

The standard series are based on the highest piezo technology and are considered to be the most robust series for industrial applications.

The standard buzzers use a bent edge membrane, which is fixed and glued into the housing, guaranteeing shock, dust and waterproof operations. The different standard models cover a very wide range of applications, offering functions such as continuous, intermittent, sweep and warbler, with a sound output over 100 dB(A).



All standard products are manufactured to meet various mounting methods, such as PCB or panel mounting and are therefore equipped with either pins or fast-on terminals. The standard series include military models, extra loud types, as well as models operating at very low voltage consumption

The SULM 516 B1 is a universal buzzer with a selection mode of different functions: continuous, intermittent or stop. High sound output at very low power consumption. It can be used in all alarm and warning signals where performance, power consumption and size are important.

ADVANTAGES

- extremely high sound pressure level with a very clear and penetrating sound output
- solid state shock proof buzzer. Dust and waterproof, rated to IP67
- PCB and panel mounting; pin or fast-on terminals
- very high reliability
- low power consumption
- wide operating supply range
- wide temperature range

APPLICATIONS

- alarms
- industrial enunciator equipment
- monitoring and test equipment
- medical equipment
- military equipment
- trucks and automobiles, boats and airplanes
- signalling & process control equipment
- fire detectors etc.
- etc.

SPECIFICATIONS

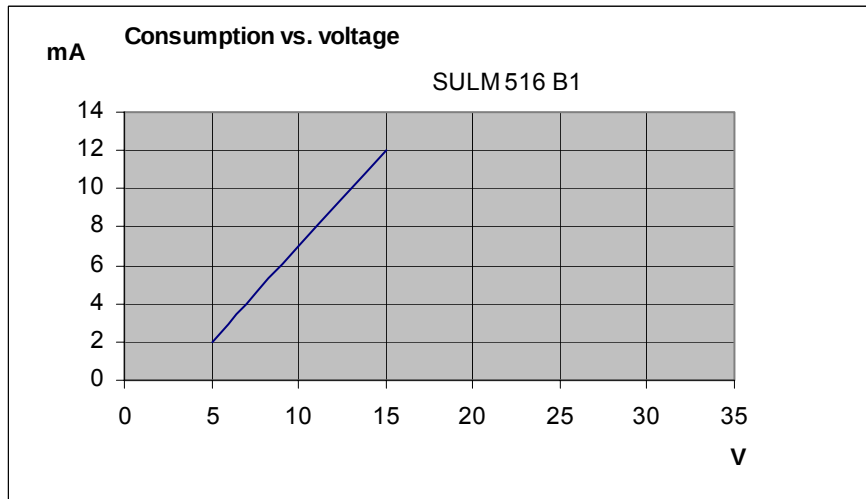
Model	Function	Operating voltage		Frequency (±15%) Hz	Pulse rate Hz	Operating current mA		Sound pressure dB(A) *
		min Vdc	Max Vdc			At V min.	At V max.	
SULM 516 B1	multifunctional	5	16	3500	1	2.4	14.2	96

*All measurements are made at 1 meter, at 12V, in free air at 21°C
The weight of the standard buzzers varies from 13 g to 24 g

Operating temperature	-35°C to +75°C
Storage temperature	-40°C to +85°C
Life time (at 21°C)	See expected life time curve in addendum
Case material	ABS (UL rating: 94 HB)
Standard colour of case	Grey
Terminal material	Tinned brass for both pin terminals and fast-on terminals
Supply voltage	The standard buzzers are not damaged by reverse voltage connection
Mounting	PC-board: by soldering the terminals. Front panel mounting: the buzzers can be mounted in panels up to 14 mm thickness They are locked with a locking pin (diameter 1mm) and secured to the panel with a plastic nut. Foresee a hole of diameter 32 mm (1.14"). Maximum torque on plastic nut: 6 Nm The step of the thread is 1.5 mm

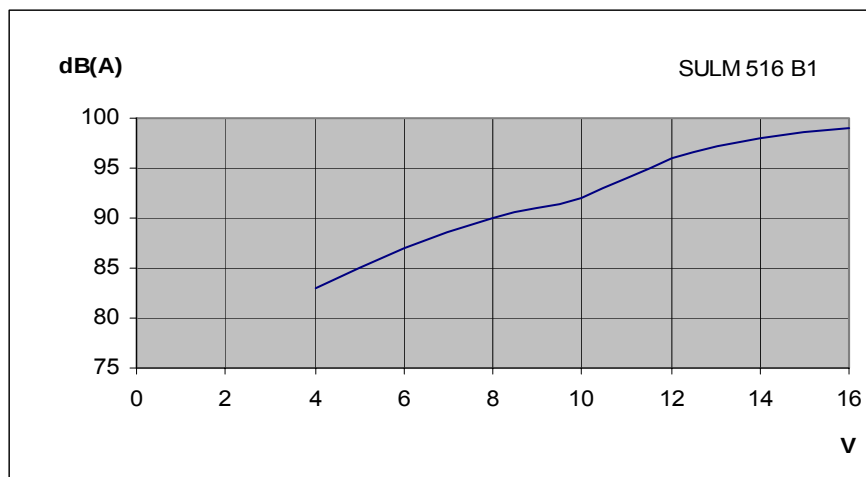
ELECTRICAL PARAMETERS

Current consumption vs. Voltage:



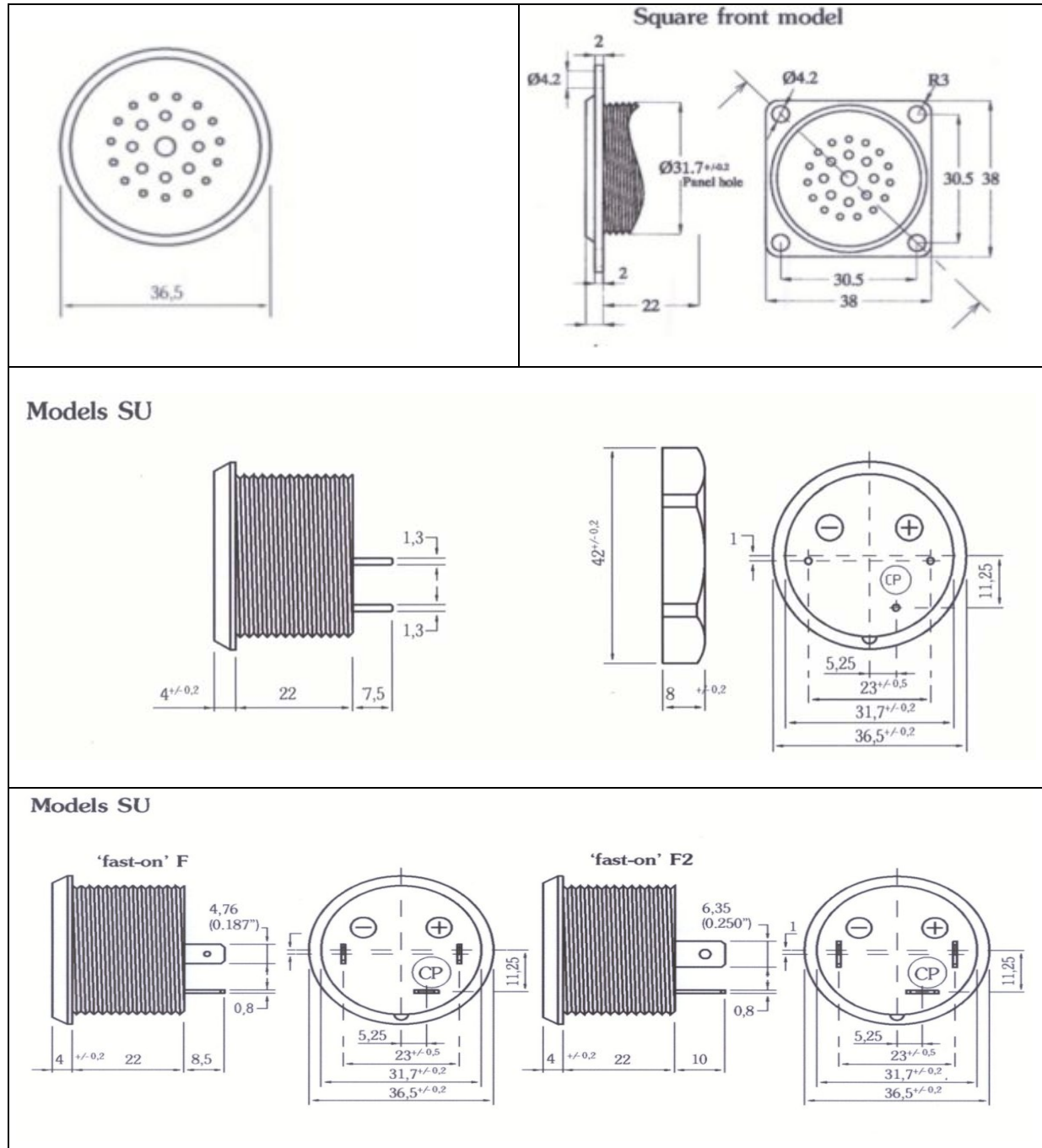
All measurements are made at 1 meter in free air at 21°C.

Sound pressure level vs. Voltage:



All measurements are made at 1 meter in free air at 21°C.

DIMENSIONS



PRODUCT CODIFICATION

S	ULM	5	16	B	1	F** F2	M*** S MS
Sonitron		Min. Voltage (Vdc)	Max Voltage (Vdc)	B: freq. 3500 Hz	Pulsation 1 = 1 Hz	Fast-on terminals F: 4.76 mm F2: 6.35 mm	M: military S: square front MS: military & Square front
	↓ U: universal L: loud M: multi- functional						

F** If the part number of the buzzer is without any terminal specifications, the model is standard delivered with round pins, diameter 1.5 mm. The fast -on terminals are available in two dimensions: F= 4.76 mm (0.187 inch) or F2 = 6,35 mm (0.250 Inch).

M*** Military norm MIL STD 202

LIST OF AVAILABLE PRODUCT TYPES

The standard series offer the following models:

SULM 516 B1
SULM 516 B1-F
SULM 516 B1-F2
SULM 516 B1-F-M
SULM 516 B1-F2-M
SULM 516 B1-S
SULM 516 B1-F-S
SULM 516 B1-F2-S
SULM 516 B1-F-MS
SULM 516 B1-F2-MS

MILITARY MODELS

All standard models can be delivered in a military version. All military models have flame retardant ABS housings in olive green and fast-on terminals.

The military models guarantee a quality superior to the classic models. On top of the standard specifications, the military models are tested as follows:

Test	Method MIL STD202	Test conditions
Thermal Shock	107	A
Humidity	103	B
Salt Spray	101	A
Shock	213 B	H
Vibration	201 A	none
Thermal strength	211	A (10 Lbs, 2 cycles)

MODELS ON REQUEST

The standard buzzers can be modified upon request in order to deliver a product, meeting the requirements of the customer's application.

- Upon special request all standard models are also available in GREY, BLACK or GREEN (khaki). Please add GREY, BLACK or GREEN to the part number if the required colour is different from the one specified as standard.
- For applications under aggressive humid conditions, models containing a piezo element covered with a protective coating are available. Add ACR to the part number.
- The protective coating gives a complementary assurance against smog; all standard models are perfectly waterproof (IP67) without the mentioned coating.
- Different pin terminal lengths, straight or bent can be custom manufactured.
- The frequency, indicated in the present catalogue, has an accuracy of +/- 15%. Standard buzzers with an improved frequency accuracy (up to +/- 2%) are available upon special customer request.