

TO-PASS[®] Telecontrol Solutions





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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® enables 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 an intelligent telecontrol PLC. TO-PASS® Compact modules can be commissioned via configuration tool without programming knowledge, offering an easy way into wireless communication and telecontrol technology.

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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.



WWW

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® GSM 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



**Telecontrollers:
750-872, 750-880/025-001
WAGO-I/O-IPCs for
telecontrol technology:
758-874, 758-875**

- 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 > 5 VDC or < 3 VDC 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
remote configuration

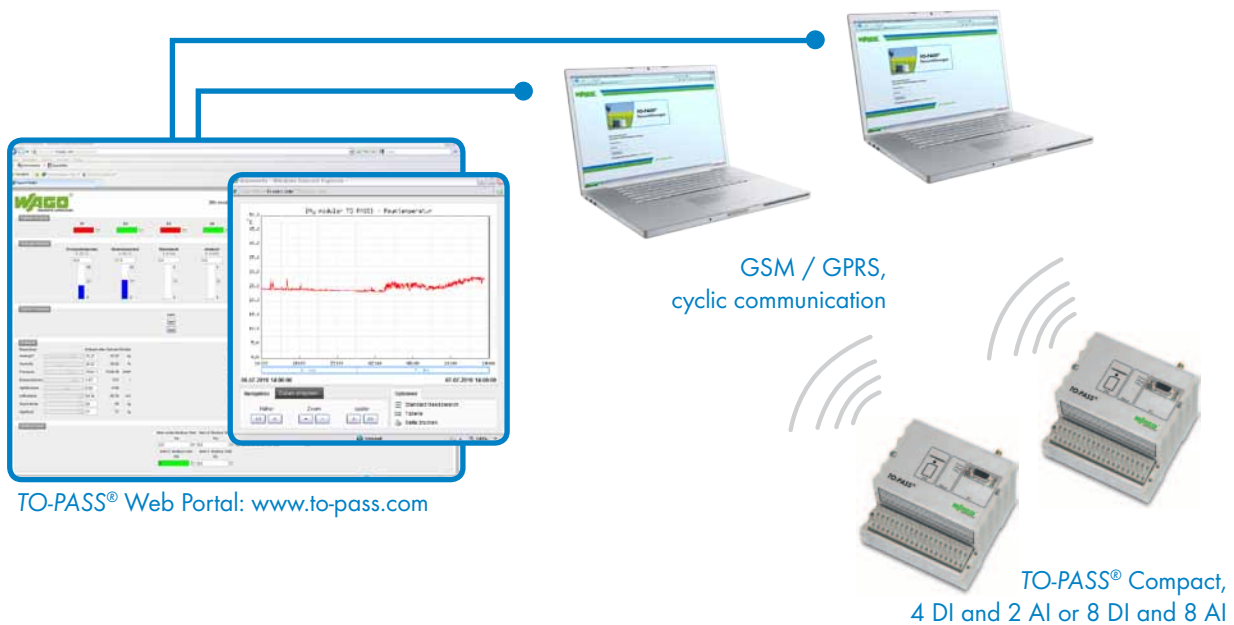
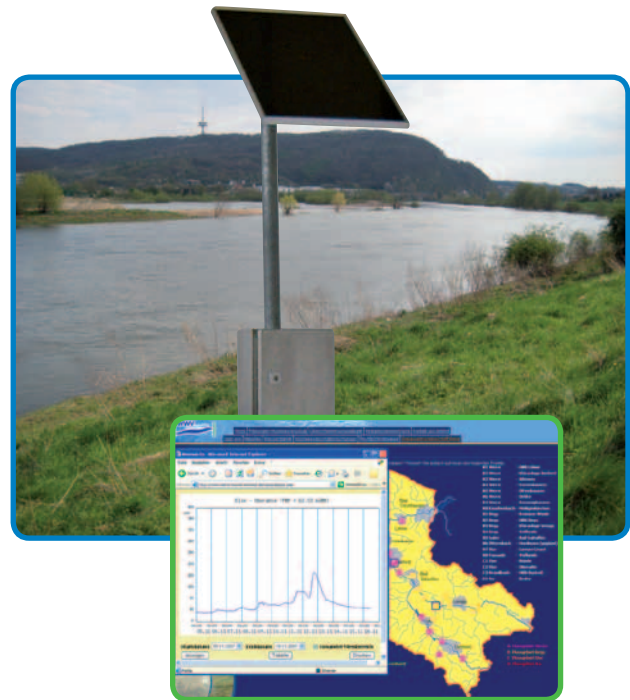
Cyclic Monitoring

TO-PASS® Compact is ideal for cyclic monitoring 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 MB and a block size of 1 KB are recommended.



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			
761-701 761-700	User fees for TO-PASS® Web Portal TO-PASS® Web Portal, basic module		
optional			
761-702 761-703	TO-PASS® Web Portal, administration module TO-PASS® Web Portal, alarm module		

SMS
GPRS
CSD

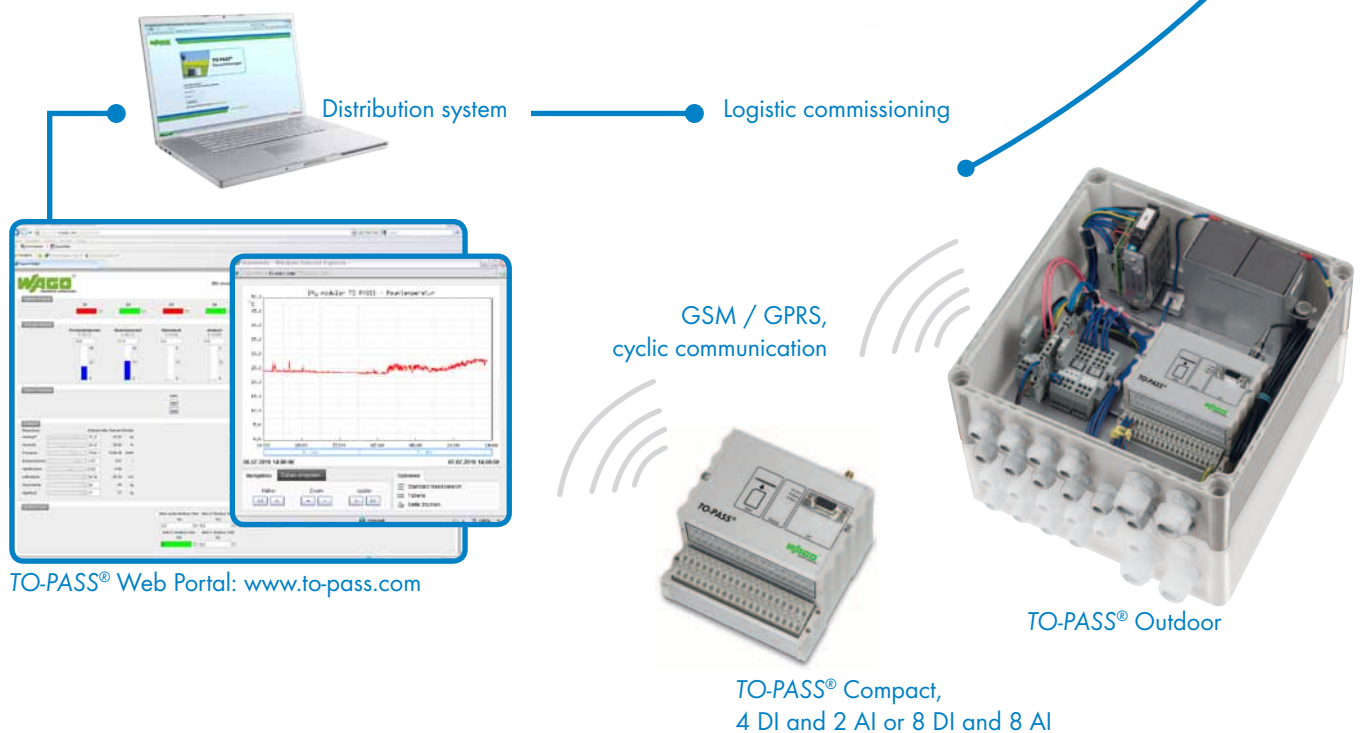
Required:
SIM card with SMS,
GPRS and CSD

Logistics Optimization



TO-PASS® Compact is 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 completely compatible with TO-PASS® Compact devices and includes IP66 housing (280 x 280 x 130 mm) with integrated battery backup, GSM antenna, heater and 115-230 VAC power supply.



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 TO-PASS® Web Portal, basic module		
761-700			
optional			
761-702	TO-PASS® Web Portal, administration module TO-PASS® Web Portal, alarm module		
761-703			

**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 ETHERNET media redundancy 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

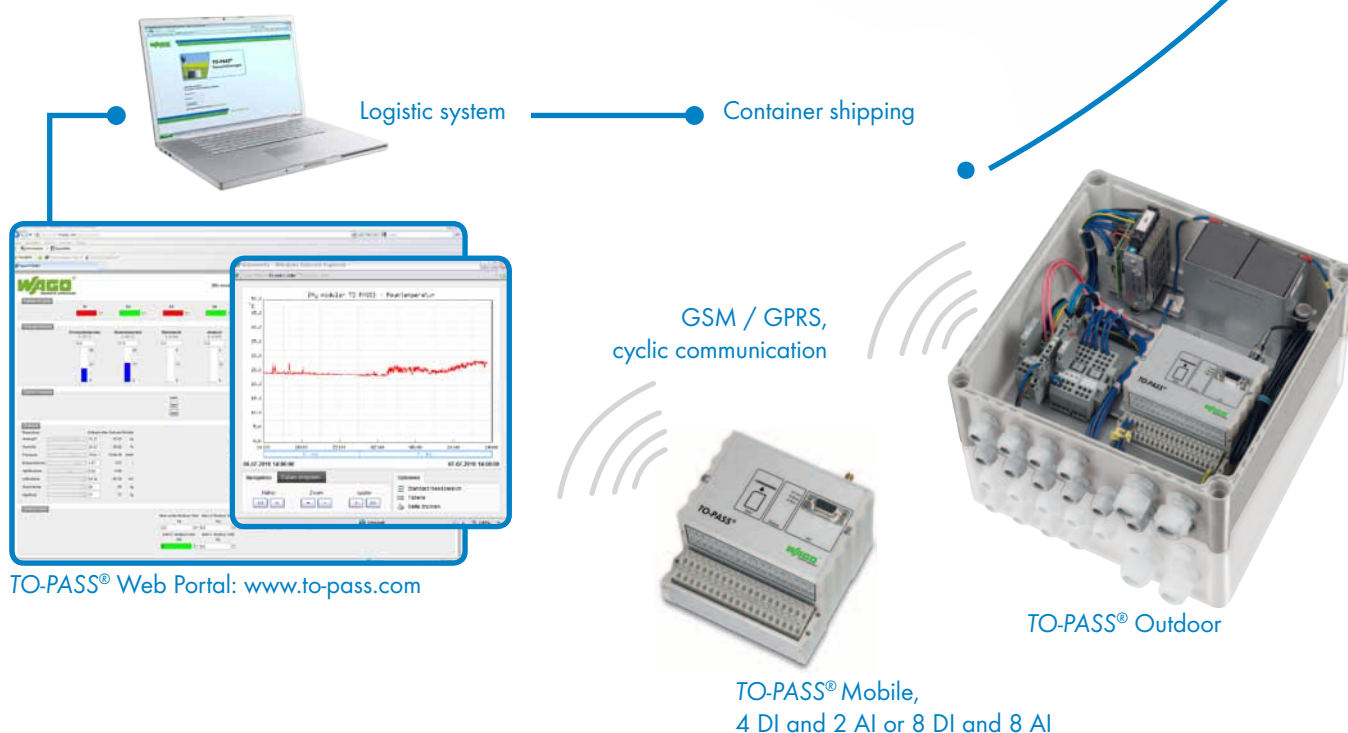
Required:
SIM card with SMS,
GPRS and CSD

Seamless Collection of Process and Position Data



TO-PASS® Mobile evaluates position data via GPRS in container shipping applications. Simultaneously, 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 130 mm) with integrated battery backup, GSM antenna, heater and 115-230 VAC power supply.



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			
761-701 761-700	User fees for TO-PASS® Web Portal TO-PASS® Web Portal, basic module		
optional			
761-702 761-703 761-9009	TO-PASS® Web Portal, administration module TO-PASS® Web Portal, alarm module TO-PASS® Outdoor for installation in an IP66 housing, with integrated GSM antenna, incl. power supply unit		

**SMS
GPRS
CSD**

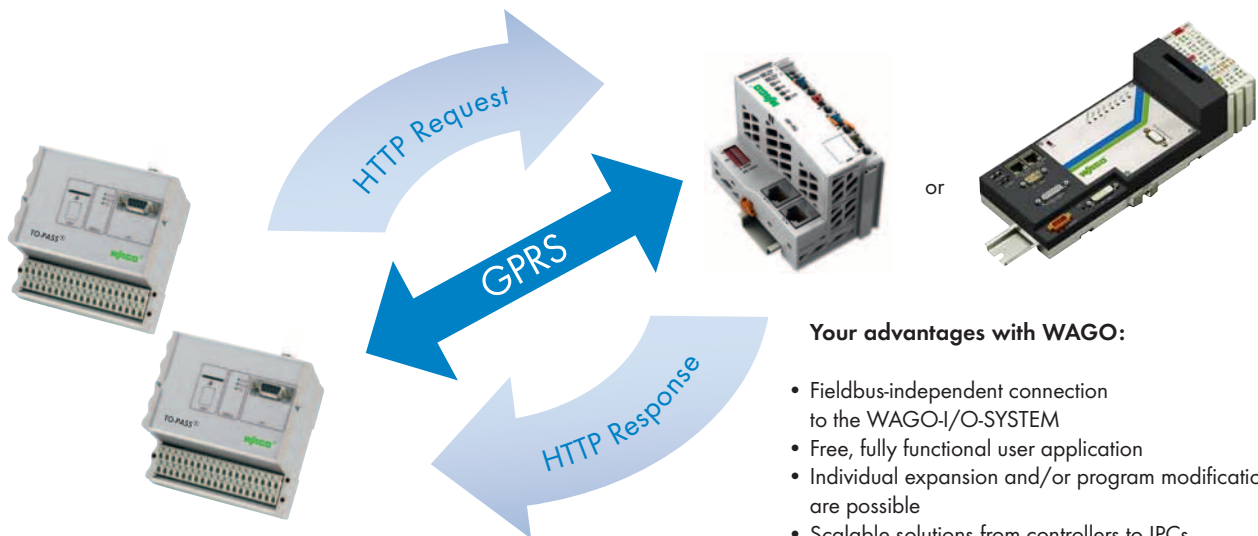
**Required:
SIM card with SMS,
GPRS and CSD**

TO-PASS® Web Connector

Easy Integration of Fault Detectors into I&C Systems

TO-PASS® Web Connector provides the following options:

- Fieldbus-independent connection of TO-PASS® Compact to the I&C system
- Sending fault and event messages via GPRS data string (<1 kB) to a WAGO I/O controller with fixed IP address
- Data transmission (e.g., via MODBUS/TCP, BACnet, IEC telecontrol protocols 60870, 61850, 61400) to a central control system



Your advantages with WAGO:

- Fieldbus-independent connection to the WAGO-I/O-SYSTEM
- Free, fully functional user application
- Individual expansion and/or program modifications are possible
- Scalable solutions from controllers to IPCs (depending on the number of remote stations)

TO-PASS® Compact:

- Rugged, compact device (e.g., temperature range from -20°C to +70°C)
- Three TO-PASS® GPRS modules are available with up to 8DI, 8AI, 4DO, 2AO and MODBUS
- Cyclic and/or event-controlled transmission
- Configuring instead of programming
- Optional outdoor versions in IP66 housing with battery, charging controller and heating

Please contact us for further information. We are always ready to help!

System configuration for monitoring four stand-alone stations:

Remote station:		
4 pcs	TO-PASS® Compact	761-112
4 pcs	GPRS magnetic foot antenna	758-965
4 pcs	EPSITRON® power supply	787-1002
I/O system:		
1 pcs	WAGO-I/O-SYSTEM	750-881
1 pcs	Digital input module	750-400
1 pcs	End module	750-600
1 pcs	EPSITRON® power supply	787-1002
Software:		
"WagoTopassWebConnector" CoDeSys function block		
Application note A301120_de		
Download: www.wago.com		

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: 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
- 6) - Counter function: Max. 4 of the digital inputs can be used as up or down counter. The maximum operating frequency is 1,250 Hz.



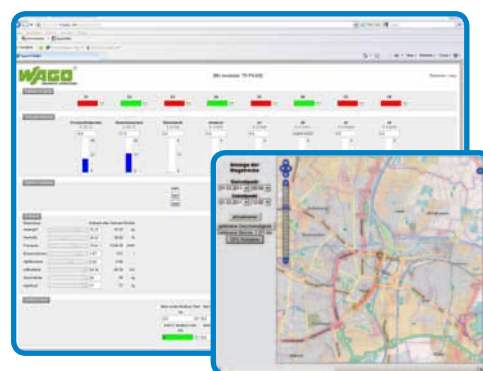
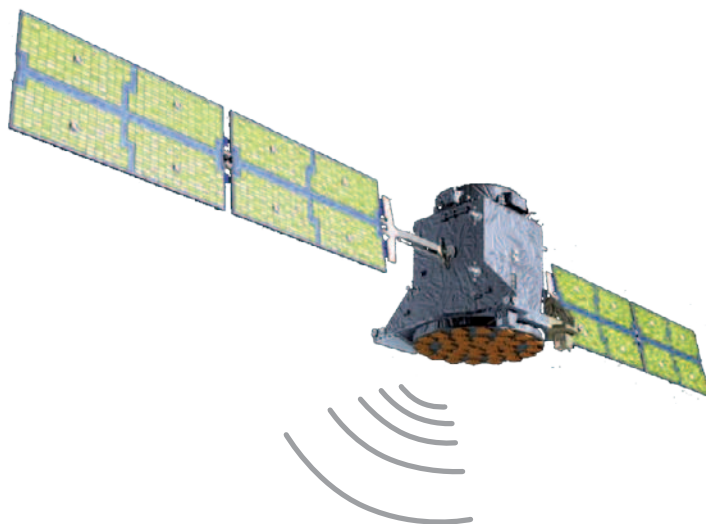
	TO-PASS® Compact	TO-PASS® Compact 2 AI	TO-PASS® Compact Web	TO-PASS® Compact 2 AI, Web	TO-PASS® Compact	TO-PASS® Compact	TO-PASS® Compact 8 AI, ELog, DLog	TO-PASS® Compact 8 AI, Web, MODBUS	TO-PASS® Compact 8 AI, Web, MODBUS
Item no.	761-110	761-111	761-112	761-113	761-114	761-210	761-214	761-216	761-217
Interfaces									
Digital inputs*	4	4	4	4	4	8	8	8	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)	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	–	approx. 200 Ω / 20 mA		
Measuring error (25°C)	–	< ± 1% of full scale value	–	< ± 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	–	< ± 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	E-mail, SMS (bidirectional), fax (depending on provider) and dial-up connection (CSD)								
LED indication	3 LEDs for operating status indication								
Operating voltage	+10 ... +30 VDC								
Closed current	approx. 20 mA at +24 V operating voltage								
Current during transmission	< 500 mA at +24 V operating voltage								
Specialty functions	1)		1), 2)		1), 2), 6)	1)	1), 2), 3), 4)	1), 2), 3), 4), 5)	1), 2), 3), 4), 5), 6)

* Four digital inputs can be configured as counter inputs.

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

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
- GPS receiver
- 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	E-mail, SMS (bidirectional), fax (depending on provider) and 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 (see page 12)	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 57,600 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 (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 schemes: MCS-1 to 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 9,600 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)	45 x 99 x 114.5	22.5 x 99 x 114.5
W x H x L	Height from upper-edge of DIN 35 rail	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.

WAGO's IEC 61131-3 programmable 750-872 and 750-880/025-001 fieldbus controllers meet all telecontrol technology requirements. They support a variety of application protocols for I/O data control or system management and diagnostics. For Web-based applications, HTML pages can be generated on an internal server. 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 control, monitoring and visualization applications. The IPC's PROFIBUS DP master version can also function 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 be simply configured via CoDeSys tool.

750-872 Programmable Fieldbus Telecontroller

Programmable ETHERNET Fieldbus Controller 750-880/025-001

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



	Programmable Fieldbus Telecontroller	Programmable ETHERNET Fieldbus Controller	I/O-IPC-G2 Linux®, Telecontrol Technology	I/O-IPC-G2 Linux®, Telecontrol Technology, PDP-M	I/O-IPC-C10 E Linux®, Telecontrol Technology	I/O-IPC-C10 E Linux®, Telecontrol Technology, PDP-M
Item no.	750-872	750-880/025-001	758-874/000-130	758-874 /000-131	758-875/000-130	758-875/000-131
Approvals	UL 508, CE					
CPU	ARM 7; 48 MHz	ARM 9; 80 MHz	Celeron®M, 600 MHz	Celeron®M; 1 GHz	Celeron®M; 1 GHz	
Interfaces						
LAN	1 x 10Base-T/100Base-TX, RJ-45	2 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	32 KB	1024 KB		1024 KB	
Program memory	1 MB	1 MB	16 MB			
Data memory	1 MB	1 MB	128 MB		128 MB	
Memory expansion	-	SD and SDHC cards up to 8 GB	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	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® Outdoor¹⁾ is a compact IP66 housing for TO-PASS® telecontrol modules, as well as GSM antenna and 115–230 VAC to 24 VDC power supply unit. Two backup batteries ²⁾ protect against power failure; terminal blocks supply additional sensors.

- All-in-one solution eliminates wiring expenses
- Antenna is hidden inside the housing
- Fast outdoor installation
- Battery provides power failure protection
- Built-in heating system for operation in 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	3,405 g
Cable grips	10 x M16, 2 x M25
Assembly	4 x drilled holes of 7 mm diameter

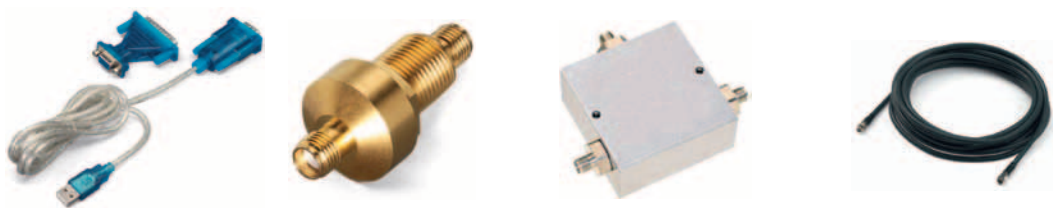
¹⁾ The TO-PASS® telecontrol module is not included in the scope of delivery and must be ordered separately.

²⁾ Batteries are delivered separately.

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



	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 2.5 m cable and SMA straight plug	Theft-proof antenna with 2.5 m cable and SMA straight plug	Rod antenna with 1 m cable and SMA straight plug	Magnetic foot antenna with 2.5 m cable and SMA straight plug	Theft-proof combination antenna with 2.5 m 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	2.5 m RG174	2.5 m RG174	1 m RG58	2.5 m RG174	2.5 m 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 lightning 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 1 m connection cable	RF lightning protector, SMA socket to SMA socket	Antenna splitter with 3 SMA sockets	Connection cable, SMA socket - 1 m (3, 5, or 10 m) H155 - SMA plug The following cables are available: 1 m 758-970/000-100 3 m 758-970/000-300 5 m 758-970/000-500 10 m 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

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



Bitte melden Sie sich an,
um zu Ihren TO-PASS®-Projektdateien zu gelangen.

Benutzername:

Kennwort:

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.

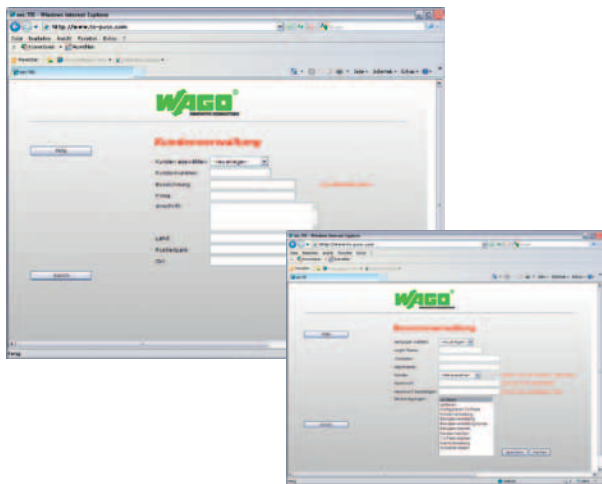
Access is protected with a username and password. The data recorder function allows digital, analog and MODBUS data of the connected devices to be recorded and displayed from 90 minutes to 512 days. Data can also be exported in CSV format. ¹⁾

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



Option: Admin

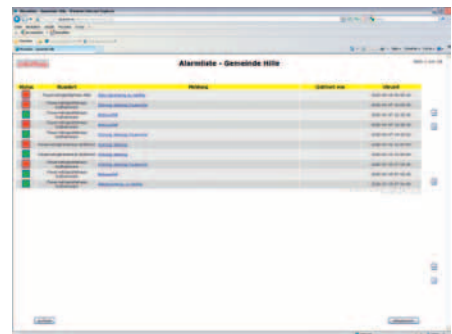
Item no. 761-702



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⁾

Option: 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⁾

Learn more about
WAGO telecontrol solutions at:



www.wago.com/telecontrol

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