

Notes on the **Baader OTP Outdoor Telescope Power Supply 27V / 22,2A** **# 2457645**

– made by BAADER, especially for 10Micron GM4000 Mount –

This power supply #2457645 replaces the model #1454210 which was discontinued some time ago. It offers numerous improvements over its predecessor.

With our self-assembled sensor cables, it is the only power supply unit on the market that can be operated at any distance from the mount: A special sensor in the power supply measures the voltage that actually arrives at the mount despite the line losses. Based on these data, the power supply automatically readjusts the voltage.

These sensor cables are not included in the scope of delivery. The power supply unit works with the cable supplied with the GM 2000 to 4000 without problems even without the sense cable. If longer cable lengths are required, please consider the articles 2457646 and 2457647.

Please also note that power supply units without this voltage control may only be operated with a maximum cable length of three meters for connecting to high-quality mounts – otherwise they may supply too low a voltage.



TECHNICAL DATA:

- **Optimized output voltage and current for max. slew rate**
- **Operating Voltage 110-240V**
- **Power Cord included (Cold appliance cable) with Euro-standard-plug**
- **optional: Power supply and sensor cables with 5m (#2457646) and 10m (#2457647) length as standard-accessory available**
- **Measurements: LxWxH: 270 x 14,3 x 120 mm**
- **Weight Power supply without cable: 3,1 kg**

PROPERTIES of the SENSOR cable:

The sensor cable measures the voltage on the mount similar to a measuring device – i.e. high-impedance and currentless. It thus avoids any voltage drop, which occurs particularly on long cables with a limited diameter. Depending on the measured value, the power supply unit then regulates itself to exactly compensate the voltage drop occurring on the main line, so that the nominal voltage is always present at the mount.

We can assemble suitable cable lengths to connect the power supply unit with the telescope including the sensor cable – see above. If necessary, please ask separately for such a sensor power cable in the required length. However, cables in these special lengths are not included in the scope of delivery of the basic unit and cannot be supplied instead of the standard cable.

Many problems with modern mounts are only caused by unreliable power supplies. The cause of the problems is then difficult to identify. A high quality power supply avoids the problems caused by a fluctuating or incorrect voltage, such as DC motor current, brownout or unstable processor operation.

DC motor current means that the motor electronics draw more current as the voltage drops, which at a certain point overloads the motor and can even damage it.

A brownout is a short-term voltage drop which, in contrast to a complete current interruption (off-on), either occurs with a slow edge or does not drop completely to zero voltage. This causes electronics – especially a microprocessor – to run erratically and, in the absence of a proper reset, is no longer able to reboot correctly. When a controller is operated outside its specified supply voltage range, it does not simply stop working – instead, individual components gradually fail or become unreliable. This is fatal for a motor controller. That's why many electronics have automatic threshold switches / reset automatics.

Nevertheless, unstable power supplies or unclear switch-on / switch-off processes still pose a risk, since by far not all boards have the necessary expensive controllers or their capacity is exhausted at some point.

A reliable power supply not only eliminates a common cause of inexplicable mount behaviour, but may even prevent costly damage to electronics by eliminating the need to compensate for voltage fluctuations and reducing stress on the electronics.

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