

## Mini Switch

Optoelectronic liquid Level limit switch  
Threaded connection  
integrated switched light circuit module  
Output open-collector pnp transistor

Product group **720**

Type **0020/21/23**

Page: 1/1

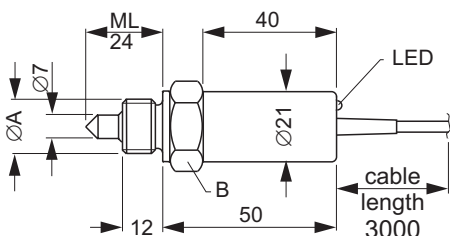
Revision: 7

Date:

7/08



Version  
M16x1,5



This type can be delivered  
in three versions:

| Typ        | ØA        | B    |
|------------|-----------|------|
| 720.0020SX | M16 x 1,5 | SW24 |
| 720.0021SX | NPT 1/2"  | SW24 |
| 720.0023SX | G1/2A     | SW30 |

### Cross reference:

| New ordering no | Old ordering no |
|-----------------|-----------------|
| 7200020SE       | 178 558         |
| 7200020SA       | 178 559         |
| 7200021SE       | 178 556         |
| 7200021SA       | 178 557         |
| 7200023SE       | 178 562         |
| 7200023SA       | 178 561         |

measures in mm

## Field of application

This Optoelectronic limit switch is for signalling liquid level limits. A big advantage is that to a great extent the optoelectronic sensor works independently of physical properties like density, dielectric constant, conductivity or color. The very compact construction only needs a minimum of space and enables it also to measure very small volume levels. With its built in green LED the activated state is indicated. It can also be used in transparent tanks.

## General Data

|                                  |                      |
|----------------------------------|----------------------|
| Measuring accuracy:              | +/-0,5 mm            |
| Light source:                    | IR-Light 930 nm      |
| Ambient light:                   | max. 10.000 Lux      |
| Minimum distance                 |                      |
| Sensor tip to any opposite wall: | >10 mm               |
| Mounting direction:              | any                  |
| Indication of active output:     | green LED            |
| Switch direction:                | to be set at factory |

## Design Data

|                          |                        |
|--------------------------|------------------------|
| Operating temperature:   | -30 to +140 °C         |
| Ambient temperature:     | -25 to +70 °C          |
| Operating pressure:      | 0 - 5 MPa (0 - 50 bar) |
| Material Sensor-housing: | SS                     |
| Material Light guide:    | Quartzglass            |
| Material packing:        | PTFE                   |
| Material housing:        | SS                     |
| Weight:                  | 0.15 kg                |

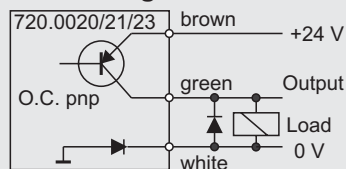
## Electrical Data

|                      |                                      |
|----------------------|--------------------------------------|
| Rated voltage:       | 24 V DC -25/+30 %                    |
| Supply current max.: | 40 mA                                |
| Output:              | O.C. pnp-Transistor                  |
|                      | current, voltage dissipation limited |
|                      | short-circuit-protected              |

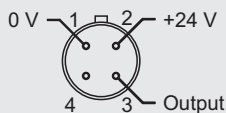
|  |                               |
|--|-------------------------------|
| Switch current (Tu=70 °C):             | 0,5 A                         |
| Connection:                            | PVC-cable 3*0.14 mm2          |
|  | or plug 4-pole serie 713, M12 |
| Ingress protection EN 60529 with plug: | IP 65                         |
| With cable:                            | IP 66                         |

subject to alterations

## Connection diagram



## pin assignment



## Ordering no.

7 2 0 0 0 2 X S X - 5 9 \_ \_ \_ X X X

|                  |                    |   |
|------------------|--------------------|---|
| Connection       | M16x1,5            | 0 |
|                  | NPT 1/2"           | 1 |
|                  | G1/2A              | 3 |
| Switch direction | switching immersed | E |
|                  | switching dry      | A |

|   |                |                       |
|---|----------------|-----------------------|
| B | Plug M12       | Cable or plug type    |
| P | PVC cable      |                       |
| 3 | 3 m            | Cable length          |
| 5 | 5 m            |                       |
| A | Cable shielded | electrical connection |
| K | Cable          |                       |
| S | Plug           |                       |

## PHÖNIX

Messtechnik GmbH  
Salzschlirfer Straße 13  
D-60386 Frankfurt/M.  
Tel. +49/69/41 67 42 -20  
Fax +49/69/41 67 42 - 29  
sales@phoenix-mt.com  
www.phoenix-mt.com

# PHÖNIX