

Lighting: Incandescent & HID Lighting
HRD Series: Tank Inspection Lights – Flameproof



IIB Version



IIC Version (50 W)



IIC Version (20 W)



IIB Version Fitted with
 DN Model Sightglass Fitting

Compliances:

ATEX - IEC:



Zone 1&2 – 21&22	II 2 GD	ATEX	IEC	CE
Ex d IIB or Ex de IIC	T3 or T4	Ex tD A21	T130°C to T200°C	IP65 or IP66

Electrical Data:

Power		Frequency	
20 W to 50 W Halogen	40 W to 100 W Incandescent	50/60 Hz	

Operating Temperature:

-40°C to +40°C (IIB version)
-20°C to +40°C (IIC version)

Lighting: Incandescent & HID Lighting

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Zone 1 & 2 - 21 & 22

⊕ II 2 GD

ATEX / IEC

IP65 or IP66

LIGHTING

Applications:

- Designed to illuminate the internals of boilers, tanks, bunkers, silos, mixers, separators, pipelines and other vessels or reactors that are normally closed.
- For use in hazardous areas where ignitable vapors, gases or highly combustible dusts are present.
- For installation in chemical and petrochemical plants, refineries and other process industries.

Features:

Type IIB version:

- 40 W to 100 W incandescent or 50 W halogen lamp (lamp not supplied).
- Internal aluminum reflector.
- Operates in any position.
- E27 lampholder.
- Terminals: 2.5 mm².
- Internal and external earth: 2.5 mm².
- High temperature cable to be used.
- Fixing by three integrated lugs.
- One M20 threaded cable entry.

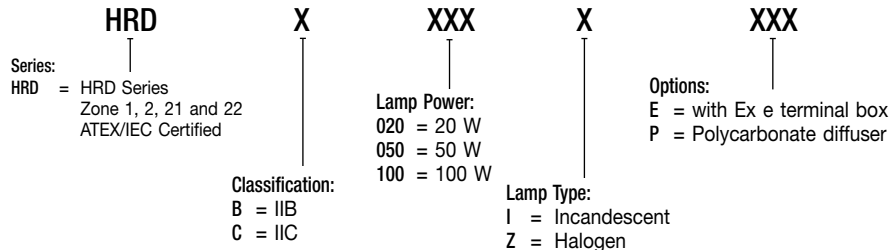
Type IIC version:

- 20 W to 50 W halogen lamp (lamp supplied).
- Internal aluminum reflector.
- Operates in any position.
- G4 lampholder for 20 W and BA 15d for 50 W.
- Power supply: 230 V 50/60 Hz.
- Fitted with transformer 230/12 V for 12 V halogen lamp.
- Terminals: 2.5 mm² terminals.
- Internal earth: 2.5 mm².
- External earth: 4 mm².
- Supplied with a set of rocker hinges for mounting with DN 50 to DN 150 sightglass fittings (according to DIN 28 120).
- One M20 threaded cable entry (via increased safety "e" box).

Standard Materials:

- Gray painted marine grade aluminum alloy body and bezel.
- Toughened sealed lamp glass.
- Internal aluminum reflector.

Catalog Number Logic:



Ordering Information:

Description	Type	Weight kg	Volume (dm ³)	Catalog Number	Old Catalog Number
40 W to 100 W incandescent or 50 W halogen (1)	IIB	2.9	8.1	HRDB100I	0947 47
20 W halogen (2) 230 V 50/60 Hz	IIC	2.3	3.0	HRDC020ZE	0947 40
50 W halogen (2) 230 V 50/60 Hz	IIC	4.0	3.6	HRDC050ZE	0947 41

(1) Can also be used with compact fluorescent lamp.

(2) Lamp supplied.

Compliances: IIB version

Hazardous Area	Gas	Dust
Certified Type	HRCd	
Zones	1–2	21–22
Conforming to ATEX 94/9/CE	CE 0081 ⊕ II 2 G	CE 0081 ⊕ II 2 D
Symbol of protection ATEX	Ex d IIB	Ex tD A21
Symbol of protection IEC		
T Rating	T4 to T3 (see table 1)	N.A.
Surface Temperature	N.A.	T130°C to T195°C (see table 1)
Ambient Temperature	-40°C to +40°C	
CE Declaration of Conformity	50241	
ATEX Certificate	LCIE 02 ATEX 6232	
IEC Certificate	LCIE Ex 02.028	
Other Certifications	–	
Index of protection (solid & liquid)	IP66	
Impact resistance (shock)	IK08	
Internal Volume	< 2 dm ³ (2 liters)	

Table 1

Catalog Number	Version	Power and Source	Ambient Temperature = +40°C		
			T Rating	Gas	
				Cable Temperature	Dust Surface Temperature
HRDB100I (lamp not supplied)	IIB	40 W Incandescent	T4	N.A.	+130°C
		60 W Incandescent	T3	+87°C	+137°C
		100 W Incandescent	T3	+107°C	+195°C
		50 W Halogen	T3	+82°C	+149°C

N.A.: Not Applicable, no need for high temperature cable for cable entry temperature less than +80°C.

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Zone 1 & 2 - 21 & 22

II 2 GD

ATEX / IEC

IP65 or IP66

Compliances - Continued:

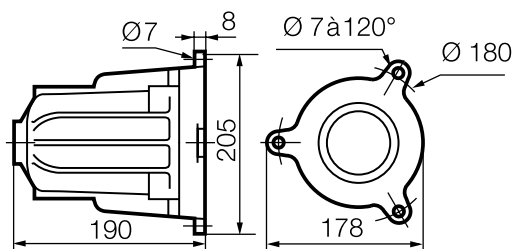
IIC version

Hazardous Area	Gas	Dust
Certified Type	HRC 20WH (20W) HRC 50 (50W)	
Zones	1-2	21-22
Conforming to ATEX 94/9/CE	CE 0081 II 2 G	CE 0081 II 2 D
Symbol of protection ATEX	Ex de IIC	Ex td A21
Symbol of protection IEC		
T Rating	T4 (20W) T3 (50W)	N.A.
Surface Temperature	N.A.	T130°C (20W) T195°C (50W)
Ambient Temperature	-20°C to +40°C	
CE Declaration of Conformity	50260 (20W) 50661 (50W)	
ATEX Certificate	LCIE 03 ATEX 6110 (20W) LCIE 03 ATEX 6109 (50W)	
IEC Certificate	N.A.	
Other Certifications	-	
Index of protection (solid & liquid)	IP65	
Impact resistance (shock)	-	

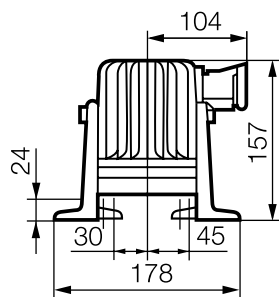
Standards:

Ex standards	EN / IEC 60079-0; 60079-1; 60079-7; 61241-0; 61241-1
Product standards	EN / IEC 60598-1
EMC standards	EN / IEC 55015; 61547
Other standards	EN / IEC 60529 (IP); 62262 (IK)

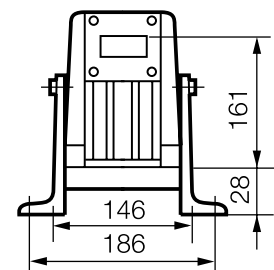
Dimensions (mm):



HRDB100I



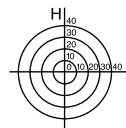
HRDC020ZE



HRDC050ZE

Photometric Data:

IIC versions: Isolux curve



		20 W Version		Illuminance E (lux)				
Height (m)	Position	Distance (cm)						
			0	10	20	30	40	
1	L		3000	1000	125	-	-	
	H		3000	900	75	-	-	
2	L		1150	750	300	100	50	
	H		1150	750	300	100	50	

		50 W Version		Illuminance E (lux)				
Height (m)	Position	Distance (cm)						
			0	10	20	30	40	
1	L		12000	2300	375	50	-	
	H		12000	2700	250	50	-	
2	L		2550	1550	600	200	-	
	H		2550	1800	800	200	-	

IIB versions:

Polar curves for a lumen output of 1000 lm flux,
according to NF C 71-120

Luminaire symbol as per NF C 71-121

100 W Incandescent

