

YZF 型和 YZS 型变压器用指针式油位计

YZF and YZS Pointer-type Oil Level Gage for Transformer

一、概述

YZF 型和 YZS 型变压器用指针式油位计（简称油位计）是变压器储油柜的油位测量装置。其主要结构包括：感受部分（直杆浮球或伸缩杆），传动部分，磁偶合器，指示部分，报警部分（不适用于无开关的油位计）。它安装在变压器储油柜上，通过感受部分（直杆浮球或伸缩杆）把油位的变化传递给油位计的传动部分，并通过磁偶合器带动指示部分，最后通过指针在度盘上指示出油位的高低，带开关的油位计则在最高、最低油位时发出报警信号，起到远距离监控的目的。

按照盘面直径分为：250，200，175，140，四种规格，分别适用于不同直径的储油柜，其中 250，200，175，140 规格的油位计带两个高低油位报警开关。

按照连杆的摆动形式分为：上下摆动和左右摆动两种，分别适用于主储油柜和有载开关储油柜。

按照连杆的结构形式分为：直杆浮球式和伸缩杆式两种，分别适用于胶囊式和隔膜式储油柜。

I. Overview

YZF and YZS pointer-type oil level gages for transformer (shorted for oil level gage) is the oil level measurer of the oil storage cabinet on transformer. Its main structure includes: sensing part (straight rod float ball or flexing rod), driving part, magnetic coupler, indication part, alarm part (not suitable for oil level gage without switch). It is installed on the oil storage cabinet of transformer, through sensing part (straight rod float ball or flexing rod) to transmit the change of oil level to the driving part of oil level gage and through magnetic coupler to drive indication part, at last through indicator to indicate oil level position up and down on dial, oil level gage with switch can give warning signal at highest and lowest positions of oil to act as remote monitoring.

In accordance with dial face diameter, it is divided to 4 sizes: 250, 200, 175, 140, suitable for oil storage cabinets with different diameters respectively, of which, the oil level gages with 250, 200, 175 and 140 sizes have two alarm switches at high and low oil levels.

In accordance with the swinging type of connecting rod, it is divided into two types, that is, swinging up-down and swinging left-right, respectively suitable for main oil storage cabinet and switch oil storage cabinet with loading.

In accordance with the structural type of connecting rod, it is divided into two types, that is, straight rod float ball type and flexing rod type, they are respectively suitable for capsule and diaphragm oil storage cabinets.

二、技术参数

空气温度：-30°C ~ +55°C。

相对湿度：当空气温度为+25°C±5°C时，相对湿度不大于90%。

油温不高于 90°C。

无剧烈振动和颠簸的场所。

密封性能：2.45×10⁵Pa。

防护等级：IP55。

长期稳定性：不小于 10000 次。

开关容量：AC 250V0.3A，DC 250V 0.3A，

绝缘耐压：2000V，1min。

II. Technical parameters

Air temperature: -30°C ~ +55°C.

Relative humidity: When air temperature is at + 25°C±5°C, the relative humidity is not more than 90%.

Oil temperature is not higher than 90°C.

Application without severe vibration and bumping.

Sealing performance: 2.45 x 10⁵Pa.

Protection grade: IP55.

Long term stabilization: > 10000 times.

Switching capacity: AC250 V0.3A, DC 250V 0.3A, .

Insulation and withstand voltage: 2000V, 1min.

三、注意事项:

本油位计系由玻璃、指针、度盘等组成, 不易受强力冲撞。

当本油位计随储油柜整体运输时, 应将连杆固定, 以免强力震动损坏内部零件。

III. Cautions:

The oil level gage consists of glass, indicator and dial, which is not easy to be strongly impacted.

When carrying out complete shipping of the oil level gage with oil storage cabinet, the connecting rod should be fixed to prevent the internal parts from damaging by severe vibration.

四、订货说明

IV. Ordering information

1. 型号 Model



2. 现有产品型号规格 Model and size of existing product

YZF₃—250 (直杆浮球式、上下摆动、带两个开关、安装在储油柜下部、度盘向下倾斜 20°)。
(straight rod float ball type, up-down swing, with 2 switches, installed at low part of oil storage cabinet, dial inclines downward 20°)

YZS₃—250 (伸缩杆式、上下摆动、带两个开关、安装在储油柜上部、度盘向下倾斜 20°)。
(flexing rod type, up-down swing, with 2 switches, installed at upper part of oil storage cabinet, dial inclines downward 20°)

YZF₂—200 (直杆浮球式、左右摆动、带两个开关、安装在储油柜中部、度盘向下倾斜 20°)。
(straight rod float ball type, left-right swing, with 2 switches, installed at meddle part of oil storage cabinet, dial inclines downward 20°)

YZF₃—200 (直杆浮球式、上下摆动、带两个开关、安装在储油柜下部、度盘向下倾斜 20°)。
(straight rod float ball type, up-down swing, with 2 switches, installed at low part of oil storage cabinet, dial inclines downward 20°)

YZF₂—175 (直杆浮球式、上下摆动、带两个开关、安装在储油柜下部)。
(straight rod float ball type, up-down swing, with 2 switches, installed at low part of oil storage cabinet)

YZF₂—140 (直杆浮球式、左右摆动、带两个开关、安装在储油柜中部)。
(straight rod float ball, left-right swing, with 2 switches, installed at meddle part of oil storage cabinet)

YZF₃—140 (直杆浮球式、上下摆动、带两个开关、安装在储油柜下部)。
(straight rod float ball type, up-down swing, with 2 switches, installed at low part of oil storage cabinet)

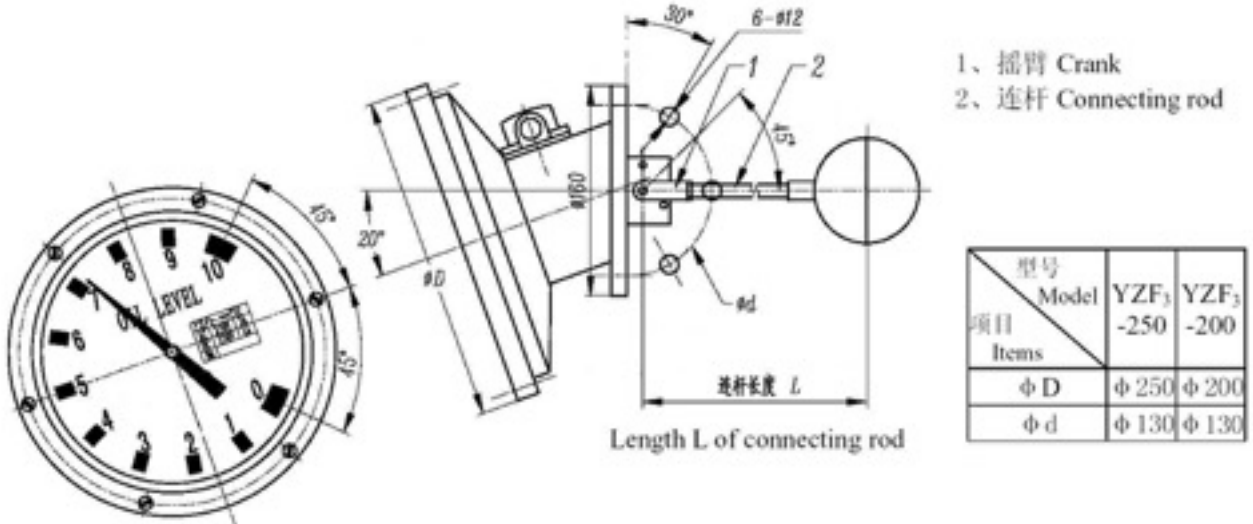
详细内容参见各产品的分页介绍。

For details, see instruction leaflet of product.

YZF₃—250 型油位计和 YZF₃—200 型油位计

YZF₃—250 Oil Level Gage and YZF₃—200 Oil Level Gage

安装尺寸图 Installation dimension drawings

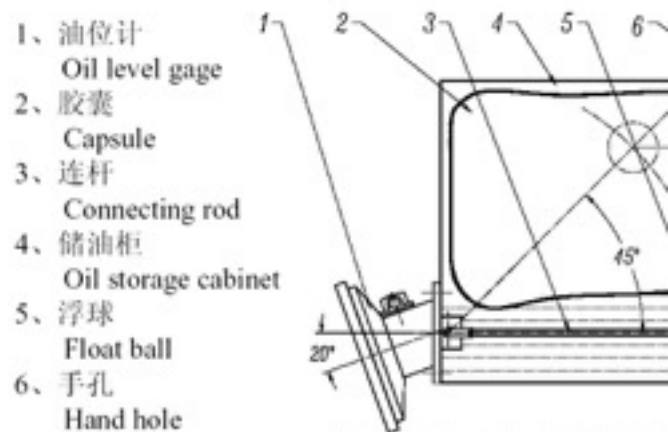


储油柜直径 (mm) Dia. of oil storage cabinet	φ600	φ650	φ800	φ1000	φ1200	φ1400	φ1600
连杆长度 L (mm) Length L of connecting rod	520	580	790	1050	1310	1565	1800

※ 说明：表中的连杆长度 L 为现有部分产品的尺寸，连杆长度可按下式进行选择：

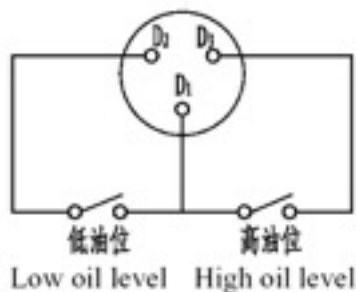
$L = H1 \times \sqrt{2}$ ，其中 $H1 = \text{储油柜直径} - H0 - H2$ ， $H0 = 80$ (建议)， $H2 = 150 \sim 250$ (建议)。

※ Description: Length L of connecting rod in the table is the dimension of existing products and the length of



connecting rod can be selected according to the following equation: $L = H1 \times \sqrt{2}$, of which $H1 = \text{dia. of oil storage cabinet} - H0 - H2$, $H0 = 80$ (suggest), $H2 = 150 \sim 250$ (suggest).

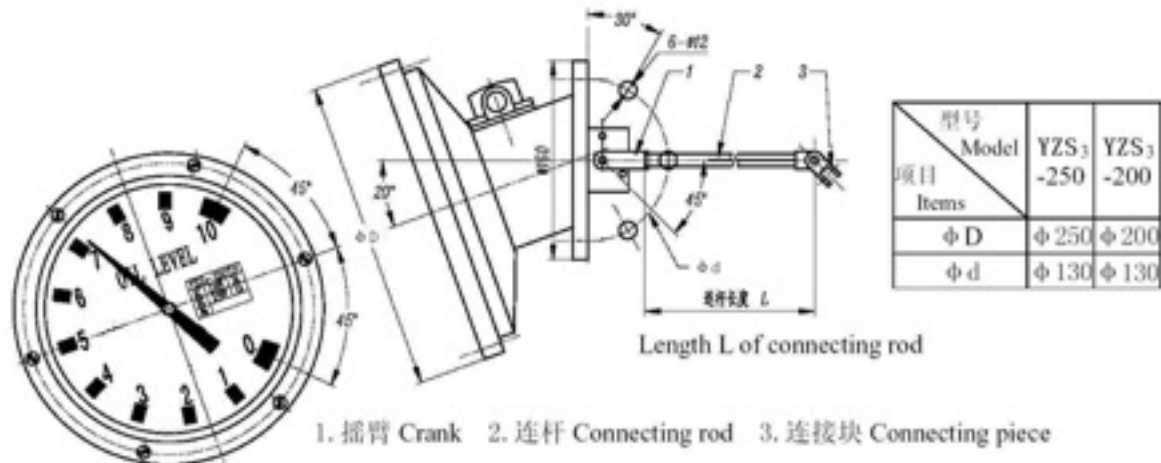
电气接线图 Electric wiring dia



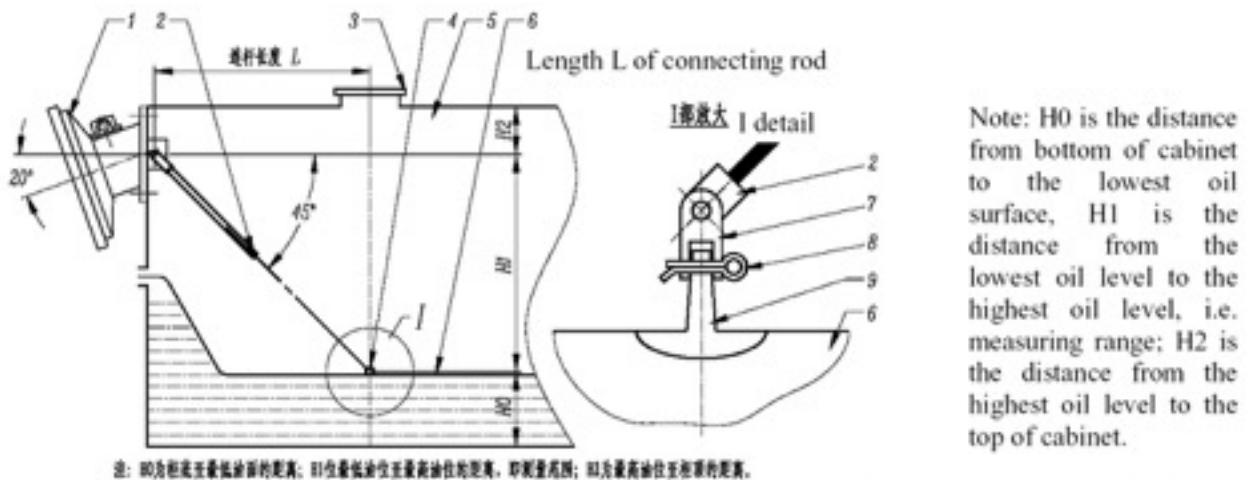
YZS₃—250 型油位计和YZS₃—200 型油位计

YZS₃—250 Oil Level Gage and YZS₃—200 Oil Level Gage

安装尺寸图 Installation dimension drawing



安装示意图 Installation schematic diagram



1、油位计 2、连杆 3、手孔 4、铰链 5、储油柜 6、密封隔膜 7、连接块 8、开口销 9、连接轴

1. Oil level gage 2. Connecting rod 3. Hand hole 4. Hinge 5. Oil storage cabinet

6. Sealing diaphragm 7. Connecting piece 8. Split pin 9. Connecting shaft

储油柜直径 Dia. of oil storage cabinet (mm)	φ800	φ1000	φ1200	φ1400	φ1600
连杆长度 L Length L of connecting rod (mm)	620	720	940	1070	1420
连杆伸开长 Extended length of connecting rod (mm)	877	1018	1329	1513	2008

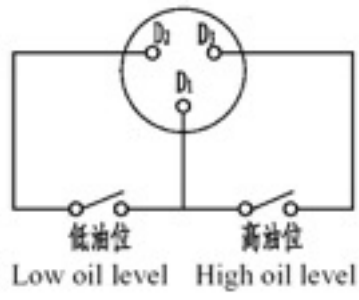
※ 说明: 表中的连杆长度 L 为现有部分产品的尺寸, 连杆长度可按下式进行选择:

$L = H1$, 其中 $H1 = \text{储油柜直径} - H0 - H2$, $H0 = 100 \sim 250$ (建议), $H2 = 80$ (建议)。

※ Description: Length L of connecting rod in the table is the dimension of some existing products and the length of connecting rod can be selected according to the following equation:

$L = H1$, of which, $H1 = \text{dia. of oil storage cabinet} - H0 - H2$, $H0 = 100 \sim 250$ (suggest), $H2 = 80$ (suggest).

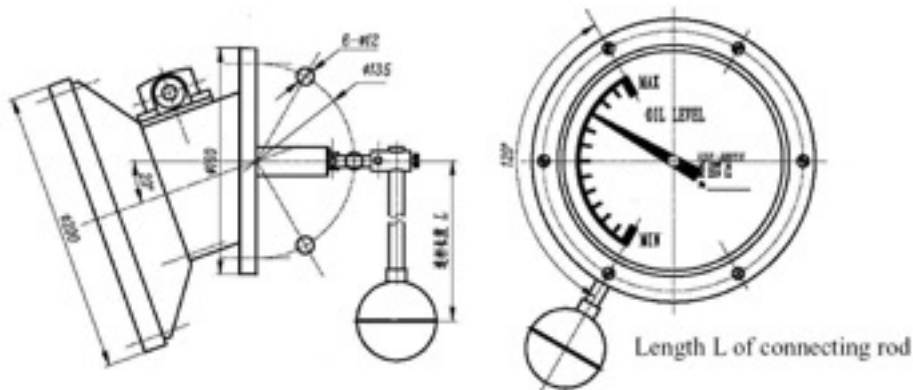
电气接线图 Electric wiring diagram



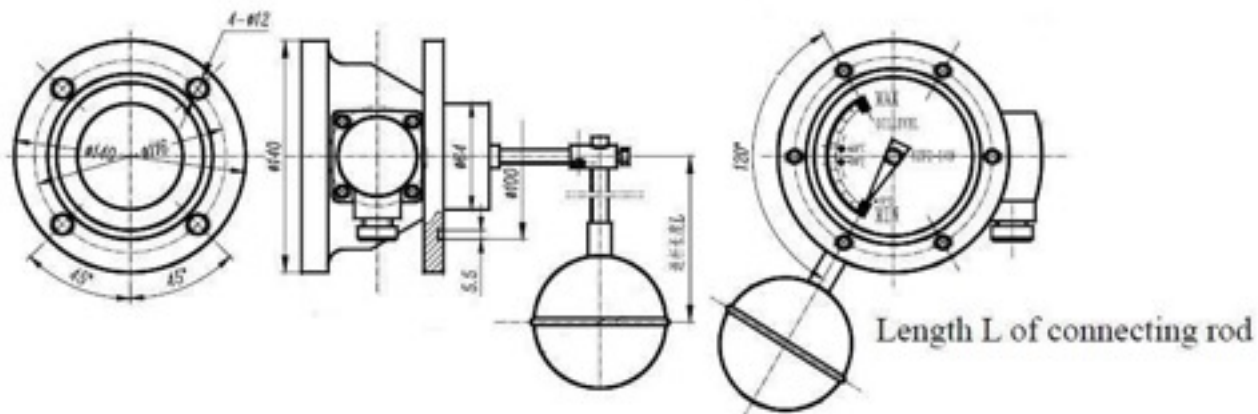
YZF₂—200 型油位计和 YZF₂—140 型油位计

YZF₂—200 Oil Level Gage and YZF₂—140 Oil Level Gage

YZF₂—200 型油位计安装尺寸图 YZF₂—200 Oil Level Gage Installation Dimension Drawing



YZF₂—140 型油位计安装尺寸图 YZF₂—140 Oil Level Gage Installation Dimension Drawing

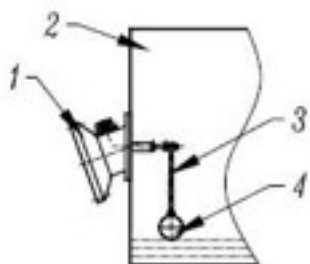


储油柜直径 (mm) Dia. of oil storage cabinet	φ400	φ500	φ540	φ600	φ650	φ700	φ800	φ1000	φ1200	φ1400
连杆长度L (mm) Length L of connecting rod	110	160	190	210	245	260	320	400	480	560

※ 说明：表中的连杆长度 L 为现有部分产品的尺寸，连杆长度可按下式进行选择：储油柜直径/2-(80~140)。

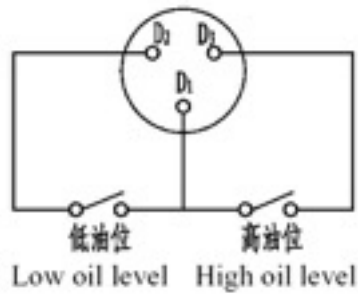
※ Description: Length L of connecting rod in the table is the dimension of some existing products and the length of connecting rod can be selected according to the following equation: Diameter of oil storage cabinet/2 - (80~140) .

安装示意图 Installation Schematic diagram



- 1、油位计 Oil level gage
- 2、储油柜 Oil storage cabinet
- 3、连杆 Connecting rod
- 4、浮球 Float ball

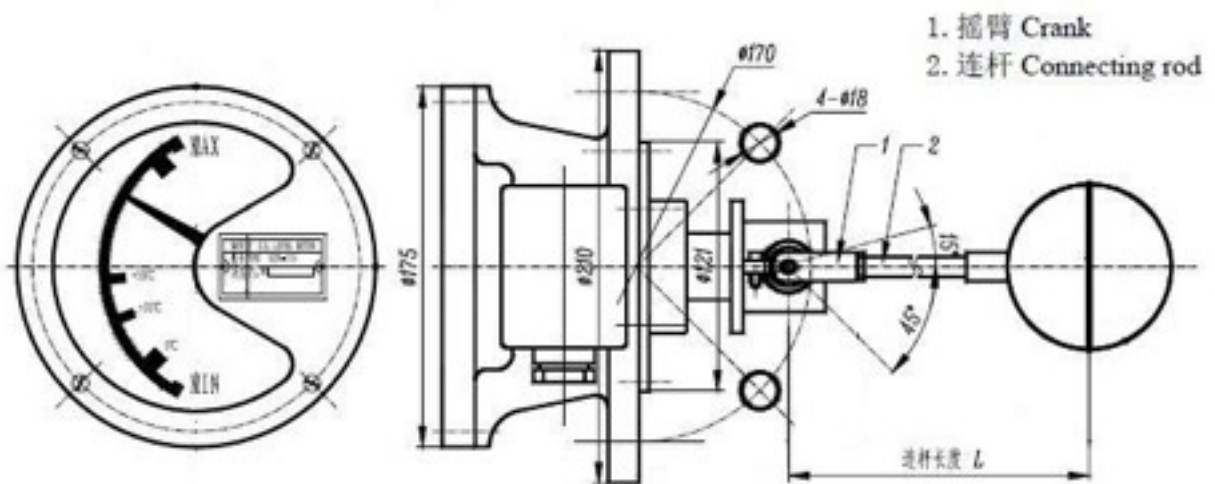
电气接线图 Electric wiring diagram



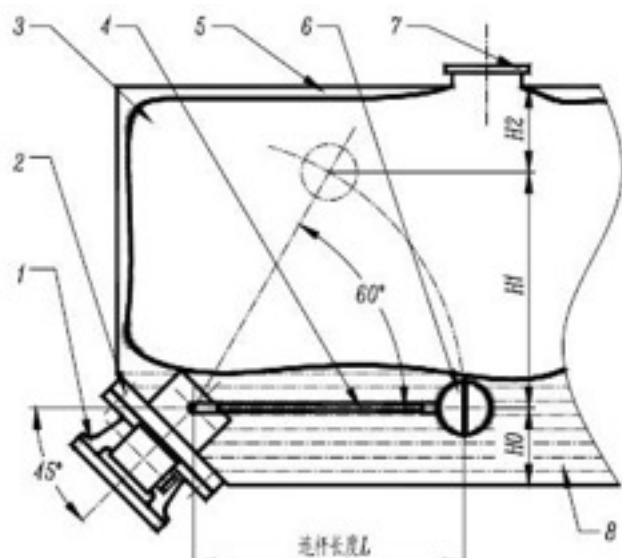
YZF₂—175 型油位计

YZF₂—175 Oil Level Gage

安装尺寸图 Installation dimension drawing



安装示意图 Installation Schematic diagram



- 1、油位计 Oil level gage
- 2、用户法兰 Customer flange
- 3、胶囊 Capsule
- 4、连杆 Connecting rod
- 5、储油柜 Oil storage cabinet
- 6、浮球 Float ball
- 7、手孔 Hand hole
- 8、集污盒 Trap

Note: H0 is the height of trap, H1 is the distance from the lowest oil level to the highest oil level bottom of cabinet, i.e. measuring range; H2 is the distance from the highest oil level to the top of cabinet.

注: H0为集污盒的高度; H1为最低油位(柜底)至最高油位的距离, 即测量范围; H2为最高油位至柜顶的距离。

储油柜直径 Dia. of oil storage cabinet (mm)	φ650	φ800	φ1000	φ1200	φ1400	φ1600
连杆长度L Length L of connecting rod (mm)	470	645	860	1070	1280	1470

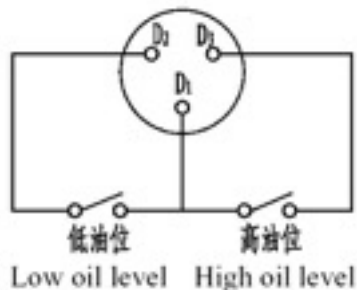
※ 说明：表中的连杆长度 L 为现有部分产品的尺寸，连杆长度可按下式进行选择：

$L = H1/0.866$ ，其中 $H1 = \text{储油柜直径} - H2$ ， $H0 = 150$ (建议)， $H2 = 240 \sim 340$ (建议)。

※ Description: Length L of connecting rod in the table is the dimension of some existing products and the length of connecting rod can be selected according to the following equation:

$L = H1/0.866$, of which, $H1 = \text{dia. of oil storage cabinet} - H2$, $H0 = 150$ (suggest), $H2 = 240 \sim 340$ (suggest)

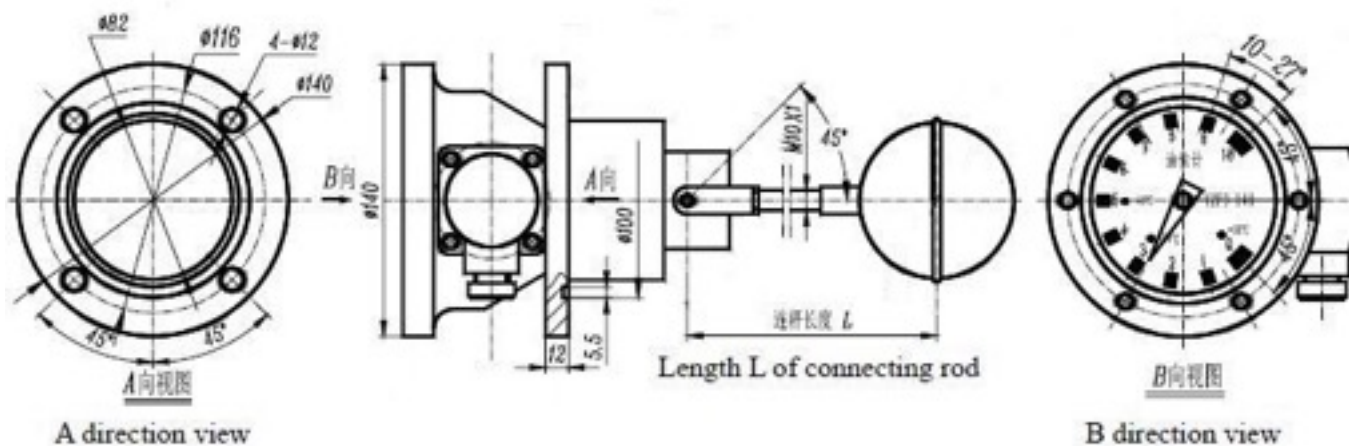
电气接线图 Electric wiring diagram



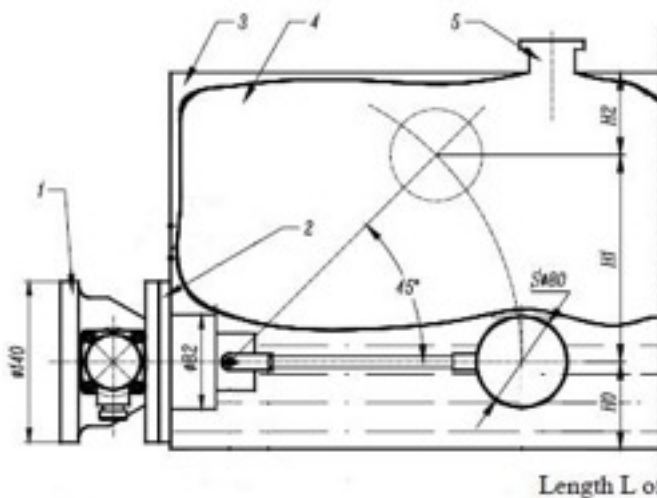
YZF₃—140 型油位计

YZF₃—140 Oil Level Gauge

安装尺寸图 Installation dimension drawing



安装示意图 Installation schematic diagram



- 1、油位计 Oil level gage
- 2、用户法兰 Customer flange
- 3、储油柜 Oil storage cabinet
- 4、胶囊 Capsule
- 5、手孔 Hand hole

Note: H0 is the distance from bottom of cabinet to the lowest oil surface; H1 is the distance from the lowest oil level to the highest oil level, i.e. measuring range; H2 is the distance from the highest oil level to the top of cabinet.

注：H0为柜底至最低油面的距离；H1为最低油位至最高油位的距离，即测量范围；H2为最高油位至柜顶的距离

储油柜直径 (mm) Dia. of oil storage cabinet	φ500	φ600	φ700	φ800	φ900
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连杆长度 L (mm) Length L of connecting rod	420	565	700	840	980
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※ 说明：表中的连杆长度 L 为现有部分产品的尺寸，连杆长度可按下式进行选择：

$L = H1 \times 2$ ，其中 $H1 =$ 储油柜直径 $- H0 - H2$ ， $H0 = 70$ (建议)， $H2 = 130 \sim 140$ (建议)。

※ Description: Length L of connecting rod in the table is the dimension of existing products and the length of connecting rod can be selected according to following equation:

$L = H1 \times 2$, of which $H1 = \text{dia. of oil storage cabinet} - H0 - H2$, $H0 = 70$ (suggest), $H2 = 130 \sim 140$ (suggest).

电气接线图 Electric wiring diagram

