EXE-12C6602A020

C4000 Fusion Ex

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.

EXE-12C6602A020 | C4000 Fusion Ex

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Ordering information

Resolution	Scanning range	Protective field height	System part	Type	Part no.
30 mm	17.6 m	1,200 mm	Receiver	EXE-12C6602A020	1097731

Sensor pre-assembled in explosion-proof enclosure including connecting cable (30 m, 12-wire, flying leads) and an enclosed connection cable for configuration and diagnostics. Depending on national regulations and requirements, a cable gland may have to be installed. The cable gland is available as an accessory.

Other models and accessories ➔ www.sick.com/C4000_Fusion_Ex

Illustration may differ

Detailed technical data

Features

Application	Explosive areas
Ex-approvals	ATEX for gas: II 2 G Ex db IIB T6
System part	Receiver
Resolution	30 mm
Protective field height	1,200 mm
Scanning range	17.6 m
Synchronization	Optical synchronisation

Safety-related parameters

Type	Type 4 (IEC 61496-1)
Safety integrity level	SIL 3 (IEC 61508)
Category	Category 4 (EN ISO 13849)
Performance level	PL e (EN ISO 13849)
PFH$_D$ (mean probability of a dangerous failure per hour)	15 x 10^{-9} (EN ISO 13849)
T$_M$ (mission time)	20 years (EN ISO 13849)
Safe state in the event of a fault	At least one OSSD is in the OFF state.

Functions

	Functions	Delivery status
Protective operation	✓	
Restart interlock	✓	External
External device monitoring (EDM)	✓	Deactivated
Beam coding	✓	Uncoded
Configurable scanning range	✓	

	Functions	Delivery status
Reduced resolution	✓	Deactivated
Fixed blanking	✓	Deactivated
Floating blanking	✓	Deactivated
Dynamic blanking for object pattern recognition	✓	
Self-teaching dynamic blanking for goods detection	✓	
Self-teaching dynamic blanking for pallet detection	✓	
Multiple sampling	✓	2x evaluation
Direction monitoring	✓	
Virtual photoelectric switches	✓	
Sensor gap monitoring	✓	
Sequence monitoring	✓	
Object entry monitoring	✓	
Detection of geometrically even objects	✓	
Safe SICK device communication via EFI	✓	

Functions in combination with UE402

Bypass	✓
Operating mode switching	✓

Interfaces

System connection	Connecting cable (30 m) with flying leads, 12-wire
Cable diameter	10 mm
Conductor cross section	0.75 mm²
Configuration connection	Female connector M8, 4-pin
Configuration method	PC with CDS (Configuration and Diagnostic Software)
Display elements	7-segment display

Electrical data

Protection class	III (IEC 61140)
Supply voltage V_S	24 V DC (19.2 V … 28.8 V) [1]
Residual ripple	≤ 10 % [2]
Output signal switching devices (OSSDs)	
Type of output	2 PNP semiconductors, short-circuit protected, cross-circuit monitored [3]
ON state, switching voltage HIGH	24 V DC (V_S – 2.25 V DC … V_S)
OFF state, switching voltage LOW	≤ 3.5 V DC
Current-carrying capacity per OSSD	≤ 500 mA
Application diagnostic output (ADO)	

[1] The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

[2] Within the limits of V_S.

[3] Applies to the voltage range between –30 V and +30 V.

Type of output	PNP semiconductor, short-circuit protected [3]
Output voltage HIGH (active)	24 V DC (V_S – 4.2 V DC ... V_S)
Output voltage LOW (deactivated)	High resistance
Output current HIGH (active)	≤ 100 mA

[1] The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

[2] Within the limits of V_S.

[3] Applies to the voltage range between –30 V and +30 V.

Mechanical data

Dimensions	See dimensional drawing
Housing cross-section	161.8 mm x 142.1 mm
Housing material	Aluminum cast/AlSi7Mg0.6

Ambient data

Enclosure rating	IP65 (EN 60529) IP66 (EN 60529)
Ambient operating temperature	0 °C ... +55 °C
Storage temperature	–25 °C ... +70 °C
Air humidity	15 % ... 95 %, Non-condensing
Vibration resistance	5 g, 10 Hz ... 55 Hz (EN 60068-2-6)
Shock resistance	10 g, 16 ms (EN 60068-2-27)

Other information

Wave length	850 nm

Classifications

ECLASS 5.0	27272704
ECLASS 5.1.4	27272704
ECLASS 6.0	27272704
ECLASS 6.2	27272704
ECLASS 7.0	27272704
ECLASS 8.0	27272704
ECLASS 8.1	27272704
ECLASS 9.0	27272704
ECLASS 10.0	27272704
ECLASS 11.0	27272704
ECLASS 12.0	27272704
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
UNSPSC 16.0901	46171620

Recommended accessories

Other models and accessories → www.sick.com/C4000_Fusion_Ex

	Brief description	Type	Part no.
EFI gateways			
	PROFINET PROFIsafe	UE4740-22H0000	1046978
Alignment aids			
	Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam!, 19 mm x 67.3 mm x 66.9 mm	AR60	1015741
Optics cloths			
	Cloth for cleaning optical surfaces	Lens cloth	4003353
Test and monitoring tools			
	30 mm diameter, 250 mm length	Test rod 30 mm	2022602
Terminal and alignment brackets			
	2 pieces, alignment bracket for explosion-proof enclosure	BEF-1SHABRST2	2072525
	• **Description:** Cable gland for the European market • **Note:** Cable gland for the European market	Cable gland	5329002

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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

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