UE402

SYSTEM PLUGS AND EXTENSION MODULES

SICK
Sensor Intelligence.

UE402
SYSTEM PLUGS AND EXTENSION MODULES

Ordering information

Type	part no.
UE402	1023577

Other models and accessories ➜ www.sick.com/UE402

Detailed technical data

Features

Application	Functionality upgrade
Compatible sensor types	C4000 safety light curtains

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)	15×10^{-9} (EN ISO 13849)
T$_M$ (mission time)	20 years (EN ISO 13849)

Functions

Bypass	✓
Operating mode switching	✓
PSDI mode	✓

Interfaces

Connection type	Fixed screw terminals
Diagnostic display	Status LED

Electronics

Protection class	III (IEC 61140)

[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$_S$.

Supply voltage V$_S$	24 V DC (19.2 V DC ... 28.8 V DC) [1]
Residual ripple	10 % [2]
Power consumption	≤ 110 mA
Switch-on time	≤ 4 s
IN A1 ... A6, MCC-BDC, MCC-TDC	
ON state, switching voltage HIGH	24 V DC (11 V DC ... 30 V DC)
OFF state, switching voltage LOW	–30 V DC ... 5 V DC
Input current HIGH	6 mA ... 20 mA
Input current LOW	–3 mA ... 0.5 mA
IN B1, IN B2, OUT B1, OUT B2	
Bypass change over time	≤ 2 s
Synchronous time monitoring	≤ 200 ms

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[2] Within the limits of V$_S$.

Mechanics

Dimensions (W x H x D)	22.5 mm x 99 mm x 114.5 mm
Housing material	Plastic
Weight	120 g

Ambient data

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Enclosure rating	IP20 (IEC 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 (IEC 60068-2-29)

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
ULus approval	✓
cUL approval	✓
EC-Type-Examination approval	✓
China GB certificate	✓

Classifications

ECLASS 5.0	27272790
ECLASS 5.1.4	27272790
ECLASS 6.0	27272790
ECLASS 6.2	27272790

ECLASS 7.0	27272790
ECLASS 8.0	27272790
ECLASS 8.1	27272790
ECLASS 9.0	27272792
ECLASS 10.0	27272792
ECLASS 11.0	27272792
ECLASS 12.0	27272792
ETIM 5.0	EC011349
ETIM 6.0	EC011349
ETIM 7.0	EC011349
ETIM 8.0	EC011349
UNSPSC 16.0901	41113704

Dimensional drawing UE402 switching amplifier
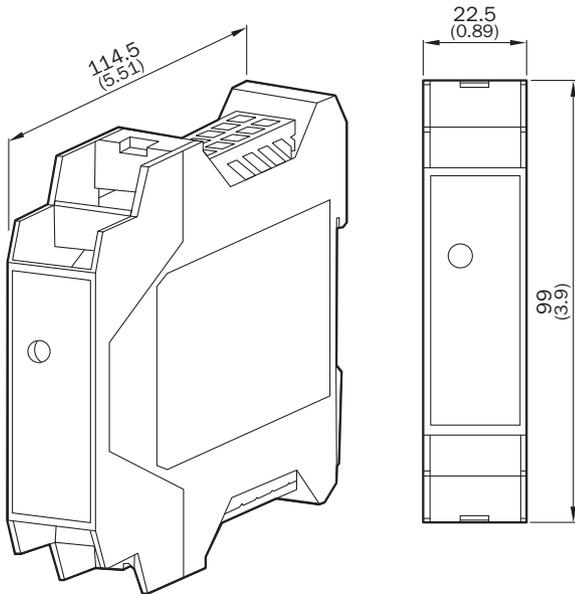
Dimensions in mm (inch)

Connection diagram C4000 Advanced safety light curtain on UE402 safety switching amplifier

E117482/00/2014-06-12
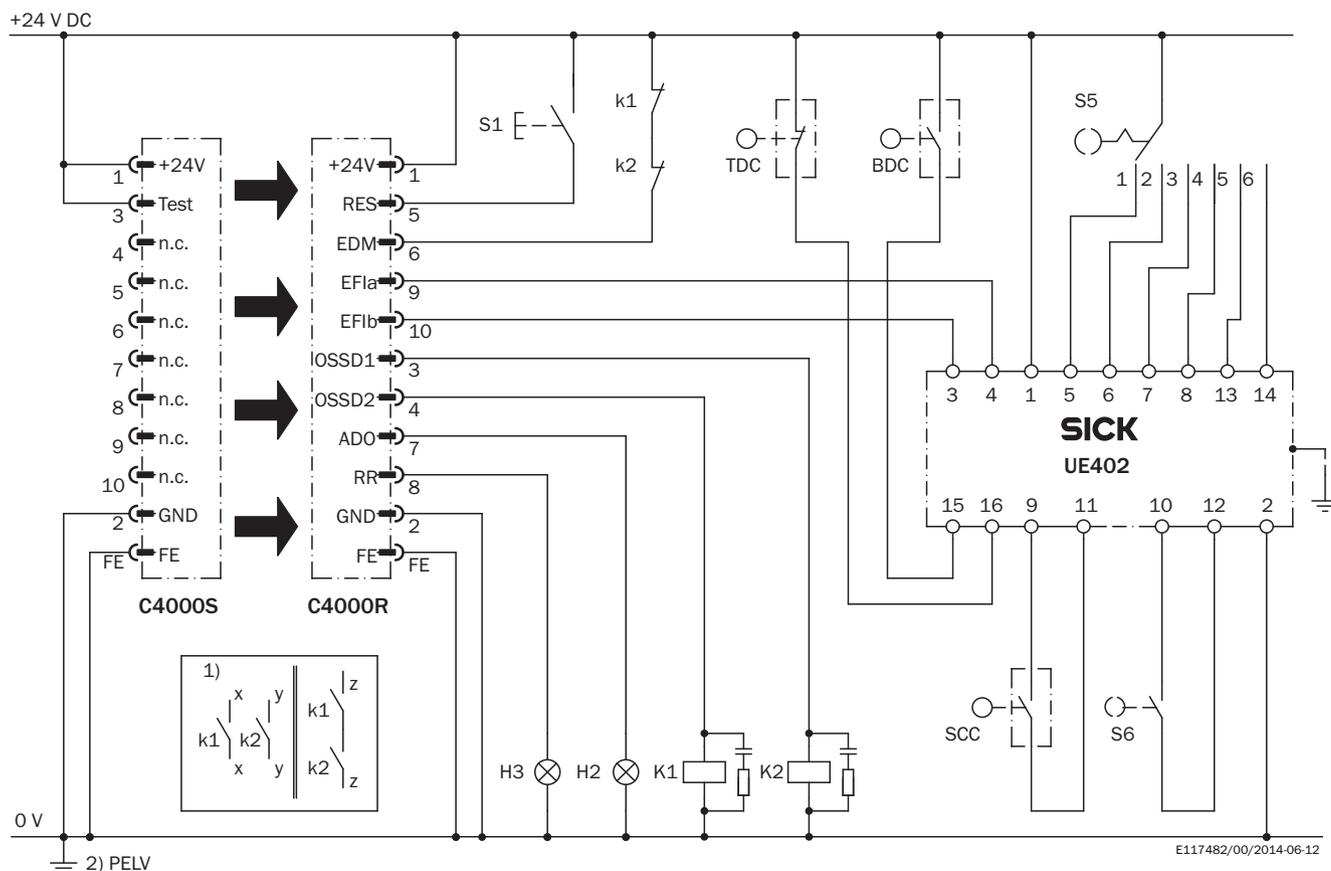
Aufgabe

Anbindung eines Sicherheits-Lichtvorhanges C4000 Advanced mit UE402 in eine Steuerung. 6 parametrierbare Betriebsarten mit Wiederanlaufsperre und Schützkontrolle. Taktbetrieb mit TDC, BDC, SCC. Ausblendbereiche einlernbar.

Wirkungsweise

Wenn kein Gegenstand im aktiven Schutzfeld detektiert wird und die Schütze K1 und K2 sich in Ruhelage befinden blinkt die Lampe H3 als Aufforderung, das Befehlsgerät S1 zu betätigen. Wenn S1 betätigt (Taster wird betätigt und losgelassen) werden die OSSDs eingeschaltet. Diese schalten die Schütze K1 und K2 ein. Bei Detektion eines Gegenstandes im aktiven Schutzfeld schalten die OSSDs die Schütze K1 und K2 ab.

Fehlerbetrachtung

Das Fehlverhalten eines der Schütze K1 oder K2 führt nicht zum Verlust der Abschaltfunktion. Querschlüsse und Kurzschlüsse der OSSDs werden erkannt und führen zum Sperrzustand (Lock-Out). Die Manipulation (Festklemmen) des Tasters S1 verhindert die Freigabe der Ausgangskreise.

Anmerkungen:

Die Wirkunsgweise der parametrierbaren Funktionen ist den jeweiligen Betriebsanleitungen der eingebundenen Geräte zu entnehmen. Die dabei enthaltenen Angaben sind zu beachten.

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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.

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For us, that is "Sensor Intelligence."

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