YOU NEED

- TMCM-1140
- Stepper motor
- Serial interface: RS485, CAN, or USB
- If you choose RS485 or CAN: interface converter suitable to your module
- Supply voltage +24V DC (9... 28V DC)
- TMCL-IDE program and PC
- Cables for interface, motor, and power

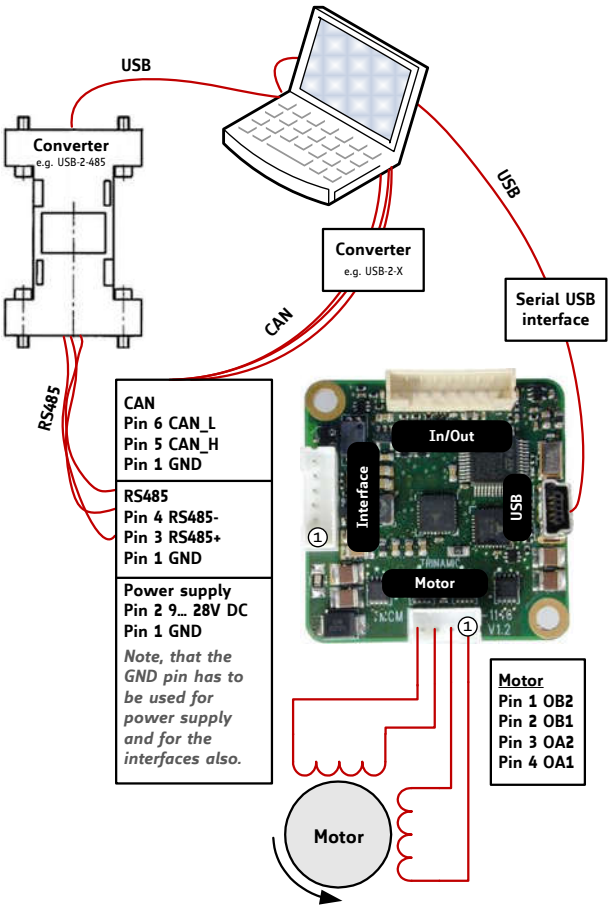
PRECAUTIONS

- Do not mix up connections or short-circuit pins.
- Avoid bounding I/O wires with motor power wires.
- Do not exceed the maximum power supply of +28V DC!
- Do not connect or disconnect the motor while powered!
- START WITH POWER SUPPLY OFF!

STARTING UP

1. Choose your interface.
   USB: connect USB interface to PC. Download and install the file *TMCM-1140.inf* (www.trinamic.com) after connecting the power supply.
   RS485 or CAN: use the interface connector and connect an interface converter.
   Connect the chosen interface to PC.
2. Connect the 24V DC power supply.
3. Connect motor to 4-pin connector of the module
4. Turn power ON. The green LED starts flashing slowly and the motor is powered but in standstill now. *If this does not occur, turn power OFF and check your connections and power supply!*
5. Start the TMCM-IDE program.
   See next page how to configure the connection and to use the IDE.
6. Type in the open window:

```
ROL 0, 500     //Rotate motor 0 with speed 500
WAIT TICKS, 0, 500
MST 0
ROR 0, 250     //Rotate motor 0 with speed 250
WAIT TICKS, 0, 500
MST 0
```



7. Click the *Assemble* icon. Thereafter click the *Download* icon to download the code to the module. Click the *Run* icon. The program will now be executed.
8. Click the *Stop* icon and start TMCL™ *Direct Mode* to issue the following commands:

   ROR rotate right, motor **0**, value **500** -> click *Execute* / The motor is rotating now.
   MST motor stop, motor **0** -> click *Execute* / The motor stops now.

FIRST STEPS ARE MADE.

Please refer to the TMCM-1140 Hardware and Firmware Manuals, too.

TRINAMIC Motion Control GmbH & Co. KG
Hamburg, Germany

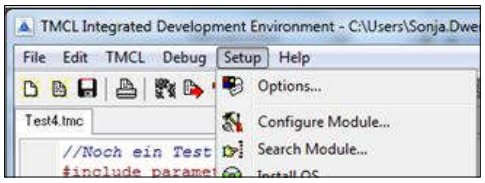
www.trinamic.com

TRINAMIC
MOTION CONTROL

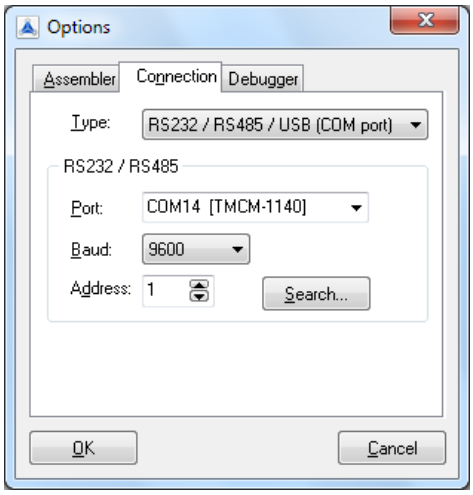
TMCL-IDE

The TMCL-IDE is available on www.trinamic.com.

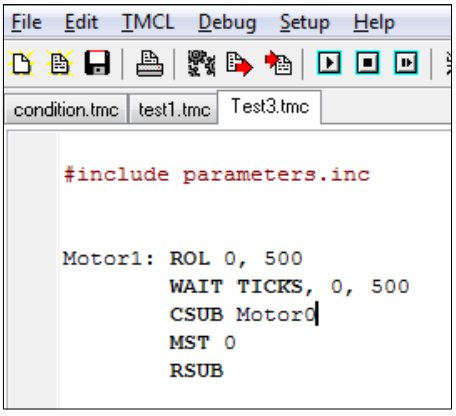
1. Make sure the COM port you intend to use is not blocked by another program.
2. Open TMCL-IDE by clicking *TMCL.exe*.
3. Choose *Setup* and *Options* and thereafter the *Connection tab*.



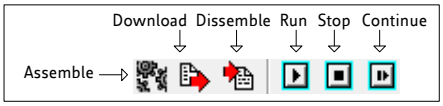
4. Choose *COM port* and *Type*. Click *OK*.



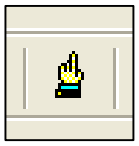
5. Write a program code into the editor window and save it with *File/Save*. Note, that TMCL programs run standalone on the module, too.



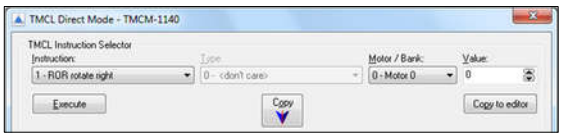
6. Click *Assemble* first, then *Download* and *Run* to start the program.



7. Stop all running programs by clicking *Stop* and start *Direct Mode* by clicking the appropriate icon.



8. The TMCM-1140 is automatically detected, if the communication is established.
9. Issue a command by choosing *Instruction*, *Type*, *Motor*, and *Value* and click *Execute* to send it to the module.



TROUBLESHOOTING

IF COMMUNICATION IS NOT ESTABLISHED

- Check if the green LED lights up. If not, check your power supply.
- Try to start *Direct Mode* and check, if the module is detected automatically.
- Check, if you are using the right COM port and it is not blocked by another program.
- Check, if the file *TMCM-1140.inf* is installed correctly.
- Check your connection settings. Default: 9600 baud, address 1.
- Check if the RS485 or CAN converter functions.

IF MOTOR DOES NOT RESPOND

- Usually the communication is not established (see above).
- Check the motor connection.
- If you are using a TMCL program try a movement command in *Direct Mode* to check if there is a problem with it.
- Restore factory settings by using instruction 137 for cancelling all settings modified by the user.