Example 2. Drive control mode using an external potentiometer.

Purpose:

Speed must be adjustable in the range from f_{min} to f_{max} using an external potentiometer. The reference signal is a voltage in the range of 0 to 10 V.

This example covers the wiring of a potentiometer powered from the internal 10 V supply (*Fig. 1*).

Wiring diagram of an external potentiometer to RD05

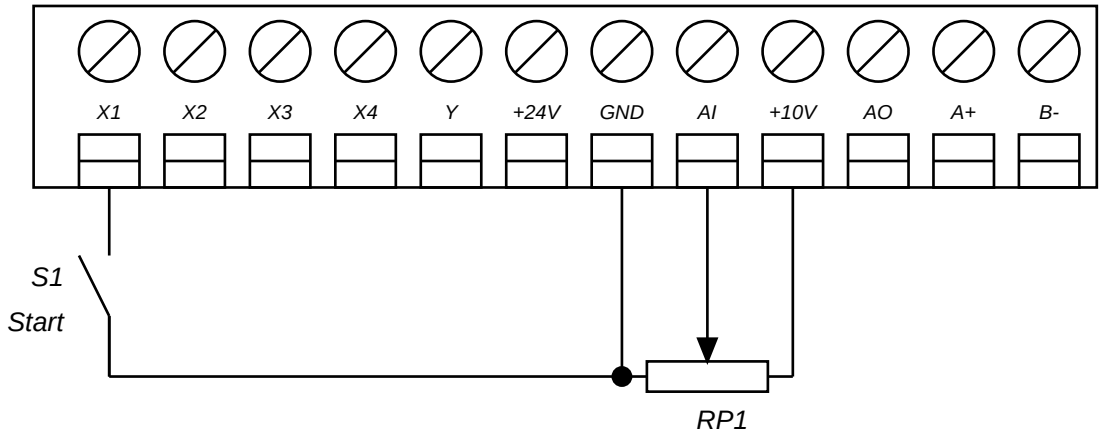


Figure 1. Wiring diagram of a pressure sensor to the RD (the built-in power supply is used)

Note: When connecting an external potentiometer, the DIP switch (in this example, AI) must be set to position U.

Control algorithm:

1) The motor is started by closing terminals X1 and COM.
2) The speed is changed by means of the external potentiometer.
3) The motor is stopped by opening terminals X1 and COM.

Parameter list.

Table 1. Parameter list.

No.	Code	Name	Value	Note
1	F01.01	Start signal source	1	Start and stop via a discrete input
2	F01.02	Frequency reference source	2	Analog input AI
3	F01.10	Maximum output frequency	50	Rated nameplate speed, Hz
4	F01.13	Lower frequency limit setting	0	Minimum motor rotation frequency, Hz
5	F01.22	Acceleration time	5	Water hammer protection
6	F01.23	Deceleration time	5	Water hammer protection
7	F02.00	Motor type		According to the motor
8	F02.01	Number of poles		According to the motor
9	F02.02	Motor rated power		According to the motor
10	F02.03	Motor rated frequency		According to the motor
11	F02.04	Motor rated rotation speed		According to the motor
12	F02.05	Motor rated voltage		According to the motor
13	F02.06	Motor rated current		According to the motor
14	F05.00	Terminal X1 function selection	1	Start in the forward direction
15	F05.20	Control mode selection	0	Two-wire system 1
16	F05.22	Active signal selection for terminals X1-X4	0000	Active when closed
17	F5.41	AI input signal type	0	Voltage range 0 - 10.00 V
18	F5.50	Lower limit of the analog input signal	0	Signal limit 0-10 V.