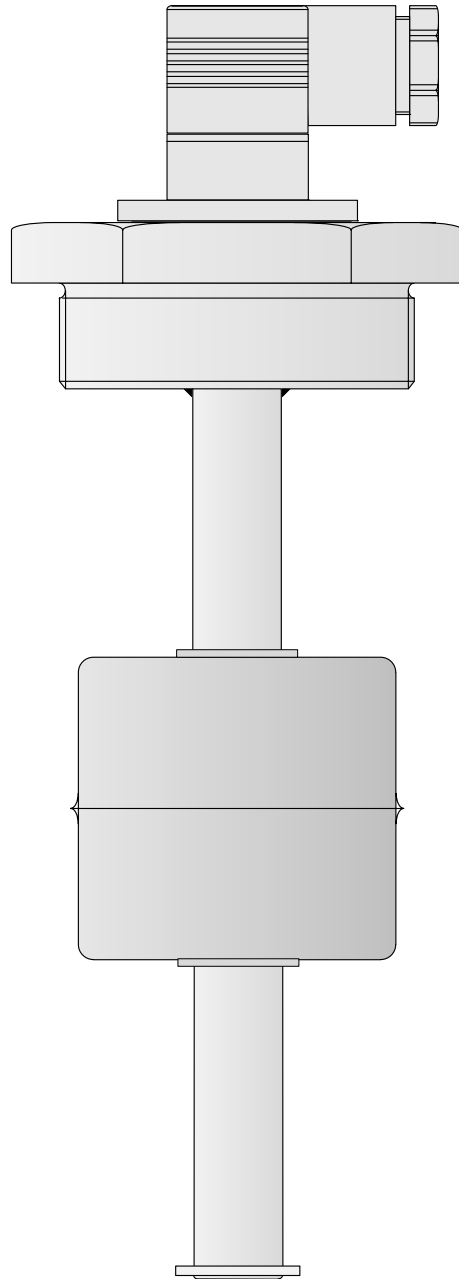


# Filling Level Sensor

with integral minimum and maximum limit switches



## MWAG 1

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# MWAG 1 Filling Level Sensor with integral limit switches

## Description

KROMA MWAG 1 filling level sensors are designed to continuously measure liquid levels of tanks, while also signalling the minimum and maximum. Level measurement is accomplished through a stainless steel 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 or minimum level is reached, the float actuates the particular limit switch. In addition to level measurement, the MWAG 1 is also suited to be used as limit switch for maximum or minimum levels. The integral resistance transducer of the KROMA MWAG 1 permits direct connection of several KROMA BAZ level indicators or KROMA MWU transformers. MWAG 1 level sensors can be furnished with different connecting elements (AA) and sliding pipes up to three meters long (L).

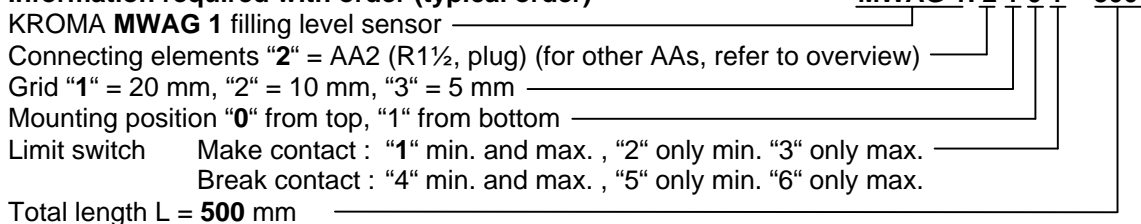
## Special Features

- Continuous resistance signal proportional to the filling level and integral electrically isolated limit switches for minimum and/or maximum
- Only one moving part - the float
- Screw plug or flange, sliding pipe and float of stainless steel 1.4571
- High degree of protection (IP 65)
- Vibration- and shockproof
- Tested according to German railway's standard BN 411002/EN 50155 (approved for use on rail vehicles)

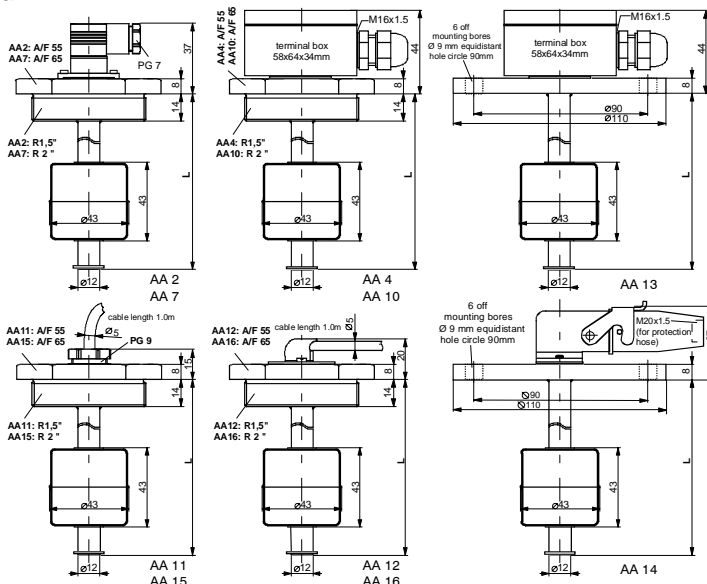
## Technical Data

Potentiometer resistance:	2 to 10 KOhm
Supply current (potentiometer):	< 5 mA
Circuit:	Three-wire potentiometer
Grid:	10 mm or 20 mm, special version 5mm
Limit switch:	Max. 110V DC; 60V AC; 0,1A; 10VA; electrically isolated
Sliding pipe:	Length $L_{max} = 3 \text{ m}$ , $\varnothing = 12 \text{ mm}$
Connecting elements:	Refer to outline drawings.
Connection:	Refer to outline drawings.
Liquid temperature range:	-30°C to +55°C
Storage temperature range:	-55°C to +55°C
Operating pressure:	$\leq 6 \text{ bar}$
Density:	$\geq 800 \text{ kg/m}^3$
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>

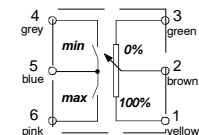
## Information required with order (typical order)



## Dimensional drawing



## Terminal assignment



limit switch actuated, when maximum or minimum level is reached)

resistor transducer