AS-Interface Safety Monitor
VAS/M-2A8L-KE4-6SE-EV

- Safe rotation speed monitor up to SIL 3/PL e
- 6 integrated, safe inputs
- 2 integrated, safe outputs (OSSDs)
- 8 logical, safe output groups (switchable)
- Increased functionality through integrated expansion port
- Integrated data decoupling
- SafeLink
- Modbus/TCP diagnosis possible

Safety monitor, three 2-channel secure inputs, two secure outputs
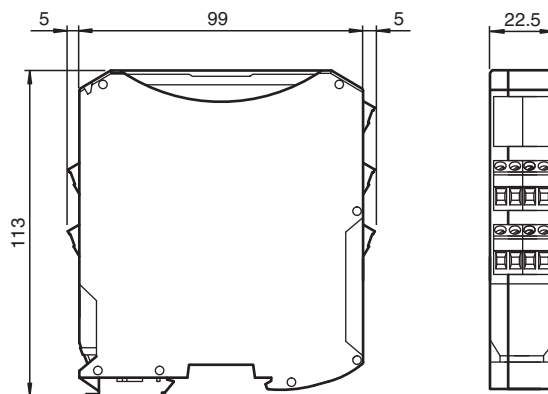
Function

The AS-Interface safety monitor compact with master function VAS/M-2A8L-KE4-6SE-EV is a control cabinet module with up to 6/3 local safe inputs and up to 6 independent outputs and disconnectable master.
The safe inputs can optionally be configured as standard inputs and signalling outputs. Two of the safe inputs are also suitable as inputs for OSSDs, the others only for potential-free contacts. Each safe input can also be configured as two standard inputs. 8 independent AS-Interface release circuits support multiple safe AS-Interface outputs on a single address. In addition, the test pulse outputs can be switched as diagnostic outputs (not control-safe). The safe circuit for the connected consumers is created using two safety relays.
The housing, which is only 22.5 mm wide, requires little space in the switch cabinet. The module is mounted by clicking it onto the 35 mm mouting rail, compliant with EN 50022.
The AS-Interface and external power supply are each connected by means of a 2-station terminal block. Connection of the inputs and outputs is by means of multiple 4-station terminal blocks. This permits the simple removal of the supply during commissioning or servicing. The supply to the connected slaves is fed either internally via the module from the AS-interface or via an external supply. For external supply via a standard power supply unit, the safety module has a decoupling function. The current status of the inputs and outputs is indicated via yellow LEDs. Communication faults are indicated via red LEDs. The display of the operating voltage and the address 0 is provided by a green LED.
An ethernet interface is used for configuration with the AS-i-Control Tools via ASIMON. The configuration can be transferred to a replacement device using a chip card.

Dimensions

Technical Data

General specifications	
AS-Interface specification	V3.0
Data decoupling	integrated
UL File Number	E223772
Functional safety related parameters	

Pepperl+Fuchs Group
www.pepperl-fuchs.com
USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com
Germany: +49 621 776 1111
fa-info@de.pepperl-fuchs.com
Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS

1

Technical Data

Safety Integrity Level (SIL)		SIL 3
Performance level (PL)		PL e
Mission Time (T_M)		20 a
PFH_d		5.08 E-9
Indicators/operating means		
LED AS-i M		Status of AS interface master, multicolored LED green: Master OK
LED SM		Status of safety monitor, multicolored LED green: Safety monitor OK
LED S1 ... S6		Status of inputs S1 ... S6, yellow LED yellow: Contact open
LED O1, O2		Status of outlputs, multicolored LED yellow: Output on
Electrical specifications		
Auxiliary voltage (input)	U_{EXT}	20 ... 30 V_{DC} PELV
Insulation voltage	U_i	500 V AS-Interface/U_{AUX}:
Rated operating voltage	U_e	18,0 ... 31.6 V from AS-Interface
Rated operating current	I_e	≤ 200 mA from AS-Interface; ≤ 4 A from AUX
Interface 1		
Interface type		Chip card slot
Interface 2		
Interface type		RJ-45 socket, 8-pin Ethernet Programming interface
Input		
Number/Type		6 / 3 safe inputs cat. 4 or 6 standard inputs and outputs
Supply		24 V U_{AUX}
Current loading capacity		10 mA per signal output
Input current		Static switching current: 4 mA at 24 V. Dynamic switching current: 15 mA at 24 V (T=100 µs)
Output		
Number/Type		Output circuits 1 and 2 max. contact rating: 700 m A_{DC-13} at 24 V
Supply		24 V U_{AUX}
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 62026-2:2013 EN 61000-6-2:2005/AC:2005 EN 61000-6-4:2007/A1:2011
Machinery Directive		
Directive 2006/42/EC		EN 13849-1:2008/AC:2009 EN 62061:2005/A1:2013
Standard conformity		
Electromagnetic compatibility		EN 61326-3-1:2008
Degree of protection		EN 60529:2000
AS-Interface		EN 62026-2:2013
Functional safety		EN 61508:2010 and EN 62061:2005 (up to SIL3) EN 13849-1:2008/AC:2009 (PL e)
Programming instructions		
Profile		configurable
Ambient conditions		
Ambient temperature		0 ... 55 °C (32 ... 131 °F)
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)
Mechanical specifications		
Degree of protection		IP20

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group   USA: +1 330 486 0001   Germany: +49 621 776 1111   Singapore: +65 6779 9091
www.pepperl-fuchs.com   fa-info@us.pepperl-fuchs.com   fa-info@de.pepperl-fuchs.com   fa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS   2

Technical Data

Connection	removable terminals rated connection capacity: rigid/flexible (with and without wire-end ferrules): 0.25 mm² ... 2.5 mm² for multiple-wire connection with two wires of equal cross-section: flexible with twin wire-end ferrules: 0.5 mm² ... 1.5 mm²
Material	
Housing	PA 66-FR
Mass	160 g
Mounting	DIN mounting rail
General information	
Application areas	Speed monitor: Local inputs, 1 to 2 axles up to 4 kHz

Assembly
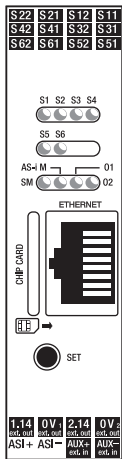
SET = Service button
CHIP CARD = Chip card
ETHERNET = Programming, Diagnostics
SafeLink communication

Connection

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".
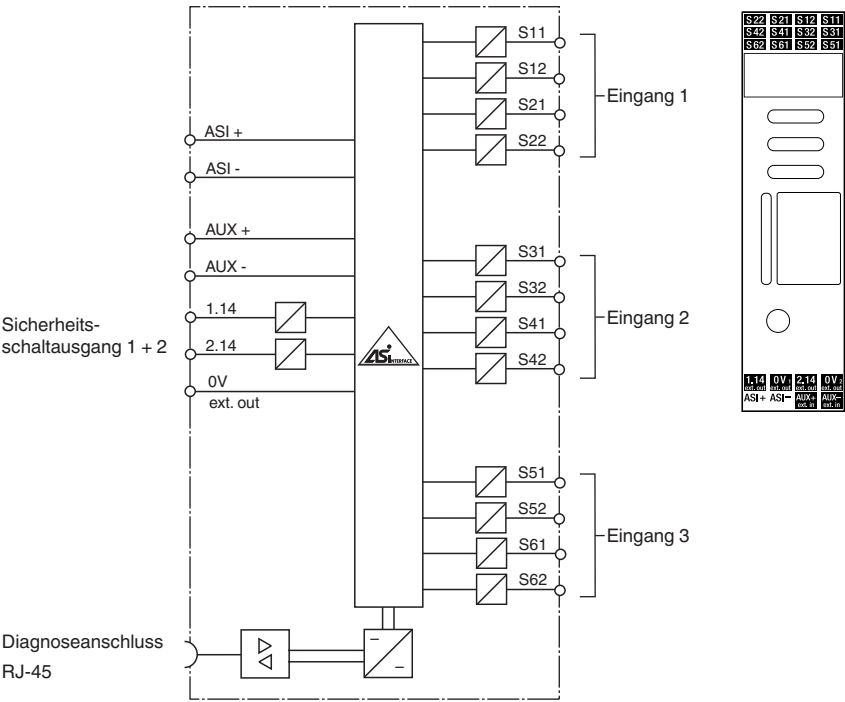
Accessories

	VAZ-SW-SUITE	Combined software for configuration, diagnostics, and programming, for masters and safety monitors (type KE4, K20, K30, K31)

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS

4