

- ▶ modularly constructed with bayonet locking system
- ▶ fast and easy to operate, mount, configure and change of modules
- ▶ troublefree and fingersafe bulb change at any position without using any tools



- ▶ safety screws for additional safety of modules against unauthorized opening

### Features

- ▶ modularly designed, versatile, flexible and powerful signal towers for smaller machines
- ▶ any desired combination possible for many different kind of applications
- ▶ complete range of visual and audible modules in all conventional voltages
- ▶ extensive mounting options
- ▶ PLC ft (leakage/inrush current)
- ▶ UL certified, Protection class IP 65, UL type 4, 4X, 13

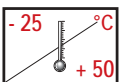
modul contacts



### QUICK MOUNT SYSTEM „FOOT ADAPTER“ (Pat.No. 501053) (Base type VFR)



Quick mounting system "Foot adapter" saves the customer the electrical connection and eases considerably mounting of signal tower for machine manufacturers and their customers. Detailed description see page 57.



## CONFIGURATION

### SIGNAL TOWER moduSIGNAL50



| LIGHT MODULES   | Light source           | Type |
|---|------------------------|------|
| Steady light  | bulb<br>or<br>LED-bulb | VLL  |
| Flashing light  |                        | VLB  |
| Strobe light  | xenon tube             | VLF  |
| PIEZO BUZZER  | Sound pressure         | Type |
| Continuous or pulsing tone and sound pressure selectable with DIP switches                  | 88 -103 dB             | VDE  |
| Continuous and pulsing tone externally switchable sound pressure selectable with DIP-switch |                        | VDZ  |



## BASES



horizontal  
VMW

vertical  
VMV

on aluminium  
tube  
with plastic foot  
VMR

on stainless steel  
tube with zinc  
die-cast foot  
VSR

on aluminium  
tube for horizontal  
mounting with  
screw  
VSW

VSW + BSS

on aluminium tube  
with foot adapter  
for quick mounting  
VFR





## Order data



| Type   | Light modules  | Light options                       |                                 | Order No.    |               |                | Nominal voltage (V) |
|--|--|-------------------------------------|---------------------------------|--------------|---------------|----------------|---------------------|
|  |  | Glühlampe                           | LED-Lampe                       |              |               |                |                     |
| VLL  | Steady light   | GL                                  | LLL, LLB                        | 750 00C 900  |               |                | bis 250 V AC/DC     |
| VLB  | Flashing light   | GL                                  | LLL                             | 760 00C 405  |               |                | 12-24 V AC/DC       |
|  |  |                                     |                                 | 760 00C 310  |               |                | 110/120 V AC        |
|  |  |                                     |                                 | 760 00C 313  |               |                | 230/240 V AC        |
| VLF  | Strobe light   | Xenonröhre                          |                                 | 770 00C 405  |               |                | 12-24 V AC/DC       |
|  |  |                                     |                                 | 770 00C 310  |               |                | 110/120 V AC        |
|  |  |                                     |                                 | 770 00C 313  |               |                | 230/240 V AC        |
|  | Piezo Buzzer modules   | Tone options                        |                                 | Housing grey | Housing black | Housing silver |                     |
|  |  | Tone type                           | Sound pressure                  |              |               |                |                     |
| VDE  | Piezo Buzzer, IP 65 tone type and sound pressure selectable with DIP-switch                                | <input type="checkbox"/> continuous | <input type="checkbox"/> 103 dB | 781 100 404  | 781 500 404   | 781 800 404    | 12 V AC/DC          |
|  |  | <input type="checkbox"/> pulsing    | <input type="checkbox"/> 88 dB  | 781 100 405  | 781 500 405   | 781 800 405    | 24 V AC/DC          |
|  |  |                                     |                                 | 781 100 310  | 781 500 310   | 781 800 310    | 110/120 V AC        |
|  |  |                                     |                                 | 781 100 313  | 781 500 313   | 781 800 313    | 230/240 V AC        |
| VDZ  | Piezo Buzzer, IP 65 tone type extern. switch. sound pressure selectable by DIP-switch 2 required positions | continuous and pulsing              | <input type="checkbox"/> 103 dB | 782 100 404  | 782 500 404   | 782 800 404    | 12 V AC/DC          |
|  |  |                                     | <input type="checkbox"/> 88 dB  | 782 100 405  | 782 500 405   | 782 800 405    | 24 V AC/DC          |
|  |  |                                     |                                 | 782 100 310  | 782 500 310   | 782 800 310    | 110/120 V AC        |
|  |  |                                     |                                 | 782 100 313  | 782 500 313   | 782 800 313    | 230/240 V AC        |
| Bases  |  |                                     |                                 | Housing grey | Housing black | Housing silver | Weight (g)          |
| VMW  | Base for horizontal mounting   |                                     |                                 | 790 120 900  | 790 520 900   | 790 820 900    | 45                  |
| VMV  | Base for vertical mounting   |                                     |                                 | 790 140 900  | 790 540 900   | 790 840 900    | 85                  |
| VMR  | Pole mount base on aluminium tube with plastic foot  |                                     |                                 | 790 14L 900  | 790 54L 900   | 790 84L 900    | 55-245              |
| VSR  | Pole mount base on stain. steel tube with zinc die-cast foot, powder coated                                |                                     |                                 | 790 15L 900  | 790 55L 900   | 790 85L 900    | 205-955             |
| VSW  | Pole mount base for horizontal mounting with screw   |                                     |                                 | 790 17L 900  | 790 57L 900   | 790 87L 900    |                     |
| BSS  | Set for vertical mounting (for VSW)  |                                     |                                 | 200 400 900  | 200 800 900   | 200 800 900    |                     |
| VFR  | Pole mount base on aluminium tube with foot adapter for quick mounting                                     |                                     |                                 | 790 18L 900  | 790 58L 900   | 790 88L 900    |                     |
| Cap - is automatically included with each base |  |                                     |                                 |              |               |                |                     |

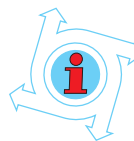
| ORDER DATA ACCESSORIES |                     |                |
|------------------------|---------------------|----------------|
| Type                   | Nominal voltage (V) | Order No.      |
| GL01                   | 12 V 5 W            | 890 010 904    |
| GL02                   | 24 V 7 W            | 890 010 905    |
| GL03                   | 48 V 7 W            | 890 010 908    |
| GL04                   | 60 V 7 W            | 890 010 909    |
| GL05                   | 110/120 V 7 W       | 890 010 910    |
| GL06                   | 230/240 V 7 W       | 890 010 913    |
| LED-Bulb BA15d         |                     | Steady light   |
| LLL                    | 12 V AC/DC          | 893 00C 404    |
|                        | 24 V AC/DC          | 893 00C 405    |
|                        | 48 V AC/DC          | 893 00C 408    |
|                        | 110/120 V AC        | 893 00C 310    |
|                        | 230/240 V AC        | 893 00C 313    |
|                        |                     | Flashing light |
| LLB                    | 12 V AC/DC          | 893 01C 404    |
|                        | 24 V AC/DC          | 893 01C 405    |
|                        | 48 V AC/DC          | 893 01C 408    |
|                        | 110/120 V AC        | 893 01C 310    |
|                        | 230/240 V AC        | 893 01C 313    |

### Colour code for lens C

|   |       |   |        |
|---|-------|---|--------|
| 1 | amber | 5 | blue   |
| 2 | red   | 6 | green  |
| 4 | clear | 7 | yellow |

### Längencode für Rohr L

|   |                     |   |        |
|---|---------------------|---|--------|
| 1 | 50 mm (not for VFR) | 5 | 500 mm |
| 2 | 100 mm              | 6 | 600 mm |
| 3 | 250 mm              | 7 | 800 mm |
| 4 | 400 mm              |   |        |



### NOTE:

Light sources have to be ordered separately (pls. refer to order data- accessories).

### ACCESSORY SAFETY SCREWS

- additional safety device of modules against unauthorized opening

| Type | Description      | Order No.   |
|------|------------------|-------------|
|      | Safety screw set | 700 000 900 |

## AS-INTERFACE

The integration of the modulSIGNAL70 signal tower into AS-Interface field bus systems is easily possible with the new AS-Interface module type VAZ. The new AS-Interface module VAZ is optionally available with standard-slave or the new A/B technique.

The AS-Interface module with standard slave can address up to 31 modules and maximum 4 modules on the signal tower. The option with A/B technique is able to address up to 62 modules and 3 or 4 modules on the signal tower.

When using internal power supply from the bus system maximum 200 mA are available for the signal tower elements.



### Features

- ▶ LED-status indicator – check routine
- ▶ modules for 31 or 62 addresses
- ▶ available with standard or A/B technique
- ▶ internal (via bus system) or external power supply selectable
- ▶ easy integration of signal tower as actor into the actor-sensor-interface system VAZ-module is mounted as first module directly onto the signal tower base
- ▶ significantly reduced wiring work

### Selection of module powering



## Order Data

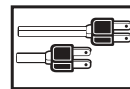
| Type | Description  | Order-Nr.   |
|------|--|-------------|
| VAZ  | AS-Interface module for 31 slaves                              | 780 500 500 |
|      | AS-Interf. module for 62 slaves - up to 3 signal tower modules | 780 500 600 |
|      | AS-Interf. module for 62 slaves - up to 4 signal tower modules | 780 500 700 |

### Status indication

red green



| green | red | Status   |
|-------|-----|--|
|       |     | Normal operation   |
|       |     | No data exchange   |
|       |     | No data exchange, Slave-adress = 0                         |
|       |     | Peripheral fault, overcurrent or low voltage on the output |



## Technical data

| Type                                    | VAZ  |             |             |
|---|--|-------------|-------------|
| order number                            | 780 500 500                                  | 780 500 600 | 780 500 700 |
| number of slaves                        | 31   | 62          | 62          |
| number of modules                       | 4  | 3           | 4           |
| IO-Code                                 | 8  | 7           | 7           |
| ID-Code                                 | F  | A           | A           |
| ID2-Code                                |  | E           | 7           |
| Datenbits                               | D0...Modul 0                                 |             |             |
|   | D1...Modul 1                                 |             |             |
|   | D2...Modul 2                                 |             |             |
|   | D3...Modul 3                                 |             |             |
| current from AS-Interface line          | max. 180 mA                                  |             |             |
| temperature range                       | -20° bis +50° C                              |             |             |
| protection class                        | IP 65  |             |             |
| AS-Interface voltage range              | 26,5 - 31,6 V                                |             |             |
| module power from the AS-Interface line | max. 130 mA                                  |             |             |
| external power supply                   | PELV, 24 V DC +/- 10%, max. 300 mA per Modul |             |             |
| housing material                        | polycarbonate, black                         |             |             |

## ACCESSORIES POLE CONNECTION BOXES

For additional installation possibilities of pole mount assemblies BMR:

- ▶ Surface cable conduits in protection class IP 65 – horizontally or vertically
- ▶ Model with magnetic base for mobile mounting, signalling device in protection class IP 65 on metal surfaces

| Code for thread |          | T       |
|-----------------|----------|---------|
| 1               | M 20     | 5 PG 16 |
| 2               | NPT 1/2" |         |

### BDW



### BDM

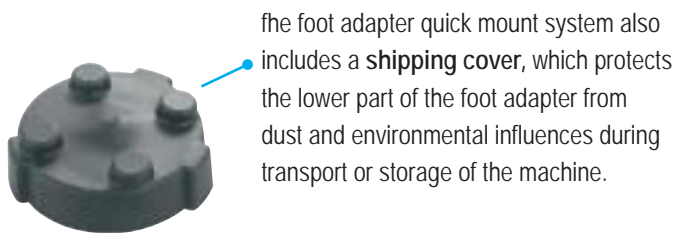
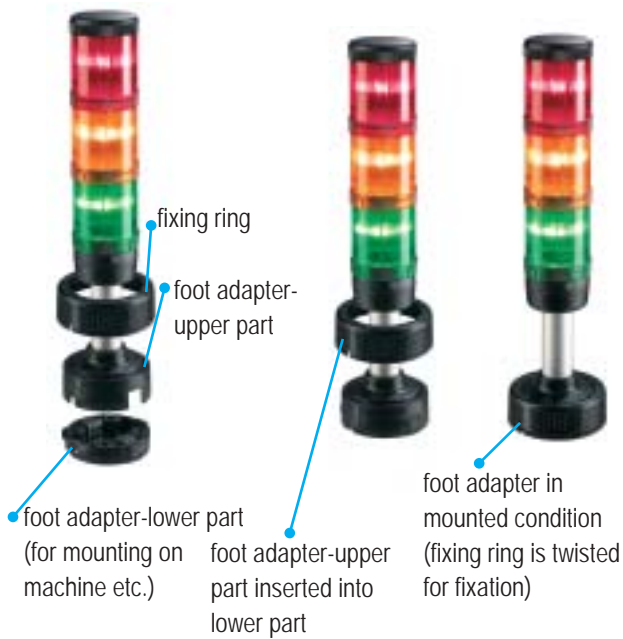


### BDV



| Type | Pole connection box     | order-Nr.    |               |                | Peso (g) |
|------|-------------------------|--------------|---------------|----------------|----------|
|      |                         | Housing grey | Housing black | Gehäuse silber |          |
| BDW  | for horizontal mounting | 841 10T 900  | 841 50T 900   | 841 80T 900    | 90       |
| BDV  | for vertical mounting   | 841 11T 900  | 841 51T 900   | 841 81T 900    | 110      |
| BDM  | for magnetic mounting   | 841 12T 900  | 841 52T 900   | 841 82T 900    | 330      |

## QUICK MOUNT SYSTEM „FOOT ADAPTER“ (Pat.No. 501053) (Base type VFR)



### Function

- the signal tower with pole mount base on aluminium tube with foot adapter for quick mounting (VFR) is electrically pre-wired
- the foot adapter lower part is mounted on the machine etc. and electrically connected
- the signal tower with foot adapter upper part is inserted into the lower part and firmly mounted by twisting the fixing ring
- the signal tower is immediately fully operable

### Advantages

- simple and cost saving disassembly of signal tower for transport of machine etc.
- quick cost saving installation of complete signal tower at client
- immediate function, no electrical connection required at client
- safe transport of signal tower (separately packed)
- additional locking option of signal tower with safety screw that cannot be lost
- signal tower fits only in one position onto the foot adapter lower part – no wrong installation of signal tower possible

## How to order Signal Tower modul SIGNAL50

| Configuration<br>24 V AC/DC   | Position | Type | Order No.<br>Catalogue | correct<br>order no. |
|---|----------|------|------------------------|----------------------|
| Steady light red  | 3        | VLL  | 750 00C 900            | 750 002 900          |
| Flashing light amber  | 2        | VLB  | 760 00C 405            | 760 001 405          |
| Steady light green  | 1        | VLL  | 750 00C 900            | 750 006 900          |
| Pole mount base on<br>aluminium tube<br>with foot adapter<br>for quick mounting,<br>100 mm long |          | VFR  | 790 58L 900            | 790 582 900          |
| 3 x bulb  |          | GL02 | 890 010 905            | 890 010 905          |



| Configuration<br>24 V AC/DC  | Position | Type | Order No.<br>Catalogue | correct<br>order no. |
|--|----------|------|------------------------|----------------------|
| Strobe light amber   | 3        | VLF  | 770 00C 405            | 770 001 405          |
| Steady light blue  | 2        | VLL  | 750 00C 900            | 750 005 900          |
| Steady light red   | 1        | VLL  | 750 00C 900            | 750 002 900          |
| Pole mount base on<br>aluminium tube<br>for horizontal<br>mounting with<br>screw,<br>250 mm long |          | VSW  | 790 57L 900            | 790 573 900          |
| 2 x bulb   |          | GL02 | 890 010 905            | 890 010 905          |



| Configuration<br>230 V AC     | Position | Type | Order No.<br>Catalogue | correct<br>order no. |
|-------------------------------|----------|------|------------------------|----------------------|
| Buzzer-module                 | 4 / 3    | VDZ  | 782 100 313            | 782 100 313          |
| LED-steady light<br>green     | 2        | VLL  | 750 00C 900            | 750 006 900          |
| LED-Bulb green                |          | LLL  | 893 00C 313            | 893 006 313          |
| LED-flashing light<br>red     | 1        | VLL  | 750 00C 900            | 750 002 900          |
| LED-Bulb red                  |          | LLB  | 893 01C 313            | 893 012 313          |
| Base for vertical<br>mounting |          | VMV  | 790 140 900            | 790 140 900          |

