Homing in torque mode

For drives IMD / IMDL / IMDC series

NOTICE

Principle for carrying out homing at torque

1. Limit engine torque
2. Increase the maximum following error parameter
3. Start a move in the desired direction, at low speed
4. Wait until the following error increases and reaches a threshold
5. Reset the position of the axis
6. Disable the axis
7. Reset the initial motor torque values and the following error parameter
8. Revalidate the axis

Example

Settings :

- Nominal current= 2,1A
- Maximal current = 200%
- Nominal torque = 2,5Nm
  Hence a maximum torque of 5Nm (2,5N x 200%)
  It is desired to limit the torque to 0.63 N during the homing, 12.6% of the maximum torque

- Following error = 2 mm
- Float accuracy = 0,01 (on Options menu\Languge iDPL\Compilator)

Program :

Task 1
```
Prog
...
...
Run 4 'Starts homing mode on torque
Wait Status(4) = 0 'wait homing done
Vel% = 100
...
...
EndProg
```

Task 4

```
Prog
  ' Storing initial following error
  VL255 = ReadParam(60FBh,04h)
  ' Forcing error to 10,00 mm (unit linked to the float accuracy parameter)
  WriteParam(60FBh,04h) = 1000
  ' Storing initial torque limitation
  VL254 = ReadParam(60F6h,10h)
  ' Forcing limitation to 12,6 % of maximal torque (fixed unit expressed in 0,1%)
  WriteParam(60F6h,10h) = 126
  ' Launching a low speed mouvement
  Vel% = 3
  Stti -
' Waiting for the following error threshold (ex : 5 mm)
BOUCLE:
  VR250 = Fe_S
  If VR250 < 0 Then
     VR250 = -VR250
  EndIf
  If VR250 < 5 Goto BOUCLE ' threshold of 5 mm
  ' Resetting the axis position and disable
  Home(0)
  Axis Off
  Delay 500
  ' Restore initial following error
  WriteParam(60FBh,04h) = VL255
  ' Restore initial limitation torque
  WriteParam(60F6h,10h) = VL254
  ' Enable
  Axis On
  Halt 4
EndProg
```