



- Ex d enclosure made from seawater-resistant aluminium
- 5, 10 or 20 Joule xenon strobe
- Lens available in seven different colours
- Stainless steel fixings
- Flash rate 1 Hz
- Lens guard and mounting bracket supplied as standard
- IP66 rated as standard / NEMA 4X (for UL variants)
- Telephone initiate option available
- SIL 1 IEC61508-2:2010

E5

WebCode **FL60B**



### Yodalex range

Product Series FL60 is designed to provide a visual alarm which can be used to alert, warn or draw attention to machine malfunction/start up or any number of safety related issues in hazardous areas. Visual signal designed for use in hazardous or harsh environments.

	ATEX / IECEx					
Zone	0	1	2	20	21	22
Ex interface		•	•			
Installation in		•	•		•	•

	NEC 505 Class I			NEC 506		
Zone	0	1	2	20	21	22
Ex interface		•	•			
Installation in		•	•			

	NEC 500					
	Class I		Class II		Class III	
Division	1	2	1	2	1	2
Ex interface	•	•	•	•	•	•
Installation in	•	•	•	•	•	•

Selection Table							
Certificates Flashbulb		ATEX (BAS), EAC (TehnoP), India (PESO), Russian Federation (TPB SER) 5 J					
Rated operational voltage AC	Rated operational voltage DC	Lens colour	Nominal current	Product Type	Art. No.	PS	Weight kg
115 – 115 V	–	Orange	0.09 – 0.09 A	FL60/C/L50/A/RU	212382	80	5.080
		Red	0.09 – 0.09 A	FL60/C/L50/R/RU	212383	80	5.080
230 – 230 V	–	Orange	0.045 – 0.045 A	FL60/C/N50/A/RU	212384	80	5.080
		Red	0.045 – 0.045 A	FL60/C/N50/R/RU	212385	80	5.080
		Yellow	0.045 – 0.045 A	FL60/C/N50/Y/RU	220086	80	5.080
–	24 – 24 V	Orange	0.22 – 0.22 A	FL60/C/D50/A/RU	206976	80	5.080
		Red	0.22 – 0.22 A	FL60/C/D50/R/RU	212381	80	5.080
		Yellow	0.22 – 0.22 A	FL60/C/D50/Y/RU	264017	80	5.080
Certificates Flashbulb		ATEX (BAS), IECEx (BAS), India (PESO), Korea (KTL), SIL (exida), Taiwan (ITRI) 5 J					
Rated operational voltage AC	Rated operational voltage DC	Lens colour	Nominal current	Product Type	Art. No.	PS	Weight kg
115 – 115 V	–	Orange	0.09 – 0.09 A	FL60/C/L50/A/EU	212366	80	5.080
		Blue	0.09 – 0.09 A	FL60/C/L50/B/EU	205143	80	5.080
		Green	0.09 – 0.09 A	FL60/C/L50/G/EU	205144	80	5.080
		Red	0.09 – 0.09 A	FL60/C/L50/R/EU	205145	80	5.080

**Selection Table**

Certificates Flashbulb		ATEX (BAS), IECEX (BAS), India (PESO), Korea (KTL), SIL (exida), Taiwan (ITRI)					
		5 J					
Rated operational voltage AC	Rated operational voltage DC	Lens colour	Nominal current	Product Type	Art. No.	PS	Weight kg
230 – 230 V	–	Orange	0.045 – 0.045 A	FL60/C/N50/A/EU	205150 ▲	80	5.080
		Blue	0.045 – 0.045 A	FL60/C/N50/B/EU	205151	80	5.080
		Clear	0.045 – 0.045 A	FL60/C/N50/C/EU	205152	80	5.080
		Red	0.045 – 0.045 A	FL60/C/N50/R/EU	205153 ▲	80	5.080
		Yellow	0.045 – 0.045 A	FL60/C/N50/Y/EU	205155	80	5.080
–	24 – 24 V	Orange	0.22 – 0.22 A	FL60/C/D50/A/EU	205129 ▲	80	5.080
		Blue	0.22 – 0.22 A	FL60/C/D50/B/EU	205130	80	5.080
		Clear	0.22 – 0.22 A	FL60/C/D50/C/EU	206984	80	5.080
		Green	0.22 – 0.22 A	FL60/C/D50/G/EU	206982	80	5.080
		Red	0.22 – 0.22 A	FL60/C/D50/R/EU	205133 ▲	80	5.080
		Yellow	0.22 – 0.22 A	FL60/C/D50/Y/EU	205140	80	5.080
Certificates Flashbulb		ATEX (BAS), IECEX (BAS), India (PESO), Korea (KTL), SIL (exida), Taiwan (ITRI)					
		10 J					
Rated operational voltage AC	Rated operational voltage DC	Lens colour	Nominal current	Product Type	Art. No.	PS	Weight kg
115 – 115 V	–	Clear	0.105 – 0.105 A	FL60/C/L100/C/EU	205142	80	5.080
		Red	0.053 – 0.053 A	FL60/C/L100/R/EU	206993	80	5.080
		Yellow	0.105 – 0.105 A	FL60/C/L100/Y/EU	252627	80	5.080
230 – 230 V	–	Orange	0.053 – 0.053 A	FL60/C/N100/A/EU	205146	80	5.080
		Blue	0.053 – 0.053 A	FL60/C/N100/B/EU	205147	80	5.080
		Red	0.053 – 0.053 A	FL60/C/N100/R/EU	205148	80	5.080
		Yellow	0.053 – 0.053 A	FL60/C/N100/Y/EU	229927	80	5.080
–	24 – 24 V	Orange	0.5 – 0.5 A	FL60/C/D100/A/EU	243725	80	5.080
		Blue	0.5 – 0.5 A	FL60/C/D100/B/EU	222058	80	5.080
		Clear	0.5 – 0.5 A	FL60/C/D100/C/EU	260788	80	5.080
		Red	0.5 – 0.5 A	FL60/C/D100/R/EU	205124	80	5.080
		Yellow	0.5 – 0.5 A	FL60/C/D100/Y/EU	205125	80	5.080
Certificates Flashbulb		ATEX (BAS), IECEX (BAS), India (PESO), Korea (KTL), SIL (exida), Taiwan (ITRI)					
		20 J					
Rated operational voltage AC	Rated operational voltage DC	Lens colour	Nominal current	Product Type	Art. No.	PS	Weight kg
115 – 115 V	–	Clear	0.17 – 0.17 A	FL60/C/L200/C/EU	206996	80	5.080
		Red	0.17 – 0.17 A	FL60/C/L200/R/EU	206995	80	5.080
230 – 230 V	–	Orange	0.17 – 0.17 A	FL60/C/N200/A/EU	217478	80	5.080
		Clear	0.17 – 0.17 A	FL60/C/N200/C/EU	257225	80	5.080
		Red	0.17 – 0.17 A	FL60/C/N200/R/EU	205149	80	5.080
		Yellow	0.17 – 0.17 A	FL60/C/N200/Y/EU	223322	80	5.080
–	24 – 24 V	Orange	1.1 – 1.1 A	FL60/C/D200/A/EU	205126	80	5.080
		Blue	1.1 – 1.1 A	FL60/C/D200/B/EU	252854	80	5.080
		Clear	1.1 – 1.1 A	FL60/C/D200/C/EU	252855	80	5.080
		Red	1.1 – 1.1 A	FL60/C/D200/R/EU	205127	80	5.080
		Yellow	1.1 – 1.1 A	FL60/C/D200/Y/EU	205128	80	5.080

Selection Table							
Certificates Flashbulb		Canada / USA (UL), India (PESO) 5 J					
Rated operational voltage AC	Rated operational voltage DC	Lens colour	Nominal current	Product Type	Art. No.	PS	Weight kg
115 – 115 V	–	Clear	0.09 – 0.09 A	FL60/B/L50/C/UL	261246	80	5.080
230 – 230 V	–	Orange	0.045 – 0.045 A	FL60/B/N50/A/UL	212367	80	5.080
		Red	0.045 – 0.045 A	FL60/B/N50/R/UL	211406	80	5.080
–	24 – 24 V	Orange	0.22 – 0.22 A	FL60/B/D50/A/UL	205156	80	5.080
		Blue	0.22 – 0.22 A	FL60/B/D50/B/UL	205368	80	5.080
		Clear	0.22 – 0.22 A	FL60/B/D50/C/UL	205159	80	5.080
		Red	0.22 – 0.22 A	FL60/B/D50/R/UL	205160	80	5.080
		Yellow	0.22 – 0.22 A	FL60/B/D50/Y/UL	205369	80	5.080

Further variations in gas group, flash energy, voltage and lens colour are available, please use the selection table on the internet. The tone table can be found online at r-stahl.com.

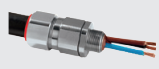


Technical Data				
Variant	5 J (ATEX / IECEx)	10 J / 20 J (ATEX / IECEx)	5 J (EAC)	5 J (UL)
<b>Explosion Protection</b>				
Ambient temperature °C	-20 ... +60 °C	-20 ... +60 °C	-20 ... +60 °C	-20 ... +60 °C
Gas explosion protection IECEx	Ex d IIB+H2 T4 Gb	Ex d IIB+H2 T4 Gb		Ex d IIB+H2 T4 Gb
Gas explosion protection ATEX	Ⓔ II 2 G Ex d IIB+H2 T4 Gb	Ⓔ II 2 G Ex d IIB+H2 T4 Gb		Ⓔ II 2 G Ex d IIB+H2 T4 Gb
Gas explosion protection EAC			1 Ex d IIB+H2 T4 Gb X 1 Ex d IIB+H2 T6 Gb X	
Dust explosion protection IECEx	Ex tb IIIC T135 °C Db	Ex tb IIIC T135 °C Db		Ex tb IIIC T135 °C Db
Dust explosion protection ATEX	Ⓔ II 2 D Ex tb IIIC T135 °C Db	Ⓔ II 2 D Ex tb IIIC T135 °C Db		Ⓔ II 2 D Ex tb IIIC T135 °C Db
Dust explosion protection EAC			Ex tb IIIC T135 °C Db X Ex tb IIIC T85 °C Db X	
Gas explosion protection IECEx 2	Ex d IIB+H2 T6 Gb			
Gas explosion protection ATEX 2	Ⓔ II 2 G Ex d IIB+H2 T6 Gb			
Dust explosion protection IECEx 2	Ex tb IIIC T85 °C Db			
Dust Explosion Protection ATEX 2	Ⓔ II 2 D Ex tb IIIC T85 °C Db			
<b>Electrical Data</b>				
Tolerance	-10 – 10 %	-10 – 10 %	-10 – 10 %	-10 – 10 %
<b>Lighting Data</b>				
Lamp	Xenon flash tubes	Xenon flash tubes	Xenon flash tubes	Xenon flash tubes
Flash rate	1 Hz	1 Hz	1 Hz	1 Hz
<b>Mechanical Data</b>				
Degree of protection IP (IEC 60529)	IP66	IP66	IP66	IP66
Protection class	I (PE connection) (Internal + external)	I (PE connection) (Internal + external)	I (PE connection) (Internal + external)	I (PE connection) (Internal + external)
Enclosure material	Aluminium, powder-coated, Seawater-resistant	Aluminium, powder-coated, Seawater-resistant	Aluminium, powder-coated, Seawater-resistant	Aluminium, powder-coated, Seawater-resistant
Sealing material	NBR O-ring seal	NBR O-ring seal	NBR O-ring seal	NBR O-ring seal
Material mounting parts	Sheet steel, powder-coated	Sheet steel, powder-coated	Sheet steel, powder-coated	Sheet steel, powder-coated
Material dome	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Material wire guard	Round structural steel, galvanised	Round structural steel, galvanised	Round structural steel, galvanised	Round structural steel, galvanised
Connection terminals solid max.	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>
Connection terminals finely-stranded max.	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>
Enclosure colour	red normal	red normal	red normal	red normal

**Technical Data**

Variant	5 J (ATEX / IECEx)	10 J / 20 J (ATEX / IECEx)	5 J (EAC)	5 J (UL)
<b>Mounting / Installation</b>				
Connection type	Screw terminal	Screw terminal	Screw terminal	Screw terminal
<b>Components</b>				
Drilled holes	2 x M20	2 x M20	2 x M20	2 x M20
Screw connections	Can be ordered as accessories	Can be ordered as accessories	Can be ordered as accessories	Can be ordered as accessories
Stopping plug	1 x M20 x 1.5 1 x dust cap	1 x M20 x 1.5 1 x dust cap	1 x dust cap 1 x M20 x 1.5	2x1/2"NPT adaptor M20x1/ 2"NPT
Stopping plug material	Brass	Brass	Brass	Brass

You can find more technical data online at [r-stahl.com](http://r-stahl.com). WebCode FL60B

**Accessories and Spare Parts**

Figure	Description	Art. No.	Weight kg
<b>Cable glands made of metal</b>			
	Ex d & Ex e Compound barrier cable gland for all types of armoured cables (SWA, braided, tape) (nickel plated brass)	109428	0.240
	Ex d & Ex e Compound barrier cable gland for all types of unarmoured and braid armour cables (nickel plated brass)	109441	0.200
<b>Mounting bracket</b>			
	Stainless steel bracket fixing kit accessories	210794	0.400

Approvals of the cable entries must be observed.

**Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations**
