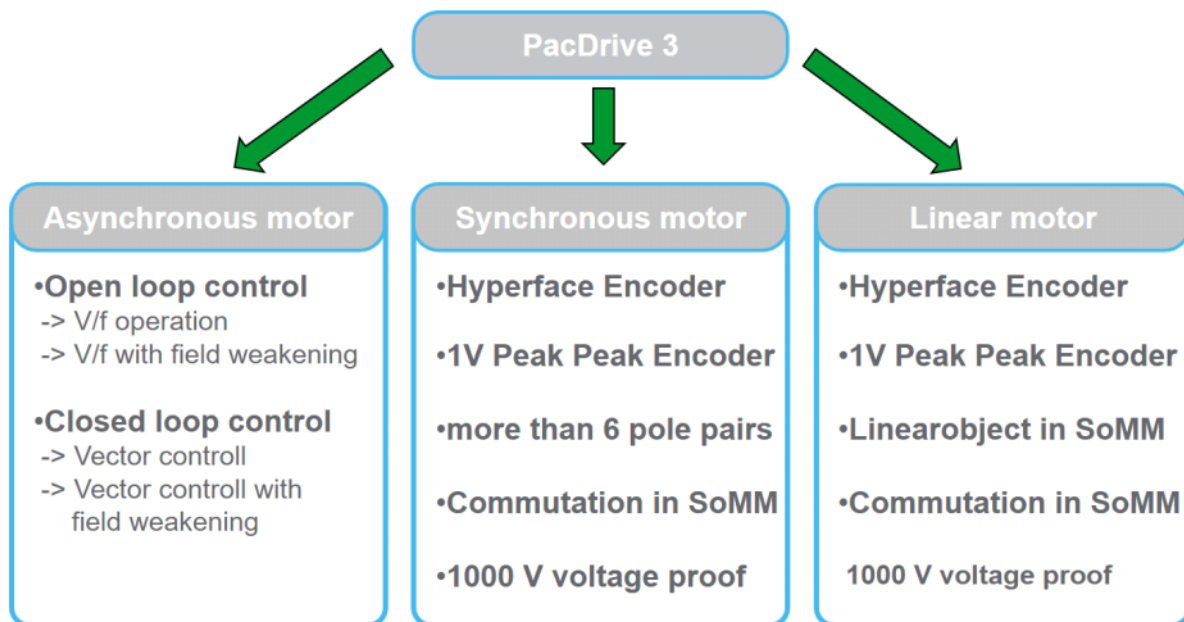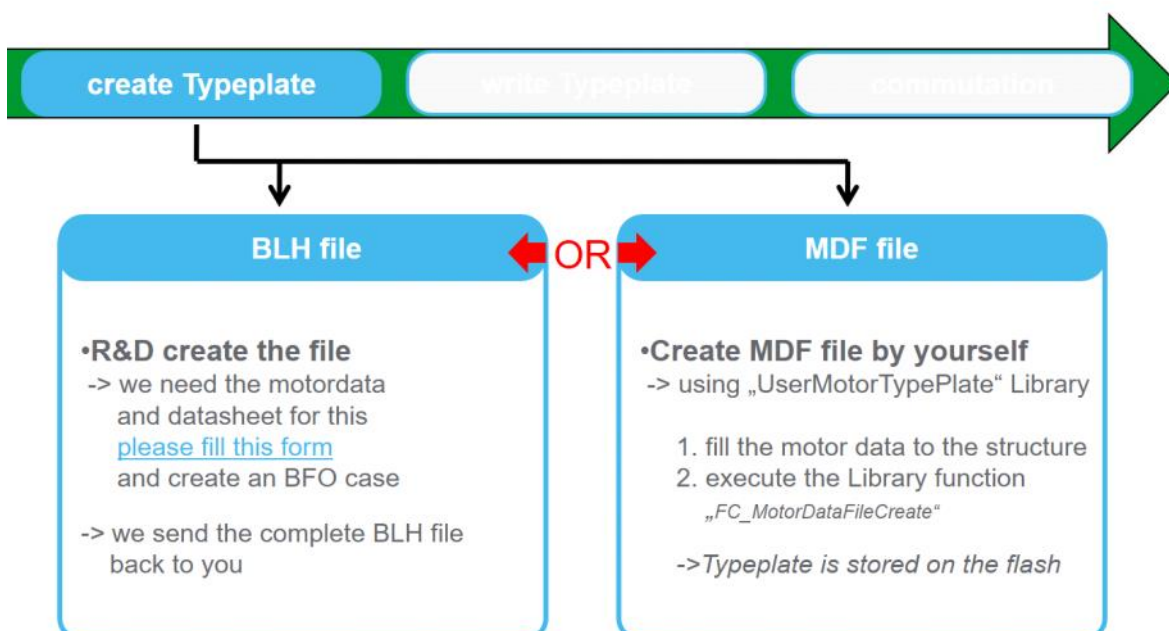# Motor typeplate overview

Dienstag, 15. Januar 2019   06:43
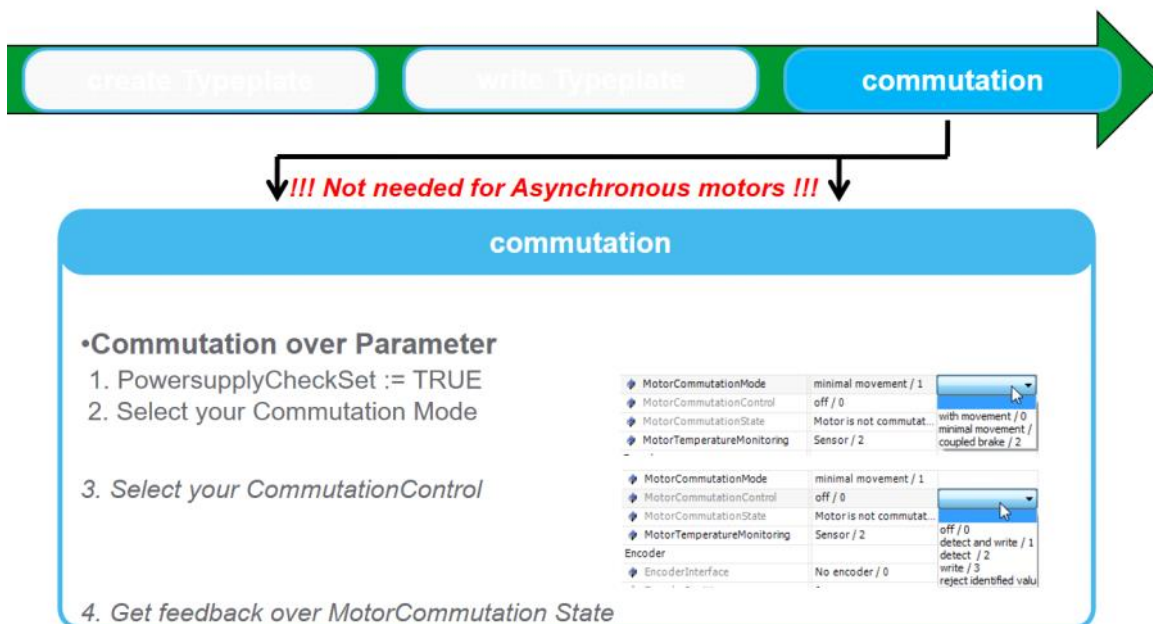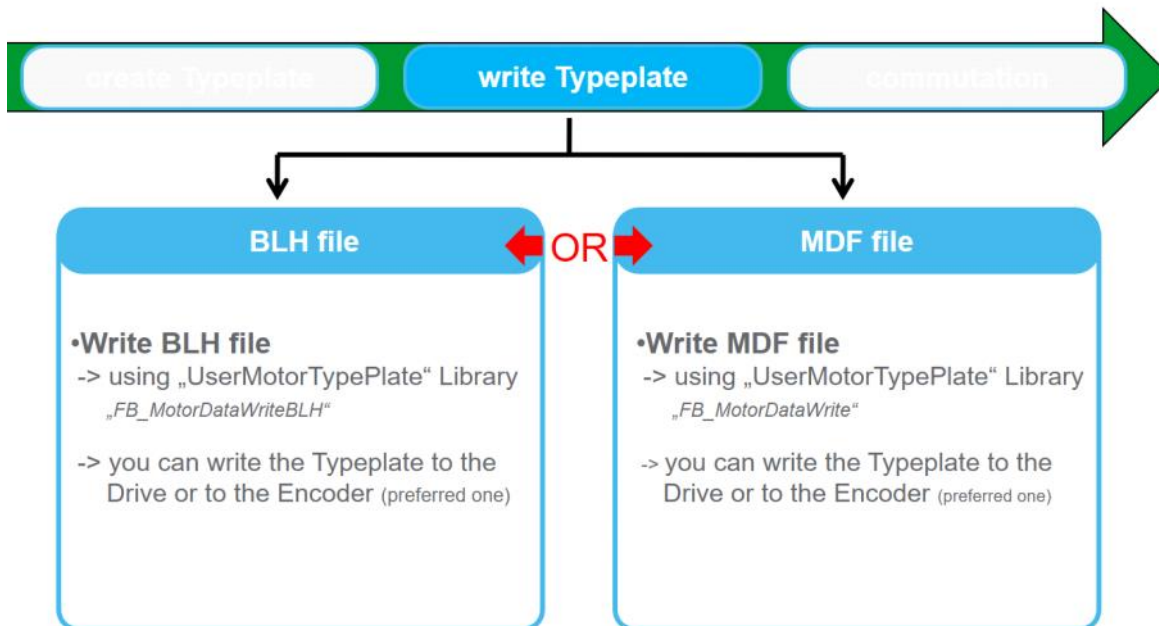
This document should help you to check if the motor can be used on PacDrive3 and which steps are necessary to do this.

Overview Supported 3rd Party Motors

PacDrive 3

Asynchronous motor

- **Open loop control**
  - -> V/f operation
  - -> V/f with field weakening

- **Closed loop control**
  - -> Vector controll
  - -> Vector controll with field weakening

Synchronous motor

- Hyperface Encoder
- 1V Peak Peak Encoder
- more than 6 pole pairs
- Commutation in SoMM
- 1000 V voltage proof

Linear motor

- Hyperface Encoder
- 1V Peak Peak Encoder
- Linearobject in SoMM
- Commutation in SoMM

  1000 V voltage proof

Three steps to run a 3rd Party Motor

create Typeplate → write Typeplate → commutation

BLH file   OR   MDF file

BLH file

- **R&D create the file**
  - -> we need the motordata and datasheet for this
    please fill this form
    and create an BFO case

  - -> we send the complete BLH file back to you

MDF file

- **Create MDF file by yourself**
  - -> using „UserMotorTypePlate" Library

    1. fill the motor data to the structure
    2. execute the Library function
       „FC_MotorDataFileCreate"

    ->Typeplate is stored on the flash

write Typeplate

create Typeplate | **write Typeplate** | commutation

BLH file ← OR → **MDF file**

•Write BLH file
-> using „UserMotorTypePlate" Library
   „FB_MotorDataWriteBLH"

-> you can write the Typeplate to the
   Drive or to the Encoder (preferred one)

•Write MDF file
-> using „UserMotorTypePlate" Library
   „FB_MotorDataWrite"

-> you can write the Typeplate to the
   Drive or to the Encoder (preferred one)

---

create Typeplate | write Typeplate | **commutation**

!!! Not needed for Asynchronous motors !!!

commutation

•Commutation over Parameter
1. PowersupplyCheckSet := TRUE
2. Select your Commutation Mode

3. *Select your CommutationControl*

4. Get feedback over MotorCommutation State

MotorCommutationMode	minimal movement / 1	
MotorCommutationControl	off / 0	
MotorCommutationState	Motor is not commutat...	with movement / 0
MotorTemperatureMonitoring	Sensor / 2	minimal movement /
		coupled brake / 2

MotorCommutationMode	minimal movement / 1	
MotorCommutationControl	off / 0	
MotorCommutationState	Motor is not commutat...	off / 0
MotorTemperatureMonitoring	Sensor / 2	detect and write / 1
Encoder		detect / 2
EncoderInterface	No encoder / 0	write / 3
		reject identified valu

Advantage MDF file:
- **Customer could create the file by himself**
- **Customer could switch fast to a different motor type (no wait time for blh file creation)**
- **Fast change of motor parameter possible in terms of wrong data (much faster as if you wait for a new blh file at the commisioning phase)**

Advantage BLH file:
- **If the customer would like to have less than 6 pole pairs (competition motor), we could create an blh file after clarification with Marketing.**

For motors with more than 6 pole pairs we recommend to use the mdf file.