

Data sheet | Item number: 750-645

2-channel vibration velocity/bearing condition monitoring VIB I/O

www.wago.com/750-645



Color:



Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG
Hansastr. 27
32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.



Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG
Hansastr. 27
32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.



Item description

The VIB I/O Module is used for online monitoring of the machine vibration condition. It records the two most important parameters required for condition analysis: vibration severity and roller bearing condition.

Vibration velocity is a measurement for machine vibration energy and therefore, a suitable indicator for the vibration forces acting on the machine. The ISO 10816-3 standard is used to assess the results in which the effective values of the (measured) vibration are divided into three quality categories.

Roller bearing condition is evaluated on the basis of high-frequency shock impulse signals. Shock impulses are momentary impulses arising from mechanical damage to roller bearings or the bearing surfaces.

Evaluation uses a scale where the measured shock impulses are divided into three bearing condition categories: good, limited and poor. By recording the measurement results and evaluation in a trend curve, bearing damage can be detected at an early stage.

Subject to changes. Please also observe the further product documentation!



A special Tandem-Piezo[®] acceleration sensor serves as encoder to facilitate simultaneous measurement of machine vibrations and high-frequency shock impulse signals.

Data

Technical data

Device-specific	Both alarm and warning threshold can be set via process image and engineering software.
Number of digital outputs	2
Number of inputs	2
Encoder connection	+AI1, -AI1, +AI2, -AI2
Output current per channel	0.5 A
Output current	short-circuit-protected
Output voltage	24 VDC
Oscillating velocity (RMS)	0 ... 100 mm/s
Shock impulse (SPM)	-10 ... +80 db _{SV}
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	30 mA
Supply voltage (field)	24 VDC (-15 ... +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Isolation	500 V system/field
Indicators	LED (A) green: Sys. ok; LED (B-D, F-H) red: Alarm 1, Warn 1, Error 1, Alarm 2, Warn 2, Error 2
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2

Connection data

Connection technology: inputs/outputs	8 x CAGE CLAMP [®]
Connection type 1	Inputs/Outputs
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches

Physical data

Width	12 mm / 0.472 inches
Height	100 mm / 3.937 inches
Depth	67.8 mm / 2.669 inches
Depth from upper-edge of DIN-rail	60.6 mm / 2.386 inches

Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG
 Hansastr. 27
 32423 Minden
 Phone: +49571 887-0 | Fax: +49571 887-169
 Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?
 We are always happy to take your call at +49 (571) 887-44222.



Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Color	light gray
Housing material	Polycarbonate; polyamide 6.6
Fire load	0.967 MJ
Weight	65 g
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	0 ... +55 °C
Ambient temperature (storage)	-25 ... +85 °C
Protection type	IP20
Pollution degree	2 per IEC 61131-2
Operating altitude	0 ... 2000 m / 0 ... 6562 ft
Mounting position	horizontal (standing/lying); vertical
Relative humidity (without condensation)	95 %
Vibration resistance	per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	per EN 61000-6-2
EMC emission of interference	per EN 61000-6-3
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible H ₂ S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO ₂ contaminant concentration at a relative humidity 75 %	25 ppm

Commercial data

Product Group	15 (I/O System)
eCl@ss 10.0	27-24-26-05
eCl@ss 9.0	27-24-26-05
ETIM 8.0	EC001601
ETIM 7.0	EC001601
Recupel Type	

Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG
 Hansastr. 27
 32423 Minden
 Phone: +49571 887-0 | Fax: +49571 887-169
 Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?
 We are always happy to take your call at +49 (571) 887-44222.



PU (SPU)	1 pcs
Packaging type	box
Country of origin	DE
GTIN	4045454727451
Customs tariff number	85389099990

Environmental Product Compliance

CAS-No.	12626-81-2 1303-86-2 1317-36-8 7439-92-1 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Diboron trioxide Lead Lead monoxide Lead titanium zirconium oxide (Pb(Ti,Zr)O3)
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	630fe19a-3951-41e2-b0ed-dbef1c24682e
SCIP notification number (Belgium)	16931dcb-6eed-4692-a6be-0b281a4acc0a
SCIP notification number (Bulgaria)	eb980276-80d5-4ac0-b874-27f5c8dadfec
SCIP notification number (Czech Republic)	b5c7f10f-c142-4fee-8146-42be82ab199c
SCIP notification number (Denmark)	3e3e9419-d3fa-4da9-b60e-1aecbbf63743
SCIP notification number (Finland)	32427cb2-353c-4444-a906-5fb550b0aff5
SCIP notification number (France)	66d56363-aed7-4245-918d-ec00fb9d45e7
SCIP notification number (Germany)	72bd88a7-c02a-4bdb-b2ab-bc51e3c3385a
SCIP notification number (Hungary)	9bfcd90d-f31d-4ce4-9cb4-f05cbf77fe7d
SCIP notification number (Italy)	859e833b-3ea6-4e52-9c3a-4444ad28d6fe
SCIP notification number (Netherlands)	e3e328ef-7f8f-4e24-8d23-044607991c25
SCIP notification number (Poland)	fa6c05a5-9205-4004-bba4-016516fce4d8
SCIP notification number (Romania)	d39f1174-7d4e-4786-a5f9-65fa19e42b36
SCIP notification number (Sweden)	c19e6000-442f-4403-8861-9bd0400310ea

Approvals / Certificates

General approvals

Certificate

Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG
Hansastr. 27
32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.



Logo	Approval	Additional Approval Text	name
	EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC RU C-DE.AM02.B.00087 /19
	KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-VMM750
	UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.1

Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for hazardous areas

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV14ATEX148929X (II 3 G Ex ec IIC T4 Gc)
	CCCEX CQST/CNEx	CNCA-C23-01	2020312310000213 (Ex ec IIC T4 Gc)
	EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AM02.B.00163 /19 (2Ex nA IIC T4 Gc X)
	IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX TUN 14.0035 X (Ex ec IIC T4 Gc)
	INMETRO TÜV Rheinland do Brasil Ltda.	IEC 60079-0	BR-Ex_TÜV 12.1297 X
	UKEx WAGO GmbH & Co. KG	EN 60079-0	UKCA_WAGO22UKEX003X_ec
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726 Sec.1

Optional accessories

Carrier rail

Mounting accessories

Item no.: 210-197 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored	www.wago.com/210-197
Item no.: 210-198 Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-	www.wago.com/210-198

Subject to changes. Please also observe the further product documentation!



colored

Item no.: 210-504Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-colored www.wago.com/210-504**Item no.: 210-505**Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored www.wago.com/210-505**Item no.: 210-506**Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored www.wago.com/210-506**Item no.: 210-508**Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored www.wago.com/210-508**Item no.: 210-113**Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored www.wago.com/210-113**Item no.: 210-118**Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored www.wago.com/210-118**Item no.: 210-112**Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm; silver-colored www.wago.com/210-112**Item no.: 210-114**Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored www.wago.com/210-114**Item no.: 210-115**Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm; silver-colored www.wago.com/210-115**Item no.: 210-196**Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored www.wago.com/210-196**System housing**

System enclosure

Item no.: 850-814/002-000IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate www.wago.com/850-814/002-000**Item no.: 850-815/002-000**IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate www.wago.com/850-815/002-000**Item no.: 850-816/002-000**IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate www.wago.com/850-816/002-000**Item no.: 850-817/002-000**IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate www.wago.com/850-817/002-000**Item no.: 850-825**

Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.



IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20	www.wago.com/850-825
Item no.: 850-826 IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	www.wago.com/850-826
Item no.: 850-827 IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	www.wago.com/850-827
Item no.: 850-827/002-000 IP65 enclosure; Aluminium (RAL 7035); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	www.wago.com/850-827/002-000
Item no.: 850-826/002-000 IP65 enclosure; Aluminium (RAL 7035); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	www.wago.com/850-826/002-000
Item no.: 850-828/002-000 IP65 enclosure; Aluminium (RAL 7035); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip	www.wago.com/850-828/002-000
Item no.: 850-828 IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip	www.wago.com/850-828
Item no.: 850-834 IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20	www.wago.com/850-834
Item no.: 850-835 IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	www.wago.com/850-835
Item no.: 850-836 IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	www.wago.com/850-836

Sensors

Acceleration sensor

Item no.: 750-925 Tandem-Piezo acceleration sensor	www.wago.com/750-925
--	--

Shield termination

Shield clamping saddles

Item no.: 790-116 Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm	www.wago.com/790-116
Item no.: 790-124 Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm	www.wago.com/790-124
Item no.: 790-108 Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm	www.wago.com/790-108
Item no.: 790-140 Shield clamping saddle; diameter of compatible conductor	www.wago.com/790-140

Subject to changes. Please also observe the further product documentation!

**Item no.: 790-216**

Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm

www.wago.com/790-216**Item no.: 790-220**

Shield clamping saddle; 30 mm wide; 6 ... 20 mm

www.wago.com/790-220**Item no.: 790-208**

Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm

www.wago.com/790-208**Supply module**

Supply module

Item no.: 750-601

Power Supply; 24 VDC; fuse holder

www.wago.com/750-601**Item no.: 750-610**

Power Supply; 24 VDC; fuse holder; Diagnostics

www.wago.com/750-610**Item no.: 750-602**

Power Supply; 24 VDC

www.wago.com/750-602**Item no.: 750-612**

Power Supply; 0 ... 230 V AC/DC

www.wago.com/750-612**Marking accessories**

Marker carrier

Item no.: 750-103

Group marker carrier

www.wago.com/750-103

Marker

Item no.: 2009-145/000-006

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue

www.wago.com/2009-145/000-006**Item no.: 2009-145**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

www.wago.com/2009-145**Item no.: 2009-145/000-002**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

www.wago.com/2009-145/000-002**Item no.: 2009-145/000-007**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray

www.wago.com/2009-145/000-007**Item no.: 2009-145/000-005**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red

www.wago.com/2009-145/000-005**Item no.: 2009-145/000-012**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

www.wago.com/2009-145/000-012**Item no.: 2009-145/000-023**

Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.



Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

www.wago.com/2009-145/000-023

Item no.: 2009-145/000-024

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet

www.wago.com/2009-145/000-024

Item no.: 248-501/000-006

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue

www.wago.com/248-501/000-006

Item no.: 248-501/000-007

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray

www.wago.com/248-501/000-007

Item no.: 248-501/000-002

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow

www.wago.com/248-501/000-002

Item no.: 248-501/000-012

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange

www.wago.com/248-501/000-012

Item no.: 248-501

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

www.wago.com/248-501

Item no.: 248-501/000-017

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green

www.wago.com/248-501/000-017

Item no.: 248-501/000-005

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red

www.wago.com/248-501/000-005

Item no.: 248-501/000-024

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet

www.wago.com/248-501/000-024

Item no.: 248-501/000-023

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green

www.wago.com/248-501/000-023

Group marker carrier

Item no.: 750-107

Group marker carrier

www.wago.com/750-107

Downloads

Documentation

Manual

Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.



System Manual WAGO I/O System 750/753 Decentralized Automation Technology	V 3.3.3 2023 年8月29 日	pdf 8.7 MB	Download
--	-------------------------	---------------	----------

Product Manual 2-channel, vibration velocity/bearing condition monitoring VIB I/O module	V 1.2.1 2020 年2月20 日	pdf 1.2 MB	Download
--	-------------------------	---------------	----------

System Manual Series 750/753 Online HTML		URL	Download
---	--	-----	----------

Bid Text

750-645 X81 - Datei	2019 年2月19 日	xml 5.8 kB	Download
------------------------	--------------	---------------	----------

750-645 doc - Datei	2017 年10月9 日	doc 28.7 kB	Download
------------------------	--------------	----------------	----------

Instruction Leaflet

CCC Ex (Additional information) WAGO-I/O-SYSTEM *750-****/*	2023 年4月26 日	pdf 163.6 kB	Download
--	--------------	-----------------	----------

System Description

Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 223.5 kB	Download
---	--	-----------------	----------

750/753 Series I/O-System – General Product Information		pdf 976.2 kB	Download
---	--	-----------------	----------

Additional Information

Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging	V 1.1.0 2022 年8月18 日	pdf 2.2 MB	Download
---	-------------------------	---------------	----------

Libraries

Library

Condition monitoring with 750-645 The WagoLib_VIO.lib library provides a function block which allows to configure the module 750-645.	1.0.1 2011 年7月27 日	zip 112.8 kB	Download
--	-----------------------	-----------------	----------

CAD/CAE-Data

Subject to changes. Please also observe the further product documentation!



CAD data

2D/3D Models 750-645	URL	Download
----------------------	-----	----------

CAE data

EPLAN Data Portal 750-645	URL	Download
---------------------------	-----	----------

ZUKEN Portal 750-645	URL	Download
----------------------	-----	----------

WSCAD Universe 750-645	URL	Download
------------------------	-----	----------

Device Files

Device Driver

WAGO USB Service Kabel Treiber / Serie 750 und 857	6.5.3.0 2014 年9月10 日	zip 4.8 MB	Download
--	-------------------------	---------------	----------

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 750-645 2-channel vibration velocity/bearing condition monitoring VIB I/O	URL	Download
---	-----	----------

Installation Notes

Product family

WAGO I/O System 750/753
[Show all products from the family](#)

Subject to changes. Please also observe the further product documentation!