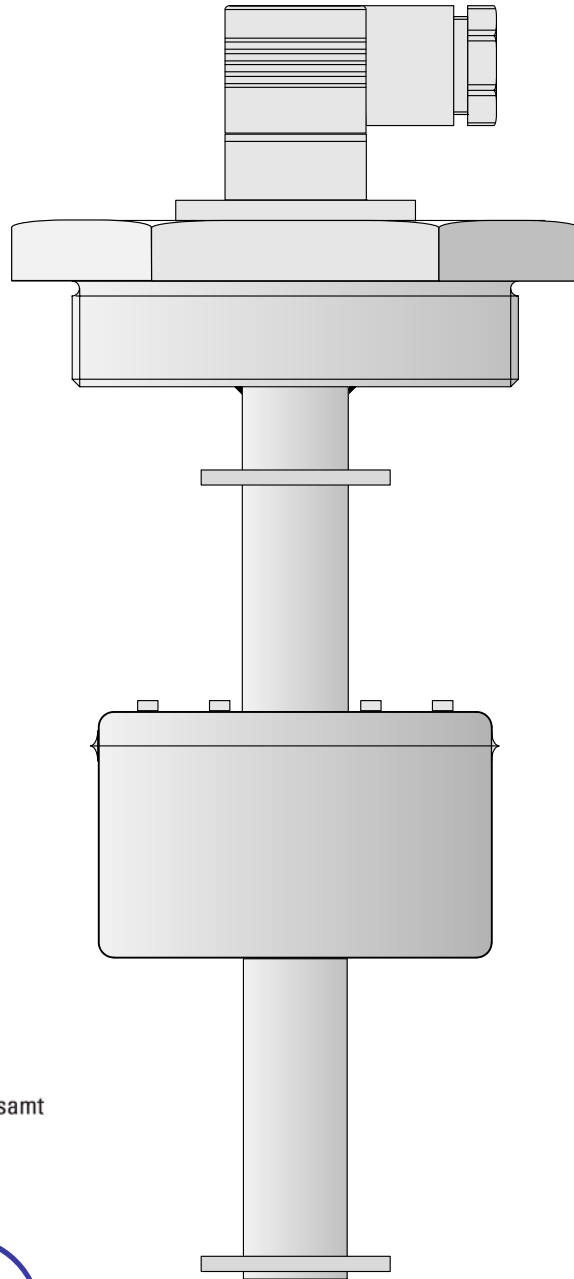


# Filling Level Sensor

with level limit switch as overflow protector



Eisenbahn-Bundesamt



## MWAS 2

# KROMA

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# MWAS 2 Filling Level Sensor

## with level limit switch as overflow protector

### Description

KROMA MWAS 2 filling level sensors are designed to continuously measure liquid levels of tanks, while also having an overflow signaling feature. Level measurement is accomplished through a six-chamber safety float. A magnet inside the ring float serves to switch reed contacts which are potentiometer taps provided in the sliding pipe. The signal available at the electrical output is an analogous resistance signal proportional to the filling level. The distance (grid) between reed contacts is 10 mm or 20 mm. Just before the maximum level is reached, the float actuates an overflow switch which breaks the overflow protector circuit of the connected fuelling facility. The MWAS 2 is equipped with a resistor which prevents the switch from being overloaded and permits connection of conventional fuelling facilities. In addition to level measurement, the MWAS 2 is also suited to be used as overflow protector.

The integral resistance transducer of the KROMA MWAS 2 permits direct connection of several KROMA BAZ level indicators or KROMA MWU measuring transformers.

MWAS 2 level sensors can be furnished with different connecting elements (AA) and sliding pipes up to three meters long (L).

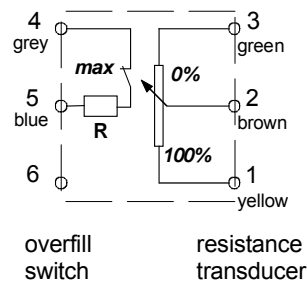
### Special Features

- Six-chamber safety float of polyamide
- Screw plug or flange and sliding pipe of stainless steel 1.4571
- High degree of protection (IP 65)
- Vibration- and shockproof
- Tested by the Technical Inspection Board (TÜV) (certificate no. W/FP 1408/96 and 4207/99)
- Tested according to German railways' standard BN 411002/EN 50155 (approved for use on rail vehicles)
- Type approval as overflow protector for rail vehicles (certificate no. EBA 34AZ3/0919/6 and EBA 32AZ3/0705/9)

### Technical Data

Potentiometer resistance:	2 to 10 k $\Omega$
Supply current (potentiometer):	< 5 mA
Circuit:	Three-wire potentiometer
Grid:	10 mm or 20 mm
Limit value monitor:	max. 30 V; 0.020 A; R = 560 $\Omega$
Sliding pipe:	Length $L_{max}$ = 3 m, $\varnothing$ = 14 mm
Connecting elements:	Refer to outline drawings.
Connection:	Refer to outline drawings.
Liquid temperature range:	-40°C to 70°C
Storage temperature range:	-55°C to +70°C
Operating pressure:	$\leq$ 1 bar
Density:	$\geq$ 700 kg/m
Vibratory strength:	9.9 m/s <sup>2</sup> (2.3 to 100 Hz), 30 m/s <sup>2</sup> (50 Hz)
Shock resistance:	50 m/s <sup>2</sup>

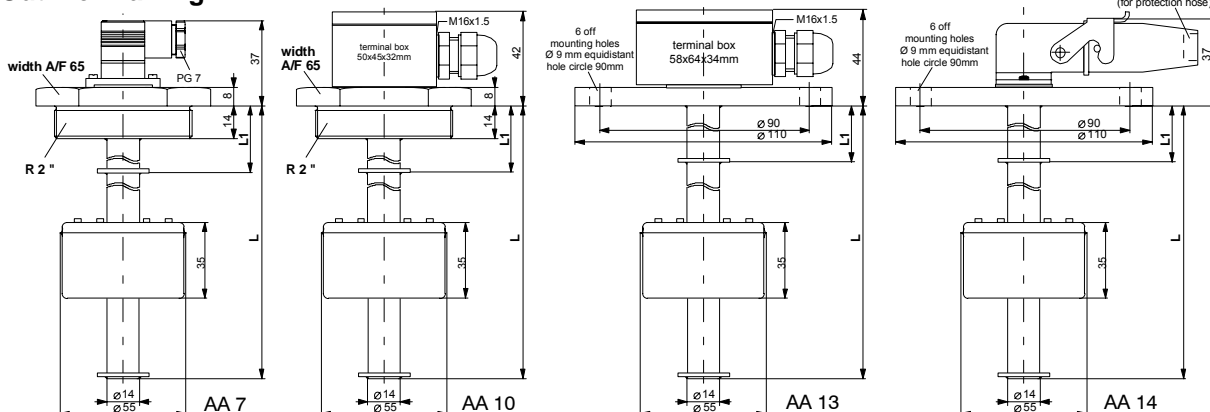
### Terminal Assignment



### Information required with order (typical order)

KROMA MWAS 2 level sensor	<b>MWAS 2 . 7 1 0 - 500 / 50</b>
Connecting elements "7"=AA7 (R2"/plug) (for other AAs, refer to overview)	_____
Grid "1" = 20 mm, "2" = 10 mm	_____
Mounting position "0" from top, "1" from bottom	_____
Total length L = 500 mm	_____
Upper float stop L1 = 50 mm	_____

### Outline Drawing



Subject to technical modifications.