

Signal Automaton 6+S

General Features

The ZÖLLNER Signal Automaton 6+S is an automatic signal control for all ZÖLLNER whistles with electric signal release. It is programmed to release automatically the maneuvering and warning signals according to Rule 35 (a, b, c, e, g) of the Colregs 1972 and additionally the SOS distress signal.

Essentials

- type approved by the BSH
- automatic and manual signal release
- sound and light signals
- ready for connection of one or two whistles, one maneuver signal lamp and separate push-button keys
- signal intervals adjustable
- dimmer for key illumination



Characteristics of automatic signals

COLREG 1972 - Rule 35 Sound Signals in Restricted Visibility

In or near an area of restricted visibility, whether by day or night, whistle signals shall be used.

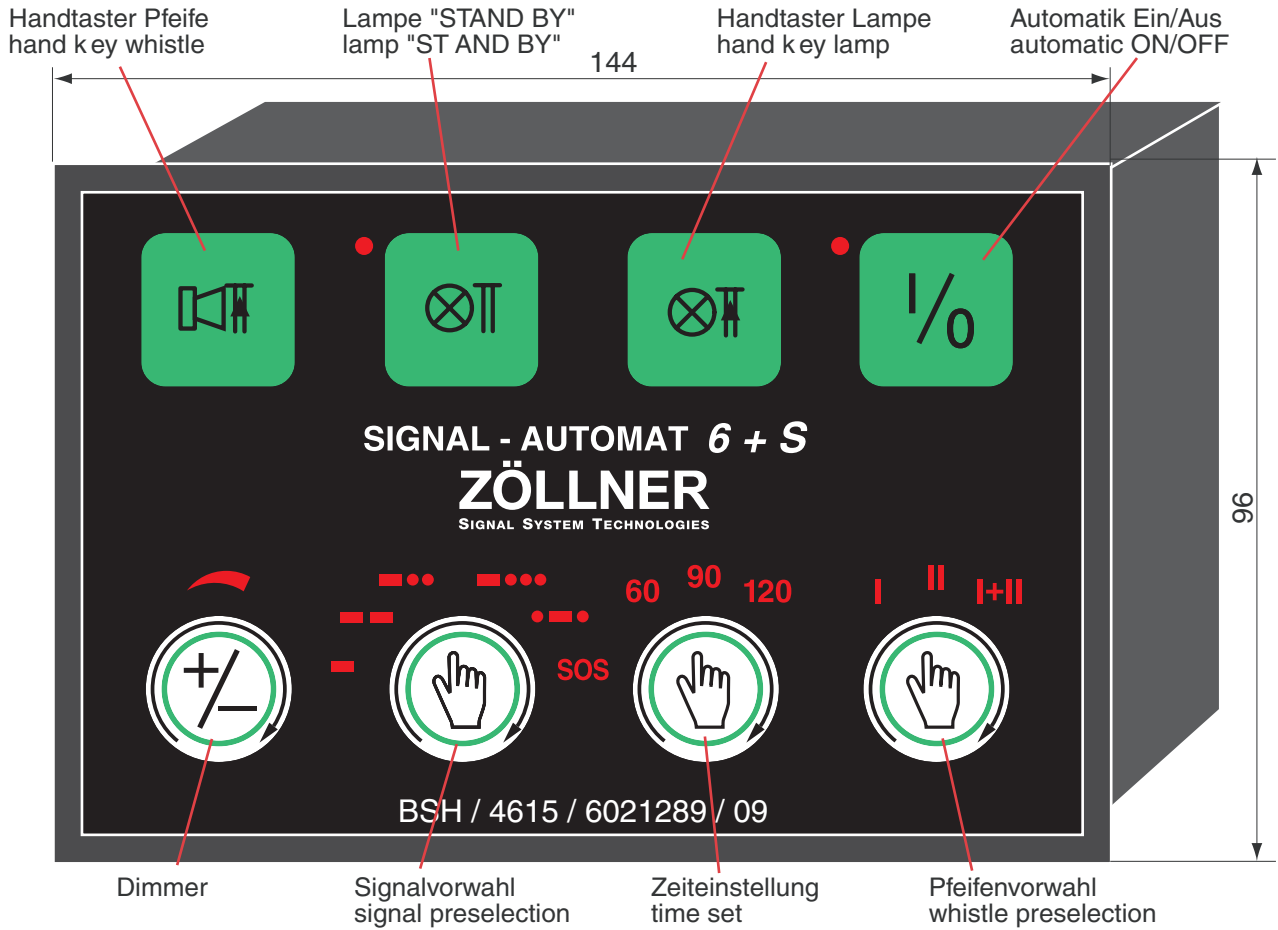
- (a) ■ = vessel making way through water
 (b) ■ ■ = vessel making no way through water
 (c) ■ ■ ■ = vessel not under command, vessel restricted in her ability to maneuver, vessel engaged in fishing, or towing or pushing another vessel
 (e) ■ ■ ■ ■ = vessel towed
 (g) ■ ■ ■ = vessel at anchor
 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ = SOS distress signal

Advantages

- latest technical standard
- best material and workmanship - made in Germany
- functional membrane keyboard
- self-explanatory symbols
- pluggable, therefore easy installation or repair
- maintenance-free

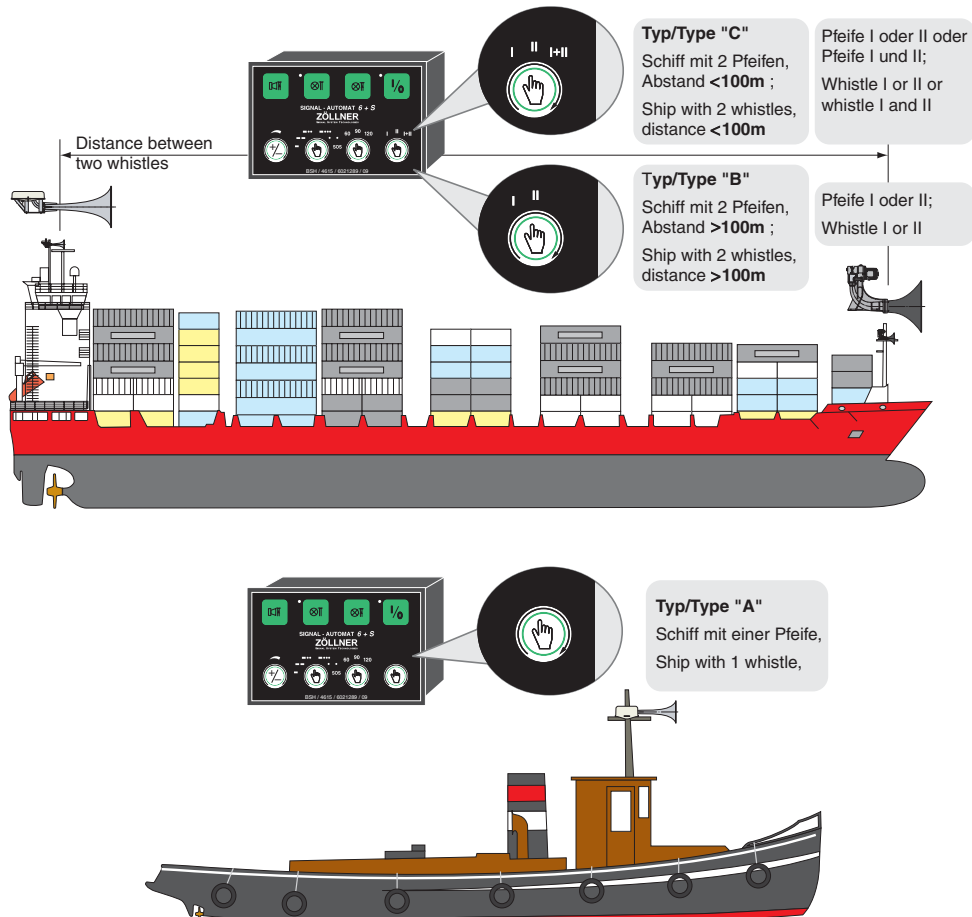
Installation

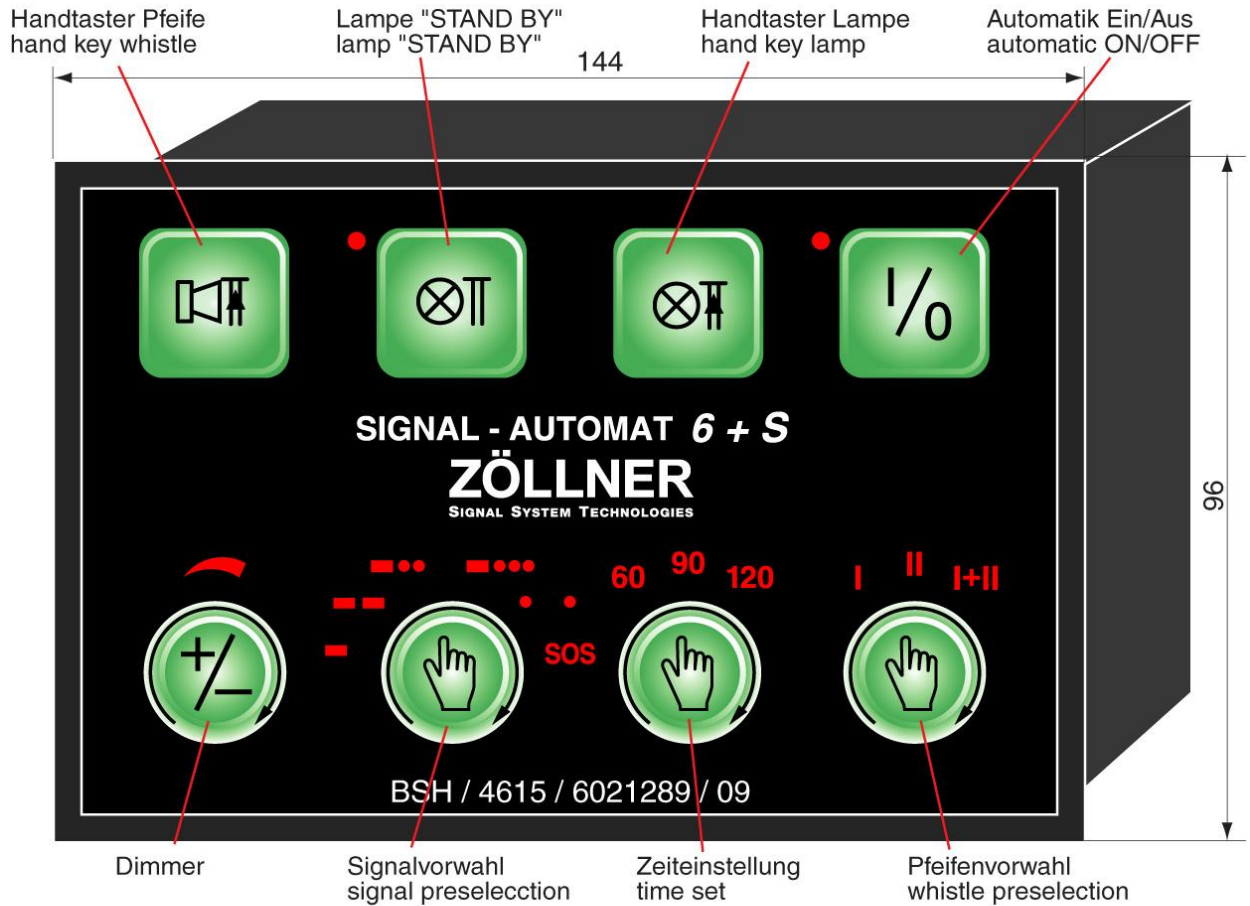
- in the center of the bridge console
- system voltage AC 1phase or 24 V DC
- no special tools required



Einbauöffnung: 139x92 mm
cutout for installation: 139x92 mm

Einbautiefe: 100 mm
plug in depth: 100mm





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Klemmleiste Rückseite / terminal strip reverse side

Klemmleiste kann zum Anschluss abgezogen werden!
For connection terminal strip can be pulled off !

1. GENERAL INFORMATION

The Signal Automaton 6+S serves to release automatically 5 different signals according to Rule 35 (a, b, c, e, g) of the Colregs 1972 and SOS.

At the same time it serves as control for the white maneuver signal lamp with a range of visibility of at least 5 nautical miles.

The following signals can be released:

Sound signals in restricted visibility

1. Rule 35 (a)
At intervals of not more than 2 minutes one prolonged blast:
a power-driven vessel making way through water;
2. Rule 35 (b)
At intervals of not more than 2 minutes two prolonged blasts
in succession with an interval of about 2 seconds:
a power-driven vessel underway but stopped and making no way
through water;
3. Rule 35 (c)
At intervals of not more than 2 minutes three blasts in succession
namely one prolonged blast followed by two short blasts:
a vessel not under command, vessel restricted in her ability to maneuver,
vessel constrained by draught, sailing vessel, vessel engaged in
fishing and vessel engaged in towing or pushing another vessel;
4. Rule 35 (e)
At intervals of not more than 2 minutes four blasts in succession,
namely one prolonged blast followed by three short blasts:
a vessel towed or if more than one vessel is towed the last vessel in tow;
5. Rule 35 (g)
Three blasts in succession, namely one short, one prolonged and one
short blast:
a vessel at anchor may, in addition to the bell and gong signal, give
warning of her position. (The prescribed bell and gong signal is released
separately.)

Further sound and light signals can be released manually by signal keys.

1. Distress signal
The distress signal SOS namely three short blasts, three long blasts,
three short blasts in unlimited loop.

2. FUNCTIONAL DESCRIPTION

After installation and electric connection on board of the vessel, the automaton is ready for operation at any time, provided that the necessary power supply is available. Readiness for operation is indicated by illuminated signal keys. The "I/O"-key for switching off all signals only lights up in case a program has been switched on.

Attention:

Before switching on a new program, the "I/O"-key must be pushed to cancel the preceding program. All hand keys have priority. The program is stopped whenever a hand signal key is operated.

The keys take the following functions:

Keys in the first row from left to right:

- 1st key - all manual sound signals
- 2nd key - maneuver signal lamp on/off, so that all sound signals can be accompanied by light signals (if active a red LED will be on).
- 3rd key - all manual light signals
- 4th key - switching on of automatic signals in restricted visibility (Rule 35) (if active a red LED will be on)

Keys in the second row from left to right:

- 1st key - four-stage adjustable key illumination
- 2nd key - preselection of different signals for navigating in restricted visibility (Rule 35 a, b, c, e, g) or SOS
- 3rd key - adjustment of signal interval at approx. 60 seconds, 90 seconds, less than 120 seconds
- 4th key - adjustment of whistle 1 or 2 or whistle 1 plus 2
The automaton is manufacturer adjusted in accordance with the number of whistles stated in the purchase order.

If only 1 whistle is installed on board, this switch is not available.

3. INSTALLATION ON BOARD

- 3.1 The unit is adjusted to the voltage indicated on the name plate. This can be changed by displacing two bridges on the power supply pc-board **01616876 (230AC)**, **01616878 (115V AC)** or **01616879 (24 V DC)**.
- 3.2 The signal automaton can be installed vertically or horizontally.
- 3.3 For mechanical installation a cutout of 139 x 92 mm in the bridge console is required. The installation depth is 100 mm.
- 3.3.1 The automaton is inserted into the cutout from above.
- 3.3.2 Place the automaton in correct position and fix it in front plate of the bridge console from behind with 2 clamping screws.
- 3.4 One main switch, preferably with indicating lamp, should be shipyard provided for the entire electric system on the bridge including the automaton.
- 3.5 The maneuver signal lamp must be installed in accordance with Annex I, paragraph 12 of the Colregs 1972.
- 3.6 Electric connections is to be carried out in accordance with enclosed diagram. Terminals 15 through 16 may serve as connection for a command printer.

4. MAINTENANCE

The Signal Automaton 6+S is maintenance-free.

Before starting any work on the signal automaton, the electric power supply mains must be interrupted.

The signal times correspond to those prescribed in Rule 35 (Colregs 1972) and have been manufacturer adjusted. Changes of the signal times or program, as well as programming of special signals may only be made by the manufacturer.

5. TROUBLE SHOOTING

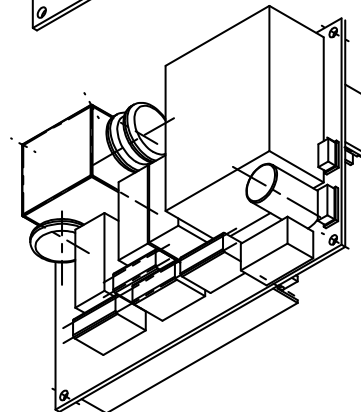
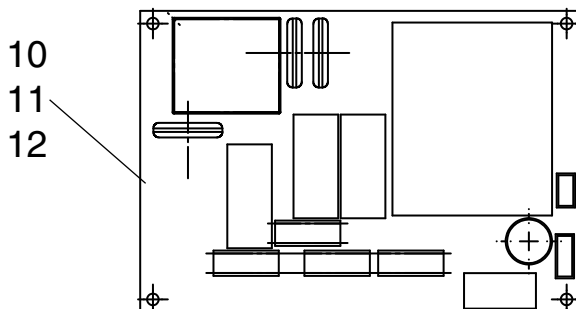
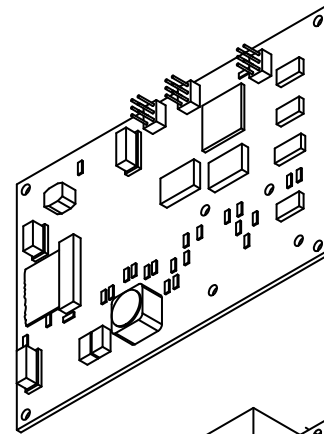
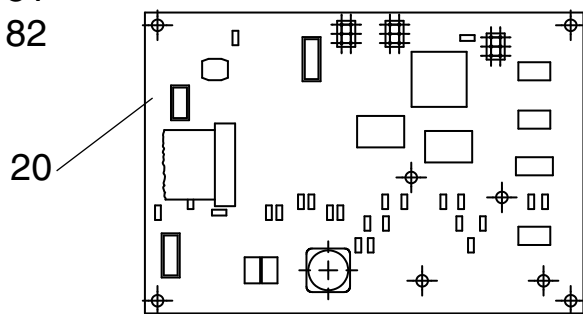
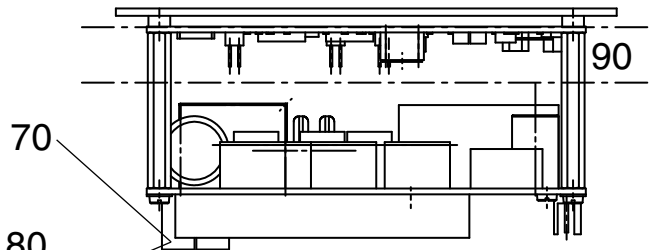
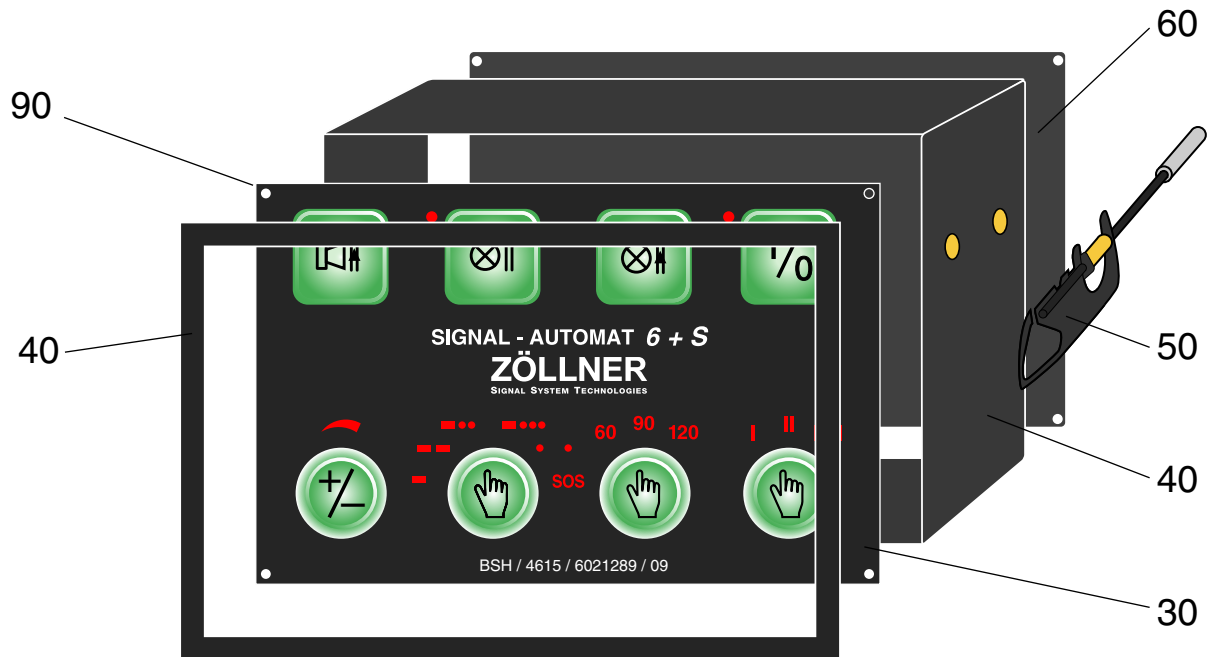
Fault: No functions of signal automation!

- 5.1 Check whether terminals 2 + 3 are connected to the correct voltage as indicated on the unit's name plate.
- 5.2 Check fuses F1 and F2 on the power supply pc-board. As replacement only use fuses for feeble currents semi-time lag, 250 V, 5x20 mm oK
- | | | |
|--------------------|-------------|----------------------------|
| for 230V AC | 1A | ident no. 683320101 |
| for 115V AC | 1,6A | ident no. 683320216 |
| for 24V DC | 6,3A | ident no. 683320163 |
- 5.3 Should above measures be insufficient to eliminate the failure, the key and control pc-board as well as the power supply pc-board can be taken out easily. For this purpose first take off the front frame and then the terminal strip. After loosening the 4 screws in the front plate, this can be pulled out of the casing, along with the pc-boards.

6. TECHNICAL DESIGN

The signal automaton consists of two different sections:

- 6.1 The front plate with key pc-board 01616886 and control pc-board 01416877 with all necessary keys.
The signal automaton is controlled by a micro processor. In case of a failure this can be taken out without having effect on the hand signal release.
- 6.2 The power supply pc-board 01616876 with switching relay, terminal strip, fuses and power supply.



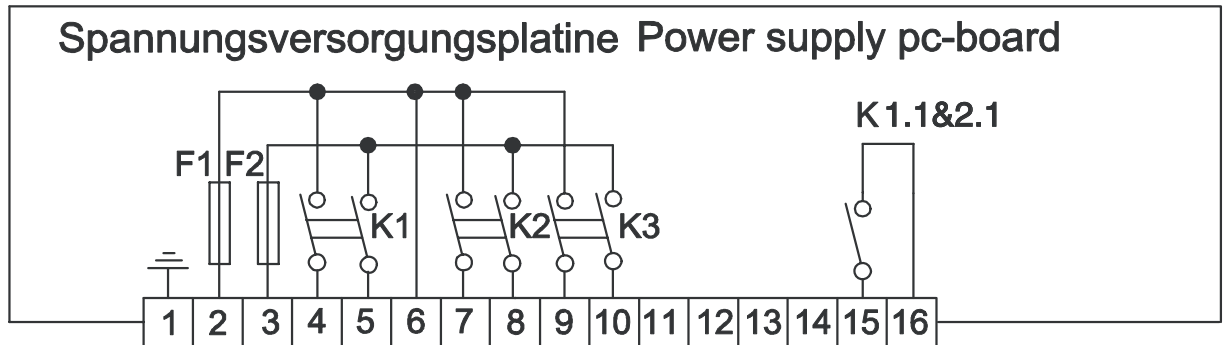
Änderung vorbehalten! Subject to alteration!

Pos. Item	Stck. Qty	Bestell-Nr. Order-No.	Techn. Daten Techn. Data	Bezeichnung	Designation
10	1	01616876	230V AC	Spannungs- Versorgungsplatine	power supply PC- board
11	1	01616878	115V AC	Spannungs- Versorgungsplatine	power supply PC- board
12	1	01616879	24V DC	Spannungs- Versorgungsplatine	power supply PC- board
20	1	01616877	122x84	Steuerplatine	control PC-board
30	1	01616886		Tasterplatine beleuchtet	illuminated key PC-board
40	1	nn	144x96	Einschubgehäuse	flush type casing
50	2	605072146	95 mm/B	Befestigungsspanne	threaded bolt
60	1	nn	144x96	Rückwand	rear plate
70	2	683519648		Sicherungskappe	protection cap
80	2	683320101	5x20	Sicherung 230V AC	fuse 230V AC
81	2	683320216	5x20	Sicherung 115V AC	fuse 115V AC
82	2	683320163	5x20	Sicherung 24V DC	fuse 24V DC

Bei Ersatzteilbestellung unbedingt Seriennummer angeben!
It is essential to state the serial-no. when ordering spare parts!

Änderung vorbehalten! Subject to alteration!

	F1,F2
230V	1A
115V	1,6A
24V	6,3 A



Einspeisung
Feeding

24V DC or
110-120V AC or
210-240V AC

Pfeife I
Whistle I



Pfeife II
Whistle II



Lampe
Lamp

Pfeife
Whistle



Lampe
Lamp

Potentialfreier Kontakt
Potential-free Contact
für/ for ZETFON
400/310 & 300/310

muting (SRD)

- Pfeife I/whistle I=Zet-Horn/Makrofon
- Pfeife II/whistle II=Zet-Horn/Makrofon
- Pfeife I/II whistle I/II =ZETFON/Drucker,printer,Muting SRD
- Anschluss /connection=General Alarm (Zöllner GAV)

Tasterleitungen verdreht oder abgeschirmt verlegen !
Lay cables for signal keys twisted or screened !

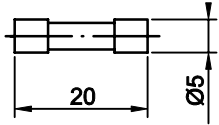
Typ A = Pfeife I/Whistle I

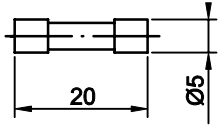
Typ B = Pfeife I oder II/Whistle I or II

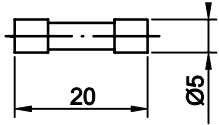
Typ C = Pfeife I,I+II,II/Whistle I,I+II,II

Typ A , B , C

Wertseitig einstellbar
Adjustable by yard

Stck. Qty.	Zeichnung Drawing	Benennung/techn.Daten Designation/techn.Data	Bestell-Nr. Order no.	Gewicht Weight kg
2		Sicherung fuse 1A 5x20	683320101	0,001

Stck. Qty.	Zeichnung Drawing	Benennung/techn.Daten Designation/techn.Data	Bestell-Nr. Order no.	Gewicht Weight kg
2		Sicherung fuse 1.6A 5x20	683320216	0,001

Stck. Qty.	Zeichnung Drawing	Benennung/techn.Daten Designation/techn.Data	Bestell-Nr. Order no.	Gewicht Weight kg
2		Sicherung fuse 6.3A 5x20	683320163	0,001