Compact Camera EC-710 series

STAHL

Compact Camera for hazardous areas
EC-710 series

Compact Camera designed for harsh environments and minimal space requirements. IP69K protection allows easy cleaning of extremely soiled cameras by using a high-pressure cleaner. The temperature range of -40°C up to +75°C allows worldwide operation without additional enclosures. The light-weight (0.44 kg/0.97 lbs without cable) and the diameter of only 55 mm allow easy mounting/installation.

Explosion Protection:

IECEx KEM 09.0039X
KEMA 09ATEX0102 X

Zone 1, 2, 21, 22
Ex II 2 G Ex mb IIC T6/T5/T4 Gb
Ex II 2 D Ex mb IIIC T85/100/125°C Db

Temperature Range:
Ambient temperature range
Operation
T4;-40°C<+75°C,
T5;-40°C<+50°C,
T6;-40°C<+35°C.

Cold start: -10°C

IP Protection:
IP 68 according IEC 60529
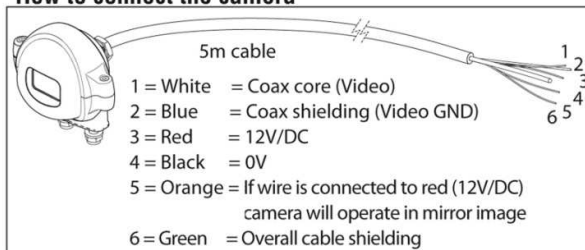IP 69K according EN 40050-9

Hardware Features

- The extremely small, lightweight, unobtrusive, robust and compact design allows it to be placed in the tightest corner.
- 7 lenses and therefore 7 different viewing angles ensure a constant monitoring and overview of the plant.
- The low power consumption allows autonomous operation in conjunction with solar power or battery power.
- Quick, easy and cost-saving mounting/installation.
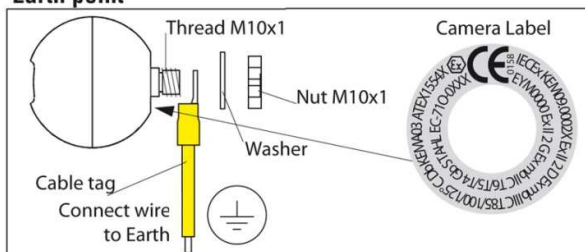- Zone 1, 2, 21, 22 (Gas / Dust)

Hardware Types

PAL Models:	NTSC Model:	Horizontal viewing Angle	Vertical viewing angle
EC-710-081P	EC-710-081N	81°	61°
EC-710-070P	EC-710-070N	70°	53°
EC-710-052P	EC-710-052N	52°	39°
EC-710-044P	EC-710-044N	44°	33°
EC-710-033P	EC-710-033N	33°	25°
EC-710-023P	EC-710-023N	23°	11°
EC-710-012P	EC-710-012N	12°	9°

Installation

How to connect the camera

5m cable

1 = White = Coax core (Video)
2 = Blue = Coax shielding (Video GND)
3 = Red = 12V/DC
4 = Black = 0V
5 = Orange = If wire is connected to red (12V/DC) camera will operate in mirror image
6 = Green = Overall cable shielding

Earth point

Thread M10x1
Camera Label
Nut M10x1
Washer
Cable tag
Connect wire to Earth

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Data sheet 2013 | R1-0 | EN
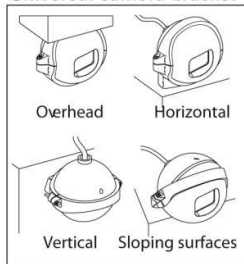
Technical Data

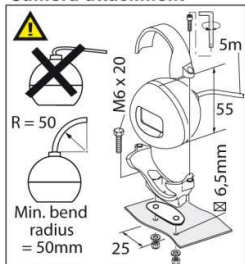|	
CCD sensor	¼" CCD Image sensor
CCD total pixels	PAL: 795(H) x 596(V), NTSC: 811(H) x 508(V).
Minimum illumination	1.5 Lux (F1.2, 5600°K).
Resolution	470 TVL
S/N ratio	52dB (MIN) / 60dB (TYP) (AGC OFF).
Video output	1.0V p-p composite video at 75 Ohm.
Gamma correction	0.45
Gain control	AGC
White balance	ATW/AWC/Fix (zero color rolling).
White balance range	AWB, ATW(3200-10.000°K)/fix(3200°K).
Mirror function	REV./ NOR. Switchable via orange wire connected to 12V/DC.
Shock constancy	Shock and vibration resistant for usage on offshore platform.
Weight	0.44 kg, without cable, 0.695 kg with 5 m cable
Lensglass	Chemically hardened, toughened, tempered float glass, 5 to 7 times stronger than ordinary glass.
Housing	Stainless steel 316L, IP68 according to IEC 60529. IP69K according EN 40050-9.
Camera bracket	Camera bracket is made of glass reinforced polyamide, survives torque test: 50 Nm at -40°C...+75°C.
Ambient temperature	T4;-40°C<+75°C, T5;-40°C<+50°C, T6;-40°C<+35°C.
Power	12V/DC +/-10%,
Input Power consumption	consumption 250mA heating on, 85mA heating off.
Fuse	Camera must be connected to a fuse 250 mA slow blow. The breaking capacity of the fuse must be in accordance with the prospective short circuit current of the supply.
Cable	metric marker. 5.0 meters (+/-0,04m), the cable shall be fixed mounted.
Standards	EN 60079-18: 2009, EN 60079-0: 2012, IEC 60079-18: 2009, IEC 60079-0: 2011.
Certificates	KEMA 03 ATEX 0102X, IECEx KEM 09.0039X:
Optional accessory	Ex e terminal box, Protection tube, VB-CAM-MULTI-01-ARM, VB-CAM-MULTI-01-UNI, Video encoder,, Wall-bracket, Inspection glass holder, Ex d monitor (7" or 15")

Safety advices

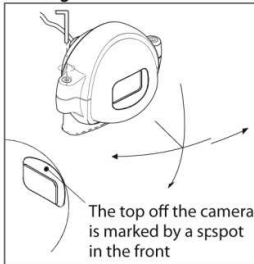**Camera must be connected to a fuse 250 mA slow below**

Universal camera bracket — Overhead, Horizontal, Vertical, Sloping surfaces

Camera attachment — R = 50, Min. bend radius = 50mm, M6 x 20, 6,5mm, 5m, 55, 25

Aiming the camera — The top off the camera is marked by a spspot in the front

.NOTE: The free end of the permanently connected, unterminated cable is to be connected in an appropriate way, e.g. in a suitable Ex e or Ex d junction box.
Electrical connections shall only be done by Ex qualified engineers following the latest ATEX regulations (e.g. EN60079-14). We accept no liability for mistakes, faults or damages due to wrong voltage connection. Zenerbarriers and fuses are not included and should be applied by installer.

Date/serial number marking see camera label:
EYMXXXX
E= Prefix = Ex
Y = Year; 1st digit: 2011 = B, 2012 = C
M = Month; 2nd digit: January = A, December = M (NB: Letter "i" is not used)
X = Follow-up number, restarted every month; 4 digits

We reserve the right to make any changes at any time according to technological progress or further development.