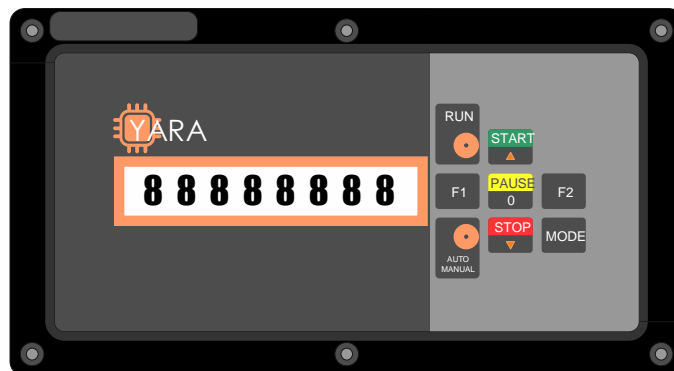


uDR-1300S PROGRAMMABLE MOTOR CONTROLLER

uDR-1300 is designed to control of stepper motor or servo motor rotation on the set distance or with the set speed without use of the computer or CNC controller.

Functions

- 50 lines of the movement program
- Automatic / Manual modes of operation
- Input of rotation parameters (speed, acceleration / braking, stop coordinates, lines of the program etc.) on a digital display
- Firmware correction for realization of non-standard algorithms (cyclic operations, a speed choice on an external signal, connection of the encoder position sensor for measurement of actual position of the motor, etc.)
- Includes 3A stepper motor driver or additional driver for any power (optional)
- synchronizing controllers to make complex movements



OPERATION

The controller has 3 modes of operation.

- Automatic
- Manual
- Parameters

To select of the desired mode press **MODE** key. The AUTO/MANUAL LED will change it's mode according to the following list.

- AUTOMATIC mode – LED is On
- Manual mode – LED is OFF

To reach Parameters mode long press **MODE** from Manual mode.


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Manual mode

You can move motor by pressing  or  keys. The motor will rotate with selected speed on fixed distance.


To STOP movement if it is not finished press the same key again.

To change the speed in MANUAL mode press  key, input desired speed and move cursor out of the input field.

To change the distance in MANUAL mode ("Manual step" in the parameters mode) press  key, input desired data and move cursor out of the input field.



Automatic mode

This mode is applied for execution of the program written in memory of the device. How to write the program you can find in "Parameters mode" description.

To start the program press  key. To make a temporary pause press  key. To stop the program and rewind to the first line press  key.

Parameters mode

To reach Parameters mode long press  from Manual mode.

Select desired parameter address and press  to input desired value. To return to the parameter address section press  again.

Parameters 0..99 are the system parameters. Check the following table for description.

Address	Name	Description	Notes
0	Firmware version		Read only
1	Acceleration		1..50000
2	Start speed	The speed to start from. If selected speed is lower then Start speed, then selected speed will be applied	1..10000
3	Defined speed	Speed of rotation	1..10000
4	Manual step	Length of the movement in Manual mode	

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5	Point position	Position of the point on the display for separating the fractional part	0..6
6	Divider	For dividing the inner axis counter before output actual value on the display	1..1000
7	Multiplier	For multiplying the inner axis counter before output actual value on the display	1..1000

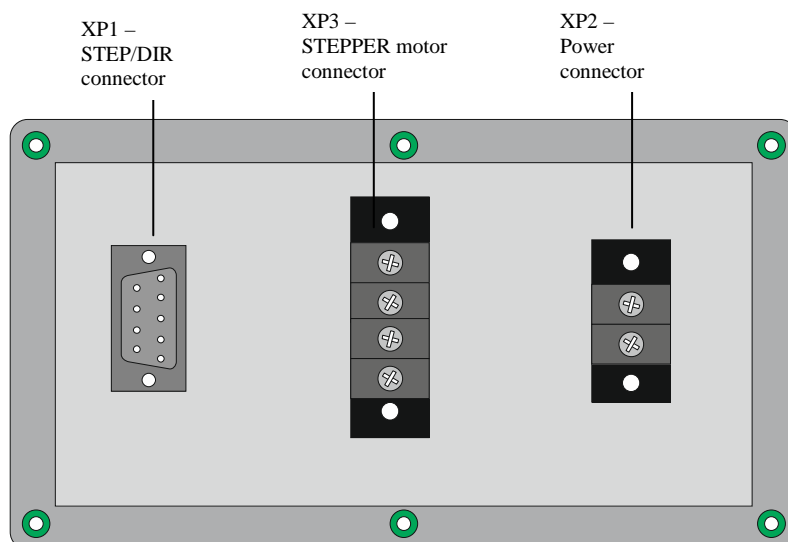
Parameters 100..149 are the movement program. Parameter 100 is the first line of movement, parameter 101 is the second and so on.

To write the program select P100 in the parameters mode, then press **MODE**, input function number, then press **MODE**, input function value, press **MODE** to return to the parameter address selection. Select P101 to write the next line and so on.

The table of available functions is listed below:

Number	Name	Description	Notes
0	End Of program	Input this function after all lines to stop the program execution	
1	Speed selection	Selection of the current speed	
3	Go to Distance	Movement to selected coordinate	
4	Delay	Make a pause	
		Other functions are available on request	

CONNECTION

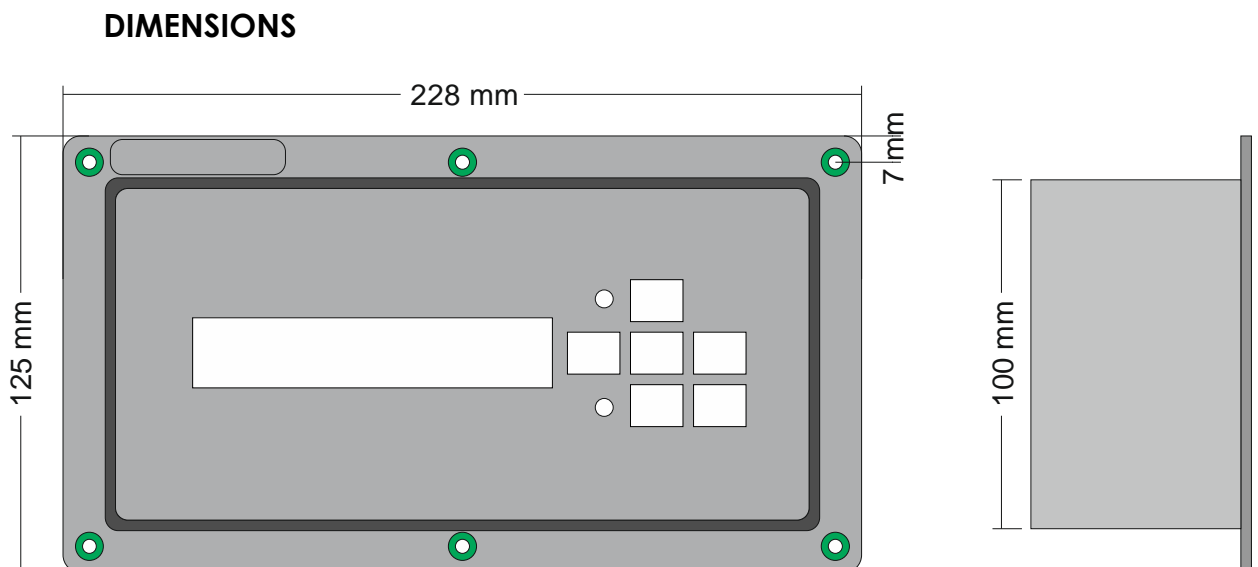


Back view of the controller.

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Pinout of the XP1 connector (DB9M).

Pin	Signal	Notes
1	STEP	STEP signal to external servo / stepper drive
2	DIR	DIR signal to external servo / stepper drive
3		
4		
5		
6		
7		
8		
9	GND	Common



uDR-1300S PROGRAMMABLE MOTOR CONTROLLER

ORDERING INFORMATION

uDR-1300S.A.B.C

A - Power.

Available variants:

220 - Power 220V 50Hz

24 - Power 24V DC

By request we are ready to add necessary power ranges (eg 110V etc)

B – Output type.

Available variants:

SD - STEP / DIR output, No Stepper motor driver inside

D - 3.5A stepper driver inside

C – IO signals

Available variants:

0 - no input / output signals

44 - 4 opto input 24V DC, 4 relay output signals

For synchronizing of several controllers you need to order this option.

Ordering example:

uDR-1300S.220.SD.44

Model uDR-1300S with 220V 50 Hz power supply, STEP/DIR output (without 3.5A driver inside) 4 opto input and 4 relay output signals.

CONTACTS

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