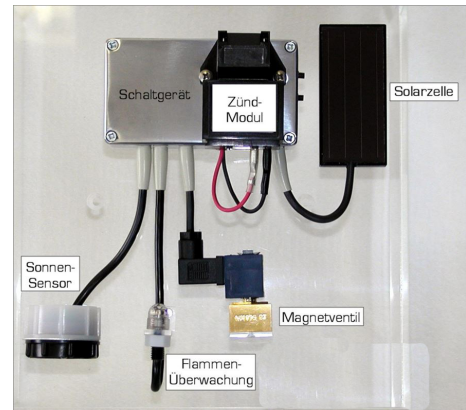


Twilight switch BS-GC Solar

Information

Until now, only battery-powered devices were available on the market. Malfunctions occur due to oxidized battery contacts, as well as prematurely discharged or even leached batteries. The BS-GC twilight switch is used to control gas lights. By using a powerful solar cell in conjunction with an electric double-layer capacitor, the device works completely independently. No batteries or accumulators are required for operation, making this device maintenance-free.



Technical Informations

Arbeitsspannung:	3,4 V
Arbeitsweise:	<p>Der Sonnensensor (LDR1) erfasst die Umgebungshelligkeit. Unterschreitet diese einen bestimmten Schwellwert, öffnet der Dämmerungsschalter das Magnetventil und schaltet die elektronische Zündung für 30 Sekunden ein. Nimmt der Flammensensor (LDR2) ein Aufleuchten der Glühkörper wahr, schaltet die Zündung sofort ab. Die Leuchte wird ausgeschaltet (Ventil zu), wenn die Morgendämmerung den Einschalt-punkt vom Sonnensensor überschreitet.</p> <p>Bisher waren nur batteriebetriebene Geräte auf dem Markt erhältlich. Es kommt immer wieder zu Funktionsstörungen aufgrund oxidierten Batteriekontakte, sowie vorzeitig entladener oder sogar ausgelaufener Batterien.</p> <p>Der Dämmerungsschalter BS-GC ist ein Gerät zur Steuerung von Gasleuchten.</p> <p>Durch den Einsatz einer leistungsstarken Solarzelle in Verbindung mit einem elektrischen Doppelschicht-kondensator arbeitet das Gerät völlig autark. Es werden für den Betrieb keine Batterien oder Akkus benötigt, dieses Gerät ist somit wartungsfrei.</p> <p>Der Sonnensensor (LDR1) erfasst die Umgebungshelligkeit. Unterschreitet diese einen bestimmten Schwellwert, öffnet der Dämmerungsschalter das Magnetventil und schaltet die elektronische Zündung 30 Sekunden ein. Nimmt der Flammensensor (LDR2) ein Aufleuchten der Glühkörper wahr, schaltet die Zündung sofort ab. Die Leuchte wird ausgeschaltet (Ventil zu), wenn die Morgendämmerung den Einschalt-punkt vom Sonnensensor überschreitet.</p>




BRAUN Lighting Solutions e. K. is a participant in the export initiative "Energie Effizienz – made in Germany", initiated by the Federal Ministry for the Economy and Technology. Due to the complexity of the many possible combinations of drivers and LED modules, the values shown for technical LED parameters, including performance parameters, are typical. Actual values of specific products in specific configurations may vary from these typical values. The information and diagrams contained in this document do not constitute an offer or contractual obligation. Product parameters may change as a result of technical innovation and will be undertaken without prior notice. Our manufacturing conforms to DIN EN and VDE regulations; the product conforms to European EMC regulations.

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Flammenüberwachung:	Yes
Hinweise :	For the proper function of the twilight switch, the following must be observed: - do not bring lubricating oils or similar agents into contact with the inside of the valve Security alert: - Caution high voltage! The ignition spark voltage is approx. 27 KV! - Do not remove, install or transport the unit with a charged capacitor
Kondensator Anzahl :	1
Kondensatorspannung :	
Kondensatorspannung :	1,0 – 2,5 V
Kondensatortyp:	Double layer capacitor
Leerlaufspannung :	5,5 V
Leitung und Sensoren :	All control cables that feed out of the metal housing are provided with an anti-kink protection, which simultaneously works as a strain relief. The control cables and cores are sheathed with notch-resistant silicone and are best suited for a warmer operating temperature. The sensors for daylight and flame monitoring are high-quality components (LDR), which are also used, for example, in exposure measurement technology.
Leitungslängen Solarmodul :	ca. 450 mm
Leitungslängen Sonnensensor:	ca. 450 mm
Leitungslängen Ventilleitung:	ca. 200 mm
mehrere Schaltprogramme :	Yes
Nachzündautomatik:	Yes
Niedrigspannungsanzeige (optional) :	red LED flashes every 3 seconds
Panel:	Thin film module for outdoor use
Ruhestrom :	ca. 300 ;Å
Schalthysterese:	approx. 5% of the threshold value
Schaltspannung Ventil :	4 V
Schaltstrom Ventil :	Impuls ca. 400 mA/16 ms
Schwellwerte (Flamme/Sonne):	Adjustable between 4 - 60 lx, 20 - 1 klx
Sicherheitsabschaltung:	Yes

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Solare Energieversorgung:	Daylight and light at night are converted into electrical energy by a thin-film solar cell and stored in the electrical double-layer capacitor. The solar cell is characterized by maximum performance with small dimensions. The double-layer capacitor is charged even at low light intensity. The double-layer capacitor stores the energy gained from light and reliably supplies the device with the necessary voltage. The energy system used in this device for electrical self-sufficiency can achieve a service life of between 10 and 12 years with regard to the capacitors. It should be emphasized that double-layer capacitors can be charged and discharged daily due to their long service life of around 100,000 charge/discharge cycles. Conventional batteries, however, reach their upper performance limit at 2000 to 5000 charge/discharge cycles.
Temperaturbeständigkeit der Steuerelemente :	-40°C to +120°C
Ventil Informationen:	Micro solenoid valve 2/2-way valve pulse-controlled
Ventil:	<p>A 2/2 way micro solenoid valve is used. The diameter for the gas flow rate is 2.5mm, so that in natural gas operation, each type of lamp can be supplied with up to 12 flames. If a higher gas throughput is required, a 2/2 way valve with a larger diameter can be used.</p> <p>1. If the flame sensor (LDR2) detects that the bulbs have lit up, the ignition switches off and monitors the flame all night.</p> <p>2. The maximum ignition time is limited to 30 seconds. After that the ignition is switched off in any case and the solenoid valve is closed. Only after one minute a second start procedure is performed. Thereby the ignition is switched on again and the valve is opened. If the ignition is unsuccessful in the second start procedure, the ignition is not switched on again until the next night.</p> <p>3. If the flame goes out at night after successful ignition, a re-ignition takes place. If this remains unsuccessful after 30 seconds, the gas valve is closed and no further starting procedure follows during the night.</p> <p>Safety shutdown to prevent "permanent lighting" or the escape of unburned gas: The double layer capacitor is monitored at night and during the ignition time. If the charging voltage drops below a set minimum voltage, the running ignition is not interrupted. However, further post-ignitions are blocked. The charging voltage is checked again the next evening. Ignitions are possible again if the voltage is sufficient.</p>

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