TO-PASS® Telecontrol Solutions

WAGO®
INNOVATIVE CONNECTIONS

Contents:

Telecontrol technology requires highly flexible hardware and software modules. To fulfill this requirement, WAGO offers a wide range of modular and perfectly matched *TO-PASS*® components. At any time, from nearly anywhere in the world, *TO-PASS*® allows stand-alone monitoring of remote objects, – even in harsh outdoor conditions. A GSM network allows *TO-PASS*® modules to communicate wirelessly, freeing them from data lines or radio links.

Scalable Telecontrol Solutions

From Fault Detector to Intelligent Telecontrol PLC

Data can be sent to a user-selected destination address (e.g., WAGO Web portal) and easily accessed from any browser. Remote access ensures a high degree of system availability, while simultaneously relieving service personnel from the burden of performing time-consuming, on-site inspections. With an appropriate GSM service provider's contract, wireless connection is more efficient and cost-effective than a standard wired connection. Remote access, a range of 400 I/O modules and IEC 60870/IEC 61850 telecontrol protocols are just some of options available for remote monitoring applications.

The *TO-PASS*® system provides solutions ranging from fault reporting, process data collection and analysis up to intelligent telecontrol PLC. *TO-PASS*® Compact modules can be commissioned via configuration tool without programming knowledge, serving as a convenient gateway into wireless communication and telecontrol technology.

With *TO-PASS®*, WAGO offers a complete telecontrol solution consisting of stand-alone fault detectors with GSM connection, optional IP66 protection and a telecontrol PLC that links to the WAGO-I/O-SYSTEM.

This allows distant information from networked facilities to be acquired in a similar manner to remote stations.

A GPS version is also available for locating mobile objects via satellite signals.

An Internet server with SQL database completes the system features.

TO-PASS® Web server

TO-PASS® Outdoor

- IP66 housing for outdoor installation
- Battery provides power failure protection
- Integrated GSM antenna

TO-PASS® Compact

- Convenient, compact solution with integrated GSM modem and I/O for SMS and GPRS
- Up to 8 digital inputs
- Up to 8 analog inputs
- 4 digital outputs
- 4 analog outputs

Mobile, fast measured value acquisition from the Internet

Password-protected visualization from anywhere via Internet, including current value representation and line recorder for history of measured values or SAP logistic connection.

TO-PASS® Web Portal

The TO-PASS® System

Error message via SMS, e-mail, fax or phone call

GPRS

TO-PASS® Mobile

- Compact module with integrated GPS receiver, GSM modem and I/O for direct mounting
- Acquisition of measured values and position data

TO-PASS® GPRS Modem

- *TO-PASS®* Modem for issuing alarm messages via SMS and bidirectional GPRS communication based on the TSC protocol

TO-PASS® VPN Router

- *TO-PASS®* Router for secure VPN (Virtual Private Network) transmission for ETHERNET networks using GPRS or EDGE, with optional firewall

750-872 Telecontroller, 758-870 and 758-875 Telecontrol WAGO-I/O-IPCs

- IEC 60 870-5-101, IEC 60 870-5-104 and IEC 61 850/61400-25
- Telecontrol substation
- Programmable via CoDeSys v2.3
- Configuration tool for telecontrol protocols
- Comprehensive range of distributed I/O modules (750 and 753 Series)

Error Reporting

TO-PASS® Compact sends up to eight different error messages via SMS, e-mail or fax. Alarm texts can be assigned to each input by applying a voltage > 5VDC or < 3VDC to the digital inputs. These texts are sent to up to four different receivers.

Conversely, up to four outputs can be connected to *TO-PASS*® Compact via SMS. User-defined texts allow digital outputs to be switched on or off.

A SIM card with SMS function (contract or prepaid) is all that is required.

Error message via SMS, e-mail, fax or phone call

TO-PASS® Compact, max. 8 DI

The following components are required:

Item No.	Description	Item No.	Description
761-110	*TO-PASS*® Compact telecontrol module for fault detection/indication, monitoring and remote control with 4 digital inputs	761-210	*TO-PASS*® Compact telecontrol module for fault detection/indication, monitoring and remote control with 8 digital inputs

SMS
CSD

Required:
SIM card with SMS;
optional
CSD for
for remote configuration

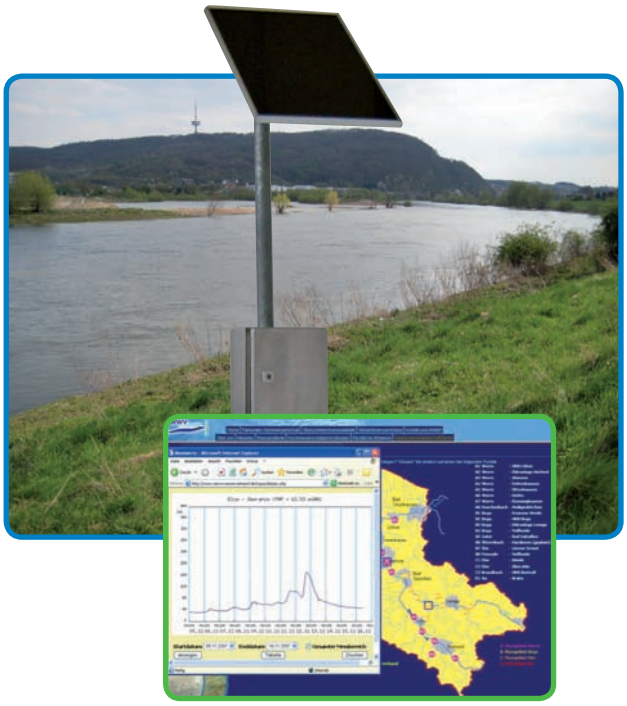
Cyclic Monitoring

TO-PASS® Compact is ideal for cyclic monitoring of digital and/or analog measured values from silos, containers, machines or systems. Process data is transmitted in an adjustable cycle from 1 to 99 minutes to a user-defined Internet address.

In addition, WAGO's *TO-PASS*® Web Portal is ideally suited for *TO-PASS*® Compact process visualization.

TO-PASS® Web Portal is a self-learning portal, capable of identifying and independently visualizing values from the *TO-PASS*® Compact module – no programming required.

A SIM card with SMS, CSD and GPRS services is required. SMS is used for alarms. CSD provides remote access to the PC operating program for *TO-PASS*® Compact device configuration. The GPRS service is used for data transmission. Monthly data volumes of 10 Mbytes and a block size of 1 Kbyte are recommended.



TO-PASS® Web Portal: www.to-pass.com

GSM / GPRS,
cyclic communication

TO-PASS® Compact,
4 DI and 2 AI or 8 DI and 8 AI

The following components are required:

Item No.	Description	Item No.	Description
761-113	*TO-PASS*® Compact, 2 AI, Web, telecontrol module for fault detection/indication, monitoring and remote control	761-216	*TO-PASS*® Compact, 8 AI, Web, MODBUS, telecontrol module for fault detection/indication, monitoring and remote control
	and		
761-701	User fees for *TO-PASS*® Web Portal		
761-700	*TO-PASS*® Web Portal, basic module		
	optional		
761-702	*TO-PASS*® Web Portal, administration module		
761-703	*TO-PASS*® Web Portal, alarm module		

SMS
GPRS
CSD

Required:
SIM card with SMS, GPRS and CSD

Logistics Optimization

TO-PASS® Compact provides the ideal solution for an automated tank filling process. Process values are transmitted in an adjustable cycle from 1 to 99 minutes to a user-selected Internet server. The server can be linked to the distribution system for automatic filling commissioning.

For a complete tank-filling solution, WAGO also offers *TO-PASS*® Outdoor. It is perfectly compatible with *TO-PASS*® Compact devices and includes an IP66 housing (280 x 280 x 130mm) with integrated battery backup, GSM antenna, heater and 115–230VAC power supply

Distribution system

Logistic commissioning

TO-PASS® Web Portal: www.to-pass.com

GSM / GPRS,
cyclic communication

TO-PASS® Compact,
4 DI and 2 AI or 8 DI and 8 AI

TO-PASS® Outdoor

The following components are required:

Item No.	Description	Item No.	Description
761-113	*TO-PASS*® Compact, 2 AI, Web, telecontrol module for fault detection/indication, monitoring and remote control	761-216	*TO-PASS*® Compact, 8 AI, Web, MODBUS, telecontrol module for fault detection/indication, monitoring and remote control
	and		
761-9009	*TO-PASS*® Outdoor for installation in an IP66 housing, with integrated GSM antenna, incl. power supply unit		
761-701	User fees for *TO-PASS*® Web Portal		
761-700	*TO-PASS*® Web Portal, basic module		
	optional		
761-702	*TO-PASS*® Web Portal, administration module		
761-703	*TO-PASS*® Web Portal, alarm module		

SMS
GPRS
CSD

Required:
SIM card with SMS, GPRS and CSD

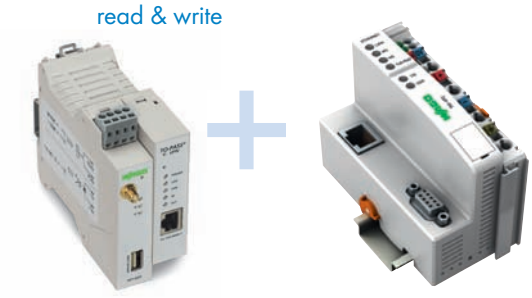
Intelligence On-Site

Combining the WAGO-I/O-SYSTEM 750 and 761-520 *TO-PASS®* Router is the ideal solution for telecontrol applications requiring on-site control. The proven 750 Series offers 400 input and output modules. It provides scalable performance ranging from controller to IPC and is programmable via CoDeSys per IEC 6-1131 standard. For communication with www.to-pass.com Web portal, fully programmed CoDeSys function modules are available free of charge. Telecontrol protocols per IEC 60 870, IEC 61 400 and IEC 61 850 standards are also available. This combination in a single unit results in an intelligent telecontrol station capable of processing and wirelessly transmitting data, as well as receiving set points remotely. Program changes can also be performed via 761-520 *TO-PASS®* Router.

Error message via SMS, e-mail, fax or phone call

TO-PASS® Web Portal: www.to-pass.com

via GPRS
read & write



The following components are required:

Item No.	Description
761-520	*TO-PASS® GPRS Modem, VPN Router*
750-872	Programmable fieldbus telecontroller
750-880	Programmable ETHERNET fieldbus controller
750-881	Programmable ETHERNET fieldbus controller
750-882	Programmable media-redundancy ETHERNET fieldbus controller
	or other WAGO ETHERNET controllers
750-xxx	Input and output modules from the WAGO-I/O-SYSTEM 750
750-600	End module

SMS
GPRS
CSD

Required:
SIM card with SMS, GPRS and CSD

Seamless Collection of Process and Position Data

TO-PASS® Mobile evaluates position data via GPRS in container-shipping applications. Simultanuously, the module records process data from shipping containers, continuously monitoring the cold chain in food transportation. Data can be transmitted via MODBUS (e.g., using an existing control system) or directly via existing I/O level. *TO-PASS*® Mobile sends this data in defined cycles to a user-selected Web server or to the *TO-PASS*® Web Portal, ensuring seamless monitoring of your containers.

TO-PASS® Outdoor provides a complete solution for container applications. It is perfectly compatible with *TO-PASS*® Compact modules and includes: IP66 housing (280 x 280 x 130mm) with integrated battery backup, GSM antenna, heater and 115–230VAC power supply.

Logistic system — Container shipping

TO-PASS® Web Portal: www.to-pass.com

GSM / GPRS,
cyclic communication

TO-PASS® Mobile,
4 DI and 2 AI or 8 DI and 8 AI

TO-PASS® Outdoor

The following components are required:

Item No.	Description	Item No.	Description
761-314	*TO-PASS*® Mobile, 4 AI, telecontrol module for fault detection/ indication, position monitoring and remote control	761-316	*TO-PASS*® Mobile, 4 AI, Web, MODBUS, telecontrol module for fault detection/ indication, position monitoring and remote control
	and		
761-701	User fees for *TO-PASS*® Web Portal		
761-700	*TO-PASS*® Web Portal, basic module		
	optional		
761-702	*TO-PASS*® Web Portal, administration module		
761-703	*TO-PASS*® Web Portal, alarm module		
761-9009	*TO-PASS*® Outdoor for installation in an IP66 housing, with integrated GSM antenna, incl. power supply unit		

SMS
GPRS
CSD

Required:
SIM card with SMS, GPRS and CSD

Project Support

From The Very Beginning...

Expertise in:

- PLC programming
- Fieldbus applications
- Measurement value processing
- Telecontrol technology
- Exa pplications

We will assist you with:

- Product documentation
- Manuals
- Application notes
- Component libraries

Consulting:

- Planning support
- Component selection
- Assistance in preparing your bid

TO-PASS® Compact

Compact telecontrol module for fault detection/indication, as well as monitoring machines and installations over a GSM network. The module can be used in many countries via an integrated quad-band GSM modem. Messages are sent via SMS, e-mail, fax or phone call.

Specialty functions:

1) - Acknowledgment: Acknowledging any fault message
- Stand-by: Automatic remote switching of stand-by service
- Remote parameterization: Programming and process visualization conveniently performed from the office

2) - GPRS-dedicated line: Permanent online connection to the process on a WEB server or PC with fixed IP address (e.g., DSL connection)

3) - Event logger: Saves all occurring status changes

4) - Data logger: Saves all process values with adjustable cycle

5) - MODBUS: Reading from 64 MODBUS 2-byte registers via serial interface

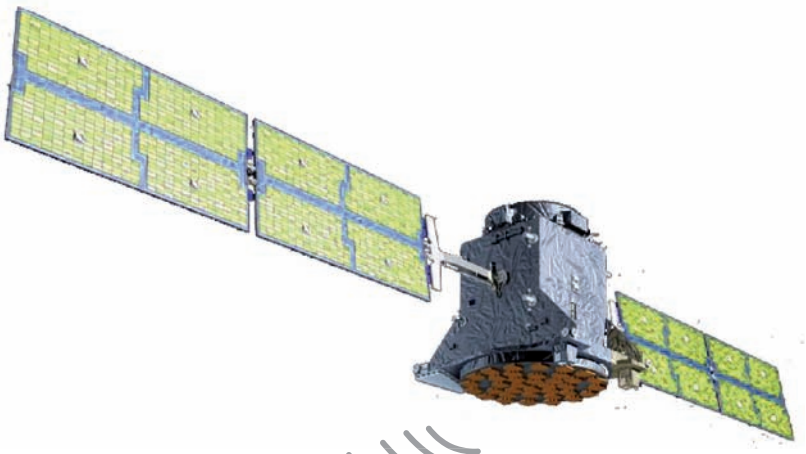
	***TO-PASS®* Compact**	***TO-PASS®* Compact** 2 AI	***TO-PASS®* Compact** Web	***TO-PASS®* Compact,** 2 AI, Web	***TO-PASS®* Compact**	***TO-PASS®* Compact** 8 AI, ELog, DLog	***TO-PASS®* Compact** 8 AI, Web, MODBUS
Item No.	**761-110**	**761-111**	**761-112**	**761-113**	**761-210**	**761-214**	**761-216**
Digital inputs	4				8		
Input current	max. 2.9 mA at 30 VDC						
Signal voltage (0)	0 – 5 VDC						
Signal voltage (1)	7 – 30 VDC						
Analog inputs	–	2 (0/4 – 20 mA)	–	2 (0/4 – 20 mA)	–	8 (0/4 – 20 mA)	
Internal resistance	–	approx. 200 Ω / 20 mA	–	approx. 200 Ω / 20 mA	–	approx. 200 Ω / 20 mA	
Measuring error (25 °C)	–	< ± 1% of full scale value	–	< ± 1% of full scale value	–	< ± 1% of full scale value	
Temperature coefficient	–	< ± 0.1% / K of full scale value	–	< ± 0.1% / K of full scale value	–	< ± 0.1% / K of full scale value	
Digital outputs	4 contacts						
Output current	max. 0.5 A/30 VDC, short-circuit protected						
Analog outputs	–	–	–	–	–	2 (0/4 – 20 mA)	
Load impedance	–	–	–	–	–	≤ 600 Ω	
Measuring error (25 °C)	–	–	–	–	–	< ± 1% of full scale value	
Temperature coefficient	–	–	–	–	–	< ± 0.1% / K of full scale value	
Communication	GSM quad-band						
Communication types	SMS (bidirectional), e-mail and fax depending on provider, dial-up connection (CSD)						
LED indication	3 LEDs for operating status indication						
Operating voltage	+10 ... +30 VDC						
Closed current	approx. 20mA at +24V operating voltage						
Current during transmission	< 500mA at +24V operating voltage						
Specialty functions	1)		1), 2)		1)	1), 2), 3), 4)	1), 2), 3), 4), 5)

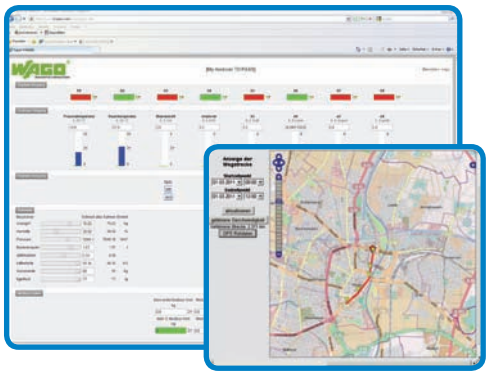
All technical data and approvals are available online at www.wago.com.

TO-PASS® Mobile

TO-PASS® Mobile, 4 AI
TO-PASS® Mobile, 4 AI, Web, MODBUS

- E-mail, SMS (bidirectional), fax (depending on provider) and dial-up connection (CSD)
- Internal memory for GPS and process data
- GPSr eceiver
- GPS raw data
- Map view via Google Maps + Open Street Map
- Waypoints + distance





TO-PASS® Web Portal

	TO-PASS® Mobile, 4 AI	TO-PASS® Mobile, 4 AI, Web, MODBUS
Item No.	**761-314**	**761-316**
Operating temperature	-20 °C ... +70 °C	
Antenna connection	SMA socket (for both GSM and GPS)	
Input current	max. 2.9 mA at 30 VDC	
Signal voltage (0)	0 – 5 VDC	
Signal voltage (1)	7 – 30 VDC	
Analog inputs	4 (0/4 – 20 mA)	
Internal resistance	approx. 200 Ω / 20 mA	
Measuring error (25 °C)	< ± 1% of full scale value	
Temperature coefficient	< ± 0.1% / K of full scale value	
No. of outputs	2 contacts	
Output current (max.)	0.5 A/30 VDC, short-circuit protected	
Communication	GSM quad-band	
Communication types	SMS (bidirectional), e-mail and fax depending on provider, dial-up connection (CSD)	
LED indication	3 LEDs for operating status indication	
Operating voltage	+10 ... +30 VDC	
Closed current	approx. 35mA at +24V operating voltage	
Current during transmission	< 500mA at +24V operating voltage	
Specialty functions	1)	1), 2), 3), 4), 5)

All technical data and approvals are available online at www.wago.com.

TO-PASS® GSM Modems

TO-PASS® Router for industrial ETHERNET networks unites a GPRS/EDGE data transmission, VPN (Virtual Private Network) router and firewall in a single device. Highly sensitive data can thus be transmitted wirelessly and safely via GSM network.

The integrated firewall also extensively protects the application against unauthorized access, providing maximum security and flexibility.

Intelligent communication management ensures stability and high availability of the connection. Thus, remote stations can be easily integrated into an IP network.

TO-PASS® Modem replaces a conventional AT-controlled switched-line or dedicated-line modem. Applications can communicate with a control center or with one another bi-directionally via GPRS. A TSC-capable remote station is required for communication and establishing connections.

The *TO-PASS*® GPRS Modem can be easily integrated into existing technical infrastructures via serial RS-232 interface.

	TO-PASS® Modem, GPRS and VPN Router	***TO-PASS***® Modem, GPRS, RS-232
Item No.	**761-520**	**761-510**
Application interface	10/100 Base-T (RJ-45 socket) ETHERNET IEEE802	RS-232 (ITU V.24/V.28) socket: D-Sub 9
Baud rate	10/100 Mbit/s; Auto Cross Over	300 bit/s up to 57600 bit/s
Service port	USB-A	–
Connection control	–	AT commands, DTR control, Always Online, TSC
Power supply	12 – 30 VDC (24 VDC nominal)	
Input current	typ. 365 – 180 mA; Idle mode: 174 – 120 mA (connection, no data transfer); Burst: 1.26 A (at full transmitter power)	I typ. 500 mA at 12 V (peak 1.3 A) I typ. 200 mA at 24 V
Burst repeat rate	4.62 ms	–
Power consumption $P_{max.}$	4.4 W (12 V); 4.0 W (24 V); 5.5 W (60 V)	–
Input voltage	Relay, 5 – 30 VDC, potential-free	–
Output voltage	max. 30 VDC	–
Output current	max. 20 mA	–
EDGE (EGPRS) connection	Class 12, up to 4 uplinks/downlinks; Modulation and coding scheme: MCS 1 – 9; Mobile station class B	–
GPRS connection	Class 12, up to 4 uplinks/downlinks, max. 5 slots; Coding scheme: CS 1 – 4, Mobile station class B; Full PBCCH support	Class 10, up to 2 uplinks/4 downlinks, max. 5 slots; Coding scheme: CS 1 – 4
GSM data	–	CSD 9600 bit/s
CSD/MTC connection	V.110, RLP, non-transparent 2.4, 4.8, 9.6, 14.4 kbps; SMS (TX): Point-to-point MO	–
Transmission power	Quad-band; GSM 850/900 MHz: max. 2 W DCS 1800 MHz/PCS 1900 MHz: max. 1 W	
Antenna connection	Nominal impedance: 50 Ω; Socket: SMA	
USB connection	not available	–
Dimensions (mm) W x H x L	45 x 99 x 114.5 Height from upper-edge of DIN 35 rail	22.5 x 99 x 114.5 Height from upper-edge of DIN 35 rail
Weight	approx. 280 g	approx. 150 g
Operating temperature	-20°C ... +55°C	
Relative humidity (without condensation)	95%	
Mount	DIN 35 rail	
Housing material	PC	
Degree of protection	IP20 acc. to DIN 40050	IP40

All technical data and approvals are available online at www.wago.com.

Controllers
for Telecontrol Technology

WAGO's programmable IEC61131-3-compatible 750-872 Fieldbus Controller covers all requirements of telecontrol technology. The controller supports a variety of application protocols to control I/O data or for system management and diagnostics. HTML pages can be generated on an internal server for use in Web-based applications. Programs are directly accessible via XML and ASP. Furthermore, the controller incorporates library functions for e-mail, SOAP, ASP, IP configuration, ETHERNET sockets and file system.

The compact, robust and powerful WAGO-I/O-IPC can fully perform comprehensive controlling, monitoring and visualization applications. The IPC's PROFIBUS DP master version can also be used as main control system for industrial applications. A stable and powerful automation system is provided via Linux® operating system and CoDeSys.

All WAGO telecontrollers support IEC 60870-5-101/–104, IEC 61850 and IEC 61400-25 telecontrol protocols, which the PLC programmer can access via CoDeSys. For users who do not want to write a PLC program, protocols may also simply be configured via CoDeSys tool.

750-872
Programmable
Fieldbus
Telecontroller

Industrial PC
WAGO-I/O-IPC-G2
Telecontrol

Industrial PC for
Extented Application Range
WAGO-I/O-IPC-C10 E
Telecontrol

	Programmable Fieldbus Telecontroller	I/O-IPC-G2 Linux Telecontrol	I/O-IPC-G2 Linux Telecontrol PDP-M	I/O-IPC-C10 E Linux Telecontrol	I/O-IPC-C10 E Linux Telecontrol PDP-M
Item No.	**750-872**	**758-870/000-130**	**758-870/000-131**	**758-875/000-130**	**758-875/000-131**
Approvals	UL 508, CE				
CPU	ARM 7; 48 MHz	Geode SC1200; 266 MHz		Celeron®M; 1 GHz	
Interfaces					
LAN	1 x 10Base-T/ 100Base-TX, RJ-45	2 x 10Base-T/100Base-TX, RJ-45			
I/O interfaces (serial)	1 x D-Sub 9; socket	1 x RS-232, 1 x D-Sub 9, socket			
I/O interfaces (USB)	–	2 x USB port acc. to Specification 1.1			
Memory					
Non-volatile memory (retain)	24 KB	128 KB		1024 KB	
Program memory	1 MB	16 MB			
Data memory	1 MB	32 MB		128 MB	
Memory expansion	–	CompactFlash Type I/II			
Fieldbus (optional)	–	–	PROFIBUS DP Master	–	PROFIBUS DP Master
Programming	WAGO-I/O-PRO v2.3				
Telecontrol protocols	MODBUS/TCP (UDP), ETHERNET/IP, IEC 60870-5-101/-104, IEC 61850 / 61400-25 3964R/RK512				
Operating temperature	0°C ... +55°C			-20°C ... +60°C	
EMC: CE-Immunity to interference	acc. to EN 61000-6-2 (2005)				
EMC: CE-Emission of interference	acc. to EN 61000-6-4 (2007)				

All technical data and approvals are available online at www.wago.com.

TO-PASS® Outdoor

All-In-One Solution

TO-PASS® Outdoor[1] is a compact IP66 housing for *TO-PASS*® telecontrol modules, including GSM antenna and 115–230VAC to 24VDC power supply unit.
Two backup batteries[2]) protec against power failure; terminal blocks supply additional sensors.

- All-in-one solution eliminates wiring expenses
- Antenna is placed inconspicuously inside the housing
- Fast outdoor installation
- Batteries provide protection against power failure
- Built-in heating system allows temperatures < - 20°C
- Also available for self-sustaining solar operation

	TO-PASS® Outdoor
Item No.	**761-9009**
Degree of protection	IP66
Enclosure	Polycarbonate
Power supply $V_{ant, in}$	Wide input voltage range: 85 – 264 VAC, 120 – 375 VDC
Energy consumption	approx. 2.9 W at 230 VAC (for full batteries and a *TO-PASS*® module without sensors and heating)
Battery capacity	24 V / 1.2 Ah
Heating	8 W
Heater switch	at 3°C ON, at 15°C OFF
Dimensions (mm) W x H x L,	
incl. cable grips	280 x 130 x 310, other dimensions upon request
Weight	3405 g
Cable grips	10 x M16, 2 x M25
Assembly	4 x drilled holes of 7mm diameter

[1] The *TO-PASS*® telecontrol module is not included in the scope of delivery and must be ordered separately.
[2] Batteries are delivered separately.

All technical data and approvals are available online at www.wago.com.

TO-PASS® Accessories*





	Self-Adhesive Antenna	Theft-Proof Antenna	Rod Antenna	Magnetic Foot Antenna	Theft-Proof Combination Antenna
Item No.	**758-961**	**758-962**	**758-963**	**758-965**	**758-966**
Description	Self-adhesive antenna with 2.5m cable and SMA straight plug	Theft-proof antenna with 2.5m cable and SMA straight plug	Rod antenna with 1m cable and SMA straight plug	Magnetic foot antenna with 2.5m cable and SMA straight plug	Theft-proof combination antenna with 2.5m cables and SMA straight plugs
Antenna connection	GSM/ UMTS/ *Bluetooth®*/ WLAN 850/900/1800/ 1900/2100/ 2400 MHz	GSM/ UMTS 850/900/1800/ 1900/2100 MHz	GSM 850/900/1800/ 1900 MHz	GSM/ UMTS/ 850/ 900/ 1800/ 1900/ 2100 MHz	GSM/ UMTS 850/900/1800/ 1900/2100 MHz, additional GPS antenna connection
Dimensions	117 mm x 12 mm	29 mm x 52 mm	Height: 298 mm	Height: 88 mm	29 mm x 52 mm
Cables	2.5m RG174	2.5m RG174	1m RG58	2.5m RG174	2.5m RG174
Gain	2.15 dBi	2.0 dBi	2.2 dBi	2.2 dBi	2.0 dBi
VSWR	<1.5	<2.0	<1.6	<2.0	<2.0
Connector	SMA straight plug				




	USB Adapter	RF Lighting Protector, SMA Socket to SMA Socket	Antenna Splitter with 3 SMA Sockets	Connection Cable SMA Socket/SMA Plug
Item No.	**761-9005**	**758-969**	**758-971**	**758-970/000-x00.**
Description	USB adapter with 1m connection cable	RF lighting protector, SMA socket to SMA socket	Antenna splitter with 3 SMA sockets	Connection cable, SMA socket - 1m (3, 5, or 10m) H155 - SMA plug The following cables are available: 1m **758-970/000-100** 3m **758-970/000-300** 5m **758-970/000-500** 10m **758-970/000-1000**
Antenna connection		GSM/ UMTS/ *Bluetooth®*/ WLAN	GSM/ UMTS/ *Bluetooth®*/ WLAN	GSM/ UMTS/ *Bluetooth®*/ WLAN

All technical data and approvals are available online at www.wago.com.

* For additional accessories (antenna adapters, batteries, charge controllers and modems), see Full Line Catalog Volume 3

TO-PASS® Web Portal

The *TO-PASS*® product family is designed for wireless communication of signals and messages. Transmission is performed via global GSM mobile radio network. Beyond many other communication channels (e.g., e-mail, SMS or fax), the devices can also transmit data to a Web server via Web functionality. This allows the creation of a permanent GPRS connection similar to a dedicated line.

The process image (i.e., states and values of all digital and analog inputs of a *TO-PASS*® telecontrol module) is transmitted to the Web server with time stamp at a variably configurable interval and then stored in a database.

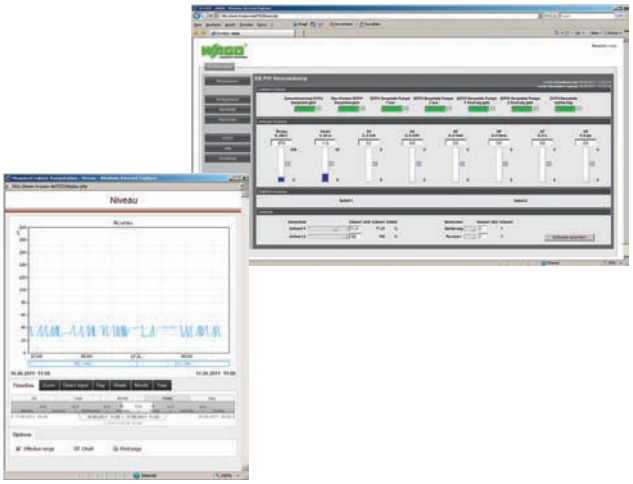
Standard data loggers, as well as cumbersome process of reading out data are no longer necessary.

Controlling and managing your data is simplified by using an Internet browser via:

www.to-pass.com

Basic

Item No. 761-700

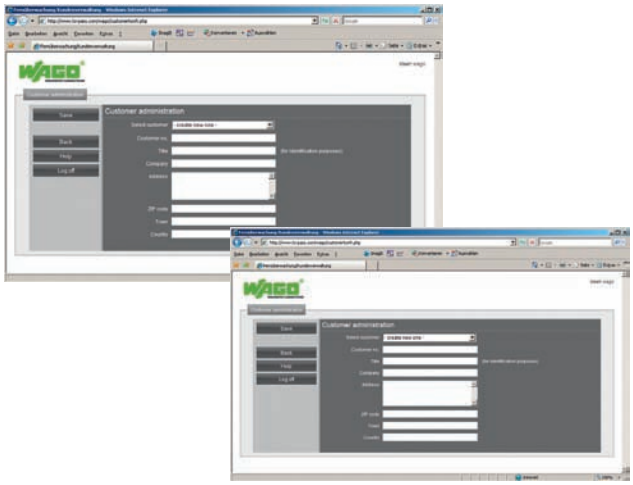


With the basic module, a user's own area is provided on the *TO-PASS*® Web Portal via customizable sub-address (www.to-pass.com/customer). Access is protected with a username and password. The data recorder function allows digital, analog and MODBUS data of the connected devices to be recorded and displayed from 90 minutes to 512 days. Data can also be exported in CSV format. [1)]

[1)] Depending on the expansion level (starter, standard, unlimited), a varying number of devices can log into the portal.

Admin

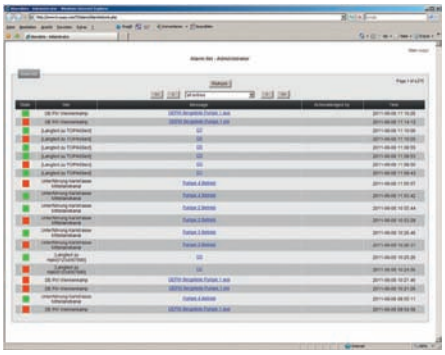
Item No. 761-702



The “Admin” option is an addition to the basic module. It allows the user to administrate additional usernames with passwords, as well as customers and devices with different access authorizations. [1)]

Alarm

Item No. 761-703



The “Alarm” option is an addition to the basic module. It allows the module to display and administrate alarms generated from analog, digital and MODBUS values. Using analog values, up to 4 limit values can be configured for each measurement. An alarm list allows all alarms to be displayed and acknowledged.

This option also allows the user to configure the persons and the time at which an alarm will be sent to them via SMS or e-mail. [1)]

WAGO Kontakttechnik GmbH & Co. KG
Postfach 2880 · 32385 Minden
Hansastraße 27 · D-32423 Minden
Phone:
Headquarters +49(0)571/887-0
Sales +49(0)571/887-222
Order Service +49(0)571/887-333
Technical Support +49(0)571/887-555
Fax: +49(0)571/887-169
E-mail: info@wago.com
Online: www.wago.com

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