

The SASM16 is a replacement for Pulsar® 201 modules with time, seconds, date feature and dot display. This module has been developed to add a date on early time-only LED watches to improve the general serviceability. As known from other watch movements produced by StrikesAndSpares Semiconductor the SASM16 is built with original parts from disassembled Pulsar®, Omega® or Hamilton® movements. The red display, the plastic carrier, the quartz crystal and the reed switches will be swapped from your module to a new circuit board. If the light sensor of your original module is under the display, please use a SASM12.

**The Time Feature:** Press the right button once to show the time and twice to show the date. Hold the button for seconds display.

**How to set your watch:** The time setting and the software time trimming features are activated with the magnet which is hidden in the clasp of the watch. If the original magnet is not available or too weak for various reasons, you can use any magnet to gain access to the setting feature. We recommend to start with the date and day, then continue with the hours and finally finish with minute setting. Hold the magnet with the actuation of the right command button in the “hr” notch to advance the month. Place it in the “min” notch to set the day. During the set of the day you should also care about the AM/PM indicator. The upper dot should light up between 00:00h and 11:59h, between noon and midnight the lower dot should indicate PM time. Release the right button. For hour setting, place the magnet in the “hr” notch. Move the magnet in the “min” notch to increase the minutes. Make sure that you always set the minute to the next following one. For example at 12:09h, set the minutes to 12:10h. The time computing will not start and the time remains at :00 seconds until the time button has been pushed just at 12:10h. The time counting will start at 12:10:00 and the time will light up.

**Trimming:** The accuracy of the module can be adjusted by software and the on board trimmer on the left of the chip. To start the software time correction feature use magnets in both the “hr” an “min” notches. The display will light up with „cor“ for (time) correction. Remove both magnets. To diminish or increase the value of the correction parameter, hold a magnet in the “min” notch. The correction value starts with 0.5 and ends with 5.0- (minus 5.0). Example: If the watch gains half a second per day, choose the correction value 0.5- (minus 0.5). In case the watch is running too slow and loses one second per day, choose correction value 1.0. Once the right value is shown in the display, push the time button to quit the time counter correction. “Set” will light up in the display. To deactivate the software trimming feature, choose the value 0.0 and push the time button.

**Batteries:** We recommend installing two Varta cells of the type V13GA, V76PX or V357 with or without spacers. Other widely available types which can be used are LR44, #357, #1154, AG13 or SG13.

**Warranty:** We deliver all SASM modules with a full one year warranty. The appointed date of the warranty is the indicated date of the invoice. Please keep this invoice for your own records and as a document in case of a defect on the module which is covered by this warranty. The warranty does not include defects of the original display unit which is about 40 years in age!

**Personalization and Software Releases:** All SASM series modules can be programmed with a special, individual message. This message can either be shown when batteries are replaced or during normal operation, for example once you have pushed the time button several times. Please mention, that not all letters can be displayed through a seven segment display and the 1<sup>st</sup> digit can show the character “1” “,” “” or “I” only except for 24h modules (SASM32). The software version indicator will light up with “IN” (*individual*) to show the module as personalized. A personalization is 89,00 € You can always change the software back to a standard release at a later point of time which is 29,00 € The different software releases are arranged by the corresponding letter and are used in the manner you can see below. The following SASM modules can be updated to the latest release, which is also 29,00 € per module.: SASM11, SASM12, SASM13, SASM15 and SASM16.

E:	Initial release ( <i>Erstauführung</i> )	A:	1 <sup>st</sup> software modification
b:	2 <sup>nd</sup> software modification	c:	3 <sup>rd</sup> software modification
d:	experimental release	F:	4 <sup>th</sup> software modification
H:	5 <sup>th</sup> software modification	IN:	individual module