

# HCX/E+ST

ELESA original design

## Column level indicators with electric warning signals of MIN level and MAX temperature

These column level indicators generate two electric signals: one when the oil goes down to the minimum level allowed and another one when the temperature reaches the pre-set degrees.

### • Material

Special transparent polyamide-based (PA-T) technopolymer, highly resistant to shocks, solvents, oils with additives, aliphatic and aromatic hydrocarbons, petrol, naphtha, phosphoric esters. Avoid contact with alcohol and detergents containing alcohol.

### • Float

Polyamide-based technopolymer foam in black colour, built-in magnetic element to activate the electric contact when the oil level drops to a minimum; alarm threshold located at about 50 mm from the centre of the lower bolt.

### • Sensor bracket

Black polyamide-based technopolymer (PA) perfectly watertight, built-in relay (reed) with 2 two-pin conductors wired to the two-pin connector.

### • Electric temperature thermostat

Zinc-plated screw with built-in thermostat. Electric contact normally open (N.A.).

### • Swivelling two-pin connector

With front or side output (right or left) including protection against water sprays, minimum class IP 65 (according to IEC 529) that can be increased during installation with the necessary adjustments. NBR synthetic flat packing rings.

### • Set screw and nuts

In zinc-plated steel with NBR synthetic rubber OR packing rings. Fast Mounting Kit available (see page 248 of the Elessa General Catalogue).

### • Contrast screen

White lacquered aluminium housed in appropriate rear slot, avoids direct contact with fluid and therefore yellowing due to prolonged action of oil at high temperatures it can be removed before installation to fit marks and words (for example: MAX - MIN).

### • Maximum continuous working temperature with oil

90°C.



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108

Accessories for hydraulic systems

The indicator is made entirely from transparent material thus guaranteeing **maximum fluid level visibility even from the side**. Assembled using ultrasound welding to guarantee a perfect seal.

In laboratory tests carried out with mineral oil for hydraulic system type CB 68 (in accordance with ISO 3498 standards) with gradually increasing pressure, at 20°C the weld stood up to 18 bar.

We suggest in any case to verify the suitability of the product under your working conditions. If you need to use the indicator with other oils or fluids and in different pressure and temperature conditions, contact ELESA Technical Department or carry out tests in order to guarantee correct working.

Special type (on request) **HCX/E+ST-AR** for use with fluids containing alcohol.

Electric characteristics	Min level sensor	MAX temperature sensor
Power supply	AC / DC	AC / DC
Electric contacts	N.A. normally open (on request N.C. normally closed)	
Maximum applicable voltage	150 Vac, 200 Vdc	150 Vac, 48 Vdc
Maximum opening current	1 A resistive loads	5 A resistive loads
Maximum rated capacity	1.5 A (maximum power on contact 10W)	5 A
Cable gland	Pg 7 (for cables in sheath with diameter 6 or 7 mm)	
Conductor cross-section	Max 1.5 mm <sup>2</sup>	

**Do not mount this indicator in proximity to magnetic fields.**

### Assembly instructions

Indicator body: it can be fitted either with a nut fixed on the inside of the tank or from the outside by threading two holes in the tank (see drilling data on page 243 of the Elesa General Catalogue).

To ensure the best seal of the or packing rings it is recommended:  
 - to apply a maximum torque on the bolts from 12 to 15 [N\*m];  
 - roughness of the packing ring application surface Ra=3 µm.

Two-pin connector: detach the connector from the indicator by unscrewing the set screw located under the connector, extract the contact holder, loosen the cable gland, slip on the two-pole cable of the electric signal from the control unit and connect the wires to the terminals. Mount the contact holder on the indicator terminals and press the contact holder protection into the required position, screw on the connector set screw and then tighten the cable gland.

### Functioning

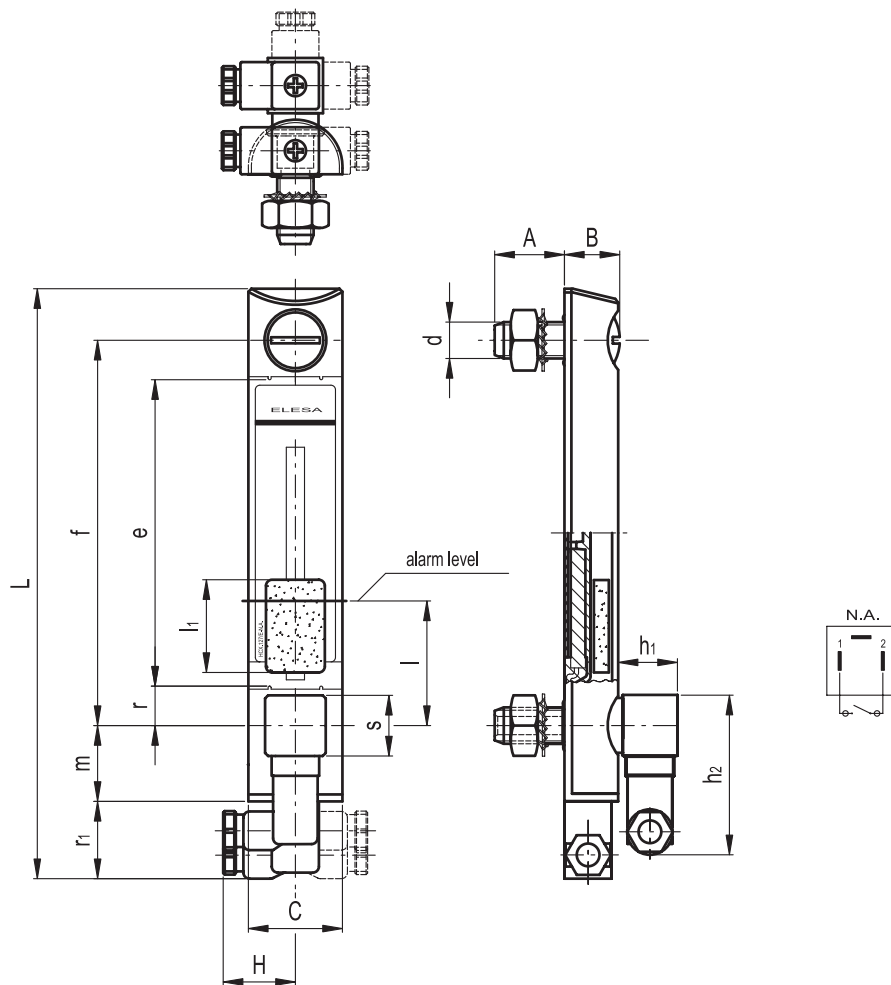
Oil level sensor.

In the version N.A. (normally open) the electric circuit is closed when the minimum level is reached.

Temperature level.

In the version N.A. (normally open) the electric circuit is closed when the pre-set temperature is reached - normally set at 80°C.

On request and for sufficient quantities it can be pre-set for different temperatures.



Standard elements		Main dimensions															Weight	
Code	Description	f	d	A	B	C	H	L	e	l	l1	m	r	r1	h1	h2	s	grams
11151	HCX.127-E-ST	127	M12	23	18	31	27	195	101	50	40	25	13	26	21	54	22x22	235