

TROUBLESHOOTING

Error codes on your Winther Cargo e-bike

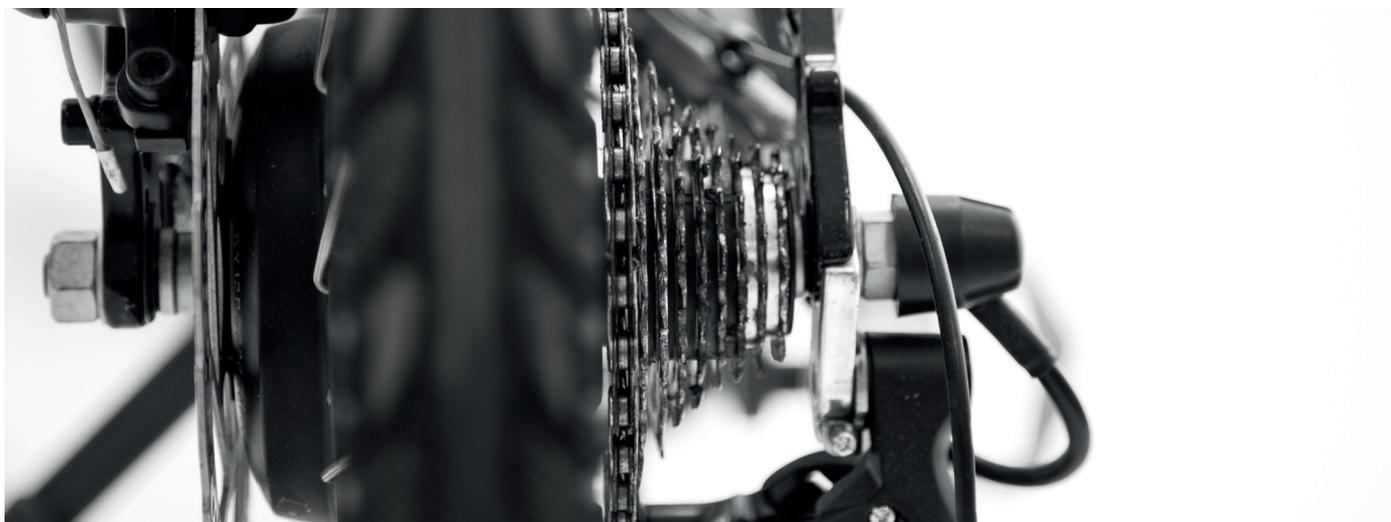
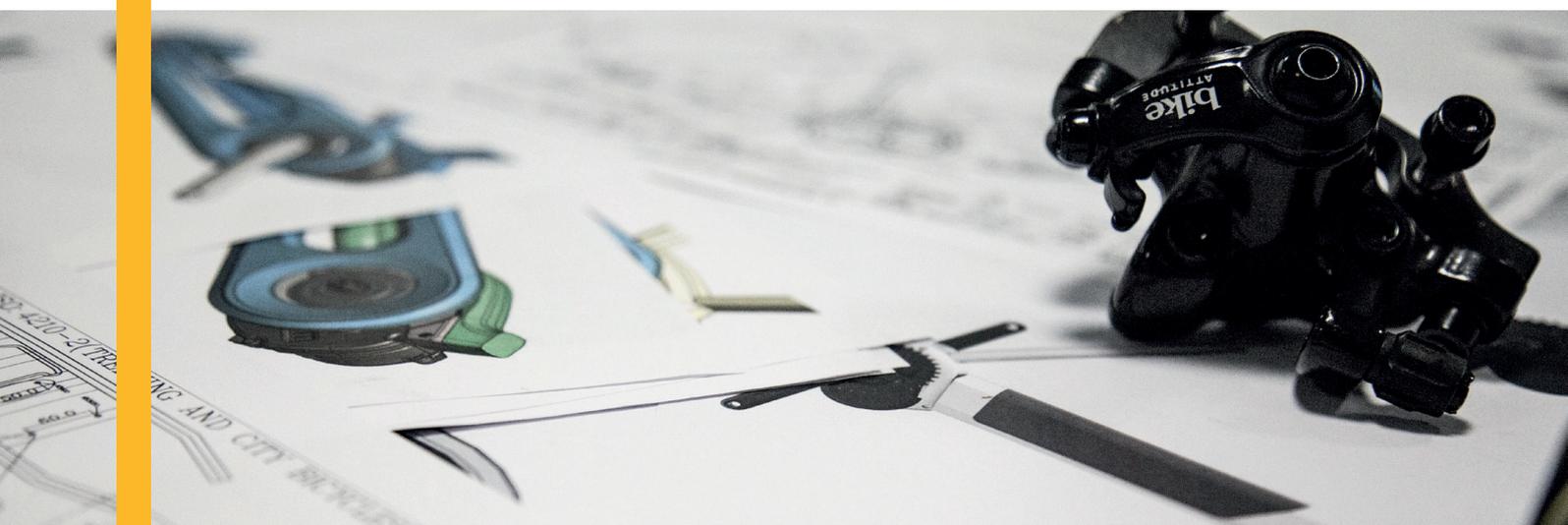


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Introduction

Use this guide to detect and understand displayed errors on your e-bike. If you cannot find a suitable solution in this guide, please contact us and we will help you get further.

Identify your motor

Before you get on with this guide, identify your motor and get the right guidance.

Pictures below shows the 3 different motors.



8 Fun (50286-BL)

Rear wheel motor



50609-1-BL

*Rear wheel motor
w/cassette*



50675-BL

*Rear wheel motor
w/cassette*

Error codes for motor 8 Fun (50286)

Please check following points and see error codes before contacting Pro-Movec:

1. Check voltage at the battery, must be minimum 41.3 v fully charged, if the battery voltage is below 41.3 V, check the charger, it must be 42V +/-0.3 V.
2. Attach the battery and turn on the system.
3. Displaying of double errors indicate a defect on crank sensor.
4. If the motor does not help when pedaling, but walk assistant works, check the distance between sensor and the magnetic disc - it should be 2 mm.
5. If the distance is ok, replace the sensor.
6. If there is damage on the sensor tip, replace the sensor.

ERROR CODES	MEANING	SOLUTION
EO ²	The controller has been exposed to a high voltage. If the error indicator still shows "EO ² " after a system restart, the controller is defect.	Replace controller.
EO ³	Fault on motor wire.	Check the plug Replace controller or inner-part / motor.
EO ⁴	Indicates to low a voltage.	Charge or replace the battery. Check charger. Check fuse / fuse holder.
EO ⁵	Indicates that brakes are activated. Turns of when the brake is deactivated.	Release the brake handle. Replace brake handle.
EO ⁶	Indicates that the crank sensor is defect.	Replace crank sensor.
EO ⁷	Indicates error on the throttle.	Turn throttle back to basics or replace it.

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EO ⁸	Indicates error on the controller, controller plug or wires.	Check plug or replace the controller.
EO ⁹	Indicate system-shoot-down because to high voltage.	Replace the controller. Replace the battery.

Parts list

Motor 8 Fun (50286-BL), Cargo kit.

Part No.	Product name	Quantity
50286-BL	Motor, rear wheel, 250 W, 36V, 28", black	1 piece
50128	Sensor, speed, set w/75mm disc	1 piece
50439-3370	Display, LCD, 200W, 36V, 28"	1 piece
50021-3470	Throttle, 36V, 3470mm	1 piece
50466-BL	controller, 250w, LCD, w/ freewheel, black	1 piece
50083	Frame (carrier 2, 26")	1 piece
50048	Bottompart w/connector pins, carrier 2	1 piece
50003	Cover	1 piece
50120	Screw for cover 3.5x20, carrier 2	1 piece
50121	Screw for bottompart 5x10mm, carrier 2	4 pieces
50122	Screw for bottompart / controller, carrier 2	2 pieces
50123	Nut for connectorpins, M4 brass	2 pieces
50124	Washer f. connector pins	2 pieces

Error codes for motor 50609-1-BL

Please check following points and see error codes before contacting Pro-Movec:

1. Check voltage at the battery, must be minimum 41.3 v fully charged, if the battery voltage is below 41.3 V, check the charger, it must be 42V +/-0.3 V.
2. Attach the battery and turn on the system.
3. If the motor does not help when pedaling, but walk assistant works, check the distance between sensor and the magnetic disc - it should be 2 mm.
4. If the distance is ok, replace the sensor.
5. If there is damage on the sensor tip, replace the sensor.

ERROR CODES	MEANING	SOLUTION
EO ²	Faults in power consumption, power consumption is too high > 14 A.	Replace the engine unit or Change complete motor unit.
EO ³	Faults in the controller.	Replace the controller unit.
EO ⁴	The throttle, if fitted, is active when the power is turned on.	Set the throttle to the position "0" be sure to throttle itself snaps back to poss. "0" Replace throttle.
EO ⁵	The brake cut off, if fitted, is active when the power is turned on.	Check brake and cut off contact for damage. Disconnect cut off contact NS ok mount new contact.
EO ⁸	Low power.	Charge the battery fully up, See above about charging the battery. (1.)

Parts list

Motor 50609-1-BL, Cargo Kit.

Part No.	Product name	Quantity
50609-1-BL	Motor, Rear wheel,casette, 250 W,36 V,28"	1 piece
50438	Sensor, speed, set, 750 mm, incl.bracket	1 piece
50707-2	Display, LCD compact int. in throttle	1 piece
50715-BL	Controller for new int. LCD/ LED display	1 piece
50356	Wire for brake cut off wire L=3200mm	1 piece
50083	Frame (carrier 2, 26")	1 piece
50048	Bottompart w/connector pins, carrier 2	1 piece
50003	Cover	1 piece
50120	Screw for cover 3,5x20, carrier 2	1 piece
50121	Screw for bottompart 5x10mm, carrier 2	4 pieces
50122	Screw for bottompart / controller, carrier 2	2 pieces
50123	Nut for connectorpins, M4 brass	2 pieces
50124	Washer f. connector pins	2 pieces

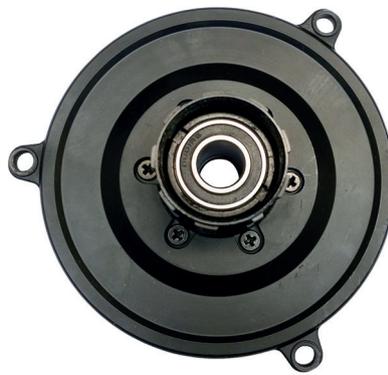
Extra information regarding motor 50609-1-BL

We have used an improved soldering technique on the circuit board on motor 50609 and added 40 watt extra to the motor.

If motor 50609 needs replacement then use the new inner part (50627*16 pol) and use cassette lid (50626-1-BL).



*New motor model
50609-1-BL*



Cassette lid 50626-1-BL



*New inner part 50627*16pol*

Find all the items on [promovec.com](https://www.promovec.com)

Replacement of disc brake, motor 50609-1-BL

To prevent damaging the housing when mounting the screws, it is important to use the screws that came with the motor.

Screws from other brands e.g. Shimano cannot be used.

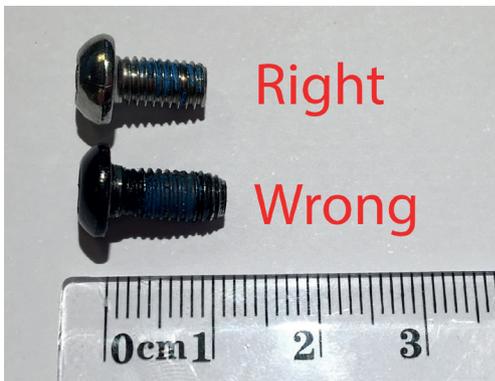
If wrong screws are used the housing will be damaged and prevent the motor from running.



Replacement of disc brake with screws from the motor.



Damaged housing.



The screws that come with the motor is 5 x 10 mm.

Error codes for motor 50675-BL

Please check following points and see error codes before contacting Pro-Movec:

1. Check voltage at the battery, must be minimum 41.3 v fully charged, if the battery voltage is below 41.3 V, check the charger, it must be 42V +/-0.3 V.
2. Attach the battery and turn on the system.
3. Is there a display on the e-bike?
4. How much power (V) is on the battery when it's fully charged - measure in the pole-end when the ignition is on the battery, and rear lamp is on.
5. If the battery reaches a voltage at min. 41,3 V mount the battery on the e-bike and turn on the system. Can you see light in display / diodes in the throttle?
6. What is the distance between crank sensor and magnet?
7. If the system is with a display the error code will be displayed.
8. Check if the plug for motor wire is assembled correct.
9. Remove the black lid over the controller box and check for damages on wires or defective plugs.

ERROR CODES	MEANING	SOLUTION
EO ²	Faults in power consumption, power consumption is too high > 14 Ah.	Replace the engine unit or Change complete motor unit.
EO ³	Faults in the controller.	Replace the controller unit.
EO ⁴	The throttle, if fitted, is active when the power is turned on.	Set the throttle to the position "0" be sure to throttle itself snaps back two poss. "0" Replace throttle.

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EO ⁵	The brake cut off, if fitted, is active when the power is turned on.	Check brake and cut off contact for damage. Disconnect cut off contact NS ok mount new contact.
EO ⁸	Low power.	Charge the battery fully up, See above about charging the battery. (1.)

Parts list

Motor 50675-BL, Cargo Kit.

Part No.	Product name	Quantity
50675- BL	Motor, Rearwheel, 250w, 28", 36V	1 piece
50961	Sensor, speed compact bl connect	1 piece
50683-26-BL	Controller f.motor 50675 (Rear wheel)	1 piece
50707-2	Display, LCD compact int. in throttle	1 piece
50356	Wire for brake cut off wire L=3200mm	1 piece
50083-XL	Frame (carrier 2-XL, 26")	1 piece
50048	Bottompart w/connector pins, carrier 2	1 piece
50003	Cover	1 piece
50120	Screw for cover 3,5x20, carrier 2	1 piece

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50121	Screw for bottompart 5x10mm, carrier 2	4 pieces
50122	Screw for bottompart / controller, carrier 2	2 pieces
50123	Nut for connectorpins, M4 brass	2 pieces
50124	Washer f. connector pins	2 pieces

Extra information regarding motor 50675-BL

In case of error code "EO²" on the motor, replace innerpart with 50633 and use a special tool for opening the motor.

If there is a defect on cassette lid, replace it with 50650-BL.
Find the items on promovec.com.



New inner part 50633.



Special tool for motor opening (50756)



Troubleshooting on battery & charger

Multimeter settings



Install the multimeter on
“DC-voltage” - see picture.



If possible, set the knob to “200 V $\overline{\text{--}}$ ”
The black wire must be in the
entry marked “COM”, and the red
wire should be placed in entrance
marked “VΩmA”.

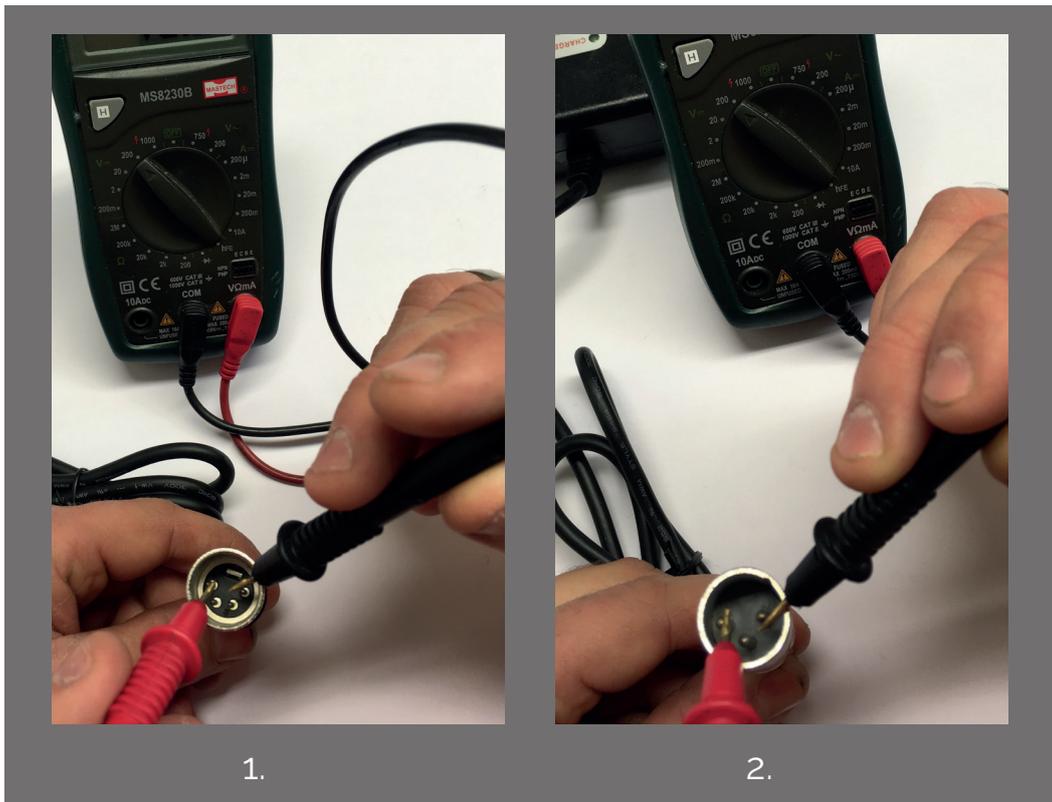
Measuring of battery with multimeter



1. Battery must be turned on.
2. The multimeter measuring pins are placed on each battery pole. By doing so you can measure the battery voltage.
3. When the battery is fully charged, it must measure at least 41,3 V.

Measuring of charger

1. On chargers with a 4-pin connector, measure pin 1 and 4. Red measure stick on pin 1 and black measure stick on pin 4.
2. On chargers with a 3-pin connector, measure pins 1 and 2. Red measure stick on pin 1 and black measure stick on pin 2.



Connection of charger and charging

1. Insert charger plug in the battery, and the mains plug (230V) in the socket - turn on the charger.
2. When the diode "charge" is green, and "power" is red - it indicates the charger is turned on.
3. When the diode "charge" and "power" lights red, it indicates that battery is charging.
4. When the diode "charge" lights green the battery is fully charged.



1.



2. / 4.



3.

Check of fuse

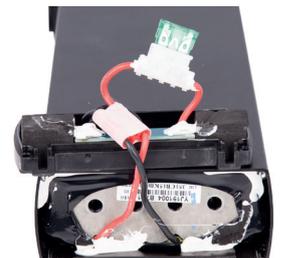
1. Remove the 4 screws that hold the black plastic piece / or rear light (see pictures below).
2. Remove the tape around the fuse.
3. Check that the fuse is properly mounted in the holder by "rocking" it a bit. Also remove it from the holder and check that the sticks are clean and free from soot. Squeeze the fuse holder with a pliers to further secure the fuse.

Check if your battery is with 3-or 4-pins

The fuse in a 3-pin battery is located behind the rear light, and in a 4 pin battery is located in opposite end. Release the screws in the respective ends to get access to the fuse



3-pin: remove the rear light.



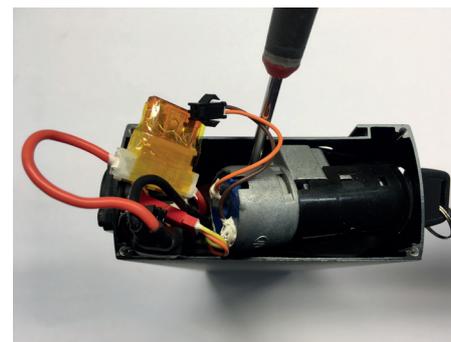
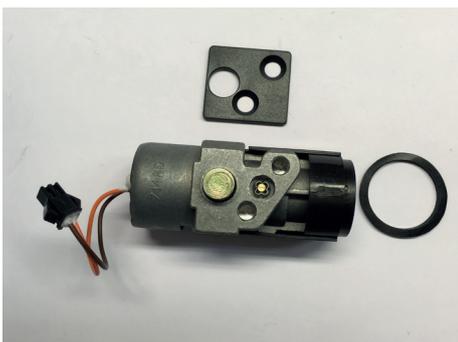
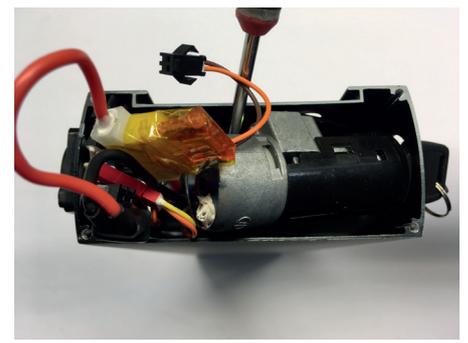
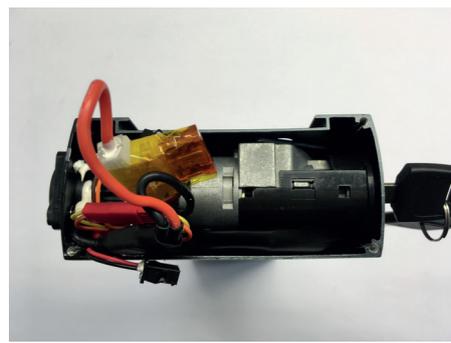
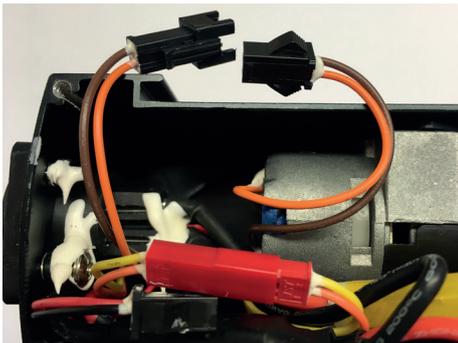
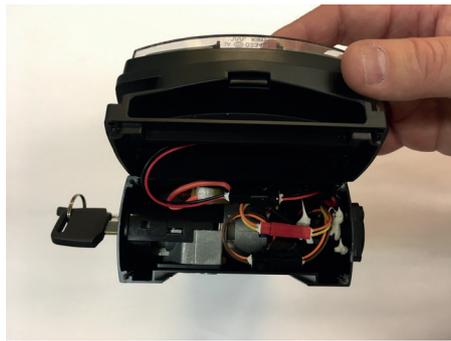
4-pin: remove the black plastic rear end.

This is a an exemple of a burned and broken fuse.



Replacement of ignition lock

1. Remove the 4 screws that hold the rear light (at the end).
2. Remove the rear light by clicking the plug off (black / red wire)
3. Remove the two bolts holding the ignition lock (underside)
4. Separate the plug (yellow / orange wire)
5. The fuse and other connectors are tilted.
6. Tilt the ignition lock with a screwdriver or the like, and remove it from the battery case.
7. Mount it in reverse order.
8. Remember to install distance block and rubber ring on the new ignition lock.



Test tools

Battery and Charger Tester

This is a easy tool for checking voltage (DC) on the battery, and measure if charger is fully functional.

You can find the tool on promovec.com (article no. 50741)



Test plugs for charger - 3. and 4-pin.

BMS tool

Get read-out data from your battery with the 4-pins BMS-tool. All the data is readable with a software program you download via promovec.com.

Find the tool on promovec.com (article no. 50649-1)



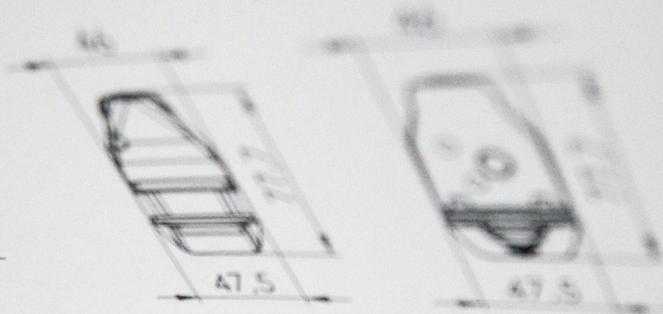
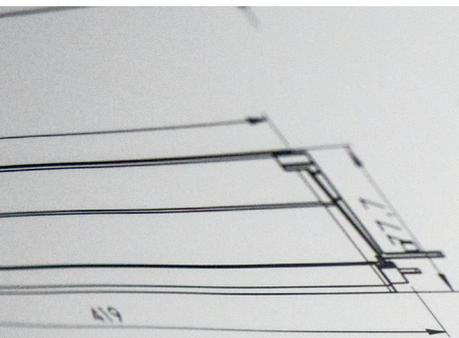
Contact Pro-Movec A/S

When contacting Pro-Movec by e-mail please inform following:

- Brand of bicycle
- Year of manufacture
- Date of purchase
- Attache a copy of the purchase receipt
- Describe the problem as detailed as possible

service@promovec.dk

+45 88444411



Name:	Date:	Promovec
Drawn by: KLS	10-02-2017	
Last edited by: KLS	12-04-2017	
Approved by: JR	12-04-2017	
Tolerance: 0.1/0.2/0.4/0.8 mm	Unit: mm/mg	
Pro-Movec A/S Brunbjergvej 2 DK-8240 Risskov www.promovec.com		Description: DT1 with UART communication
Part number:		DT1UART
Material:		
Scale: 1:3		A4
Weight:		
Revision: A		

Sheet 1 of 1