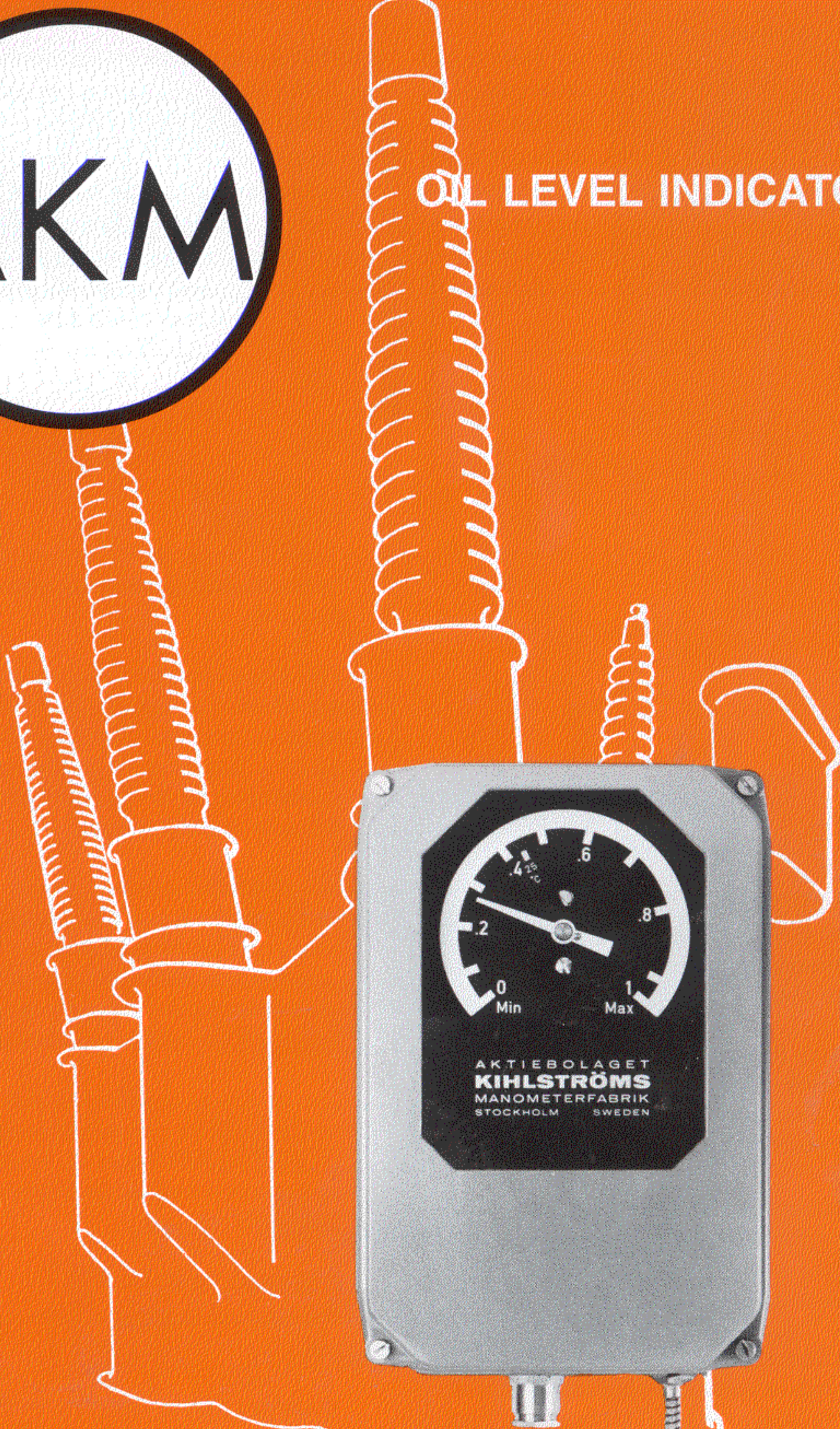
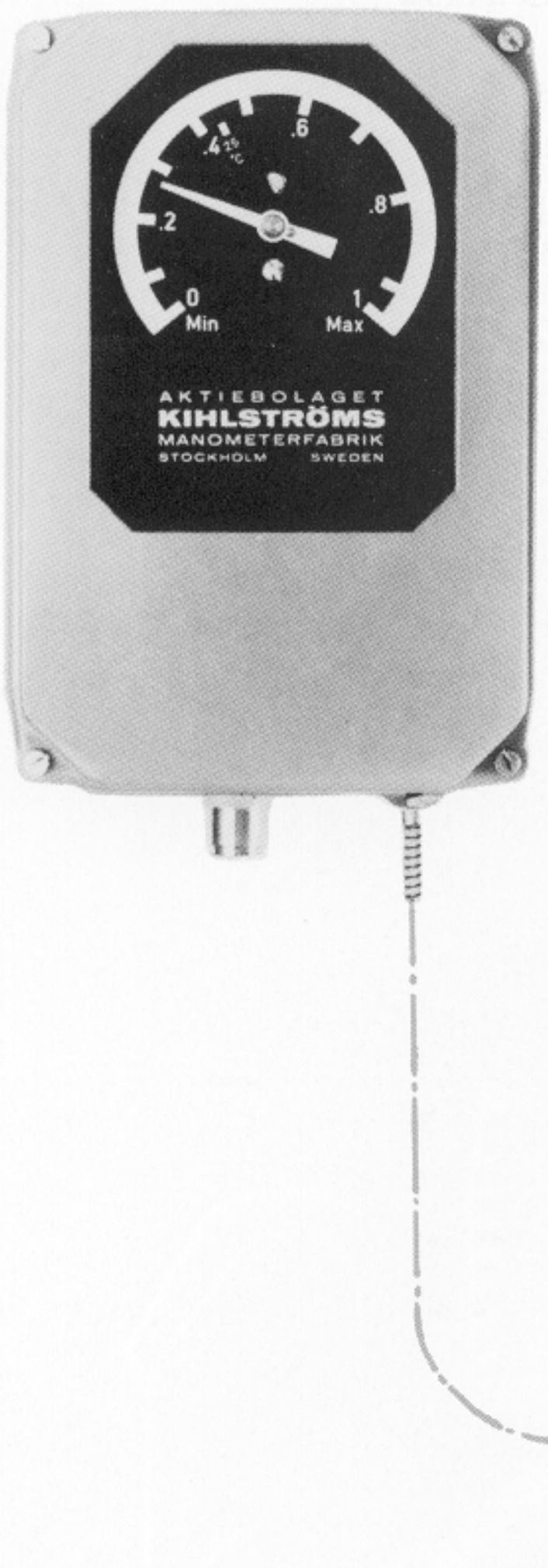
AKM

OIL LEVEL INDICATOR



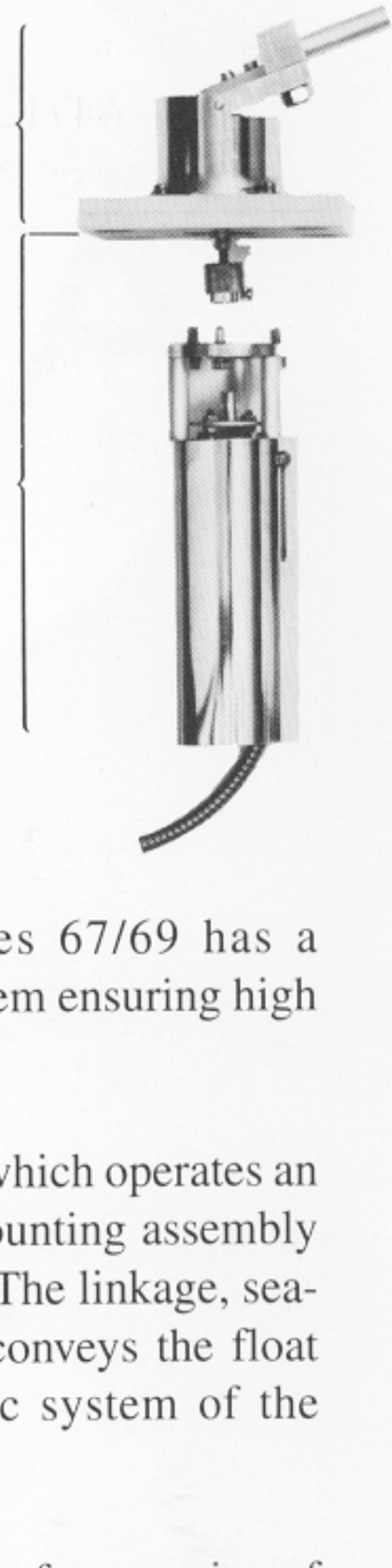
AB KIHLSTRÖMS
MANOMETERFABRIK

BULLETIN 67/69
1998



Flange mounting assembly and float

Indicator connection



FUNCTION

The Oil level indicator Series 67/69 has a hydromechanical measuring system ensuring high precision.

The oil level is sensed by a float which operates an arm connected to the flanged mounting assembly bolted to the conservator vessel. The linkage, sealed by a flexible metal bellow, conveys the float arm movement to the hydraulic system of the indicator instrument.

DESCRIPTION

The Oil level indicator Series 67/69 is designed for indicating and monitoring the oil level in conservator vessels of power transformers.

It is made for outdoor mounting directly on the transformer in any climate, tropical as well as arctic. All parts are made of non corrosive or surface treated material.

The indicator and the transmitter are joined by a flexible tubing, making it easy to install the indicator in a location where it will be convenient and safe to read.

The indicator may be separated from the transmitter without need for the transmitter to be removed from the conservator. This facilitates handling during transport and testing of the transformer.

The microswitches for oil level control are located inside the indicator instrument case, where they are easy to connect and adjust.

As an option, the indicator can be supplied with a transmitter for remote indication.

The hydraulic system consists of two pairs of bellows joined by a connecting tubing. One pair of bellows joins to the linkage in the flanged mounting assembly, transmitting the movement of the linkage via the connecting tubing to the second pair of bellows in the indicator instrument.

The system is designed to make the indicator compensated for variations in ambient temperature as well as differences in height between the conservator vessel and the location of the indicator instrument.

CALIBRATION

The Oil level indicator is calibrated and ready for use.

IMPORTANT ASPECTS

The Oil level indicator Series 67/69 is designed so that the indicator can be positioned in a location for safe and convenient reading.
Simple and trouble-free installation.
Maintenance free, with outstanding durability.
Indicator can be disconnected without draining the conservator.
Made to customer specification, with a wide variety of optional versions.

TECHNICAL DATA

Casing: Die casted aluminium with epoxy paint.
Clear transparent window of tough polycarbonate plastic.
Case is ventilated and weather-proof according to DIN 40050 protection class IP 54.

Measuring system: Hydromechanical, compensated for ambient temperature changes.

Capillary tubing: Copper-nickel with a protective tubing of stainless steel.

Transmitter: Float of homogenous foam plastic. Float arm and flanged mounting assembly of anodized aluminium.

Scale: Made to customer specification, depending on the shape of the conservator vessel.

Switches: Two fully adjustable Magnetic Blow Out microswitches, breaking capacity: 3 A, 220 V AC/DC. Four switches available as an option.

Insulation test. 2000 V 50 Hz to earth 60 s.

Instrument operating temperature:
Max.+70°C, min -50°C.

Anti-vibration mountings: Included

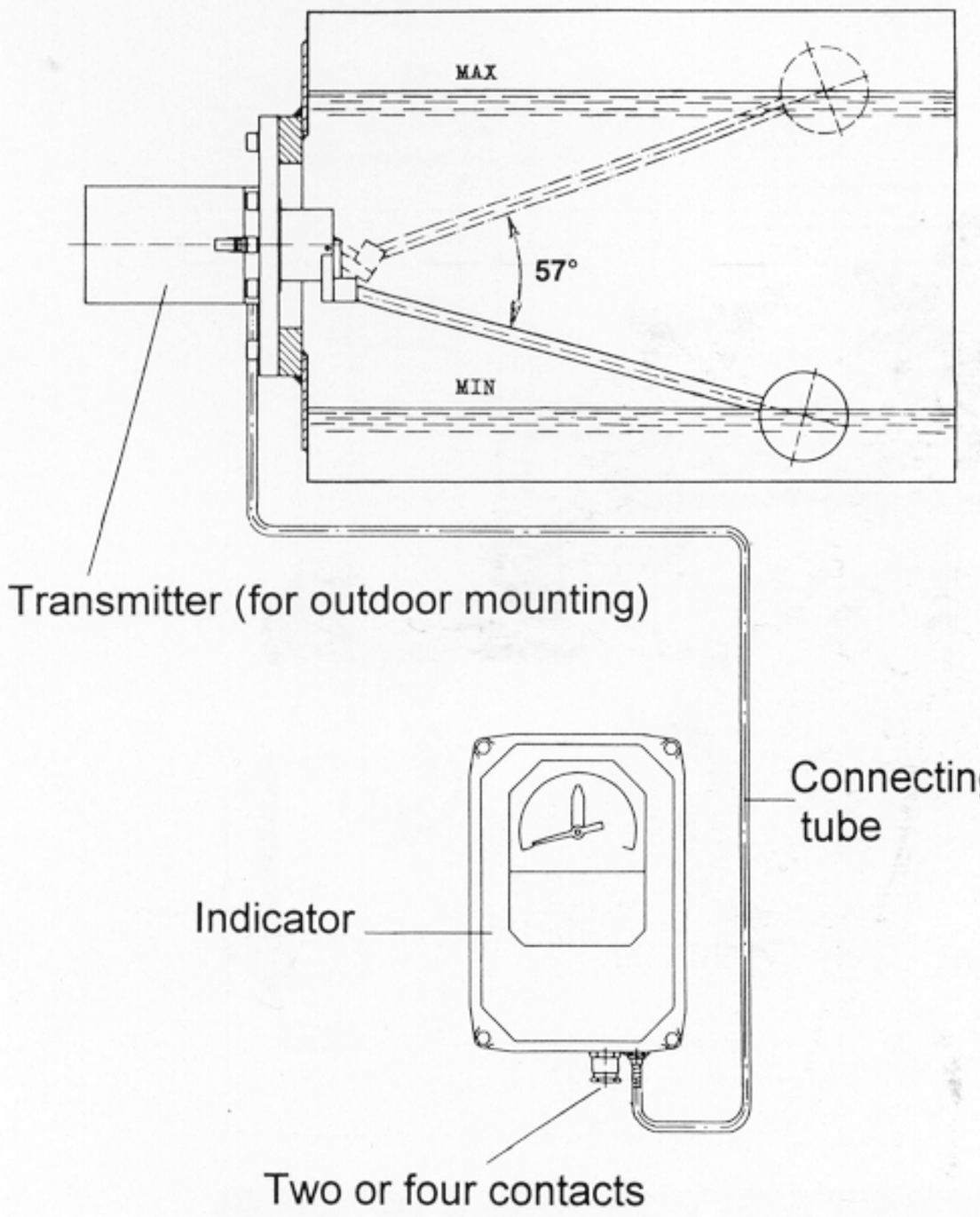
ORDER INFORMATION

Request order information sheet TD149E for specifying instrument, flanged mounting assembly and float.
Two indicator instruments are available, 46702 which is designed for use with square type flanged mounting assembly and 46900 which is designed for use with round flanged mounting assemblies.
The flanged mounting assembly can be made to customer specification to fit virtually any conservator vessel. For standard dimensions see last page.
Float is specified by arm length, which should be decided so that the maximum change in oil level will correspond to 57° movement of the float arm. (see installation suggestions below) Recommended arm length is 500-2000 mm.

AVAILABLE OPTIONS

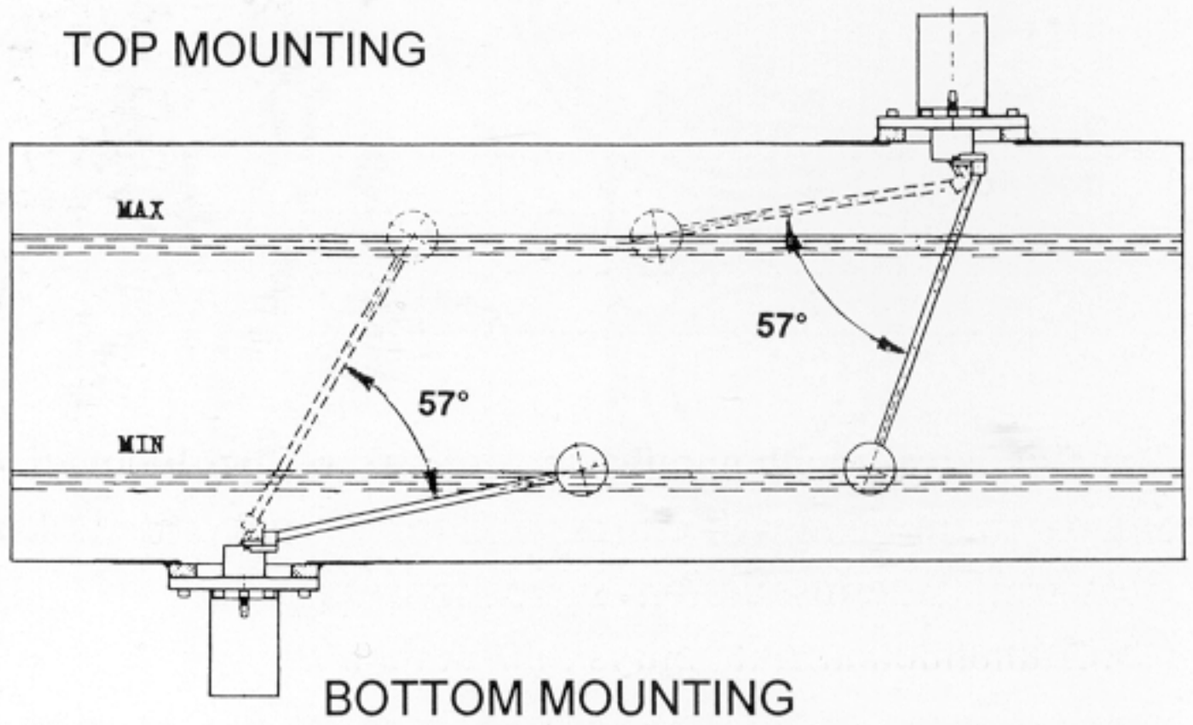
Four instead of two microswitches
Transmitter for remote indication TD111 4-20 mA

SIDE MOUNTING



N.B. Flange 46701-0 is recommended only for bottom mounting. Other flanges are suitable for all mountings.

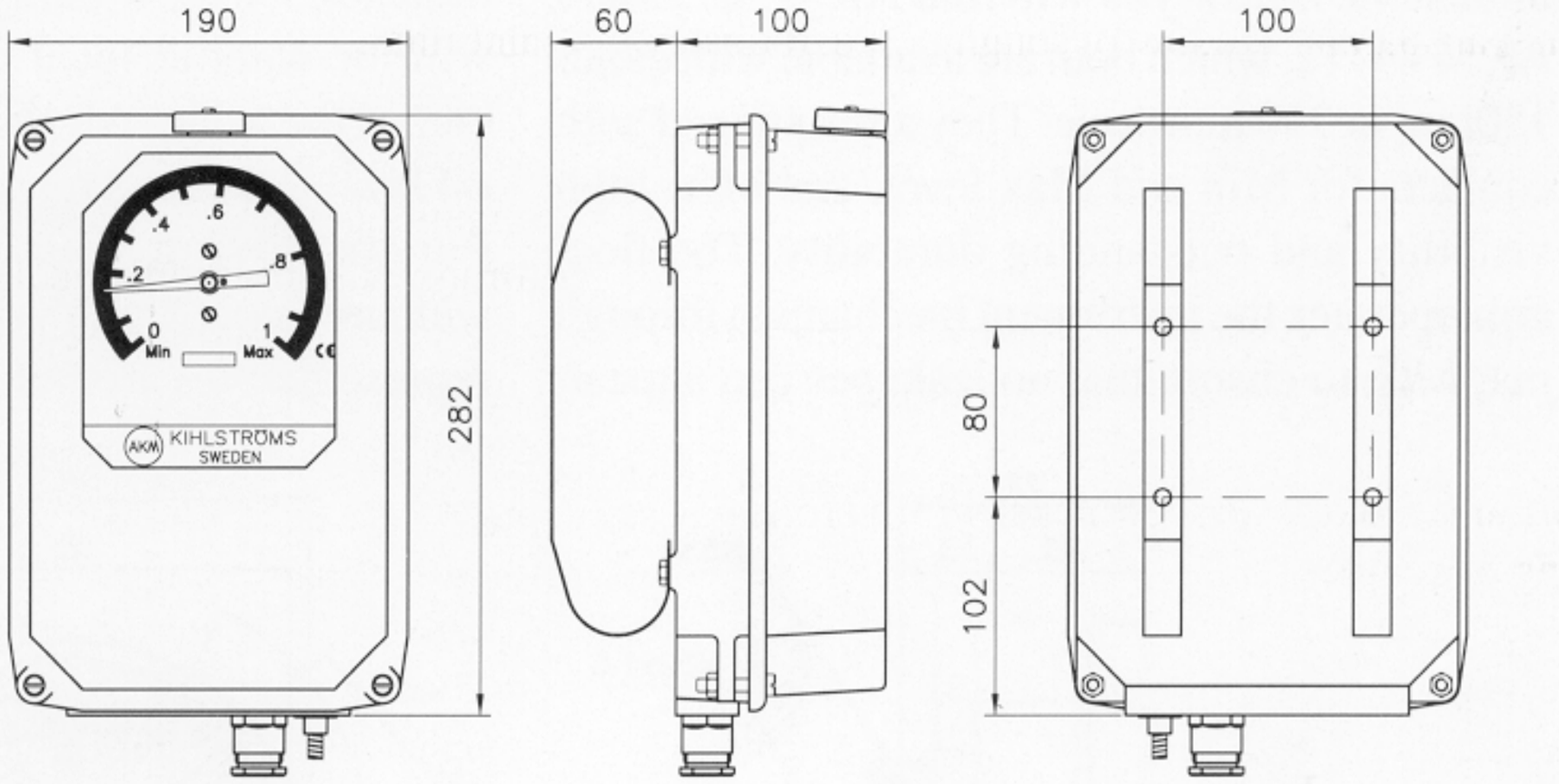
TOP MOUNTING



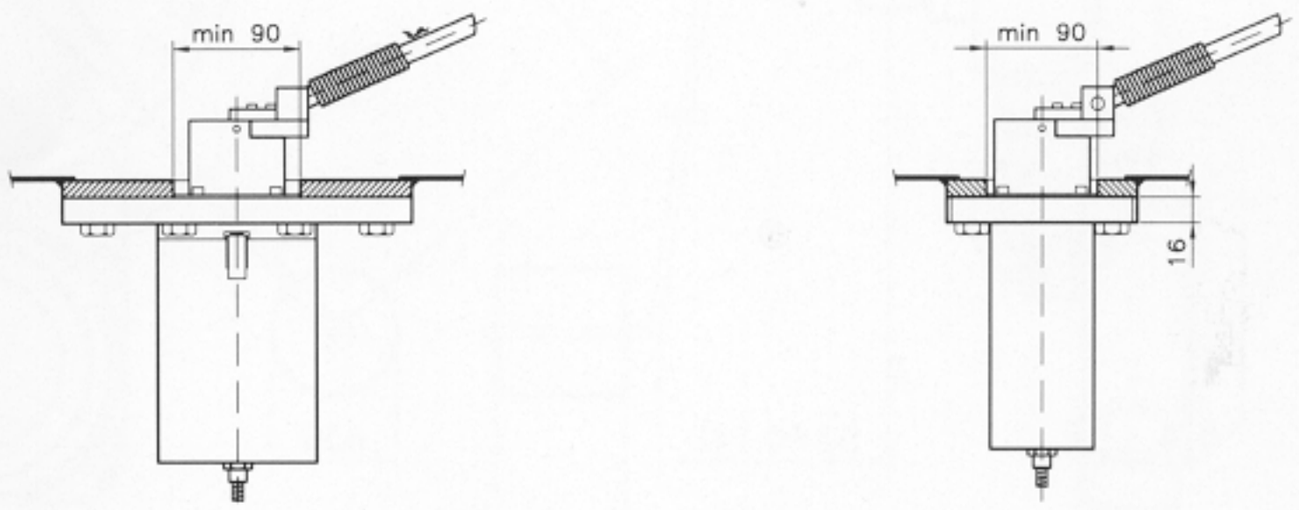
BOTTOM MOUNTING

MEASURES:

INSTRUMENT:



FLANGE:



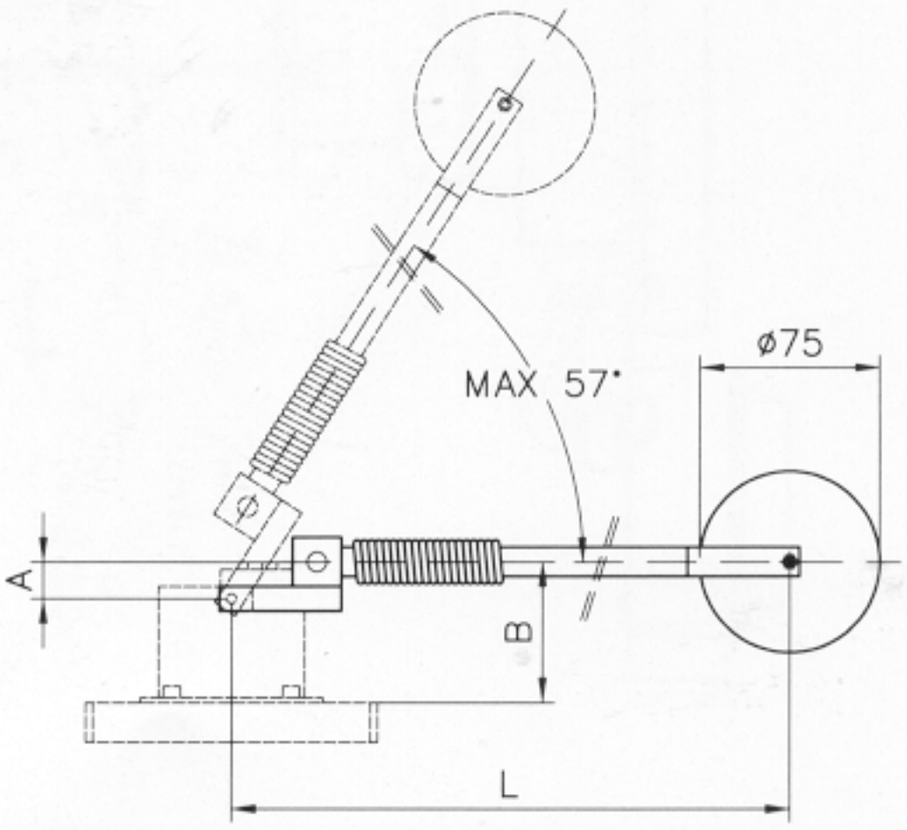
Flange No	D	d1	d2	Z
46701-1	140	125	7	6
46701-2	220	190	11,5	8
46701-4	140	125	14	4
Special	D	d1	d2	Z

Flange No	A	d1	d2
46701-0	120	125	18
Special	A	d1	d2

FLOAT:

Float No.	A	B	L
48200 - L	13	55	min 500 - max. 2000
48200 - 1 - L	53	95	min 500 - max. 2000

The float arm length should be decided so that the maximum change in oil level will correspond to 57° movement of the float arm. (see installation suggestions page 3)
Recommended arm length is 500-2000 mm.

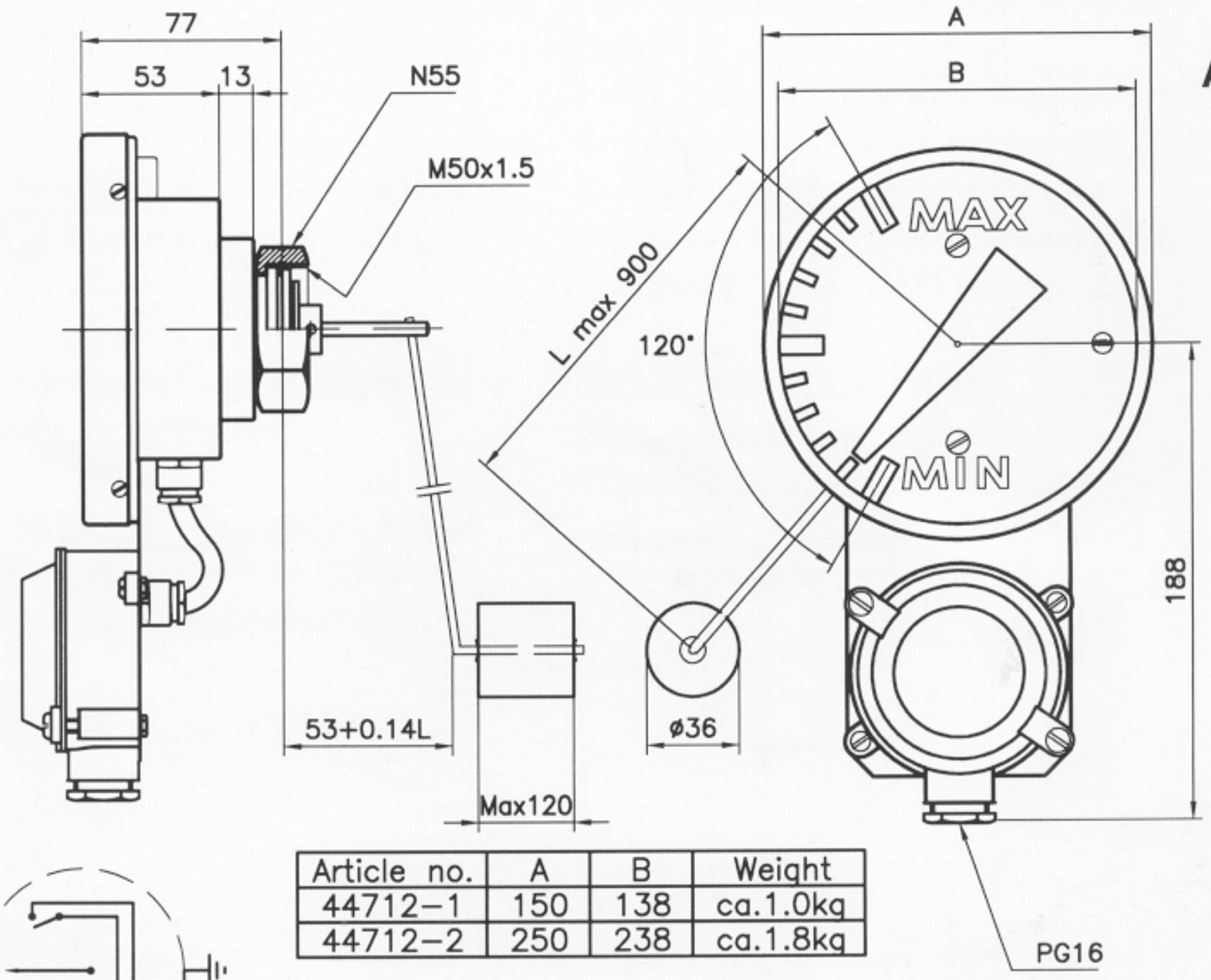


CONVENTIONAL OIL LEVEL INDICATORS:

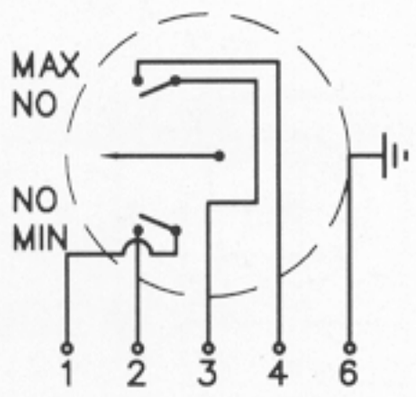
AKM also offers a range of conventional oil level indicators. Below you will find AKM 34725 and AKM 44712, which both are available with either 150mm or 250 mm scale. They are equipped with contacts for Min and Max level, and offer high visibility and outstanding durability. The float arm operates the instrument mechanism through magnets, to ensure that no leakages can appear.

For remote indication, AKM offers oil level indicators with a built in 4-20mA transmitter, with or without local indication. On the other end of the scale, AKM produces small low cost oil level indicators for distribution transformers. For discussing your requirements, you are welcome contacting AKM or any of the AKM representatives around the world.

AKM 44712

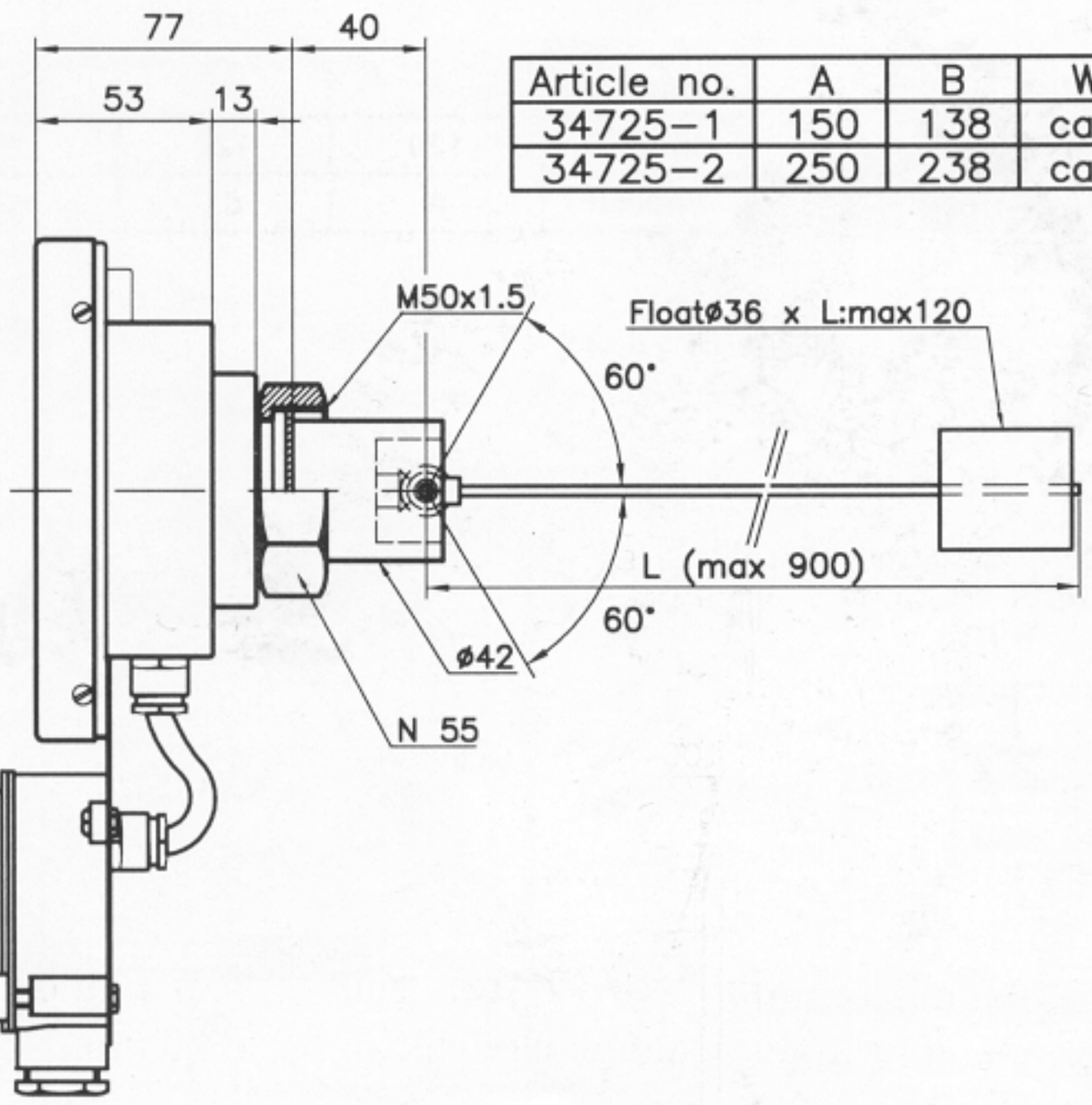


Article no.	A	B	Weight
44712–1	150	138	ca.1.0kg
44712–2	250	238	ca.1.8kg



Contact capacity 250V, 5A, AC / 125V, 0.3A, DC
Ambient temperature max +70°C, min −50°C.
Insulation test to earth with 2000V 50 Hz 60s
Protection class IP 54 DIN 40050

AKM 34725



Article no.	A	B	Weight
34725–1	150	138	ca.1.0kg
34725–2	250	238	ca.1.8kg