Electrical-contact pressure gauges

Standard and vibration-resistant models | Complete English user manual

1. Product overview

This manual covers standard and vibration-resistant mechanical pointer pressure gauges with integrated electrical contacts. They show process pressure locally and switch when pressure reaches preset upper or lower limits, supporting automatic control or abnormal-pressure alarms for gas and liquid systems. Standard models suit stable environments without severe vibration; vibration-resistant models suit vibration and pressure pulsation.

2. Product features

Independent upper and lower limits: Separate high/low contacts support alarms or equipment interlocks.
Magnetic-assisted switching: The magnetic-assisted contact mechanism responds rapidly and has a 30VA contact rating for suitable small or medium relay loads.
Enclosure choices: Standard dry-case models provide IP54 protection for stable services such as water supply and low-pressure air vessels. Vibration-resistant versions use glycerin or silicone-oil case filling and IP65 protection for hydraulic equipment, compressors and construction machinery.

3. Family specifications

Parameter	Specification
Pressure envelope	−0.1MPa to 100MPa; customized calibrated spans within this envelope
Accuracy classes	1.0 / 1.6 / 2.5; follow the dial marking
Temperature influence	≤0.4% per 10°C departure from 20±5°C
Contact voltage	≤220VAC or ≤380VAC, according to the contact nameplate
Contact capacity	10VA direct contact / 30VA magnetic-assisted / 50VA high-capacity magnetic-assisted
Default connections, 60mm models	EYXC-60 and EYTNXC-60: M14×1.5
Default connections, 100mm and 150mm models	EYXC-100, EYXC-150, EYTNXC-100 and EYTNXC-150: M20×1.5
Other connections	Custom threads available

Model, pressure span, accuracy, enclosure type and contact rating are configuration-dependent. These options are not cumulative ratings for a single gauge. Product design and specifications may change without prior notice.

4. Before installation

Disconnect electrical power to the target system. Confirm that the pressure range, process connection and electrical ratings match the application. Before installation, the pointer must be at zero while the instrument is unpressurized.

Mechanical and electrical installation

5. Mechanical installation

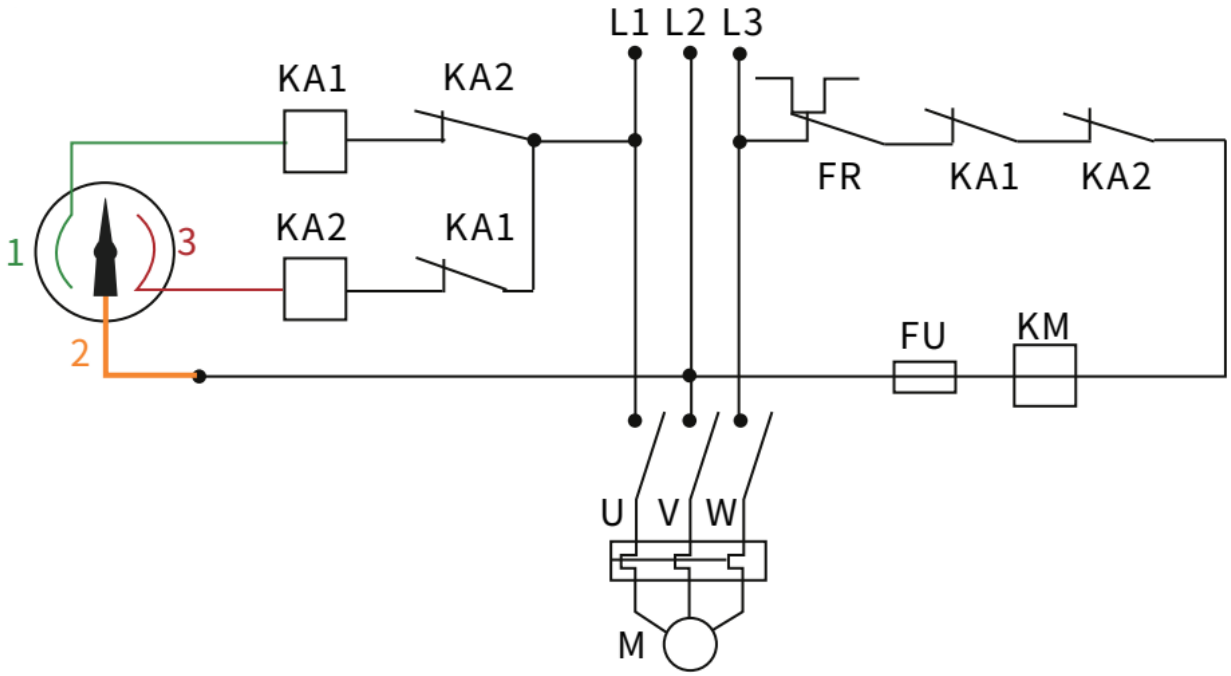
The source specifies installation with the connection direction perpendicular to the pipeline. Verify that the pressure-source peaks remain below the following limits:

Pressure condition	Upper limit
Steady pressure	Less than 2/3 of full scale
Alternating pressure	Less than 1/2 of full scale
Momentary pressure	Less than 3/4 of full scale

6. Wire-color definitions

Color	Connection
Green	Lower-limit output, L
Yellow	Electrical common
Red	Upper-limit output, H
Black	Protective earth

7. Original control-circuit example



The original circuit drawing is retained, with its standard Latin electrical labels. L1/L2/L3 are the supply phases; U/V/W are the motor connections; M is the motor; KA1/KA2 are control relays; KM is the contactor; FU is the fuse; FR is the overload relay.

Drawing identifiers: 1 = green lower-limit output; 2 = yellow common; 3 = red upper-limit output. These numbers identify the drawing’s gauge contacts; use the physical terminal markings on the supplied instrument when making connections. The diagram does not state relay-coil voltage, fuse rating or motor size. Match all external components to the actual supply and load.

Settings, checks and precautions

8. Set the thresholds

Before energizing the circuit, press and turn the red knob to set the lower limit, identified by the green pointer, then release the knob. Turn toward the upper-limit red pointer, press and rotate to adjust that limit, then release the knob. The upper limit cannot be set below the lower limit, and the lower limit cannot be set above the upper limit.

9. Verify switching

After adjustment, use a stable pressure source to check the actual contact operation before putting the system into service. Raise pressure to the upper red pointer: H conducts. Reduce pressure to the lower green pointer: L conducts.

10. Precautions

1. Disconnect power before installing the gauge, opening the terminal box or adjusting setpoints. Use it only after the process connection is secure, the electrical wiring is complete and switching has been tested.
2. Do not use liquids, gases or other media that corrode copper or copper alloys.
3. Do not exceed the instrument’s pressure or temperature range; this can seriously shorten service life or cause damage.
4. Professional calibration every six months is recommended. Check contact-operation reliability at the same time.
5. Do not strike, drop or dismantle the gauge, or apply heavy force to the case, connection or window.
6. Because the gauge switches electrical circuits, stop using it immediately if an abnormality occurs and arrange inspection or repair.
7. Severe vibration causes inaccurate readings and reduces service life. Select a vibration-resistant electrical-contact gauge and add a damping tube for such conditions.
8. Before dismantling, servicing or transporting the pipeline, remove the gauge and protect its body and connection. Reinstall it according to the installation section of this manual.

Terminal identification

The illustrated terminal-box label uses 1 = common, 2 = lower limit, 3 = upper limit and 4 = earth. Circuit contact identifiers and physical terminal numbers are different references. Follow the conductor function and the label on the supplied gauge.

Source identification

Manufactured by Yueqing ELECALL Electric Co., Ltd., holder of the ELECALL trademarks.
Address: No. 246 Weishi Road, Yueqing Economic Development Zone, Zhejiang, China.
Telephone: 4006-111-323 | Website: www.elecall.cn.
Source document: VI-EYX-260402; original page size 148×210mm.
Source slogan: “A better product at a good price” / “DO BETTER FOR EVER”.