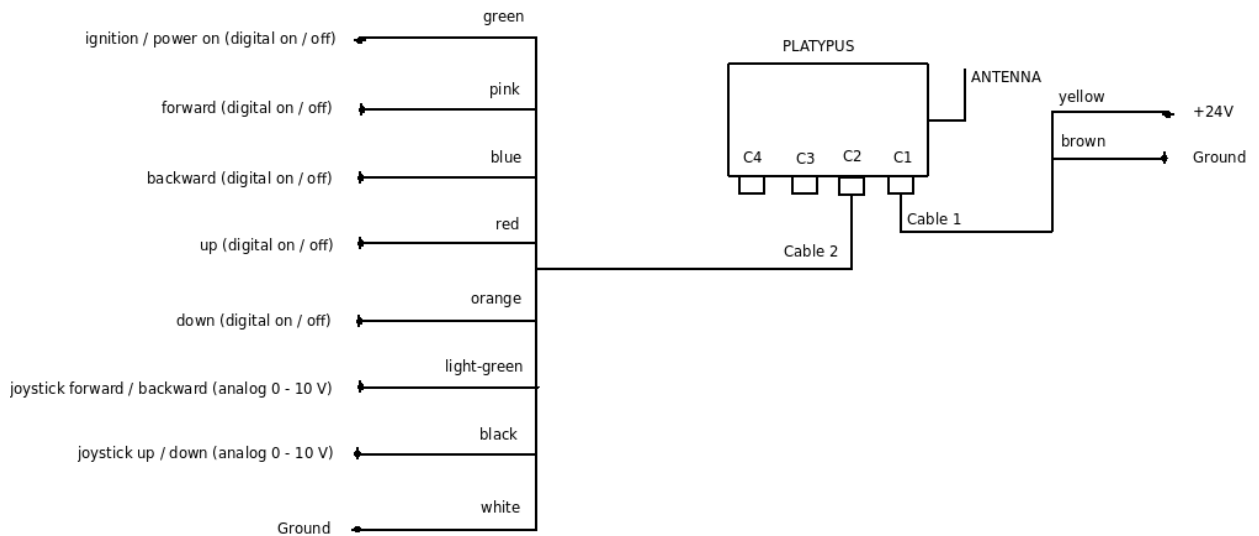


Orca Quick Guide

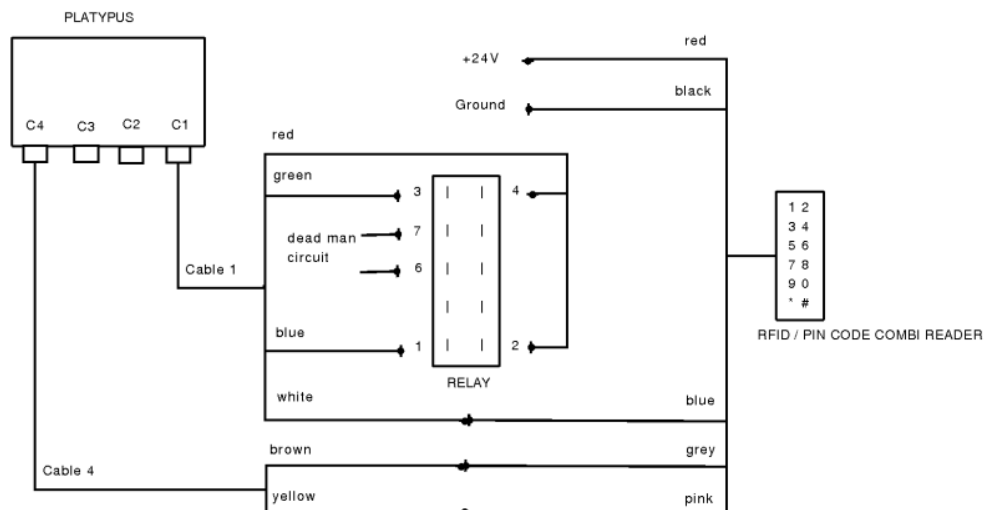
To mount Orca in the forklift, proceed as follows:

1. Locate the necessary signal sources in the forklift. You will need to find signals for Orca inputs from 02 to 05 or from 06 to 07, depending on the forklift. Input 01 is optional.
2. Locate the power source. Take the power from as close to the battery as possible for stable current.
3. Plan the location for:
 - Platypus
 - Current sensor, if one must be installed
 - Pulse sensor for speed/distance, if one must be installed
 - Antenna
 - Driver recognition module, if one must be installed
 - Relay
4. Verify that the PIN code is disabled from the SIM card. This can be done using any mobile phone.
5. Install the SIM card to Platypus. You must temporarily open the four screws under Platypus for this.
6. Mount the equipment. You will need four screws for Platypus and a selection of additional mounting accessories for the other equipment. The screw type depends on the mounting location.
7. If you mount a drive-stop relay, it must be connected to the dead man's switch. The relay is delivered with a DIN rail. You will need six Abiko connectors to mount the relay.
8. Connect the signal cables and the antenna.
9. Connect power and check that current and grounding are correct.
10. Verify that water does not gather to the mounting location.
11. Connect a laptop or a maintenance module to Platypus by using the maintenance cable.
12. Check that the activity signals are OK.
 - If you use digital signals to measure the forklift movement, the signals must be over 1 V to exceed the threshold.
 - If you use analog signals from the joystick to measure the forklift movement, write down the resting current and the threshold when the forklift starts to move. This information is later needed on the server to report movement.
13. Check that the sensor signals are OK. The acceleration values (X/Y/Z) have no defaults, because the resting values depend on the Platypus installation position. However, ensure that the values do not change when the forklift does not move. If they do, check that that mounting has been made properly.
14. Inform Oliotalo Oy that the Platypus has been successfully mounted.

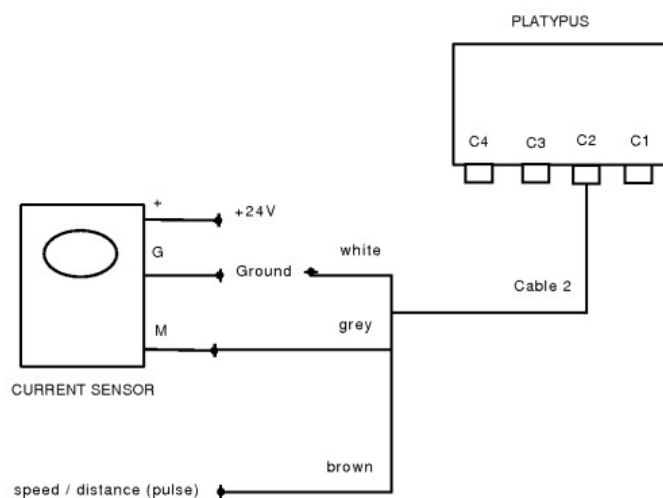
ORCA STANDARD INSTALLATION DIAGRAM

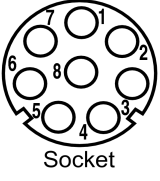


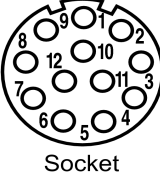
ORCA ADVANCED DRIVER RECOGNITION INSTALLATION DIAGRAM



ORCA ADVANCED USAGE MONITORING INSTALLATION DIAGRAM



Connector	Pin Number	Description	Colour Code	Orca Connection
 Socket	1	Power supply, 12-48 V DC	Yellow	Empty
	2	Power GND	Brown	Empty
	3	Power out, 5V 1A regulated	Red	Control current for the drive-stop relay.
	4	Open drain 1, 1 A FET	Blue	Control signal for the drive-stop relay.
	5	Open drain 2, 1 A FET	Green	Control signal for the drive-stop relay.
	6	Open drain 3, 1 A FET	White	Control signal for the RFID / PIN Combi Reader green led.
	7	Digi out 1, 5 V, 20mA source sink	Grey	Empty
	8	Digi out 2, 5 V, 20mA source sink	Pink	Empty

Connector	Pin Number	Colour Code	Description
 Socket	1	Green	Optional ignition / power signal. Digital, threshold 1 V. Max 48 V.
	2	Pink	Forward signal. Digital, threshold 1 V. Max 48 V threshold adjustable.
	3	Blue	Backward signal. Digital, threshold 1 V. Max 48 V threshold adjustable.
	4	Red	Up signal. Digital, threshold 1 V. Max 48 V threshold adjustable.
	5	Orange	Down signal. Digital, threshold 1 V. Max 48 V threshold adjustable.
	6	Light-green	Joystick forward / backward. Analog 1 - 10 V. Threshold adjustable.
	7	Black	Joystick up / down. Analog 1 - 10 V. Threshold adjustable.
	8	Purple	Empty
	9	Grey	Current sensor. Analog 0 - 5 V. From the supplied current sensor.
	10	Brown	Speed / distance. A pulse sensor. In relation to the drive motor RPM. Pulses / rotation, gear ratio and wheel size are configurable.
	11	Yellow	Empty
	12	White	Ground

