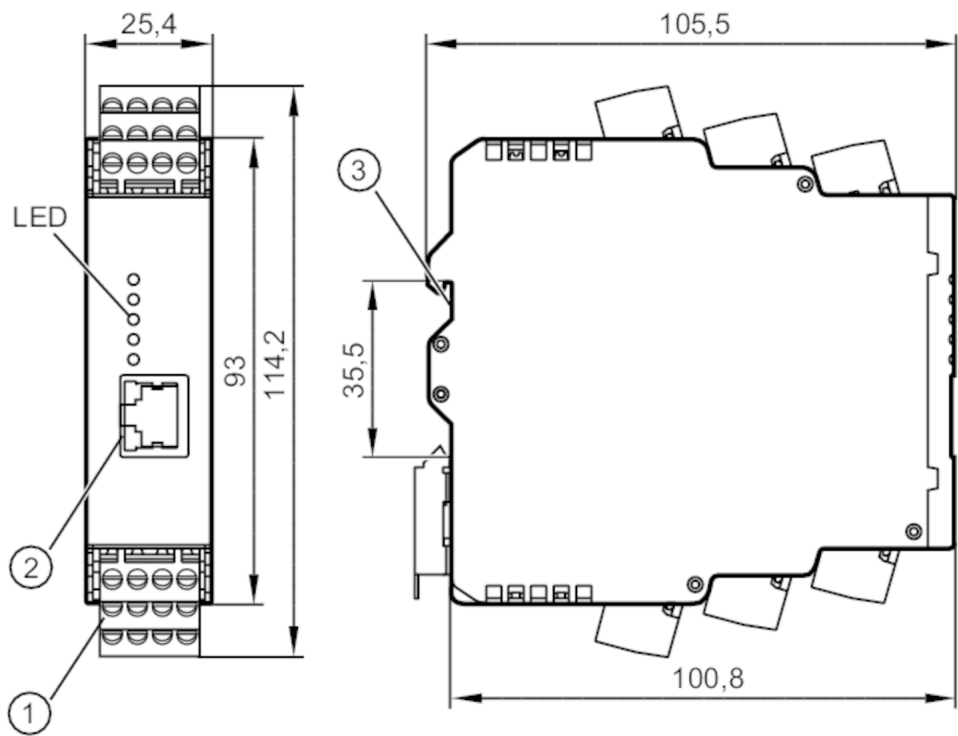




Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS



- 1 Combicon connector
- 2 Ethernet interface
- 3 DIN rail adapter



Application	
Design	housing for DIN rail mounting, parameter setting via PC software, VES004
Application	continuous vibration monitoring
Electrical data	
Operating voltage tolerance [%]	20
Operating voltage [V]	24 DC; (when using the IEPE input: 24 V + 20%; IEPE = Integrated Electronics Piezo Electric)
Current consumption [mA]	200; (24 V DC)
Protection class	III
Inputs / outputs	
Total number of inputs and outputs	8; (configurable)
Inputs	
Dynamic inputs	
Number	4
Connection	S1...S4



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Analog input	function type	Current, dynamic
	input range	0...10 mA / IEPE / 4...20 mA
	input frequency [Hz]	0,1...12000
	Resolution	16 bit
	sampling rate	100 kSamples
Process value inputs, analog / digital		
Number	2	
Connection	IN1, IN2	
Digital input	function type	pulse
	Circuit	HTL
	Frequency [Hz]	0,1...100000
Analog input	function type	Current
	input range [mA]	4...20
	Resolution	12 bit
Outputs		
Max. load	[Ω]	500
Short-circuit protection	yes	
Type of short-circuit protection	yes (non-latching)	
Overload protection	yes	
Multi-function outputs, analog / digital		
Number	1	
Connection	OU1	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Analog output	function type	Current
	output range [mA]	4...20
Digital outputs		
Number	1	
Connection	OU2	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Interfaces		
Communication interface	Ethernet	
Number of Ethernet interfaces	1	
Ethernet		
Transmission standard	10Base-T; 100Base-TX	
Transmission rate	10/100 MBit/s	
Type of connector	RJ45	
Protocol	TCP/IP	
Factory settings	IP address: 192.168.0.1	
	port 3321	
Operating conditions		
Ambient temperature	[°C]	0...70



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Storage temperature	[°C]	0...70
Protection		IP 20
Tests / approvals		
EMC		EN IEC 61000-6-2
		EN IEC 61000-6-4
MTTF	[years]	101
Mechanical data		
Weight	[g]	323.1
Type of mounting		Mounting on DIN rail; (TH35 (EN 60715))
Dimensions	[mm]	114.2 x 25.4 x 105.5
Material		Housing: PA
Data memory		
History memory		yes
Data memory buffered		yes
Data memory type		ring memory; FIFO
Real-time clock		yes
Memory location		internal
Memory interval		min. 1 min
Memory size		881664 data records
Accessories		
Accessories (optional)		cross-over Ethernet patch cable for the direct connection to the PC
Remarks		
Pack quantity		1 pcs.



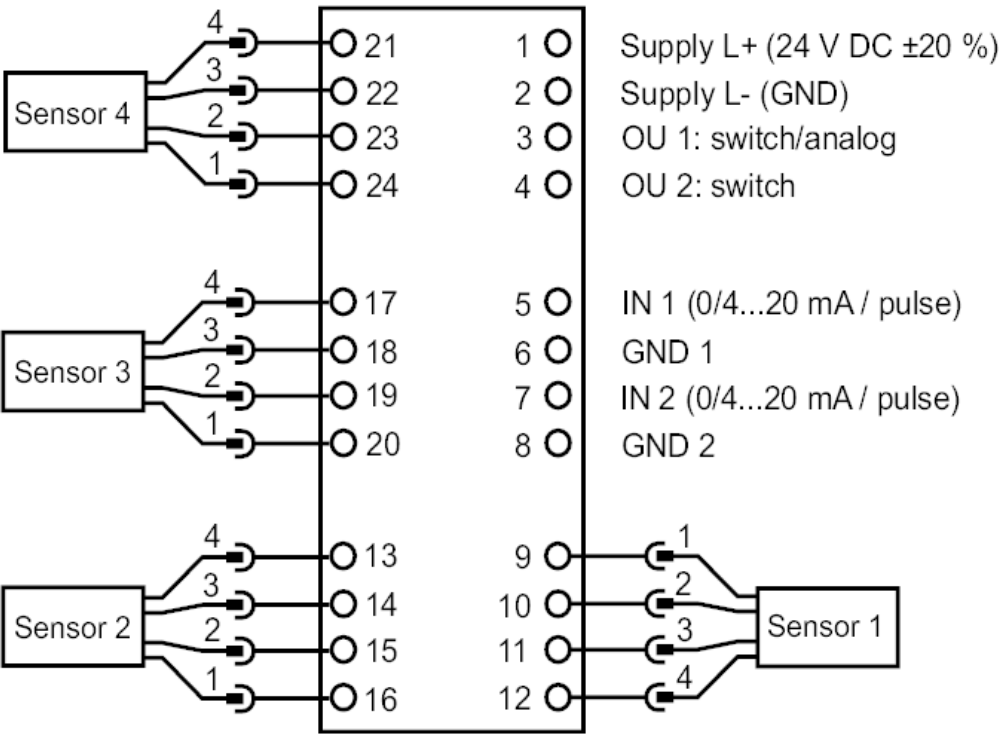
Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Electrical connection

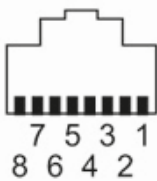
Combicon: ; Maximum cable length: 250 m

Connection



Electrical connection - Ethernet

Connector: RJ45

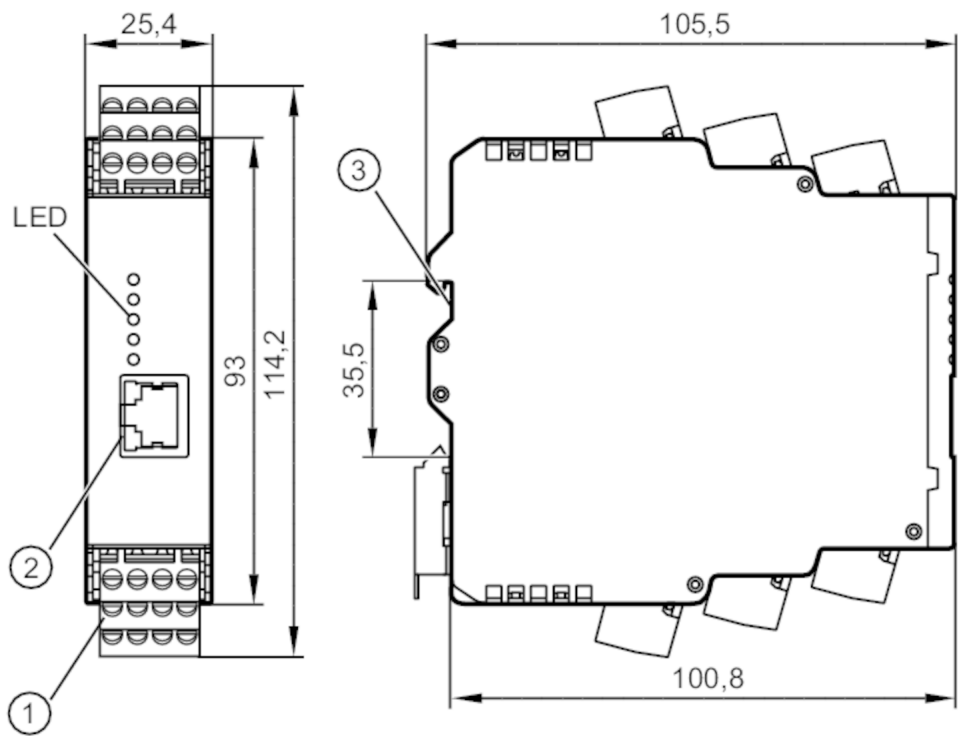


1	TxD +
2	TxD -
3	RxD +
4	n.c.
5	n.c.
6	RxD -
7	n.c.
8	n.c.



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS



- 1 Combicon connector
- 2 Ethernet interface
- 3 DIN rail adapter



Application	
Design	housing for DIN rail mounting, parameter setting via PC software, VES004
Application	continuous vibration monitoring
Electrical data	
Operating voltage tolerance [%]	20
Operating voltage [V]	24 DC; (when using the IEPE input: 24 V + 20%; IEPE = Integrated Electronics Piezo Electric)
Current consumption [mA]	200; (24 V DC)
Protection class	III
Inputs / outputs	
Total number of inputs and outputs	8; (configurable)
Inputs	
Dynamic inputs	
Number	4
Connection	S1...S4



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Analog input	function type	Current, dynamic
	input range	0...10 mA / IEPE / 4...20 mA
	input frequency [Hz]	0,1...12000
	Resolution	16 bit
	sampling rate	100 kSamples
Process value inputs, analog / digital		
Number	2	
Connection	IN1, IN2	
Digital input	function type	pulse
	Circuit	HTL
	Frequency [Hz]	0,1...100000
Analog input	function type	Current
	input range [mA]	4...20
	Resolution	12 bit
Outputs		
Max. load	[Ω]	500
Short-circuit protection	yes	
Type of short-circuit protection	yes (non-latching)	
Overload protection	yes	
Multi-function outputs, analog / digital		
Number	1	
Connection	OU1	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Analog output	function type	Current
	output range [mA]	4...20
Digital outputs		
Number	1	
Connection	OU2	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Interfaces		
Communication interface	Ethernet	
Number of Ethernet interfaces	1	
Ethernet		
Transmission standard	10Base-T; 100Base-TX	
Transmission rate	10/100 MBit/s	
Type of connector	RJ45	
Protocol	TCP/IP	
Factory settings	IP address: 192.168.0.1	
	port 3321	
Operating conditions		
Ambient temperature	[°C]	0...70



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Storage temperature	[°C]	0...70
Protection		IP 20
Tests / approvals		
EMC		EN IEC 61000-6-2
		EN IEC 61000-6-4
MTTF	[years]	89
Mechanical data		
Weight	[g]	327
Type of mounting		Mounting on DIN rail; (TH35 (EN 60715))
Dimensions	[mm]	114.2 x 25.4 x 105.5
Material		Housing: PA
Data memory		
History memory		yes
Data memory buffered		yes
Data memory type		ring memory; FIFO
Real-time clock		yes
Memory location		internal
Memory interval		min. 1 min
Memory size		881664 data records
Accessories		
Accessories (optional)		cross-over Ethernet patch cable for the direct connection to the PC
Remarks		
Pack quantity		1 pcs.



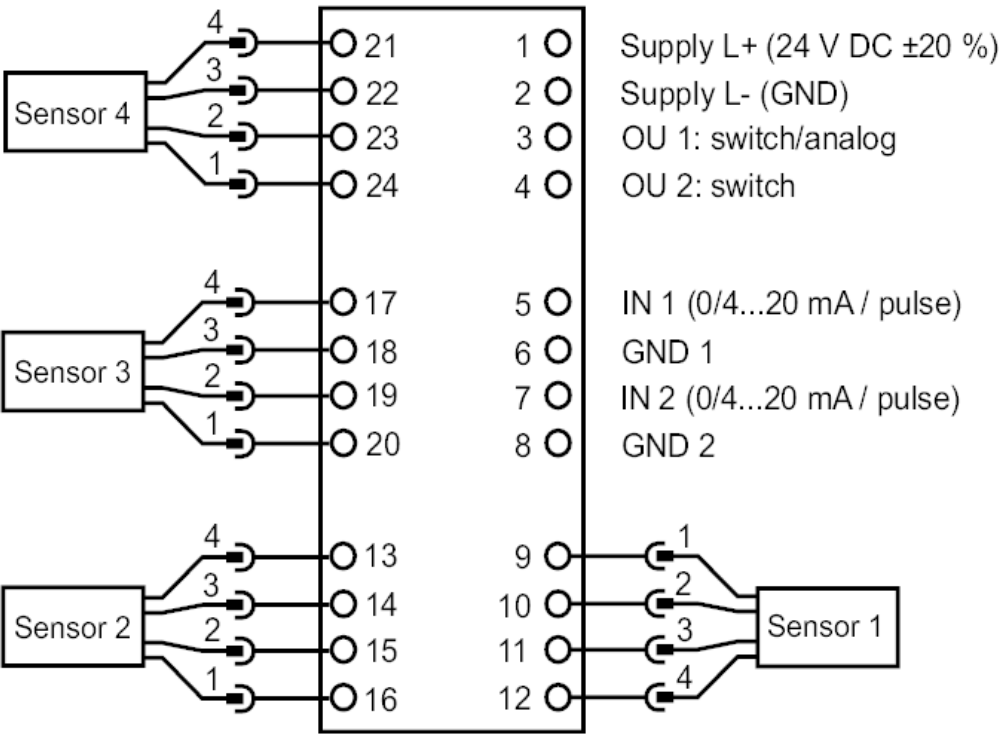
Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Electrical connection

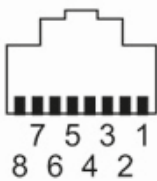
Combicon: ; Maximum cable length: 250 m

Connection



Electrical connection - Ethernet

Connector: RJ45

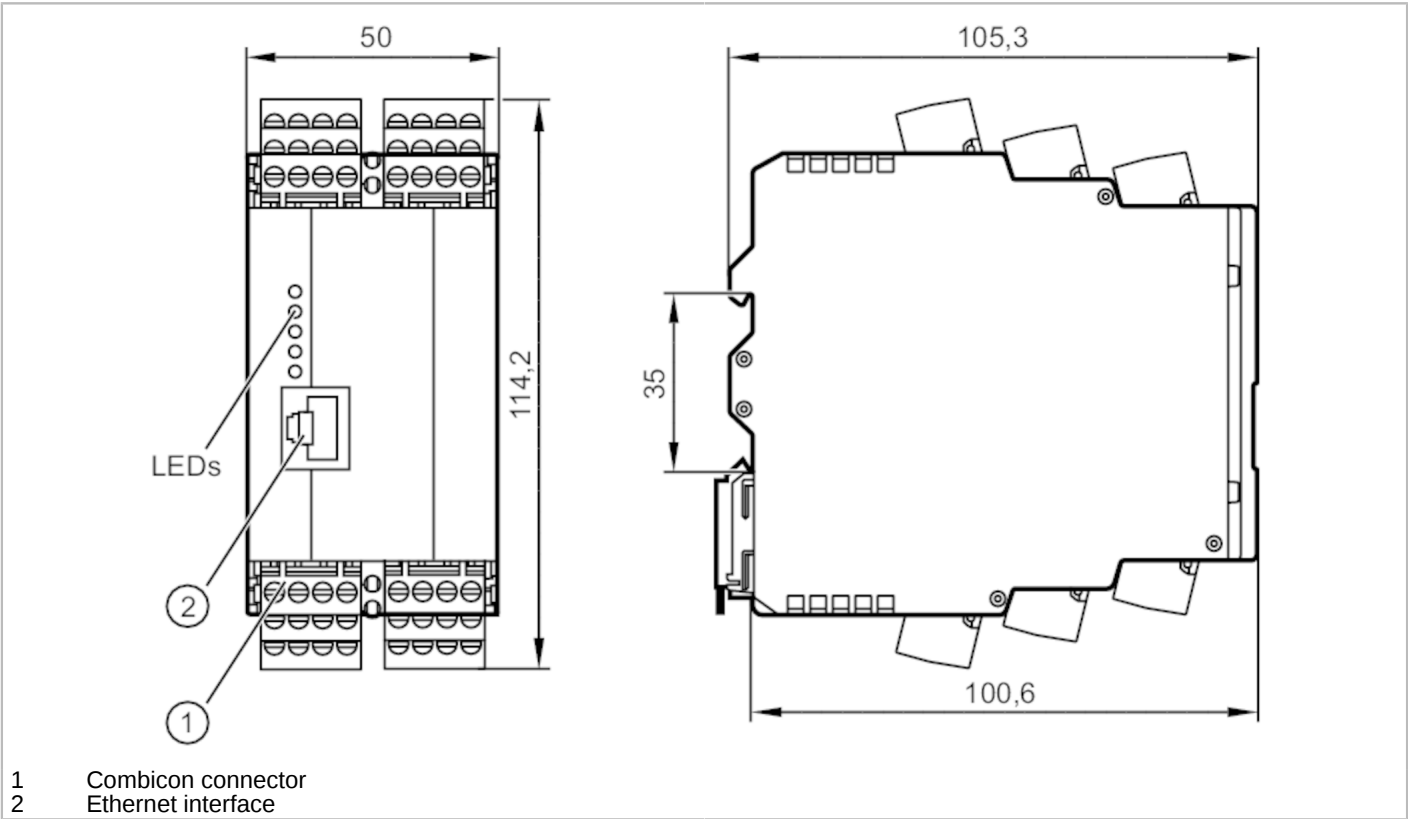


1	TxD +
2	TxD -
3	RxD +
4	n.c.
5	n.c.
6	RxD -
7	n.c.
8	n.c.



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS



Application		
Design	housing for DIN rail mounting, parameter setting via PC software, VES004	
Application	continuous vibration monitoring	
Electrical data		
Operating voltage tolerance	[%]	20
Operating voltage	[V]	24 DC; (when using the IEPE input: 24 V + 20%; IEPE = Integrated Electronics Piezo Electric)
Current consumption	[mA]	200; (24 V DC)
Protection class		III
Inputs / outputs		
Total number of inputs and outputs	16; (configurable)	
Multifunktionale Ein-/Ausgänge		
Digital		
Number	8	
Connection	I/O1...I/O8	
Digital input	Circuit	HTL
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Inputs		
Dynamic inputs		
Number	4	



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Connection	S1...S4	
Analog input	function type	Current, dynamic
	input range	0...10 mA / IEPE / 4...20 mA
	input frequency [Hz]	0,1...12000
	Resolution	16 bit
	sampling rate	100 kSamples
Process value inputs, analog / digital		
Number	2	
Connection	IN1 / U-IN1, IN2 / U-IN2	
Digital input	function type	pulse
	Circuit	HTL
	Frequency [Hz]	0,1...100000
Analog input	function type	Current
	input range [mA]	4...20
	Resolution	12 bit
Analog input	function type	Voltage
	Connection	U-IN1, U-IN2
	input range [V]	0...10
	Resolution	12 bit
Outputs		
Max. load	[Ω]	500
Short-circuit protection	yes	
Type of short-circuit protection	yes (non-latching)	
Overload protection	yes	
Multi-function outputs, analog / digital		
Number	1	
Connection	OU1 / U-OUT	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Analog output	function type	Current
	output range [mA]	4...20
Analog output	function type	Voltage
	Connection	U-OUT
	output range [V]	0...10
Digital outputs		
Number	1	
Connection	OU2	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Interfaces		
Communication interface	Ethernet	
Number of Ethernet interfaces	1	
Ethernet		
Transmission standard	10Base-T; 100Base-TX	



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Transmission rate		10/100 MBit/s	
Type of connector		RJ45	
Protocol		TCP/IP	
Factory settings		IP address: 192.168.0.1	
		port 3321	
Operating conditions			
Ambient temperature		[°C]	0...70
Storage temperature		[°C]	0...70
Protection		IP 20	
Tests / approvals			
EMC		EN IEC 61000-6-2	
		EN IEC 61000-6-4	
MTTF		[years]	89
Mechanical data			
Weight		[g]	460.6
Type of mounting		Mounting on DIN rail; (TH35 (EN 60715))	
Dimensions		[mm]	114.2 x 50 x 105.3
Material		Housing: PA	
Data memory			
History memory		yes	
Data memory buffered		yes	
Data memory type		ring memory; FIFO	
Real-time clock		yes	
Memory location		internal	
Memory interval		min. 1 min	
Memory size		881664 data records	
Accessories			
Accessories (optional)		cross-over Ethernet patch cable for the direct connection to the PC	
Remarks			
Pack quantity		1 pcs.	

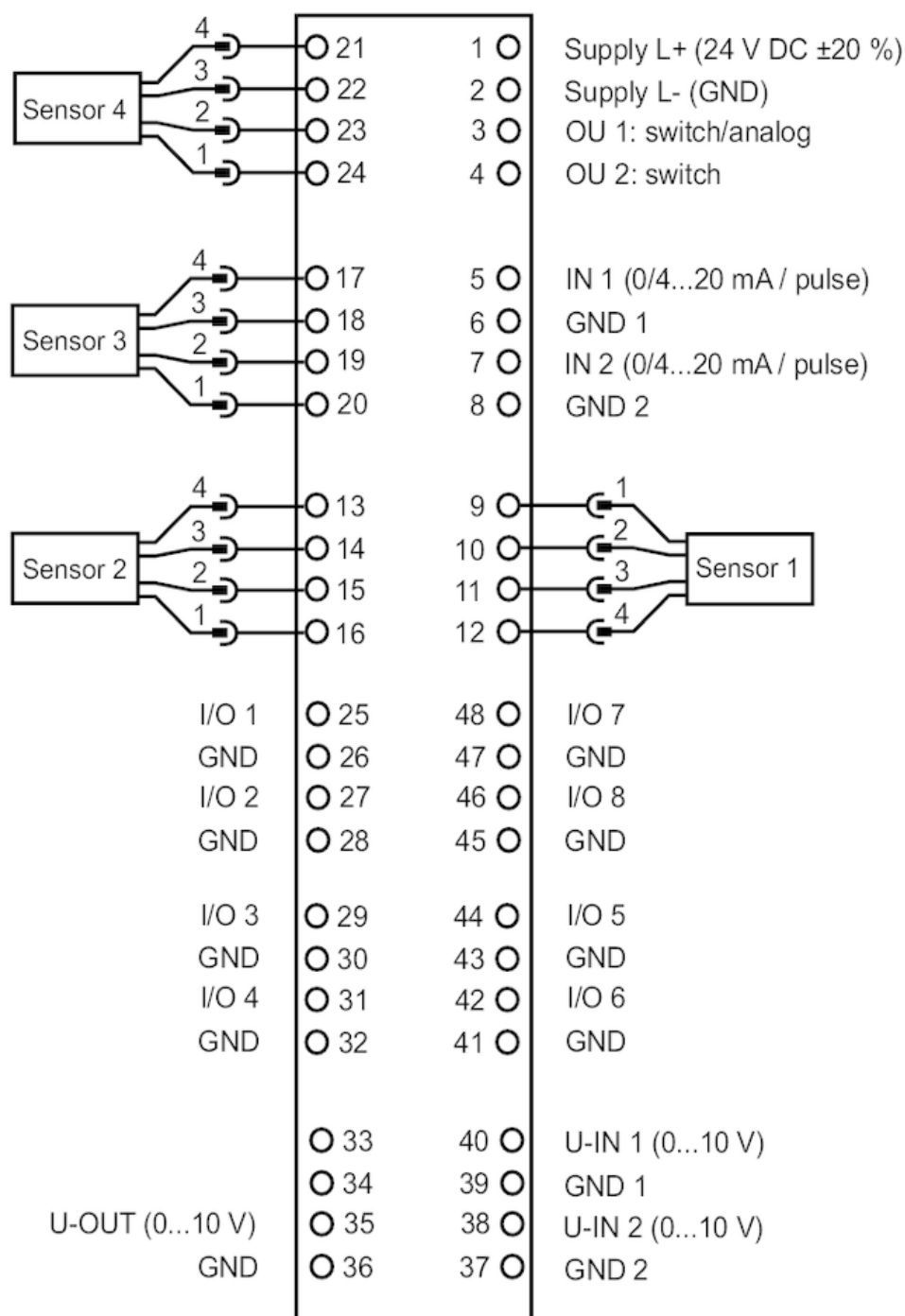
Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Electrical connection

Combicon: ; Maximum cable length: 250 m

Connection



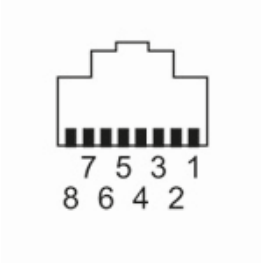


Diagnostic electronics for vibration sensors

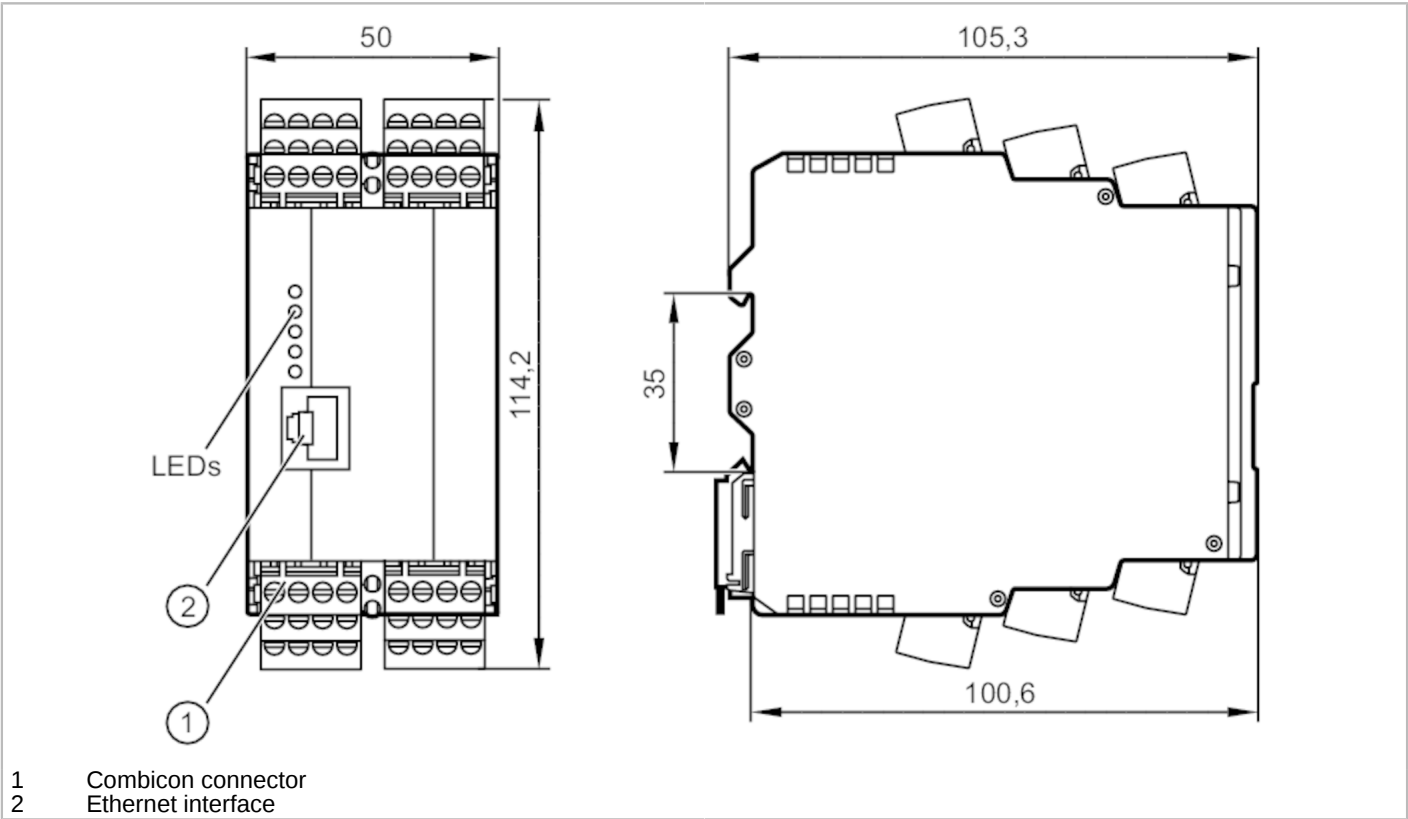
DIAGNOSTIC ELECTRONICS

Electrical connection - Ethernet

Connector: RJ45



1	TxD +
2	TxD -
3	RxD +
4	n.c.
5	n.c.
6	RxD -
7	n.c.
8	n.c.



Application		
Design	housing for DIN rail mounting, parameter setting via PC software, VES004	
Application	continuous vibration monitoring	
Electrical data		
Operating voltage tolerance	[%]	20
Operating voltage	[V]	24 DC; (when using the IEPE input: 24 V + 20%; IEPE = Integrated Electronics Piezo Electric)
Current consumption	[mA]	200; (24 V DC)
Protection class		III
Inputs / outputs		
Total number of inputs and outputs	16; (configurable)	
Multifunktionale Ein-/Ausgänge		
Digital		
Number	8	
Connection	I/O1...I/O8	
Digital input	Circuit	HTL
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Inputs		
Dynamic inputs		
Number	4	



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Connection	S1...S4	
Analog input	function type	Current, dynamic
	input range	0...10 mA / IEPE / 4...20 mA
	input frequency [Hz]	0,1...12000
	Resolution	16 bit
	sampling rate	100 kSamples
Process value inputs, analog / digital		
Number	2	
Connection	IN1 / U-IN1, IN2 / U-IN2	
Digital input	function type	pulse
	Circuit	HTL
	Frequency [Hz]	0,1...100000
Analog input	function type	Current
	input range [mA]	4...20
	Resolution	12 bit
Analog input	function type	Voltage
	Connection	U-IN1, U-IN2
	input range [V]	0...10
	Resolution	12 bit
Outputs		
Max. load	[Ω]	500
Short-circuit protection	yes	
Type of short-circuit protection	yes (non-latching)	
Overload protection	yes	
Multi-function outputs, analog / digital		
Number	1	
Connection	OU1 / U-OUT	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Analog output	function type	Current
	output range [mA]	4...20
Analog output	function type	Voltage
	Connection	U-OUT
	output range [V]	0...10
Digital outputs		
Number	1	
Connection	OU2	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Interfaces		
Communication interface	Ethernet	
Number of Ethernet interfaces	1	
Ethernet		
Transmission standard	10Base-T; 100Base-TX	



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Transmission rate		10/100 MBit/s	
Type of connector		RJ45	
Protocol		TCP/IP	
Factory settings		IP address: 192.168.0.1	
		port 3321	
Operating conditions			
Ambient temperature		[°C]	0...70
Storage temperature		[°C]	0...70
Protection		IP 20	
Tests / approvals			
EMC		EN IEC 61000-6-2	
		EN IEC 61000-6-4	
MTTF		[years]	89
UL approval		Ta	
		70 °C	
		Enclosure type	
		Type 1	
		voltage supply	
		Limited Voltage/Current	
		File number UL	
		E251902	
Mechanical data			
Weight		[g]	442.6
Type of mounting		Mounting on DIN rail; (TH35 (EN 60715))	
Dimensions		[mm]	114.2 x 50 x 105.3
Material		Housing: PA	
Data memory			
History memory		yes	
Data memory buffered		yes	
Data memory type		ring memory; FIFO	
Real-time clock		yes	
Memory location		internal	
Memory interval		min. 1 min	
Memory size		881664 data records	
Accessories			
Accessories (optional)		cross-over Ethernet patch cable for the direct connection to the PC	
Remarks			
Pack quantity		1 pcs.	



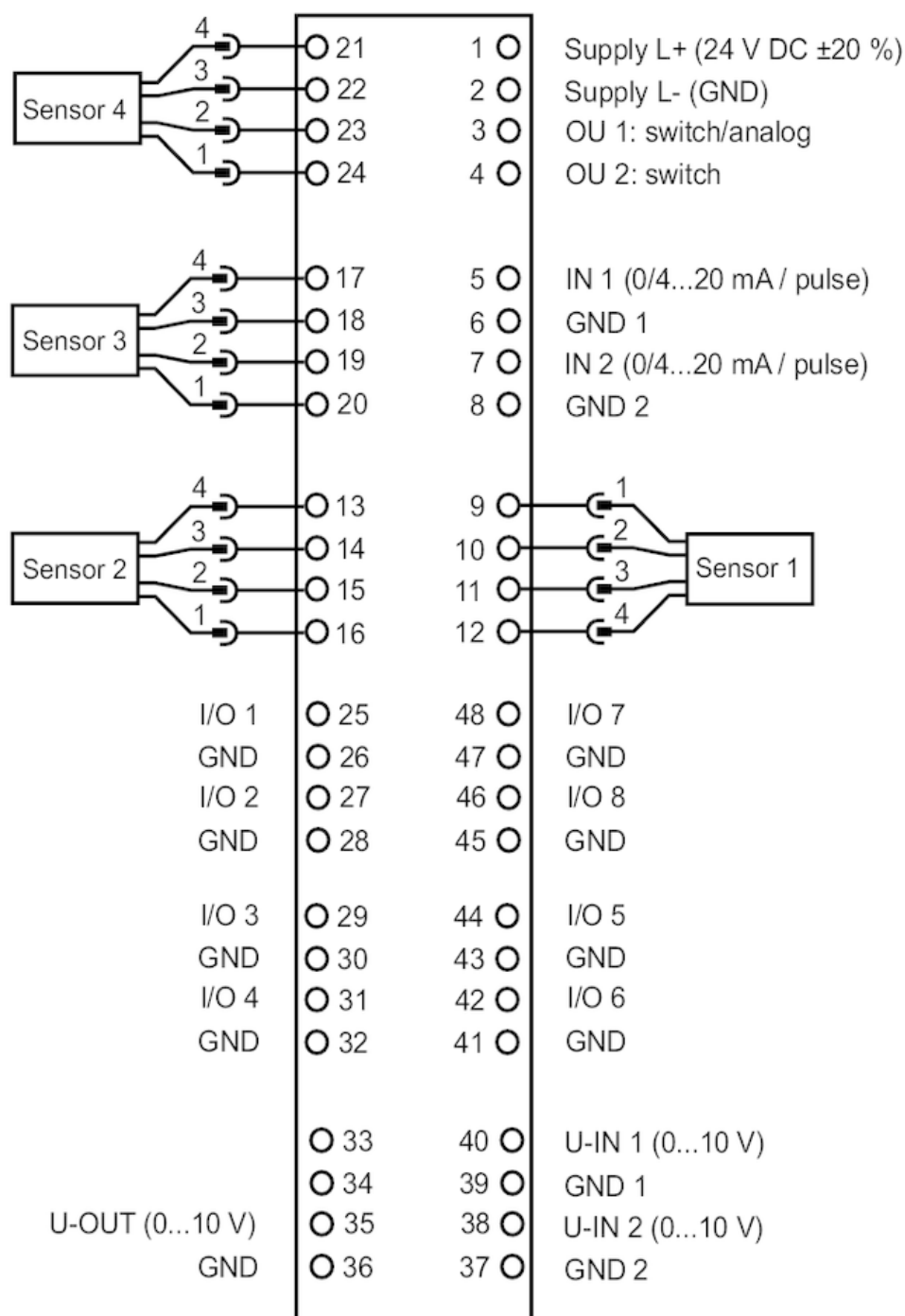
Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Electrical connection

Combicon: ; Maximum cable length: 250 m

Connection



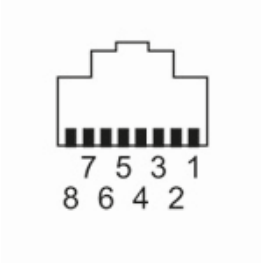


Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Electrical connection - Ethernet

Connector: RJ45



1	TxD +
2	TxD -
3	RxD +
4	n.c.
5	n.c.
6	RxD -
7	n.c.
8	n.c.

VSE150



Diagnostic electronics for vibration sensors

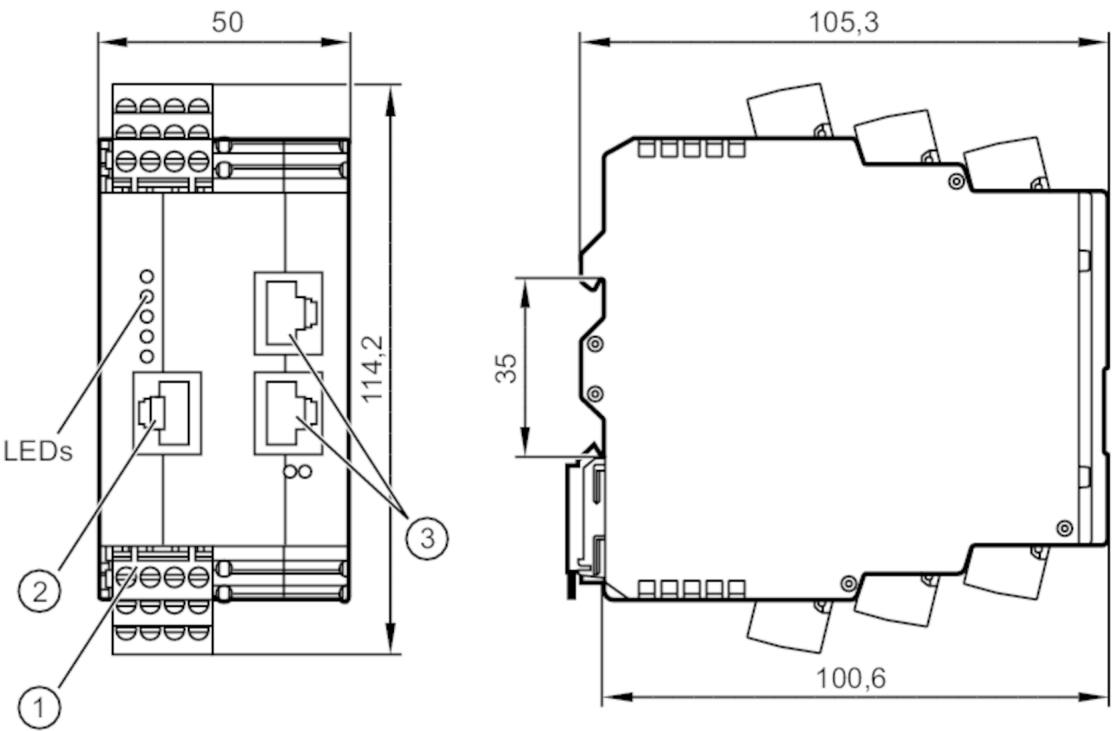
DIAGNOSTIC ELECTRONICS

Article to be discontinued

Discontinuation date: 03/31/2026

Alternative articles: VSE160

When selecting an alternative article and accessories please note that technical data may differ!



- 1 Combicon connector
- 2 Ethernet interface
- 3 fieldbus interface



Application

Design	housing for DIN rail mounting, parameter setting via PC software, VES004
Application	continuous vibration monitoring

Electrical data

Operating voltage tolerance	[%]	20
Operating voltage	[V]	24 DC; (when using the IEPE input: 24 V + 20%; IEPE = Integrated Electronics Piezo Electric)
Current consumption	[mA]	200; (24 V)
Protection class		III

Inputs / outputs

Total number of inputs and outputs	8; (configurable)
------------------------------------	-------------------

Inputs

Dynamic inputs

Number	4
Connection	S1...S4



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Analog input	function type	Current, dynamic
	input range	0...10 mA / IEPE / 4...20 mA
	input frequency [Hz]	0,1...12000
	Resolution	16 bit
	sampling rate	100 kSamples
Process value inputs, analog / digital		
Number	2	
Connection	IN1, IN2	
Digital input	function type	pulse
	Circuit	HTL
	Frequency [Hz]	0,1...100000
Analog input	function type	Current
	input range [mA]	4...20
	Resolution	12 bit
Outputs		
Max. load	[Ω]	500
Short-circuit protection	yes	
Type of short-circuit protection	yes (non-latching)	
Overload protection	yes	
Multi-function outputs, analog / digital		
Number	1	
Connection	OU1	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Analog output	function type	Current
	output range [mA]	4...20
Digital outputs		
Number	1	
Connection	OU2	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Interfaces		
Communication interface	Ethernet	
Number of Ethernet interfaces	1	
Ethernet		
Transmission standard	10Base-T; 100Base-TX	
Transmission rate	10/100 MBit/s	
Type of connector	RJ45	
Protocol	TCP/IP	
Factory settings	IP address: 192.168.0.1	
Ethernet - PROFINET		
Transmission standard	100Base-TX	
Transmission rate	100 MBit/s	



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Protocol		PROFINET	
Factory settings		IP address: 0.0.0.0	
		subnet mask: 0.0.0.0	
		gateway IP address: 0.0.0.0	
		MAC address: see type label	
Note on interfaces		CC-C (Conformance Class C) (IRT switch)	
		Netload Class III	
		SNMP (Simple Network Management Protocol)	
		MRP (Media Redundancy Protocol)	
		Supported network topologies: line	
		ring	
Operating conditions			
Ambient temperature		[°C]	0...60
Storage temperature		[°C]	0...60
Protection			IP 20
Tests / approvals			
EMC		EN IEC 61000-6-2	
		EN IEC 61000-6-4	
MTTF		[years]	92
Mechanical data			
Weight		[g]	415.2
Type of mounting			Mounting on DIN rail; (TH35 (EN 60715))
Dimensions		[mm]	114.2 x 50 x 105.3
Material			Housing: PA
Data memory			
History memory			yes
Data memory buffered			yes
Data memory type			ring memory; FIFO
Real-time clock			yes
Memory location			internal
Memory interval			min. 1 min
Memory size			881664 data records
Accessories			
Accessories (optional)		cross-over Ethernet patch cable for the direct connection to the PC	
Remarks			
Pack quantity		1 pcs.	



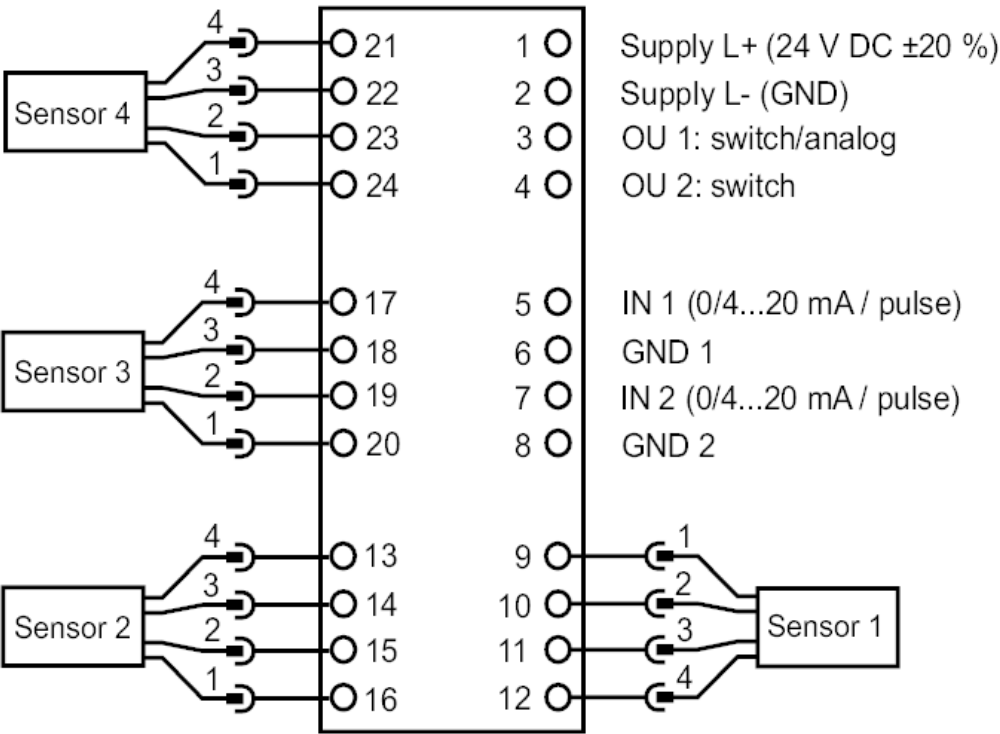
Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Electrical connection

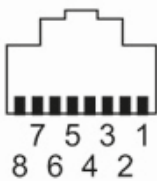
Combicon: ; Maximum cable length: 250 m

Connection

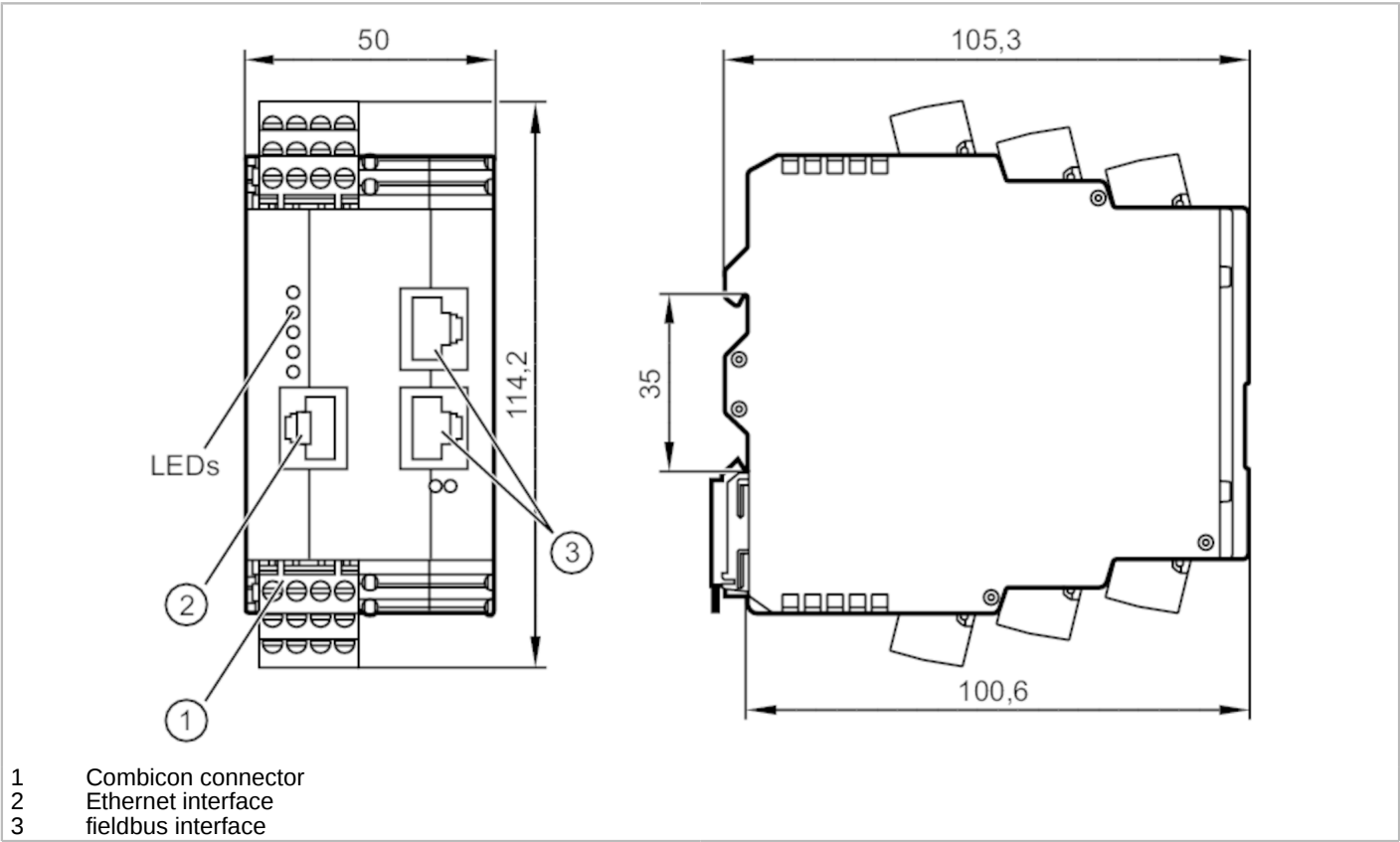


Electrical connection - Ethernet

Connector: RJ45



1	TxD +
2	TxD -
3	RxD +
4	n.c.
5	n.c.
6	RxD -
7	n.c.
8	n.c.



Application		
Design	housing for DIN rail mounting, parameter setting via PC software, VES004	
Application	continuous vibration monitoring	
Electrical data		
Operating voltage tolerance	[%]	20
Operating voltage	[V]	24 DC; (when using the IEPE input: 24 V + 20%; IEPE = Integrated Electronics Piezo Electric)
Current consumption	[mA]	200; (24 V)
Protection class		III
Inputs / outputs		
Total number of inputs and outputs	8; (configurable)	
Inputs		
Dynamic inputs		
Number	4	
Connection	S1...S4	
Analog input	function type	Current, dynamic
	input range	0...10 mA / IEPE / 4...20 mA
	input frequency [Hz]	0,1...12000
	Resolution	16 bit
	sampling rate	100 kSamples



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Process value inputs, analog / digital		
Number	2	
Connection	IN1, IN2	
Digital input	function type	pulse
	Circuit	HTL
	Frequency [Hz]	0,1...100000
Analog input	function type	Current
	input range [mA]	4...20
	Resolution	12 bit
Outputs		
Max. load	[Ω]	500
Short-circuit protection	yes	
Type of short-circuit protection	yes (non-latching)	
Overload protection	yes	
Multi-function outputs, analog / digital		
Number	1	
Connection	OU1	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Analog output	function type	Current
	output range [mA]	4...20
Digital outputs		
Number	1	
Connection	OU2	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Interfaces		
Communication interface	Ethernet	
Number of Ethernet interfaces	1	
Ethernet		
Transmission standard	10Base-T; 100Base-TX	
Transmission rate	10/100 MBit/s	
Type of connector	RJ45	
Protocol	TCP/IP	
Factory settings	IP address: 192.168.0.1	
Ethernet/IP		
Transmission standard	100Base-TX	
Transmission rate	100 MBit/s	
Protocol	EtherNet/IP	
Factory settings	IP address: 0.0.0.0	
	subnet mask: 0.0.0.0	
	gateway IP address: 0.0.0.0	
	MAC address: see type label	



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Note on interfaces	QoS (Quality of Service)	
	ACD (Address Conflict Detection)	
	Supported network topologies: line	
	ring	
Operating conditions		
Ambient temperature	[°C]	0...60
Storage temperature	[°C]	0...60
Protection		IP 20
Tests / approvals		
EMC	EN IEC 61000-6-2	
	EN IEC 61000-6-4	
MTTF	[years]	91
Mechanical data		
Weight	[g]	414.7
Type of mounting		Mounting on DIN rail; (TH35 (EN 60715))
Dimensions	[mm]	114.2 x 50 x 105.3
Material		Housing: PA
Data memory		
History memory		yes
Data memory buffered		yes
Data memory type		ring memory; FIFO
Real-time clock		yes
Memory location		internal
Memory interval		min. 1 min
Memory size		881664 data records
Accessories		
Accessories (optional)		cross-over Ethernet patch cable for the direct connection to the PC
Remarks		
Pack quantity		1 pcs.



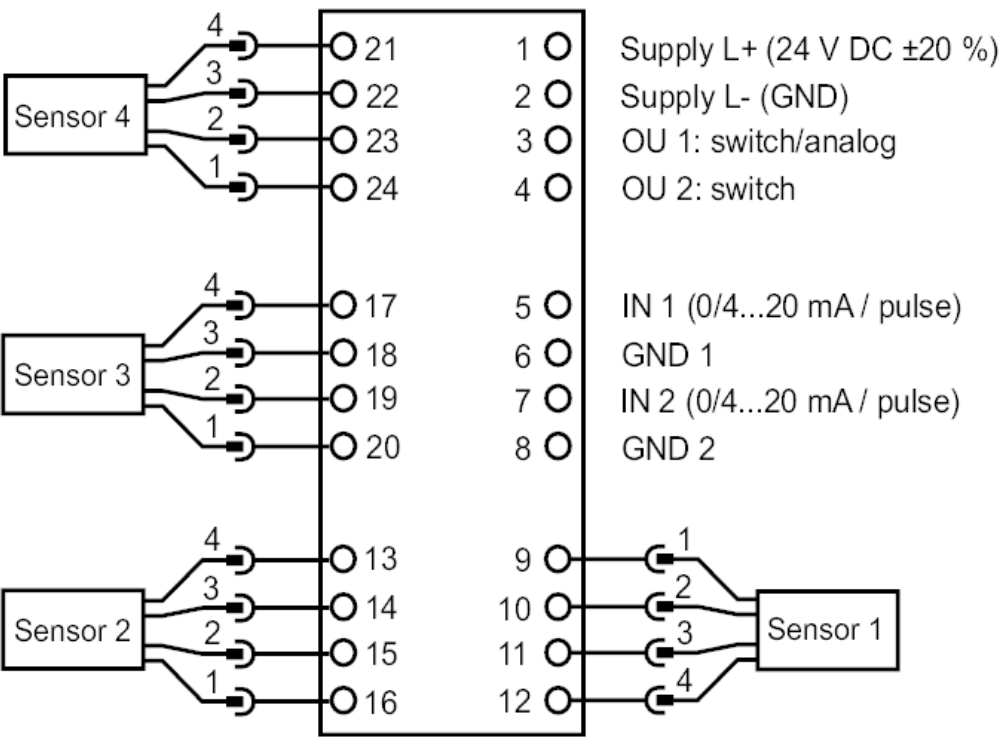
Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Electrical connection

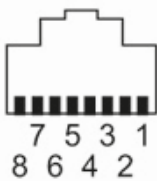
Combicon: ; Maximum cable length: 250 m

Connection

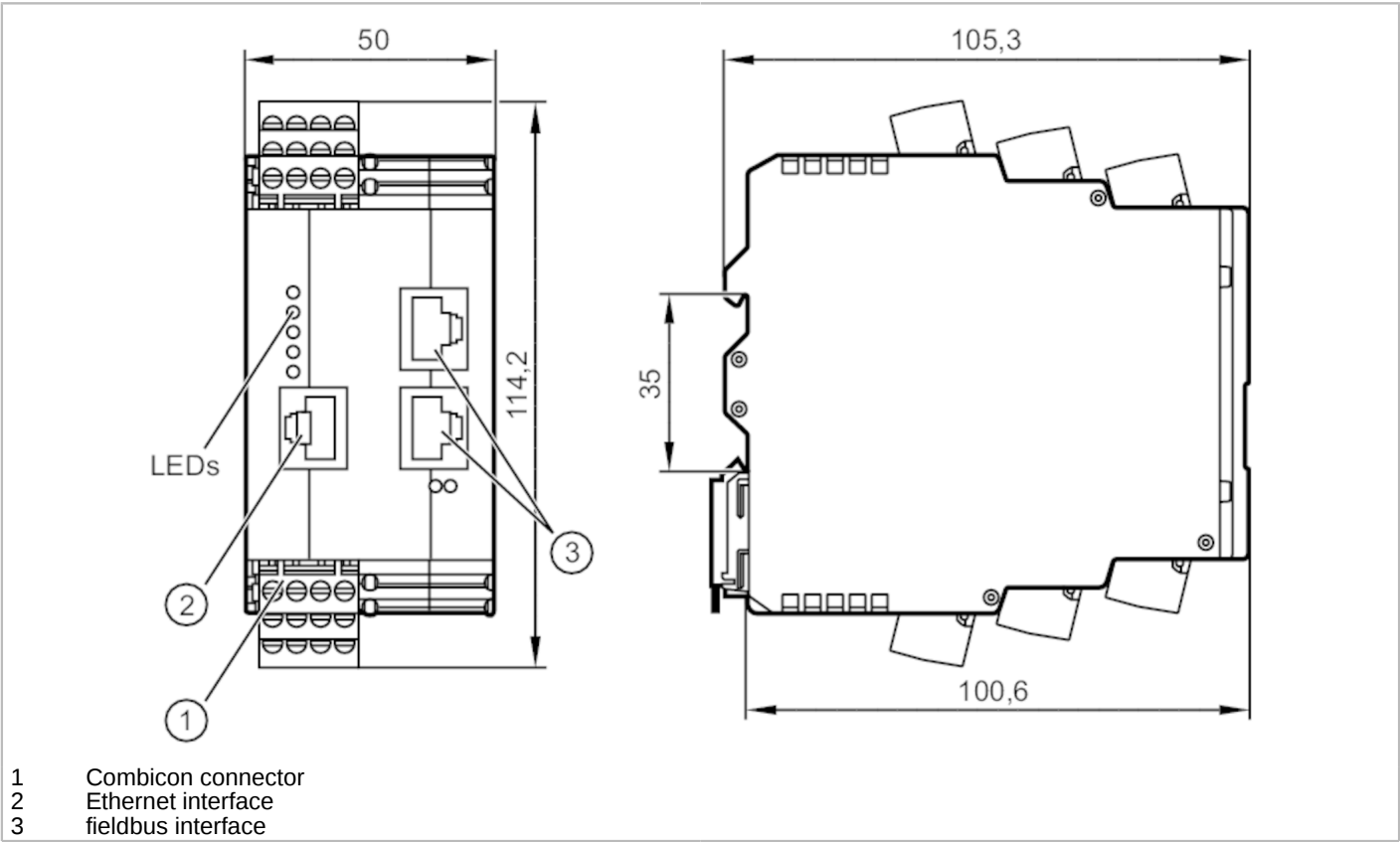


Electrical connection - Ethernet

Connector: RJ45



1	TxD +
2	TxD -
3	RxD +
4	n.c.
5	n.c.
6	RxD -
7	n.c.
8	n.c.



Application		
Design	housing for DIN rail mounting, parameter setting via PC software, VES004	
Application	continuous vibration monitoring	
Electrical data		
Operating voltage tolerance	[%]	20
Operating voltage	[V]	24 DC; (when using the IEPE input: 24 V + 20%; IEPE = Integrated Electronics Piezo Electric)
Current consumption	[mA]	200; (24 V)
Protection class		III
Inputs / outputs		
Total number of inputs and outputs	8; (configurable)	
Inputs		
Dynamic inputs		
Number	4	
Connection	S1...S4	
Analog input	function type	Current, dynamic
	input range	0...10 mA / IEPE / 4...20 mA
	input frequency [Hz]	0,1...12000
	Resolution	16 bit
	sampling rate	100 kSamples



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Process value inputs, analog / digital		
Number	2	
Connection	IN1, IN2	
Digital input	function type	pulse
	Circuit	HTL
	Frequency [Hz]	0,1...100000
Analog input	function type	Current
	input range [mA]	4...20
	Resolution	12 bit
Outputs		
Max. load	[Ω]	500
Short-circuit protection	yes	
Type of short-circuit protection	yes (non-latching)	
Overload protection	yes	
Multi-function outputs, analog / digital		
Number	1	
Connection	OU1	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Analog output	function type	Current
	output range [mA]	4...20
Digital outputs		
Number	1	
Connection	OU2	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Interfaces		
Communication interface	Ethernet	
Number of Ethernet interfaces	1	
EtherCat		
Transmission standard	100Base-TX	
Transmission rate	100 MBit/s	
Protocol	EtherCat	
Factory settings	IP address: 0.0.0.0	
	subnet mask: 0.0.0.0	
	gateway IP address: 0.0.0.0	
	MAC address: see type label	
Ethernet		
Transmission standard	10Base-T; 100Base-TX	
Transmission rate	10/100 MBit/s	
Type of connector	RJ45	
Protocol	TCP/IP	
Factory settings	IP address: 192.168.0.1	



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Operating conditions		
Ambient temperature	[°C]	0...60
Storage temperature	[°C]	0...60
Protection		IP 20
Tests / approvals		
EMC	EN IEC 61000-6-2	
	EN IEC 61000-6-4	
MTTF	[years]	91
Mechanical data		
Weight	[g]	413.2
Type of mounting		Mounting on DIN rail; (TH35 (EN 60715))
Dimensions	[mm]	114.2 x 50 x 105.3
Material		Housing: PA
Data memory		
History memory		yes
Data memory buffered		yes
Data memory type		ring memory; FIFO
Real-time clock		yes
Memory location		internal
Memory interval		min. 1 min
Memory size		881664 data records
Accessories		
Accessories (optional)		cross-over Ethernet patch cable for the direct connection to the PC
Remarks		
Pack quantity		1 pcs.



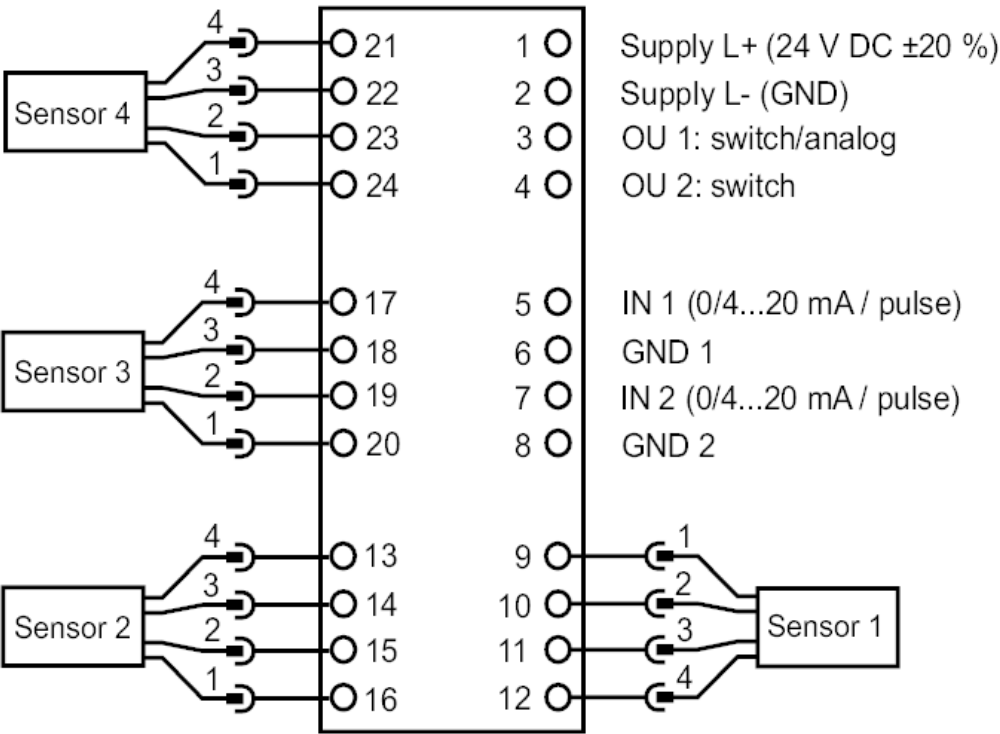
Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Electrical connection

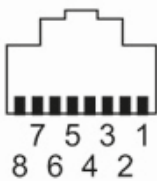
Combicon: ; Maximum cable length: 250 m

Connection



Electrical connection - Ethernet

Connector: RJ45



1	TxD +
2	TxD -
3	RxD +
4	n.c.
5	n.c.
6	RxD -
7	n.c.
8	n.c.

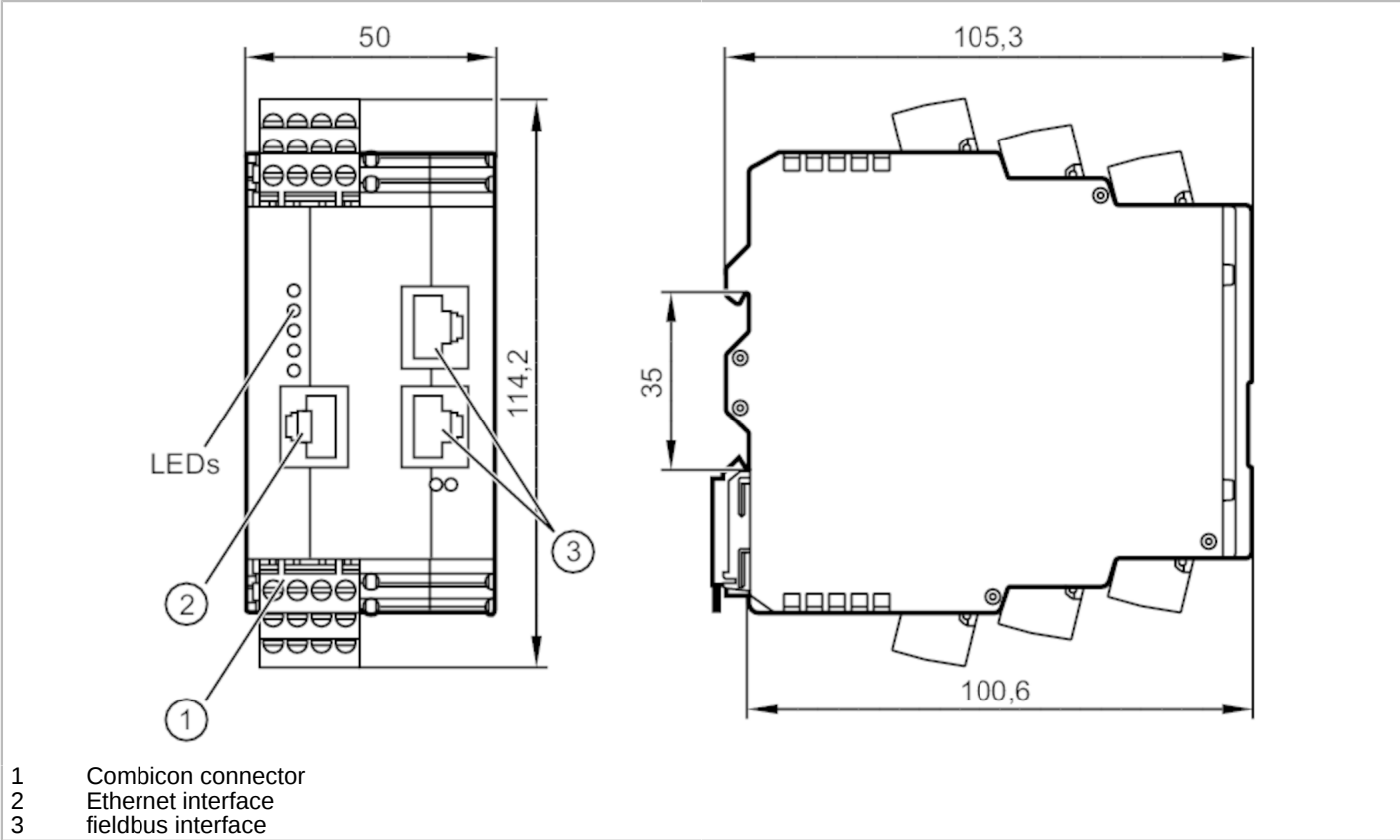


Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Article to be discontinued
Discontinuation date: 03/31/2026

Alternative articles: VSE163
When selecting an alternative article and accessories please note that technical data may differ!



- 1 Combicon connector
- 2 Ethernet interface
- 3 fieldbus interface



Application	
Design	housing for DIN rail mounting, parameter setting via PC software, VES004
Application	continuous vibration monitoring
Electrical data	
Operating voltage tolerance	[%] 20
Operating voltage	[V] 24 DC; (when using the IEPE input: 24 V + 20%; IEPE = Integrated Electronics Piezo Electric)
Current consumption	[mA] 200; (24 V)
Protection class	III
Inputs / outputs	
Total number of inputs and outputs	8; (configurable)
Inputs	
Dynamic inputs	
Number	4
Connection	S1...S4



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Analog input	function type	Current, dynamic
	input range	0...10 mA / IEPE / 4...20 mA
	input frequency [Hz]	0,1...12000
	Resolution	16 bit
	sampling rate	100 kSamples
Process value inputs, analog / digital		
Number	2	
Connection	IN1, IN2	
Digital input	function type	pulse
	Circuit	HTL
	Frequency [Hz]	0,1...100000
Analog input	function type	Current
	input range [mA]	4...20
	Resolution	12 bit
Outputs		
Max. load	[Ω]	500
Short-circuit protection	yes	
Type of short-circuit protection	yes (non-latching)	
Overload protection	yes	
Multi-function outputs, analog / digital		
Number	1	
Connection	OU1	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Analog output	function type	Current
	output range [mA]	4...20
Digital outputs		
Number	1	
Connection	OU2	
Digital output	Electrical design	PNP
	Output function	normally open / normally closed (configurable)
Interfaces		
Communication interface	Ethernet	
Number of Ethernet interfaces	1	
Note on interfaces	CC-C (Conformance Class C) (IRT switch)	
	Netload Class III	
	SNMP (Simple Network Management Protocol)	
	MRP (Media Redundancy Protocol)	
	Supported network topologies: line	
	ring	
Ethernet		
Transmission standard	10Base-T; 100Base-TX	
Transmission rate	10/100 MBit/s	
Type of connector	RJ45	



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Protocol		TCP/IP	
Factory settings		IP address: 192.168.0.1	
Modbus			
Transmission standard		100Base-TX	
Transmission rate		100 MBit/s	
Protocol		Modbus	
Factory settings		IP address: 0.0.0.0	
		subnet mask: 0.0.0.0	
		gateway IP address: 0.0.0.0	
		MAC address: see type label	
Operating conditions			
Ambient temperature	[°C]	0...60	
Storage temperature	[°C]	0...60	
Protection		IP 20	
Tests / approvals			
EMC		EN IEC 61000-6-2	
		EN IEC 61000-6-4	
MTTF	[years]	91	
Mechanical data			
Weight	[g]	414.6	
Type of mounting		Mounting on DIN rail; (TH35 (EN 60715))	
Dimensions	[mm]	114.2 x 50 x 105.3	
Material		Housing: PA	
Data memory			
History memory		yes	
Data memory buffered		yes	
Data memory type		ring memory; FIFO	
Real-time clock		yes	
Memory location		internal	
Memory interval		min. 1 min	
Memory size		881664 data records	
Accessories			
Accessories (optional)		cross-over Ethernet patch cable for the direct connection to the PC	
Remarks			
Pack quantity		1 pcs.	



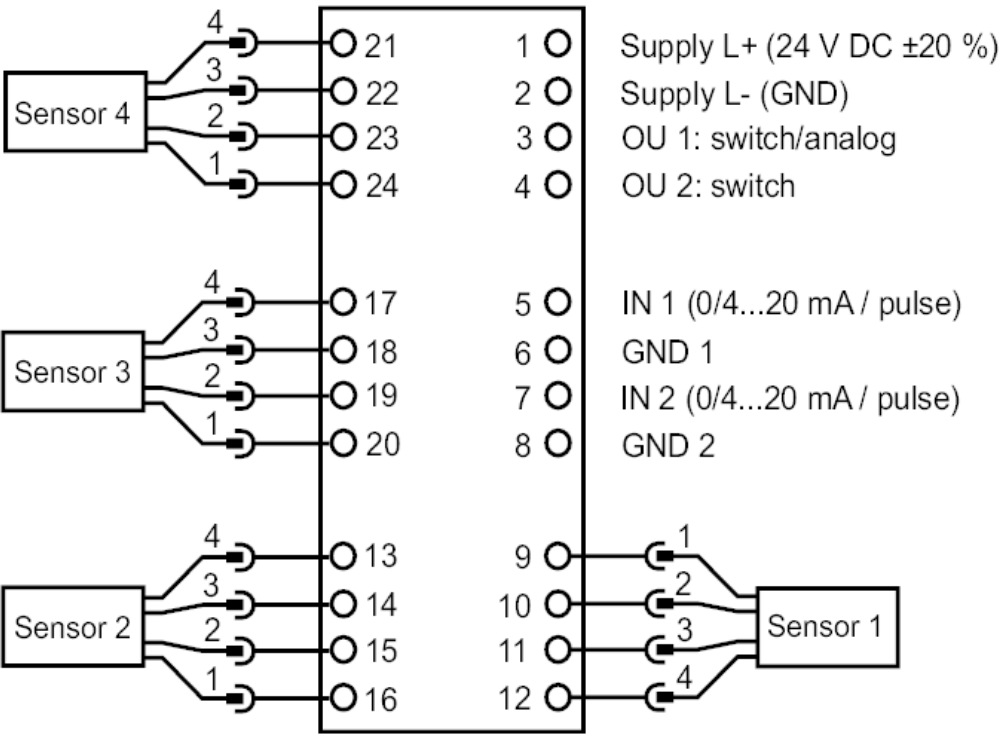
Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Electrical connection

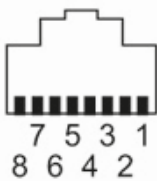
Combicon: ; Maximum cable length: 250 m

Connection



Electrical connection - Ethernet

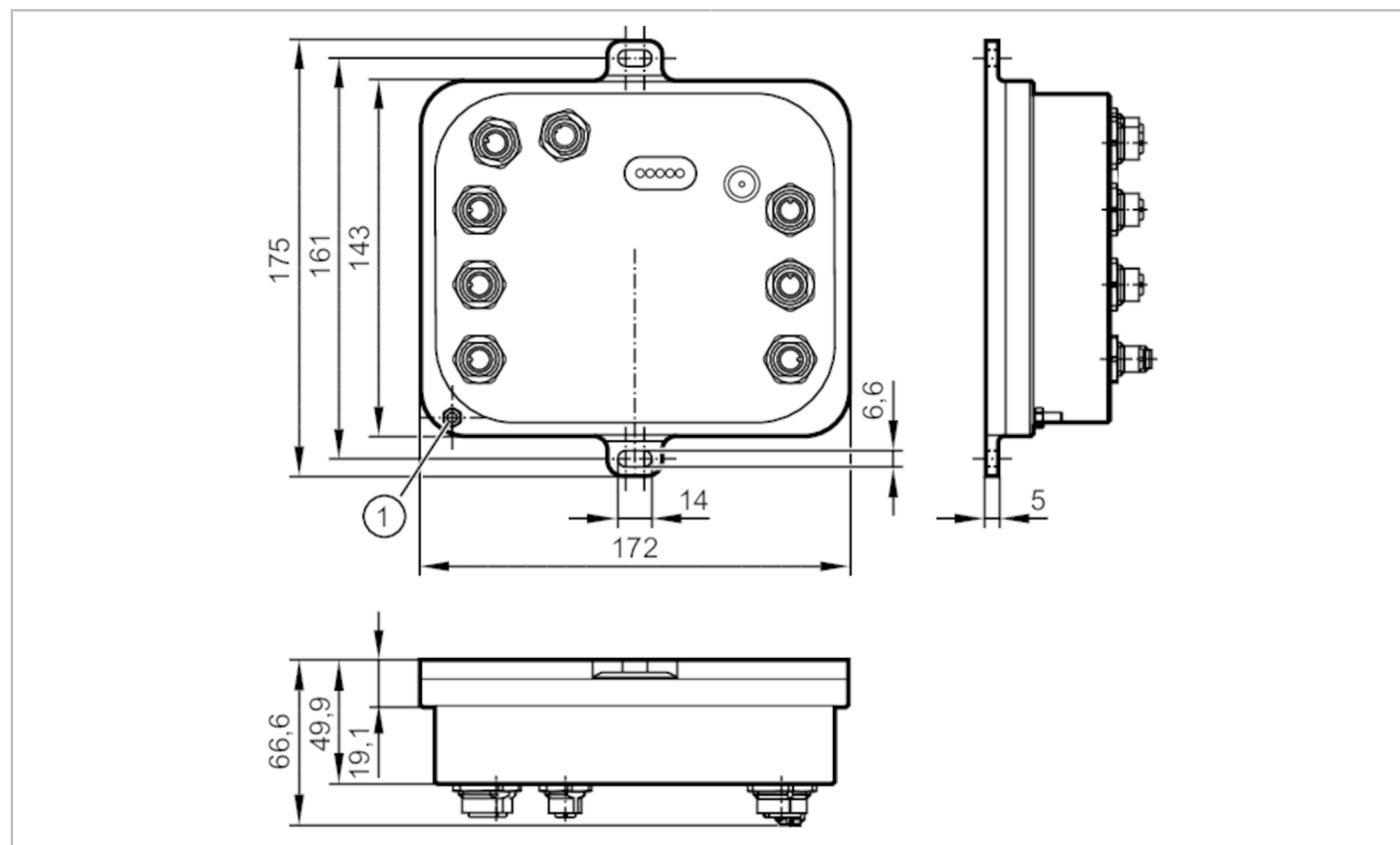
Connector: RJ45



1	TxD +
2	TxD -
3	RxD +
4	n.c.
5	n.c.
6	RxD -
7	n.c.
8	n.c.

Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS



Product characteristics

Frequency range	[Hz]	0.1...12000
Communication interface		Ethernet

Application

Design	parameter setting via PC software VES004
Application	continuous vibration monitoring

Electrical data

Operating voltage tolerance	[%]	20
Operating voltage	[V]	24 DC; (when using the IEPE input 24 V + 20% IEPE = Integrated Electronics Piezo Electric)
Current consumption	[mA]	200; ((24 V DC))
Protection class		III

Inputs / outputs

Total number of inputs and outputs	8; (configurable)
Number of inputs and outputs	Number of dynamic inputs: 4; Number of digital outputs: 2; Number of analog outputs: 1

Inputs

Total number of inputs		6
Analog input (current)	[mA]	4...20
Resolution of analog input		12
Number of dynamic inputs		4



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Dynamic input - signal	0...10 mA / IEPE / 4...20 mA		
Dynamic input - frequency range [Hz]	0,1...12000		
Dynamic input - sampling rate [kSamples]	100		
Outputs			
Total number of outputs	2		
Output signal	switching signal; analog signal		
Electrical design	PNP		
Number of digital outputs	2		
Output function	normally open / closed; (configurable)		
Max. voltage drop switching output DC [V]	2		
Permanent current rating of switching output DC [mA]	100		
Number of analog outputs	1; (configurable)		
Analog current output [mA]	4...20		
Max. load [Ω]	500		
Short-circuit protection	yes		
Type of short-circuit protection	yes (non-latching)		
Overload protection	yes		
Measuring/setting range			
Frequency range [Hz]	0.1...12000		
Interfaces			
Communication interface	Ethernet		
Protocol	TCP/IP		
Note on protocol	10 Mbaud		
	100 Mbaud		
Operating conditions			
Ambient temperature [°C]	0...70		
Storage temperature [°C]	0...70		
Max. relative air humidity [%]	90		
Protection	IP 67		
Tests / approvals			
EMC	EN IEC 61000-6-2		
	EN IEC 61000-6-4		
MTTF [years]	92		
UL approval	Ta	70 °C	
	Enclosure type	Type 1	
	voltage supply	Limited Voltage/Current (Marking Class 2)	
	UL approval number	L004	
	File number UL	E251902	
Mechanical data			
Weight [g]	1296.7		
Housing	rectangular		



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Type of mounting	Backplane mounting
Dimensions [mm]	175 x 172 x 66.6
Material	housing: Aluminum Alloy black anodized EN AW-5083

Data memory	
History memory	yes
Data memory buffered	yes
Data memory type	ring memory; FIFO
Real-time clock	yes
Memory location	internal
Memory interval	min. 1 min
Memory size	881664 data records

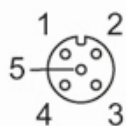
Accessories	
Accessories (optional)	cross-over Ethernet patch cable for the direct connection to the PC

Remarks	
Pack quantity	1 pcs.

Electrical connection	
Connection	

Electrical connection - Sensor 1...4

Connector: 4 x M12; coding: A



- 1 L+
- 2 Signal
- 3 GND
- 4 Test

Electrical connection - Config

Connector: 1 x M12; coding: D



- 1 TxD+
- 2 RxD+
- 3 TxD-
- 4 RxD-

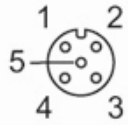


Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Electrical connection - IN 1

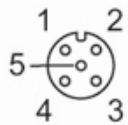
Connector: 1 x M12; coding: A; Maximum cable length: 250 m



- 1 24 V DC
- 2 -
- 3 GND
- 4 IN 1 (pulses)

Electrical connection - IN 2

Connector: 1 x M12; coding: A; Maximum cable length: 250 m

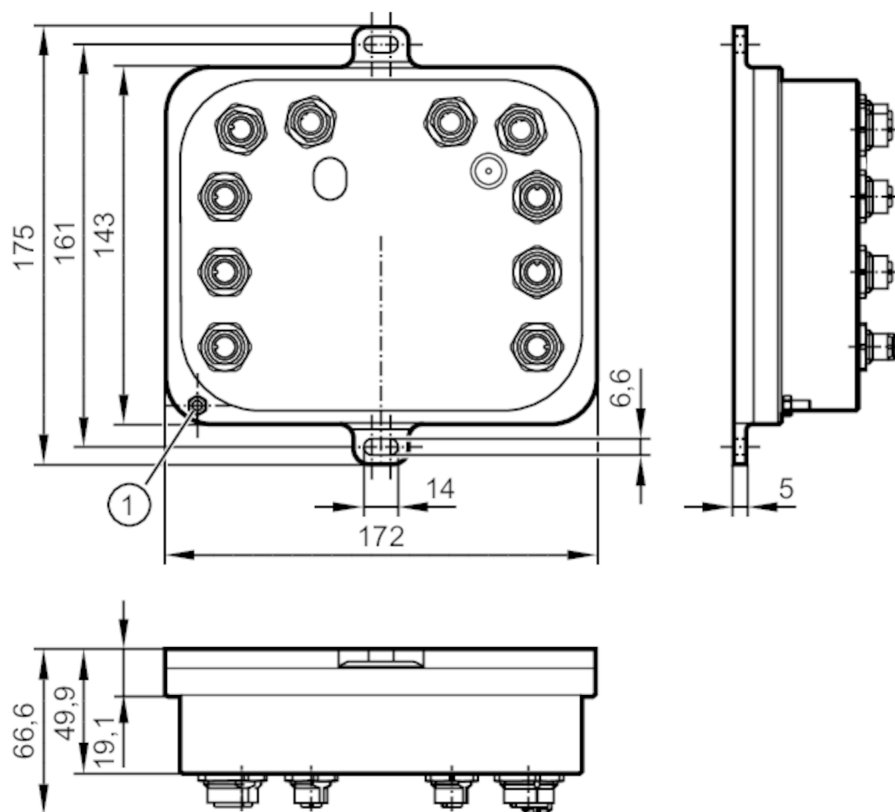


- 1 24 V DC
- 2 IN 2 (4..20mA)
- 3 GND
- 4 -

Electrical connection - OU / Supply



- 1 24 V DC
- 2 analog / digital
- 3 GND
- 4 OU2: switch



1 GND



Product characteristics

Frequency range	[Hz]	0.1...12000
Communication interface		Ethernet

Application

Design	parameter setting via PC software VES004
--------	--

Electrical data

Operating voltage tolerance	[%]	20
Operating voltage	[V]	24 DC
Current consumption	[mA]	200; ((24 V DC))
Protection class		III

Inputs / outputs

Total number of inputs and outputs	8; (configurable)
Number of inputs and outputs	Number of digital inputs: 1; Number of analog inputs: 1; Number of dynamic inputs: 4; Number of digital outputs: 2; Number of analog outputs: 1

Inputs

Total number of inputs	6
Number of digital inputs	1
Digital input - frequency range [Hz]	0,1...100000
Number of analog inputs	1; (static)



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Analog input (current)	[mA]	0...20
Resolution of analog input		12
Number of dynamic inputs		4
Dynamic input - signal		0...20 mA
Dynamic input - resolution	[bit]	16
Dynamic input - frequency range	[Hz]	0...12000
Dynamic input - sampling rate	[kSamples]	100

Outputs

Total number of outputs		2
Output signal		switching signal; analog signal
Electrical design		PNP
Number of digital outputs		2; (configurable)
Output function		normally open / closed; (configurable)
Max. voltage drop switching output DC	[V]	2
Permanent current rating of switching output DC	[mA]	100
Number of analog outputs		1; (configurable)
Analog current output	[mA]	0...22
Max. load	[Ω]	500
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
Overload protection		yes

Measuring/setting range

Frequency range	[Hz]	0.1...12000
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Interfaces

Communication interface		Ethernet
Type of connector		M12
Protocol		PROFINET

Operating conditions

Ambient temperature	[°C]	0...60
Storage temperature	[°C]	0...60
Protection		IP 67

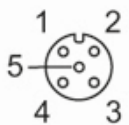
Tests / approvals

EMC	EN 61000-4-2 ESD	4 kV contact discharge / 15 kV air discharge
	EN 61000-4-3	10 V/m (80...2700 MHz)
	EN 61000-4-4 Burst	4 kV capacitive coupling probe, earthed
	EN 61000-4-6	10 V 0,15...80 MHz
	EN 61000-6-4	industrial environments
MTTF	[years]	92
UL approval	UL approval number	L004
	File number UL	E251902



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Mechanical data	
Weight [g]	1388.2
Housing	rectangular
Type of mounting	Backplane mounting
Dimensions [mm]	175 x 172 x 66.6
Material	housing: Aluminum Alloy black anodized EN AW-5083
Data memory	
Real-time clock	yes
Accessories	
Accessories (optional)	cross-over Ethernet patch cable for the direct connection to the PC
Remarks	
Pack quantity	1 pcs.
Electrical connection	
Connection	
Electrical connection - Sensor 1...4	
Connector: 4 x M12; coding: A	
	
1 L+ 2 Signal 3 GND 4 Test	
Electrical connection - Config / IE1 / IE2	
Connector: 3 x M12; coding: D	
	
1 TxD+ 2 RxD+ 3 TxD- 4 RxD-	

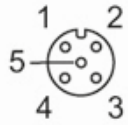


Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Electrical connection - IN 1

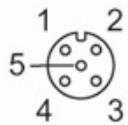
Connector: 1 x M12; coding: A; Maximum cable length: 30 m



- 1 24 V DC
- 2 -
- 3 GND
- 4 IN 1 (pulses)

Electrical connection - IN 2

Connector: 1 x M12; coding: A; Maximum cable length: 30 m



- 1 24 V DC
- 2 IN 2 (4..20mA)
- 3 GND
- 4 -

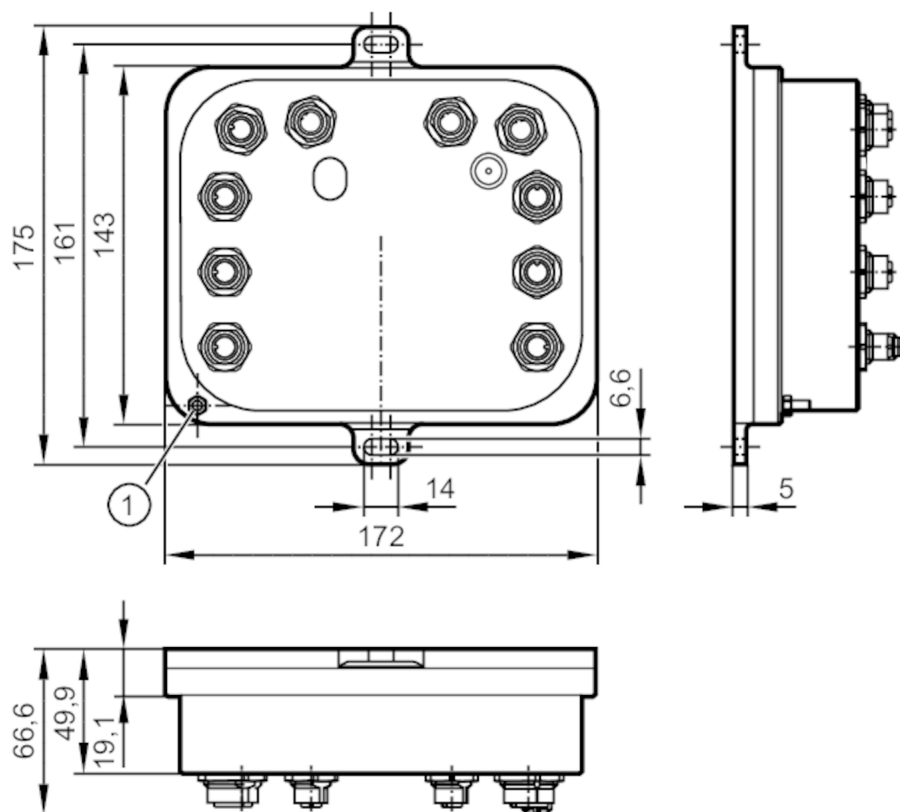
Electrical connection - OU / Supply



- 1 24 V DC
- 2 analog / digital
- 3 GND
- 4 OU2: switch

Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS



1 GND



EtherNet/IP



Product characteristics

Frequency range	[Hz]	0.1...12000
Communication interface		Ethernet

Application

Design	parameter setting via PC software VES004
--------	--

Electrical data

Operating voltage tolerance	[%]	20
Operating voltage	[V]	24 DC
Current consumption	[mA]	200; ((24 V DC))
Protection class		III

Inputs / outputs

Total number of inputs and outputs	8; (configurable)
Number of inputs and outputs	Number of digital inputs: 1; Number of analog inputs: 1; Number of dynamic inputs: 4; Number of digital outputs: 2; Number of analog outputs: 1

Inputs

Total number of inputs	6
Number of digital inputs	1
Digital input - frequency range [Hz]	0,1...100000
Number of analog inputs	1; (static)



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Analog input (current)	[mA]	0...20
Resolution of analog input		12
Number of dynamic inputs		4
Dynamic input - signal		0...20 mA
Dynamic input - resolution	[bit]	16
Dynamic input - frequency range	[Hz]	0...12000
Dynamic input - sampling rate	[kSamples]	100

Outputs

Total number of outputs		2
Output signal		switching signal; analog signal
Electrical design		PNP
Number of digital outputs		2; (configurable)
Output function		normally open / closed; (configurable)
Max. voltage drop switching output DC	[V]	2
Permanent current rating of switching output DC	[mA]	100
Number of analog outputs		1; (configurable)
Analog current output	[mA]	0...22
Max. load	[Ω]	500
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
Overload protection		yes

Measuring/setting range

Frequency range	[Hz]	0.1...12000
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Interfaces

Communication interface		Ethernet
Type of connector		M12
Protocol		EtherNet/IP

Operating conditions

Ambient temperature	[°C]	0...60
Storage temperature	[°C]	0...60
Protection		IP 67

Tests / approvals

EMC	EN 61000-4-2 ESD	4 kV contact discharge / 15 kV air discharge
	EN 61000-4-3	10 V/m (80...2700 MHz)
	EN 61000-4-4 Burst	4 kV capacitive coupling probe, earthed
	EN 61000-4-6	10 V 0,15...80 MHz
	EN 61000-6-4	industrial environments
MTTF	[years]	91
UL approval	UL approval number	L004
	File number UL	E251902



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Mechanical data	
Weight [g]	1394
Housing	rectangular
Type of mounting	Backplane mounting
Dimensions [mm]	175 x 172 x 66.6
Material	housing: Aluminum Alloy black anodized EN AW-5083

Data memory	
Real-time clock	yes

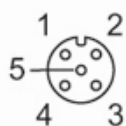
Accessories	
Accessories (optional)	cross-over Ethernet patch cable for the direct connection to the PC

Remarks	
Pack quantity	1 pcs.

Electrical connection	
Connection	

Electrical connection - Sensor 1...4

Connector: 4 x M12; coding: A



- 1 L+
- 2 Signal
- 3 GND
- 4 Test

Electrical connection - Config / IE1 / IE2

Connector: 3 x M12; coding: D



- 1 TxD+
- 2 RxD+
- 3 TxD-
- 4 RxD-

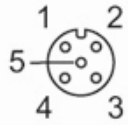


Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Electrical connection - IN 1

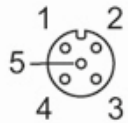
Connector: 1 x M12; coding: A; Maximum cable length: 30 m



- 1 24 V DC
- 2 -
- 3 GND
- 4 IN 1 (pulses)

Electrical connection - IN 2

Connector: 1 x M12; coding: A; Maximum cable length: 30 m



- 1 24 V DC
- 2 IN 2 (4..20mA)
- 3 GND
- 4 -

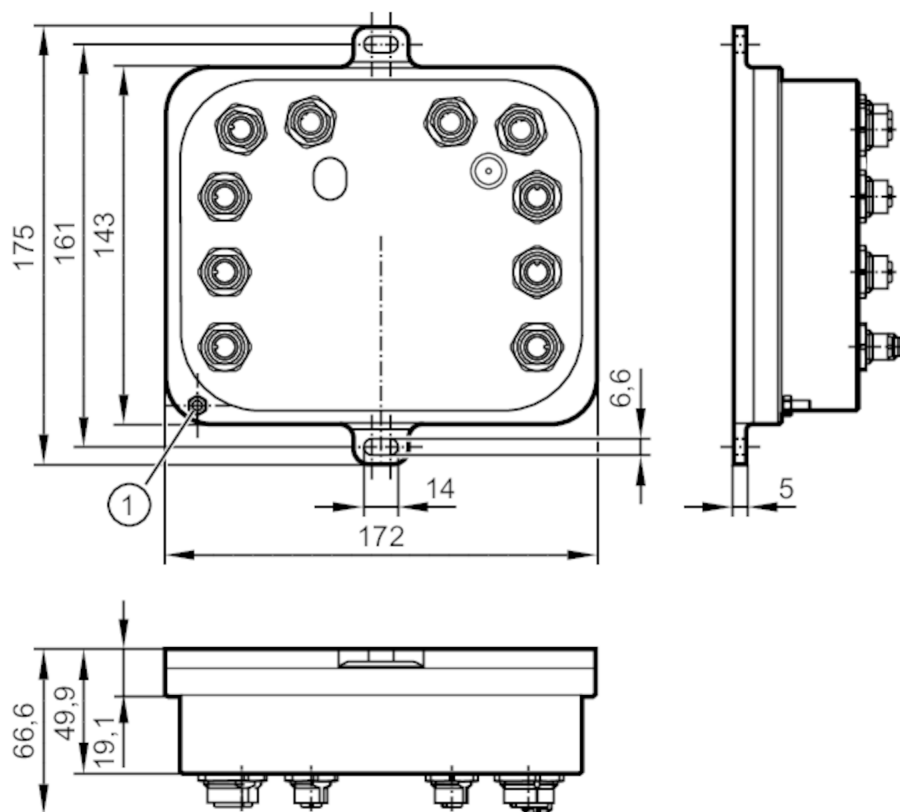
Electrical connection - OU / Supply



- 1 24 V DC
- 2 analog / digital
- 3 GND
- 4 OU2: switch

Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS



1 GND



Product characteristics

Frequency range [Hz]	0.1...12000
Communication interface	Ethernet

Application

Design	parameter setting via PC software VES004
--------	--

Electrical data

Operating voltage tolerance [%]	20
Operating voltage [V]	24 DC
Current consumption [mA]	200; ((24 V DC))
Protection class	III

Inputs / outputs

Total number of inputs and outputs	8; (configurable)
Number of inputs and outputs	Number of digital inputs: 1; Number of analog inputs: 1; Number of dynamic inputs: 4; Number of digital outputs: 2; Number of analog outputs: 1

Inputs

Total number of inputs	6
Number of digital inputs	1
Digital input - frequency range [Hz]	0,1...100000
Number of analog inputs	1; (static)



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Analog input (current)	[mA]	0...20
Resolution of analog input		12
Number of dynamic inputs		4
Dynamic input - signal		0...20 mA
Dynamic input - resolution	[bit]	16
Dynamic input - frequency range	[Hz]	0...12000
Dynamic input - sampling rate	[kSamples]	100

Outputs

Total number of outputs		2
Output signal		switching signal; analog signal
Electrical design		PNP
Number of digital outputs		2; (configurable)
Output function		normally open / closed; (configurable)
Max. voltage drop switching output DC	[V]	2
Permanent current rating of switching output DC	[mA]	100
Number of analog outputs		1; (configurable)
Analog current output	[mA]	0...22
Max. load	[Ω]	500
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
Overload protection		yes

Measuring/setting range

Frequency range	[Hz]	0.1...12000
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Interfaces

Communication interface		Ethernet
Type of connector		M12
Protocol		Modbus TCP

Operating conditions

Ambient temperature	[°C]	0...60
Storage temperature	[°C]	0...60
Protection		IP 67

Tests / approvals

EMC	EN 61000-4-2 ESD	4 kV contact discharge / 15 kV air discharge
	EN 61000-4-3	10 V/m (80...2700 MHz)
	EN 61000-4-4 Burst	4 kV capacitive coupling probe, earthed
	EN 61000-4-6	10 V 0,15...80 MHz
	EN 61000-6-4	industrial environments
UL approval	UL approval number	L004
	File number UL	E251902

Mechanical data

Weight	[g]	1369.5
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VSE953



Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Housing	rectangular
Type of mounting	Backplane mounting
Dimensions [mm]	175 x 172 x 66.6
Material	housing: Aluminum Alloy black anodized EN AW-5083

Data memory

Real-time clock	yes
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Accessories

Accessories (optional)	cross-over Ethernet patch cable for the direct connection to the PC
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Remarks

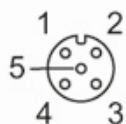
Pack quantity	1 pcs.
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Electrical connection

Connection

Electrical connection - Sensor 1...4

Connector: 4 x M12; coding: A



- 1 L+
- 2 Signal
- 3 GND
- 4 Test

Electrical connection - Config / IE1 / IE2

Connector: 3 x M12; coding: D



- 1 TxD+
- 2 RxD+
- 3 TxD-
- 4 RxD-

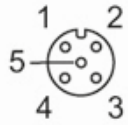


Diagnostic electronics for vibration sensors

DIAGNOSTIC ELECTRONICS

Electrical connection - IN 1

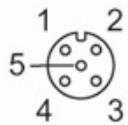
Connector: 1 x M12; coding: A; Maximum cable length: 30 m



- 1 24 V DC
- 2 -
- 3 GND
- 4 IN 1 (pulses)

Electrical connection - IN 2

Connector: 1 x M12; coding: A; Maximum cable length: 30 m



- 1 24 V DC
- 2 IN 2 (4..20mA)
- 3 GND
- 4 -

Electrical connection - OU / Supply



- 1 24 V DC
- 2 analog / digital
- 3 GND
- 4 OU2: switch