QUICK START GUIDE

Mirka ABB Kit

Mirka ABB Kit content

Mirka finishing tool for robots

Mirka motor drive cabinet EtherNet/IP:	MIA6514312
Adapter flange with mounting screws:	MIA6560111
Mains cable CE 230V IEC C13, CEROS, 2 m:	MIN6516011
10 meter robot cable:	MIA6512311
Mounting screws and a power cable	

Easy Teach Device is not included in the Mirka Kit

1. Tool installation

1. Mount adapter flange on the robot using 4 x DIN 7991 M6 x 10 bolts and a 4 mm hex key (8 Nm).

NOTE: The rotation of the adapter flange and the flange of the robot should be aligned so that the dowel pin holes match.

2. Mount the finishing tool on the adapter flange using 6 x DIN 912 M8 x 16 bolts and a 6 mm hex key (18 Nm).
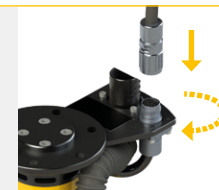
NOTE: The dowel pin makes sure the tools are mounted in the correct alignment.

3. Arrange the robot cable and eventual vacuum hose alongside the robot and make sure the cable and hose does not hinder the movement of the arm, E.g./I.e. by using clamps or by suspending the cables in air.

4. Connect robot cable to the finishing tool.

Rotation of the adapter flange
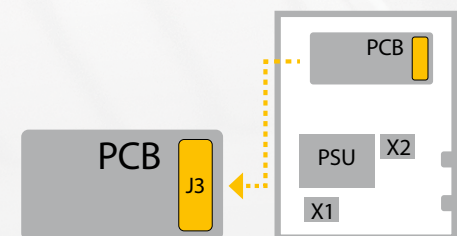

Connecting the robot cable

1.1. Installing cables

Unpack the motor drive cabinet from its transport packaging. Open the cabinet with the supplied key and remove the packaging material inside.

Locate connector J3 (robot cable). Pull the robot cable through the middle pass-through fitting and clamp the cable shield to X2.

Insert a flat screwdriver in the rectangular hole and push down to open up the connector ports.

1.2. Enable state cable

For the sander to be able to operate, terminal block 4 must be connected to a 24V output from the robot, while terminal block 6 should be connected to 0V on the robot. For enhanced safety, the enable state output could be set to low if the robot encounters an issue that causes it to stop. This will automatically halt the sanding/polishing head.

The 3 meter, 2-pole cable provided with the cabinet should be used for connecting the enable state as per the instructions. The add-in is preconfigured to stop the tool when robot motors goes to off.
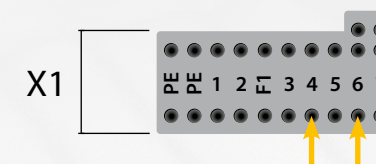
- Robot I/O board X1:2 ➡ Mirka cabinet X1:4
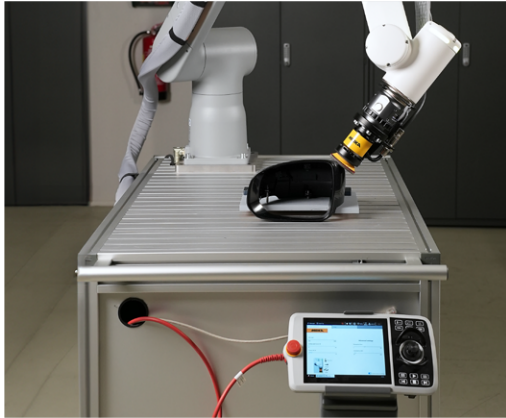- Robot 0V X19:8 ➡ Mirka cabinet X1:6

Connect the cables in the following way:

Insert robot cable wires in the following order:

NTC-	●	(Yellow)
GND	○	*Pre-connected*
Phase C	●	(Black)
Phase B	●	(Blue)
Phase A	●	(Brown, 1 mm^2)
NTC+	●	(Brown, 0,25 mm^2)
P-	●	(Green)
C-	●	(Grey)
C+	●	(Pink)
P+	○	(White)

TB 4 to 24V robot output and TB 6 to robot 0V:

NOTE: The weight of the cable and vacuum hose may affect the force measurement of the sensor.
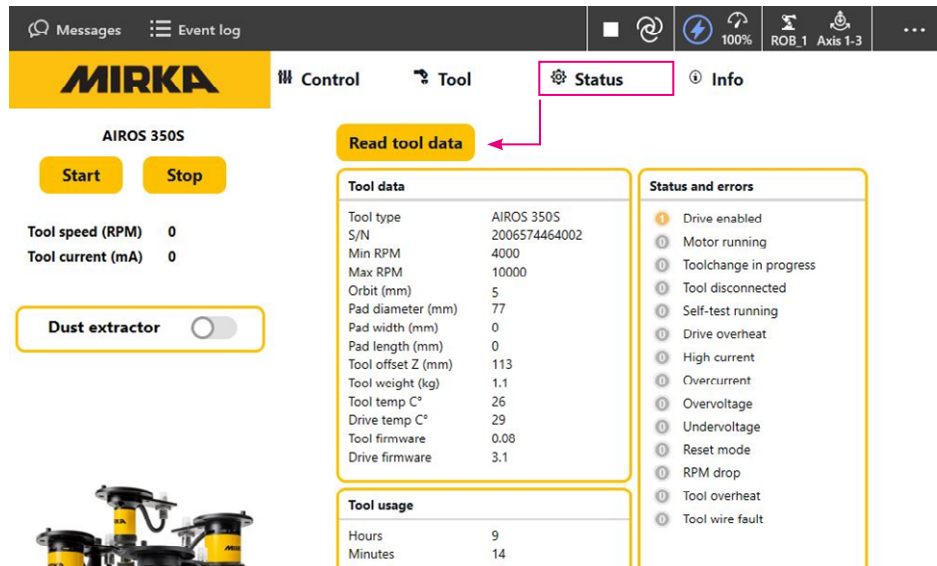
WARNING!

Miswiring of the robot cable can cause permanent damage to the motor drive. Double check that all wires are in their correct position. If unsure have an electrician or a person skilled in the art do the installation.

2. Software installation

The software in form of RobotWare Add-in is downloadable from www.mirka.com, it can be installed via a USB stick or via RobotStudio Installation Manager 7.

Availible options is "Mirka Wizard blocks for sanding and polishing" which adds the Mirka Wizard blocks, this requires force control option in the robot. The other option "Easy Teach Device commands for Mirka tool" adds commands for the hard-ware Easy Teach Device if present. Choose the fieldbus for your system.

After successful installation you can read Tool-data in the "Status"-tab by pressing "Read tool data" button.
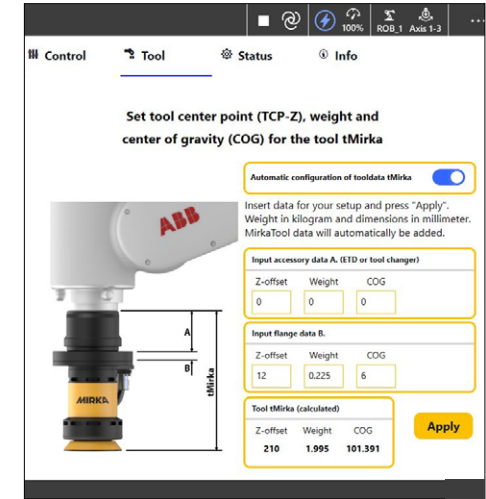

TCP (Tool Center Point) setup

It is important to have the TCP correctly setup. Choose the "Tool" tab and insert data for your hardware setup.

If you have the tool fastened in an angle or if you want to control the tooldata yourself, switch to manual configuration of tooldata.

	Z-offset	Weight	COG
Flange	12	0.225	6
ETD	85	0.67	30
ToolChanger	57	1.23	28

It is important to use the tool tMirka in the robot jogging window when start making the robot programs.

Software configuration

For proper configuration of the tool, please use the information in the manuals found at www.mirka.com

FINISHING TOOL TCP DATA	X, Y and Z Position [mm]		
	X	Y	Z
Mirka® AIROS 130S	0	0	127
Mirka® AIROS 150S	0	0	107
Mirka® AIROS 300P	0	0	122
Mirka® AIROS 312P	0	0	113
Mirka® AIROS 350S	0	0	113
Mirka® AIROS 353S	0	0	117
Mirka® AIROS 550S	0	0	113
Mirka® AIROS 650S	0	0	113

Troubleshooting finishing tool

Please refer to the tool manual, available at www.mirka.com

Get the latest software

Visit www.mirka.com/airos/download to download the latest software.

Code: 700899082

6 416868 273793