

S-DIAS Safety SNC Incremental Encoder Module

SNC 021



with 2 Incremental encoder inputs

The S-DIAS Safety SNC incremental encoder module SNC 021 provides the values of two incremental encoders, the Safety CPU as well as the non-Safe CPU (standard PLC).

The two-channel safety function “monitors” the increments in the incremental encoder interfaces and processes the so-called Safety core in two micro controllers with cross-communication.

I-encoder Specifications

Number of channels	2
Encoder	Incremental encoder with RS422 Interface with null position trace.
Input frequency	0.75 MHz
Counter frequency	3 MHz
Signal analysis	4x
Encoder resolution	maximum 12 bits
Encoder power supply	+5 V supply, short-circuit proof with monitoring function and current measurement (+ 5 V is generated from +24 V at X3)
Status LED	yes
I-encoder current consumption	maximum 300 mA per encoder

Electrical Requirements

Supply voltage for the encoder supply	+18-30 V	
Current consumption of supply voltage for the encoder supply	typically 162 mA/24 V	maximum 200 mA/30 V
Voltage supply from Safety bus	+12 V	
Current consumption on the Safety bus (+12 V supply)	typically 75 mA	maximum 90 mA
Voltage supply from S-DIAS bus	+24 V	
Current consumption on the S-DIAS bus (+24 V supply)	typically 33 mA	maximum 40 mA

Article Number and Miscellaneous

Article number	20-896-021	
Dimensions	12.5 x 104.2 x 72 mm (W x H x D)	
Standard	Two-channel application: EN 62061 SIL 3 EN ISO 13849-1 PL e/Cat. 4 One-channel application: EN 62061 SIL 3 EN ISO 13849-1 PL d/Cat. 2	
	UL 508 (E247993)	
Approvals	CE, _{us} UL, TÜV Austria EG type-tested	

Environmental Conditions

Storage temperature	-20 ... +85 °C	
Environmental temperature	0 ... +60 °C	
Humidity	0-95 %, non-condensing	
Installation altitude above sea level	0-2000 m without derating > 2000 m with derating of the maximum environmental temperature by 0.5 °C per 100 m	
Operating conditions	pollution degree 2	
EMC resistance	in accordance with 61000-6-7:2015 (Generic standards - Immunity requirements for equipment intended to perform functions in safety-related systems (functional safety) at industrial locations) in accordance with EN 61000-6-2:2007 (industrial area) (increased requirements in accordance with IEC 62061)	
EMC noise generation	in accordance with EN 61000-6-4:2007 (industrial area)	
Vibration resistance	EN 60068-2-6	3.5 mm from 5-8.4 Hz 1 g from 8.4-150 Hz 5 g from 8 Hz-150 Hz
Shock resistance	EN 60068-2-27	15 g
Protection type	EN 60529	IP20