DEK-500/R/L (Ex) Explosion-proof Camera

Installation and operation manual | Source edition as supplied

Changzhou Derke Electromechanical Equipment Co., Ltd.

English translation of DEK-500R.pdf. Source ratings, historical standards and source conflicts are retained. This translation does not update the product specification or issue a new certificate.

Source notes

Source editions may differ from separate specification sheets. Retain model-specific nameplate ratings. The overview states -45°C to +60°C, whereas the environmental section states -20°C to +45°C. Do not resolve this conflict without manufacturer confirmation. The bracket illustration identifies DEK-107 at left and a semi-fixed pan/tilt head at right.

Safety information

Read this manual and observe its warnings before installation and use. Disconnect power before maintenance or repair. Avoid opening equipment in humid or heavily dusty locations, which may reduce image clarity. Protect flameproof joint surfaces and prevent metal chips or other material entering the enclosure. Do not dismantle or modify the equipment. Connect cables as specified. Collect circuit boards, electronic components, plastics and lubricants during maintenance or disposal and transfer them to the relevant environmental disposal service; do not discard them indiscriminately.

Technical parameters from the source

Parameter	Value
Model	DEK-500/R/L (Ex)
Marking (technical section)	Exd IIC T6 / Ex tD A20 Ta T6
Ingress protection	IP68, 1.2 m
Input-voltage tolerance	-25% to +10%
Operating current	<=1 A
Power consumption	<=30 W
IR projection distances	50 / 80 / 100 m
IR angle / cold-light angle	30°/60° / 30°
Video output	1 Vp-p +/-20%, 75 ohms
Material	304 or 316L stainless steel
Window thickness / diameter	10 mm / 60 mm
Mounting (table)	Semi-fixed pan/tilt or fixed bracket
Environmental section marking	Exd IIC T6 Gb
Atmospheric pressure	80-106 kPa
Ambient temperature (environmental section)	-20°C to +45°C
Relative humidity	<95% at 25°C
Overall dimensions	320 x 120 x 280 mm
Internal space	220 x 80 x 70 mm

1. Overview

Explosion-proof camera for flammable/explosive gas and combustible-dust environments, suitable for use with explosion-proof motorized pan/tilt equipment. Supports fixed-focus, zoom or integrated cameras. Stainless-steel construction; the overview states -45°C to +60°C operation and 220 VAC supply. Special tempered-glass window; one entry for explosion-proof flexible conduit or armored cable. Optional automatic low-temperature heating. Mounting may use motorized or semi-fixed pan/tilt, fixed bracket, base, pole or tower.

2. Marking and supply

Use only the voltage and connection matching the supplied camera nameplate.

3. Cable installation

Fit the explosion-proof flexible-conduit assembly over the cable first. After removing the compression nut, retain the supplied washer and rubber seal, or use the spare parts in the package. Tighten the threaded fitting first, then the flexible conduit.

3. Housing assembly

Flameproof joints are closely fitted. Protect the rear-cover and rear-cylinder flameproof surfaces from impact and scratches during installation. An insulating gasket separates the drawer plate and rear cover; retain its insulating properties during any disassembly. After assembly, measured insulation resistance shall be at least 100 megohms. The external grounding bolt is at the center of the rear cover and must be reliably connected to earth. Preserve the insulating layer between the rear cover and drawer plate.

3. Pre-installation checks

Check certificate number, suitability of the explosion-proof marking for the gas mixture, and absence of cracks or defects in explosion-proof parts. Do not use the equipment if these conditions are not met.

4. Explosion-proof construction

The enclosure is designed so an internal explosion does not ignite the surrounding explosive mixture. Protection depends on enclosure strength, flameproof-joint gaps and lengths, and maximum surface temperature. After welding and finish machining, the source specifies a GB3836.2 hydrostatic test at 2.0 MPa for 10-12 seconds, with no leakage, structural damage or deformation. Maximum enclosure surface temperature during normal operation is 80°C. The tempered-glass window shall withstand impact and thermal-shock tests. Enclosure protection is IP68. A compression-nut cable-entry device clamps the cable firmly without loosening.

5. Transport and storage

The packaged product may be transported by any method provided it is protected from direct rain and snow. The source permits storage for more than one year at 0°C to +40°C and relative humidity not exceeding 90%.

6. Warranty

The source promises replacement within six months and a one-year warranty. Free repair is provided during the warranty period, but material and labor charges may apply to damage caused by operation contrary to the manual, unauthorized disassembly, lightning or unavoidable natural disasters. Any separate written service commitment or agreement between the company and user takes precedence.

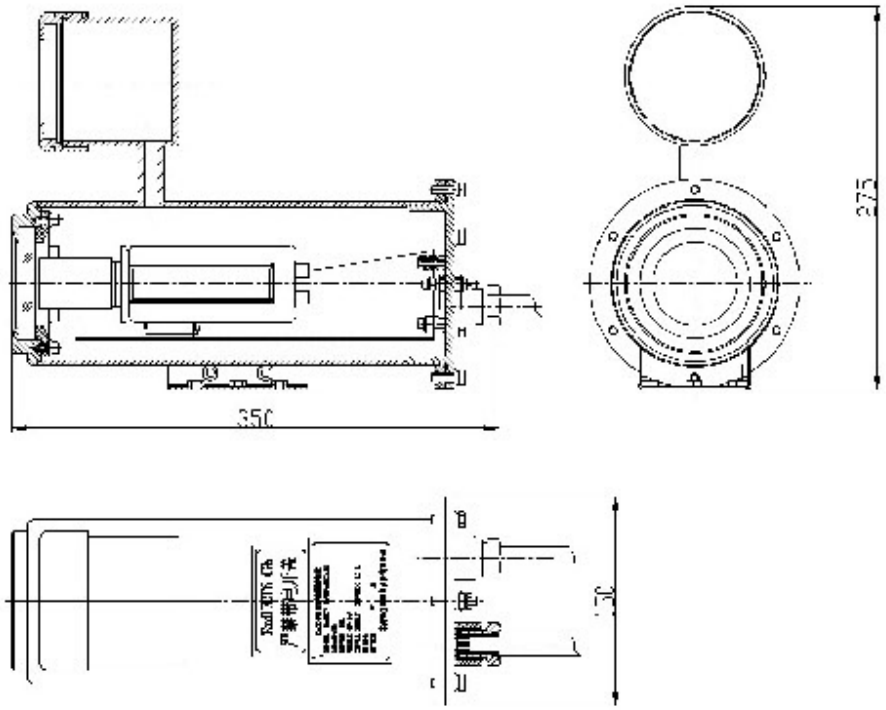
7. Company statement

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Reference illustrations

Original dimension drawings and interface screenshots are retained for reference. Original-language labels may remain inside these images; the English operating text and legends explain them. Dimensions are copied from the supplied source, not redrawn or recalculated.

Figure 1. Source page 4: Housing dimensions, mm.



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Figure 2. Source page 5: Flexible-conduit connection.

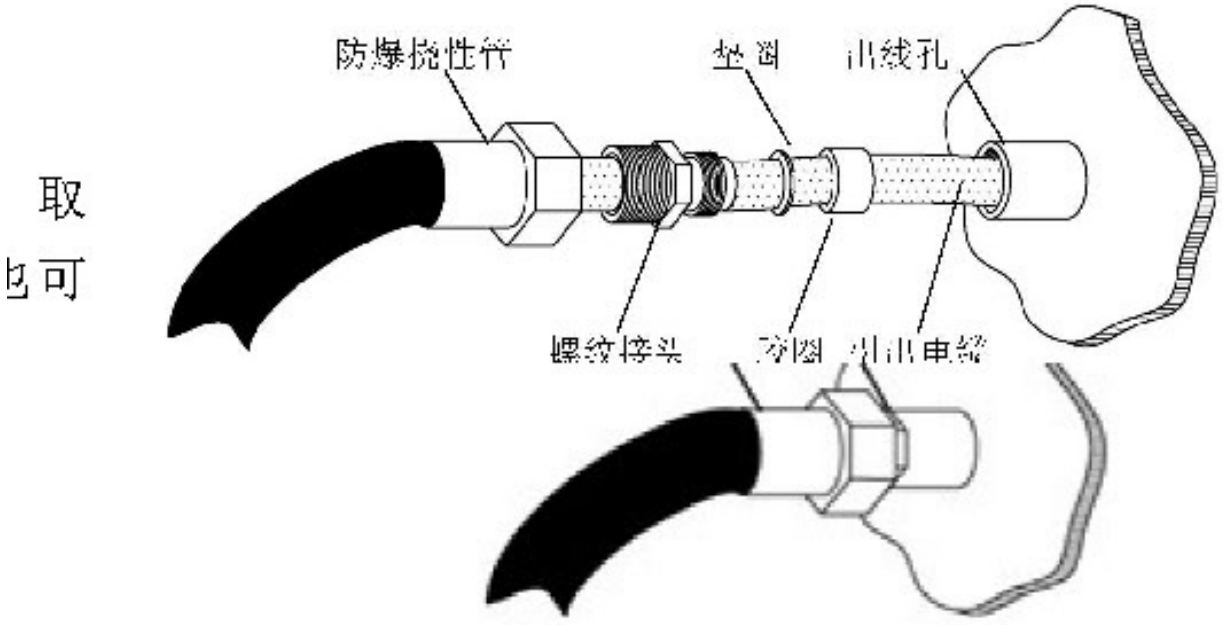
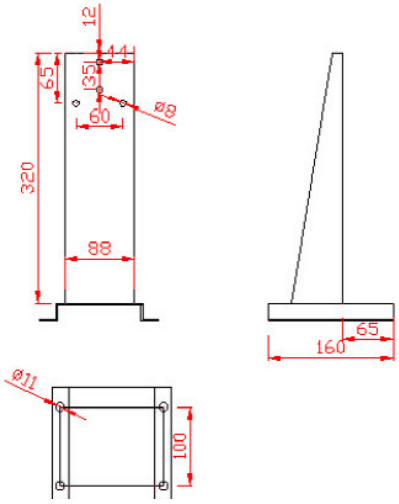


Figure 3. Source page 5: Housing / DEK-107 bracket / semi-fixed head dimensions, mm.

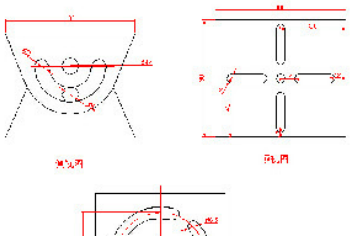


性能；装配结束后测量其绝缘电阻应当不低于100MΩ。后盖中央是外接地螺栓，设备安装时应当与大地可靠连接。

如图：应当注意后盖与抽屉板之间的绝缘层

3.3 内部结构

3.4 安装支架图



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