Technical data sheet
Safety relay
Part no.: 50149651
LBK ISC110E-F



For Illustration purposes only

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Technical data

Basic data

Series	LBK ISC
Type	Controller for radar sensor
Contains	Slot for MicroSD card
Application	Stationary access guarding
	Stationary danger zone guarding

Functions

Functions	Changeover between configurations
	Configuration memory
	Connection of up to 6 sensors
	Deactivation of sensor groups
	Slot for MicroSD card
	Start/restart interlock (RES), selectable
	Synchronization of controllers
Restart	Automatic
	Manual

Characteristic parameters

SILCL	2, IEC/EN 62061
Performance Level (PL)	d, EN ISO 13849-1
$MTTF_d$	42 years, EN ISO 13849-1
PFH_D	1.40E-08 per hour
Mission time T_M	20 years, EN ISO 13849-1
Category	3, EN ISO 13849-1

Electrical data

Protective circuit	External power supply unit with integrated short circuit protection
	Overcurrent through integrated resettable fuse (max. 5s at 8A)

Performance data

Supply voltage U_B	20 ... 28 V, DC
Current consumption, max.	1,000 mA, Without external load
Power consumption, max.	5 W

Outputs

Number of safety-related switching outputs (OSSDs)	4 Piece(s)

Interface

Type	Ethernet, EtherCAT Safety-over-EtherCAT (FSoE)

Ethernet

Function	Parameterization

Service interface

Type	USB

Connection

Number of connections	7 Piece(s)

Connection 1

Function	Voltage supply
Type of connection	Terminal
Type of terminal	Screw terminal
No. of pins	3 -pin

Connection 2

Function	BUS OUT
Type of connection	Terminal

Connection 3

Function	Signal IN
	Signal OUT
Type of connection	Terminal

Connection 4

Function	Configuration/parametization
Type of connection	USB

Connection 5

Function	Configuration/parametization
Type of connection	RJ45

Connection 6

Function	EtherCAT FSoE
Type of connection	RJ45

Connection 7

Function	EtherCAT FSoE
Type of connection	RJ45

Mechanical data

Dimension (W x H x L)	106 mm x 33 mm x 103 mm
Housing material	Plastic
Net weight	250 g
Housing color	White
Type of fastening	DIN rail mounting
	Snap-on mounting

Environmental data

Ambient temperature, operation	-30 ... 60 °C
Ambient temperature, storage	-40 ... 80 °C
Relative humidity (non-condensing)	0 ... 95 %

Certifications

Degree of protection	IP 20
Protection class	II
Approvals	TÜV Süd Italia
	UL

Technical data

Customs tariff number	85371098
ECLASS 5.1.4	27371800
ECLASS 8.0	27371819
ECLASS 9.0	27243101
ECLASS 10.0	27371819
ECLASS 11.0	27371819
ECLASS 12.0	27371819
ECLASS 13.0	27371819
ECLASS 14.0	27371819
ECLASS 15.0	27371819
ECLASS 16.0	27371819
ETIM 5.0	EC001449
ETIM 6.0	EC001449
ETIM 7.0	EC001449
ETIM 8.0	EC001449
ETIM 9.0	EC001449
ETIM 10.0	EC001449
UNSPSC 26.08	32151800

Electrical connection

Connection 1

Function	Voltage supply
Type of connection	Terminal
Type of terminal	Screw terminal
No. of pins	3 -pin

Terminal	Assignment
+	+24 V DC
E	PE
-	GND

Connection 2

Function	BUS OUT
Type of connection	Terminal
Type of terminal	Screw terminal
No. of pins	4 -pin

Terminal	Assignment
+	+12 V DC
H	CAN H
L	CAN L
-	GND

Connection 3

Function	Signal IN
	Signal OUT
Type of connection	Terminal
Type of terminal	Screw terminal
No. of pins	12 -pin

Electrical connection

Terminal	Assignment
Digital In 4	Input +24V DC
Digital In 3	Input +24V DC
Digital In 2	Input +24V DC
Digital In 1	Input +24V DC
Digital In V+	Input +24V DC, diagnostics
Digital In V-	GND
Digital Out GND	GND
Digital Out 4	Safe output
Digital Out 3	Safe output
Digital Out 2	Safe output
Digital Out 1	Safe output
Digital Out GND	GND

Connection 4

Function	Configuration/parametization
Type of connection	USB
Connector type	micro USB

Connection 5

Function	Configuration/parametization
Type of connection	RJ45

Connection 6

Function	EtherCAT FSoE
Type of connection	RJ45

Connection 7

Function	EtherCAT FSoE
Type of connection	RJ45

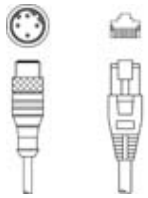
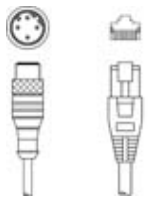
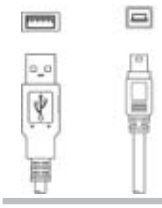
Accessories

Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50143389	KD DN-M12-5W-P1-150	Connection cable	Application: Oil and lubricant resistant Connection 1: Connector, M12, Angled, Female, A-coded, 5 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 15,000 mm Sheathing material: PUR

Accessories

Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50143385	KDS DN-M12-5W-M12-5W-P3-030	Interconnection cable	Application: Oil and lubricant resistant Suitable for interface: DeviceNet, CANopen Connection 1: Connector, M12, Angled, Male, A-coded, 5 -pin Connection 2: Connector, M12, Angled, Female, A-coded, 5 -pin Shielded: Yes Cable length: 3,000 mm Sheathing material: PUR
	50143386	KDS DN-M12-5W-M12-5W-P3-050	Interconnection cable	Application: Oil and lubricant resistant Suitable for interface: DeviceNet, CANopen Connection 1: Connector, M12, Angled, Male, A-coded, 5 -pin Connection 2: Connector, M12, Angled, Female, A-coded, 5 -pin Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR
	50130632	KSS ET-M12-4A-RJ45-A-P7-010	Interconnection cable	Application: Oil and lubricant resistant Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 1,000 mm Sheathing material: PUR
	50135081	KSS ET-M12-4A-RJ45-A-P7-050	Interconnection cable	Application: Oil and lubricant resistant Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR
	50143459	KSS US-USB2-A-mic-B-V0-018	Interconnection cable	Application: Oil and lubricant resistant Suitable for interface: USB Connection 1: USB Connection 2: USB Shielded: No Cable length: 1,800 mm

General

	Part no.	Designation	Article	Description
	50150799	LBK-MicroSD-Card	Program memory	Suitable for: Safe radar sensor LBK

Note

A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.