



TC Fluid Control Ltd
 Valves & Steam +44 (0) 161 684 7488 Instrumentation +44 (0) 1322 622 400
 www.ktc-fluidcontrol.com



LEVEL GAUGE ILLUMINATOR FOR HAZARDOUS AREA

Illuminators

1- ILLUMINATORS EVA 501

GENERAL

This lighting fixture for hazardous area comprises :

- **An illuminator** : special aluminium alloy housing for use in corrosive atmosphere (chemical or marine) and a Pyrex globe. The illuminator can be equipped with incandescent or fluocompact E27 bulb.
- **A light diffuser** mounted on the illuminator to concentrate light on the level gauge glasses . One diffuser is able to illuminate 1, 2 or 3 sections of glasses of 1 to 9 size . Light diffusers are made of Plexiglas.
- **A bracket** for fixation of the illuminator on the level gauge.

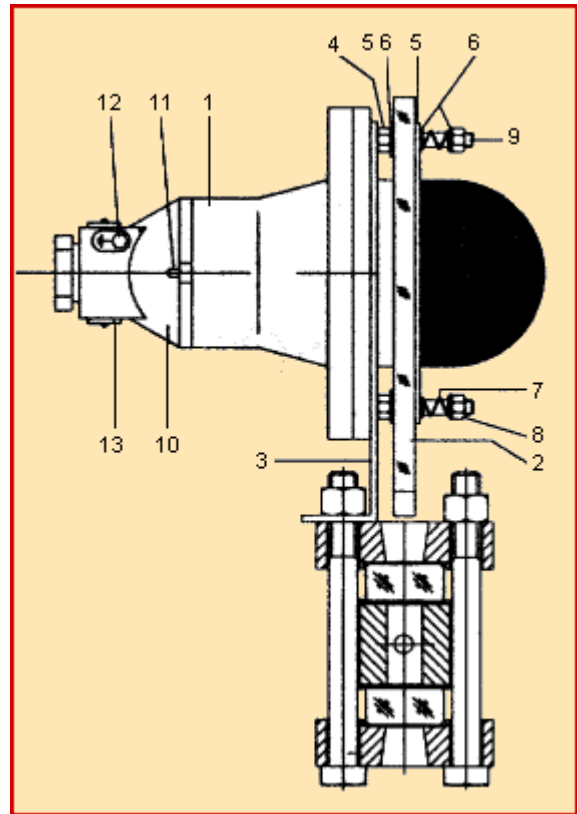
ELECTRICAL SPECIFICATION

Voltage : 110 - 230 V AC (max. 380 V) - 50 / 60 Hz, 6 to 48 V DC

Cable entry : 3/4" NPT

IP rating : IP 65

EEx approval : ISSeP N° 98D.103.1283 / 970.103.124



EEx rating according type of bulb used

Type of E 27 bulb	EEx rating	Bulb ref.
15 W incandescent (1)	EEx d IIC T6	E27/15WI
60 W incandescent (1)	EEx d IIC T5	E27/60WI
75 W incandescent (1)	EEx d IIC T4	E27/75WI
15 W fluocompact (2)	EEx d IIC T6	E27/15WF

Notes :

(1) Service life of incandescent bulb is generally estimated at 1000 h of continuous service. It can be effected by vibration transmitted to the gauge from the running process. Service life can be improved by fitting the illuminator with a switch assembly, the bulb being on operation only when switched on.

(2) 15 W fluocompact bulb lights like a 60 W incandescent bulb. Service life of this bulb is generally estimated at 15000 h of continuous service. These bulbs are not recommended for frequent switches on. Due to their low power and long service life, despite their higher price, they are a cost effective alternative.

ITEM	DESIGNATION
1	Illuminator body
2	Diffuser (Plexiglas or glass)
3	Support bracket
4	Nut
5	Gasket
6	Washer
7	Spring
8	Nut
9	Bolt
10	Bonnet
11	Security pin
12	Earth screw
13	Name plate

Further information

For further information, please send an E-mail to the following address: instruments@tc-fluidcontrol.com

The characteristics of the products described on this page may be modified without notice, in the interests of regular improvement. In addition, the technical data reproduced here is provided for information only.

Réf: 76FIT013-An-11/2001-rev03



TC Fluid Control Ltd
 Valves & Steam +44 (0) 161 684 7488 Instrumentation +44 (0) 1322 622 400
 www.ktc-fluidcontrol.com



LEVEL GAUGE ILLUMINATOR FOR HAZARDOUS AREA

Illuminators

CODIFICATION

EVA 501 · 15WF · 220V AC · DA 2x9 · B · A

Type of bulb

15WI : 15 W incand. bulb
 60WI : 60 W incand. bulb
 75WI : 75 W incand. bulb
 15WFI : 15 W fluoc. bulb
 0 : No bulb

Voltage AC or DC

Diffuser

DA : Plexiglas diffuser
 DP : Pyrex diffuser (for T°>300°C)
 Number of glass sections x glass size
 0 : No diffuser

Bracket

B : Bracket for all Klinger level gauge except ST 85 & TA 120
 C : Bracket for ST 85
 D : Bracket for TA 120
 0 : No bracket

Cable entry

A : 3/4" NPT/M20 (adaptator)
 B : ADF ALU 3/4" NPT cable gland

INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS

COMMISSIONING : Please ensure that all connections are made and checked by a suitably qualified engineer. Special precautions will also be required in hazardous areas.

OPERATION : For illuminators running continuously, general observation in service will note any dark ports where an illuminator section has failed. If the illuminator has been fitted with a switch assembly (normally a push button timer) then the switch should be operated regularly.

MAINTENANCE : when an illuminator needs to be overhauled or a component needs to be replaced, the following procedure should be followed :

- 1 - Isolate the gauge from the source of pressure. Relieve the gauge of internal pressure.
- 2 - Isolate the illuminator. Ensure that a suitably qualified engineer carries out isolation.
- 3 - Ensure that the illuminator has cooled (15 min approx.) and remove it from the gauge to a suitable site.
- 4 - Loosen the security pin using a 2 mm hexagon key.
- 5 - Unscrew the bonnet (anti-clockwise) and remove. The bulb is mounted on the inside face of the bonnet and care must be exercised during removal.
- 6 - Remove the bulb. If the bulb needs to be replaced then a original bulb can be fitted.
- 7 - With the bulb removed, the holder and wiring can be checked if required.
- 8 - The O-ring should be checked for damage whenever the unit is opened and replaced if any damage is noted
- 9 - To assemble, reverse the above procedure. The threads on the body should be smeared with silicone grease before assembly.

TROUBLESHOOTING GUIDE

Problem	Possible Fault	Action
No illumination	The illuminator is switched off	Check that the illuminator is fitted with a switch.
	The light source is broken	Replace the light source, taking care to follow any specific requirements with regard to hazardous areas.
	The wiring is defective	Check wiring, taking care to follow any specific requirements with regard to hazardous area.
Poor illumination	The light source fitted is incorrect	Check that the light source is of a suitable rating, taking care to follow any specific requirements with regard to hazardous area.
	The illuminator is not aligned correctly with the gauge centre	The diffuser should be aligned with the clear section of the gauge.
	Diffuser distorted or discoloured	The diffuser should be changed and the reasons for the distorsion ascertained (may be above the temperature limit).
	Gauge glass dirty or damaged	Clean or replace glasses.

Page 1 2 3

Further information

For further information, please send an E-mail to the following address: instruments@tc-fluidcontrol.com

The characteristics of the products described on this page may be modified without notice, in the interests of regular improvement. In addition, the technical data reproduced here is provided for information only.

Réf: 76FIT013-An-11/2001-rev03



TC Fluid Control Ltd
 Valves & Steam +44 (0) 161 684 7488 Instrumentation +44 (0) 1322 622 400
 www.ktc-fluidcontrol.com



LEVEL GAUGE ILLUMINATOR FOR HAZARDOUS AREA

Illuminators

2- FLUORESCENT ILLUMINATORS

Description

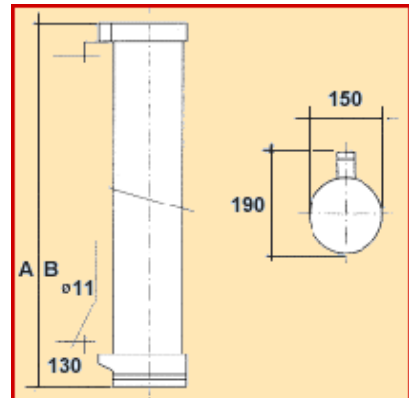
Description

- High impact resistant UV polycarbonate tube.
- Light weight and robust (shock résistant).
- Ingress protection IP67 all positions.
- Fluorescent bi-pin G13 lamps.
- Starter control gear 230 V - 50Hz, on sliding support plate as reflector.
- Spécial deflector to concentrate the output light.



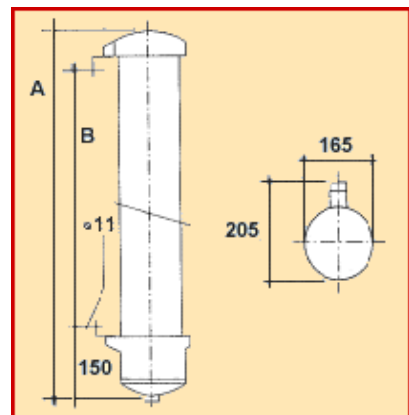
A- Water proof type IP67

Réf.	Rating	Dimensions mm		Weight kg
		A	B	
FR 120 N	1 x 18/20 W	730	565	4,5
FR 140 N	1 x 36/40 W	1340	1170	7
FR 165 N	1 x 58/60 W	1640	1475	8



B- Explosion proof EExd II C T6 and IP67

Réf.	Rating	Dimensions mm		Weight kg
		A	B	
XFR 120 N	1 x 18/20W	730	565	7
XFR 140 N	1 x 36/40 W	1385	1170	9
XFR 165 N	1 x 58/60 W	1690	1475	10



Further information

For further information, please send an E-mail to the following address: instruments@tc-fluidcontrol.com

The characteristics of the products described on this page may be modified without notice, in the interests of regular improvement. In addition, the technical data reproduced here is provided for information only.

Réf: 76FIT013-An-11/2001-rev03