



RS4/AS-i



Safety laser scanner type 3 with integrated AS-i Interface

The RS4/AS-i laser scanner is an active optoelectronic protective device (AOPD) of type 3 in acc. to IEC 61496-1. It is operated as a safety AS-i slave by way of the AS-i Safety at Work system. The AS-i safety monitor checks cyclically the safety slave, constantly comparing the transmitted data sequences with the taught data sequences. If an object enters the protective field of the RS4/AS-i the AS-i safety monitor will give the command with its relay outputs that switches off the machine.



The RS4/AS-i is intended exclusively for connection to AS-Interface Safety at Work and must not be used with any other applications. The RS4/AS-i can only be connected with the machine controls by way of AS-Interface and the AS-i safety monitor.

Appropriate use of the RS4/AS-i shall entail the knowledge of the contents of the Connecting and Operating Instructions for the RS4-4 and RS4/AS-i

Please pay attention to the information about safety precautions and intended use of the RS4-4 in the RS4-4 Connecting and Operating Instructions.

For operating the RS4/AS-i, the user should also be familiar with the contents of the Connecting and Operating Instructions for the AS-i safety monitor.

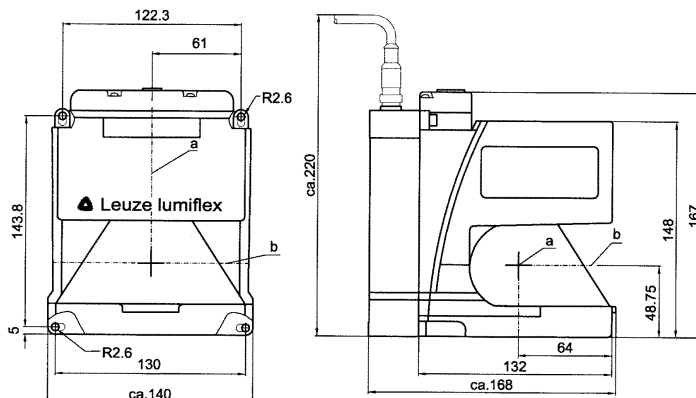
Please note the following differences from the RS4-4 Connecting and Operating Instructions:

- The RS4soft software, the technical description and software user manual are not included with the RS4/AS-i, but a separate start-up set is available.
- Deviations from the RS4-4 Connecting and Operating Instructions that need to be observed during the assembly, connection and commissioning of the RS4/AS-i are described in the supplementary information on the RS4/AS-i which is part of the RS4-4 Connecting and Operating Instructions.
- The BIA certificate has been replaced by a certificate from TÜV¹ Süddeutschland Group.

Features

- Integrated AS-i interface for direct connection to AS-Interface
- Laser-supported two-dimensional sampling of the protected area
- Four pairs of protective fields that can be programmed and switched-over
- Protective field radius 4 m, warning field radius 15 m
- M12 connection for AS-i data, AS-i auxiliary voltage and bus addressing
- M12 connection for switching of protective fields
- Addressing socket for connection of a bus addressing device
- Infrared interface for setting the protective field parameters and diagnosis
- Local connection of the restart button
- Small dimensions (168 x 167 x 140 mm)

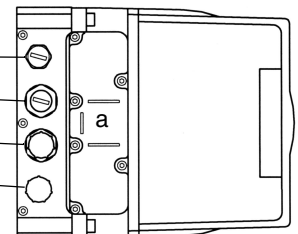
Dimensional drawings



a = axis of rotating mirror
b = scanning level

Electrical connections

Function	PIN1	PIN2	PIN3	PIN4	PIN5
Power supply and AS-i data	AS-i +	0 V	AS-i -	+24 VDC	PE
AS-i addressing socket					
Protective field switching	PF 1 in	PF 2 in	PF 3 in	PF 4 in	+24 VDC out
Restart	---	Restart	---	+24 VDC out	---



a = optical PC Interface

Technical data

Safety category	Type 3 in acc. to EN IEC 61496
Supply voltage of Us	+ 24 V DC, + 20 % / - 30%
Protection class (VDE* 106)	2
Type of protection	IP65
Reaction time	80 ms (RS4) + max. 40 ms (AS-i system)
Power consumption (supply circuit)	400 mA
Power consumption (AS-i circuit)	50 mA
AS-i profile	Safety slave
AS-i voltage	26.5 ... 31.6 V
AS-i ID code	B
I/O code	0 (four bits as output)
AS-i cycle time	5 ms

* Verband Deutscher Elektrotechniker: Association of German Electricians.

Notes on Ordering

RS4-4/A1	580014
RS4 start-up set RS4-SWC	970078
AC-PDA1/A AS-i adapter for data power supply	580004
M12 AC-M12-15M bridging plug for switching on protective field 1	580005
CB-PCO-3000 optical PC adapter	520072
CB-M12-1000-5G/MF M12 connecting cable, 1 m, 5-pole	548361
CB-M12-2000-5G/MF M12 connecting cable, 2 m, 5-pole	548362
CB-M12-5000-5G/MF M12 connecting cable, 5 m, 5-pole	548365

1. Technischer Überwachungsverein: authority responsible for industrial standards.