

# GLOW 9



Ing. Peter Klementschitz  
 8430 Leibnitz , Beim Johanniskreuz 33  
 Tel. +43 – 3452 – 76 3 14  
 Fax +43 – 3452 – 76 31 44  
<http://www.microsens.at>  
[microsens@aon.at](mailto:microsens@aon.at)

**NEW :** With battery warning, standard mode and automatic programming

**On board glow plug heating device with regulated current for 4-stroke engines with 9 cylinders**

**General :**

The current can be adjusted to the glow plug and is regulated with high precision and very high efficiency by a microcontroller. This ensures an optimum ignition temperature, low energy consumption and lowest weight, as well as a steady idle and good transition from idle to full throttle.

In case of a 9 cylinder engine there is the same principle as shown in the figure at the bottom of page : The connector 'glow plug +' is connected with 5 glow plugs in parallel, the 4 remaining glow plugs and the compensation resistor are connected with 'glow plug -' in parallel.

The glow plugs are connected in a combination of series and parallel.

The recommended number of cells for the single 9-cyl. engine is 3.



**Connections :**

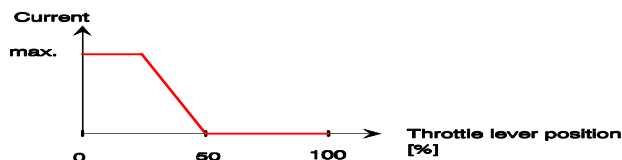
**Std:** Selection for automatic programming or a standard glow point. ON = automatic programming, OFF = standard (half throttle)

Where a programmable transmitter is used, the glow plug heating can be assigned to a separate channel and mixed with the accelerator servo (mixer set to 100%). The Y lead is then not necessary.

**Automatic programming mode:**

Set the throttle lever to idle position. Turn on transmitter and receiver. The bright red LED flashes on. Move the lever to full throttle position. The bright red LED flashes on once again. Finished ! With this automatic setting the glow plugs start to glow at half-throttle and reaches the allowed current at fourth of full throttle. The bright red LED acts as a function monitoring lamp and an adjustment aid for automatic programming.

**If this adjustment doesn't assure**, just set the throttle lever at beginning not completely to idle position. Thus annealing already begins between half and three-quarter gas. If you want to shift the switching point on further downward, go through the same procedure in reverse order.



**Setting of max. glow plug current:**  
 (by means of jumpers a,b off = striped, on = fixed)

a	b	Max. (A)	Plug type	Glow time [min.] AKKU5 – 3800 mAh
on	on	1.50	1-2 (hot)	30
off	on	1.75	2-3	25
on	off	2.10	3-4	21
off	off	2.50	4-5 (cold)	18

**Battery warning:**

The bright red LED starts to gleam when the battery is not able to supply the glow plug with the necessary current. When 2 discharged batteries are connected in series then it is possible to charge simultaneously by a standard 4-6 cells battery charger.

**Please use only new glow plug cables (ZUBI3), all with the same length.**

**Compensation resistor:**

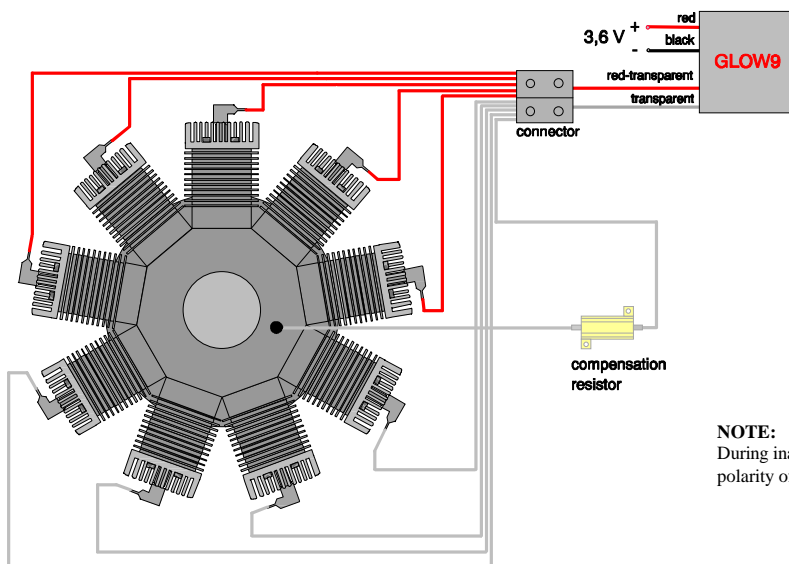
Connect the short cable (with loop at the end) with ground of the engine. The resistor should be mounted nearby the engine on a metal plate.

**Caution!** All glow plugs and the compensation resistor have to be connected when in use.

**Technical Data**

- Dimensions ( L x W x H ) : 35 x 25 x 8 mm
- Weight with : 30 g
- Power supply to receiver battery : 4 or 5 cells NiCd, 1 - 15 mA
- Internal measuring resistor : 0.0012 Ω
- Accuracy for typical current : +/- 0.1 A for each glow plug
- Recommended cells : AKKU5, NiMH 3800mAh
- Recommended glow plug cable : ZUBI3, fixing with Allen Key

Another products of microsens ®:  
 GLOW2, GLOW3, GLOW4, GLOW4B, GLOW5, GLOW7, GLOW9, SOLID0, SOLID1, SOLID2, SOLID3, AKKU1-AKKU5, ZUBI1-ZUBI5



**NOTE:**  
 During inappropriate handling (e.g. modifying or capping the links) or neglecting the polarity of batteries, the warranty goes out automatically.