

FLASHING LIGHT 10 J

Quadro F12-SIL



Integrated safety in sturdy Quadro-Design

- to signal dangerous situations in safety-relevant application such as process and plant safety, e.g.
 - leaks / gas warning
 - high-pressure / overfilling
- and machine safety, e.g. as
 - start-up warning
 - muting indication
 - machine stop delay warning
- by means of integrated self-monitoring of the devices the normative required, regular inspection of warning devices is ensured
- the warning devices can be implemented in Safety Instrumented Systems (SIS) up to **SIL 2/PLd**

We would be more than happy to provide all safety-technical key data.



Covering distance as per EN 54



Protection system



Protection system



Impact-proof housing



Operating temperature



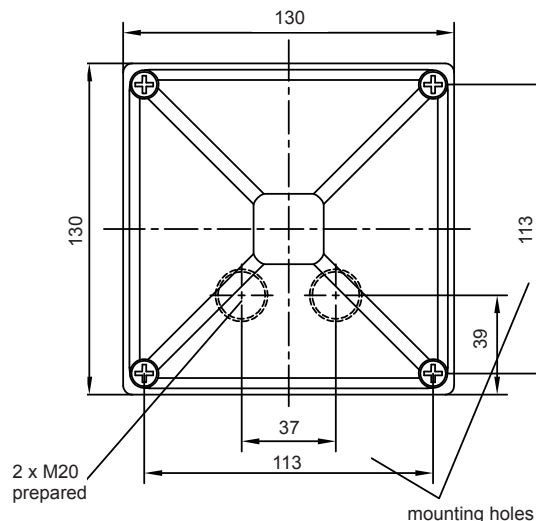
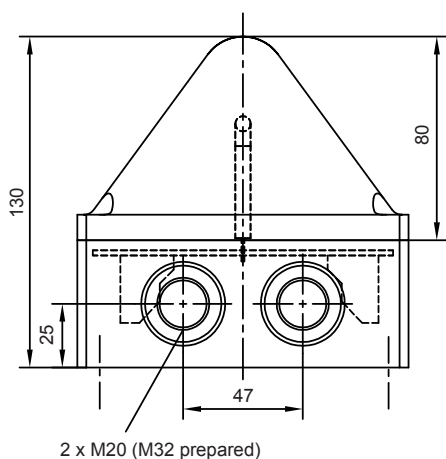
Warranty

Electrical data		Quadro F12-SIL		
Rated voltage		230 V AC	115 V AC	24 V DC
Rated frequency		50 / 60 Hz	50 / 60 Hz	
Operating range		195 – 253 V	95 – 127 V	18 – 30 V
Nominal current consumption	flashing light	250 mA	350 mA	700 mA
	diagnostics channel	100 mA	100 mA	65 mA
Alarm contact	contact version	positively driven contact (1 x NC, 1 x NO)		
	switching current	max. 6 A		
	switching voltage	max. 250 V AC		
	max. switching power (AC)	1,500 VA		
	recommended minimum load	> 50 mW		

Mechanical data		Quadro F12-SIL
Flash rate		1 Hz = 60 flashes/min.
Flash energy		10 J
Light intensity (DIN 5037) ¹		118 cd
Lens colours		clear, white, yellow, amber, red, green, blue
Operating temperature		- 30 °C ... + 55 °C
Storage temperature		- 40 °C ... + 70 °C
Relative humidity		100%
Protection system according to EN 60529		IP 66, IP 67, mounting arbitrary
Impact resistance as per EN 50102		IK 08
Protection class		II
Duty cycle		100%
Service life of the flash tube		light emission still 70% after 8,000,000 flashes
Material	lens	polycarbonate (PC)
	housing	polycarbonate (PC), RAL 7035
Cable entry		2 x M20 bottom side / 2 x M20/M32 sideways
Connecting terminals		cage clamp terminal 0.08 - 2.5 mm ²
Mounting	external lugs	113 x 153 mm – M5 or 127.1 x 127.1 mm – M5
	internal holes	113 x 113 mm
Weight		600 g





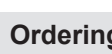

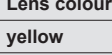
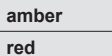
¹ with a clear lens

Dimensions



Additional mounting possible via external lugs (included).

Connection diagram

	1	L/+ Operating voltage flashing light
	2	N/- Operating voltage flashing light
	3	L/+ Operating voltage monitoring channel
	4	N/- Operating voltage monitoring channel
	5	Alarm relay NO (mechanical safety relay,
	6	Alarm relay NO positively driven contacts,
	7	Alarm relay NC voltage rating 250V/6A
	8	Alarm relay NC minimum contact load 10mA/5V)

Ordering details

Article numbers		Quadro F12-SIL	
Lens colour	Rated voltage	230 V AC	24 V DC
yellow		210 41 10 3 601	210 41 80 3 601
amber		210 41 10 4 601	210 41 80 4 601
red		210 41 10 5 601	210 41 80 5 601

Article numbers for other colours and voltages on request

Options / Accessories



Conformity to standards

The visual characteristics of flashing lights conform to the European standard DIN EN 842: "**Machine safety - visual alarm signals**". Requirements contained in the DIN EN 981 standard: "**Machine safety - system of acoustic and visual alarm and information signals**", can be fulfilled. The colours 'red' for the emergency signal and 'yellow' for the warning signal conform to the requirements of IEC 73 / DIN EN 60073 / VDE 01990: "**Coding of display devices and control elements using colours and supplementary means**".

The visual alarms fulfill the requirements to the functional safety according to:
EN 61508 Functional safety of electrical/electronic/programmable electronic safety-related systems
EN 61511 Functional safety - Safety instrumented systems for the process industry sector

The devices can be used in safety related control systems in accordance with the following standards:
EN ISO 13849-1 Safety of machinery - Safety related parts of control systems – part 1
EN 62061 Safety of machinery - Functional safety of electrical/electronic/programmable electronic safety-related systems

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