

Remote Terminal Units

Telemecanique w@de product range



The remote terminal units of the Telemecanique w@de, product range can optimize operating costs with permanent monitoring of facilities, station control, consumption follow-up, direct alerting of operators, and maintenance planning.



Remote terminal units for drinking water and waste water networks...



Compact or modular range

The Telemecanique w@de product range consists of remote terminal units, compact (W320 I) or modular (W330, W320E, W315), based on programmable logic controllers (PLCs) that allow:

- Equipment automation,
- Continuous measurement, recording, processing and archiving of facility operating parameters,
- Inter-site communication and communication with a supervisor or a Web server,
- Direct alerting of operators,
- Remote operation and configuration.

Preconfigured “applications” models, easy to implement

All remote terminal units can be supplied with the automatic controls corresponding to the type of facility.

Its setup, which is simple and fast, requires no programming and is based on intuitive parameterizing locally or remotely (W502 portal or on-board server), by editing configurable fields contained in HTML pages.



Pumping and recovery station

- Pumping management according to the levels in the servo controlled facilities (tank, recovery station, etc.).
- Management of pump wear by a changeover strategy.

Tank

Manage filling requests according to the level of the pumping or recovery station to which the tank is hydraulically connected.



Booster station

Start-up or shut down of the pumps according to the pressure in the water distribution network (elimination of water hammer, changeover cycle, etc.).

Waste water lifting station

To manage pumping, the agitator, the screen rake and pump wear with changeover strategy.



Applic

... and infrastructures

Optimize operating costs with permanent monitoring of facilities

The remote terminal units of the Telemecanique w@de product range can optimize operating costs with permanent monitoring of facilities, station control, consumption follow-up, direct alerting of operators, and maintenance planning.



Remote reading of meters

- For impulse meters (water, electricity, etc.),
- Consumption monitoring with reports (hourly, daily, monthly, minimum, maximum, load curve).

Remote maintenance

Wind-power farms

- Permanent monitoring of the facility based on information from the medium voltage network protection systems (Sepam type),
- Remote restarting actions following incidents,
- Remote reading of the various metering systems.

Installed base of PLCs

- Access to the PLCs in transparent mode (diagnosis, modification of programs, etc.),
- Automatic alarms via e-mail and/or SMS in case of faults (loss of communication with PLCs, occurrence of alarming events, etc.),
- Time stamped logs (events, consumption).

Remote management of public lighting

- Associated with the Lubio product range (energy savings of up to 40%),
- Provision of the information required for efficient management of the public lighting network (configurable alarm management, consumption follow-up, follow-up of energy savings),
- Modification, remote parameterizing (astronomical clock, event management),
- Maintenance aid (real-time knowledge of the network's condition).



Facility monitoring

Basic operation without local automatic controls (positions, measurements, metering, controls, archiving) with information transfer to a SCADA or by e-mail or SMS:

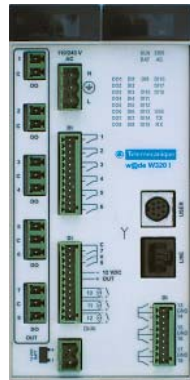
- Heating/ventilation installations,
- Refrigeration plants,
- Site monitoring (intrusion).



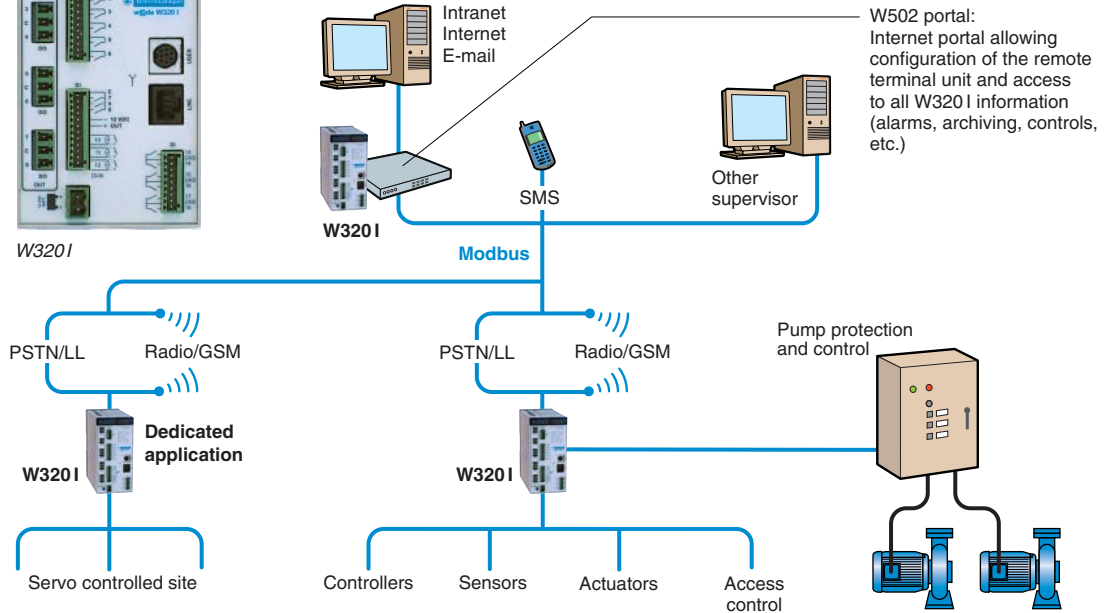
ations

W320I: compact solutions

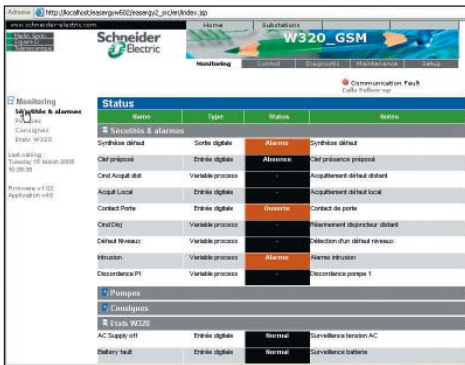
The W320I compact solutions are optimized for a type of facility. They interface with all open-protocol supervisors (Modbus or other) or a W502 portal, accessible via the Web.



W320I



W502 portal:
Internet portal allowing configuration of the remote terminal unit and access to all W320 I information (alarms, archiving, controls, etc.)



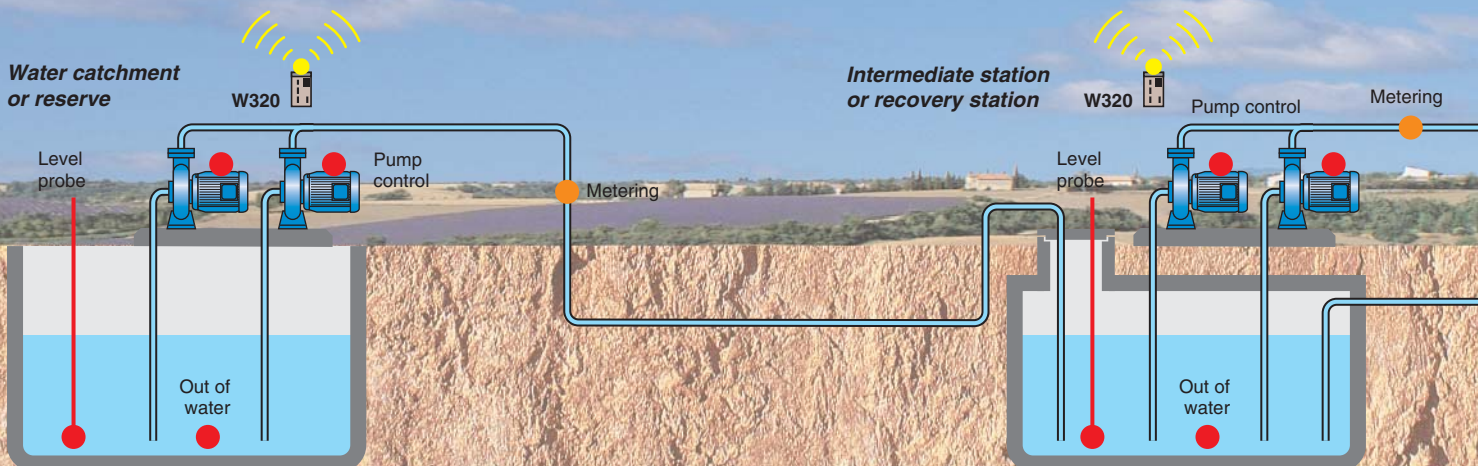
W502 portal

Application module

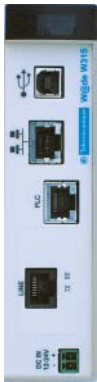
Reference	Inputs/Outputs			Extensions
	DI	DO	ANA	
W320I	15	8	3	No - compact product
W310	4	0	0 to 4	No - compact product

Application software supplied

Water (limited to 4 pumps)	Pumping station
	Recovery station
	Waste water lifting station
	Tank
RTU	Site monitoring



W315, W320E, W330: modular solutions



W315

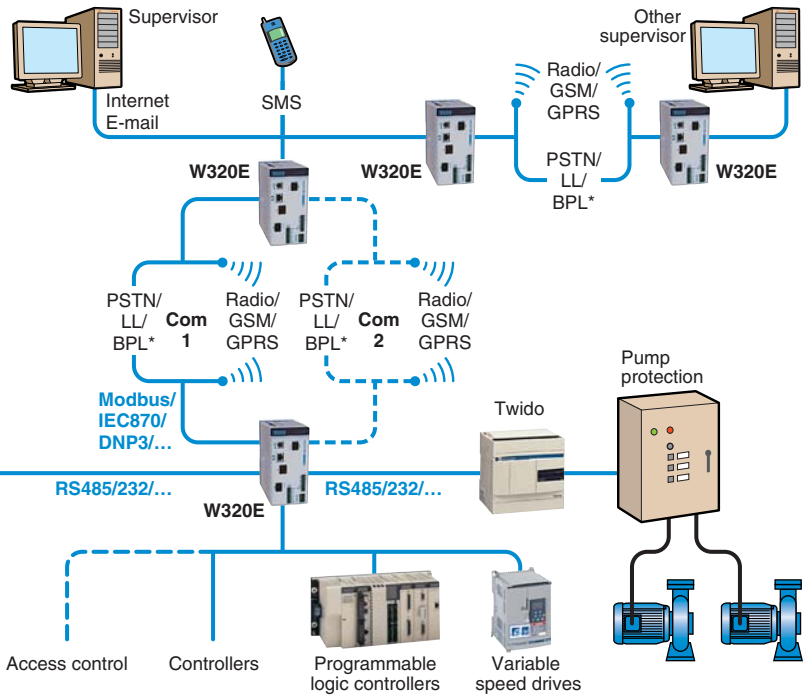


W330

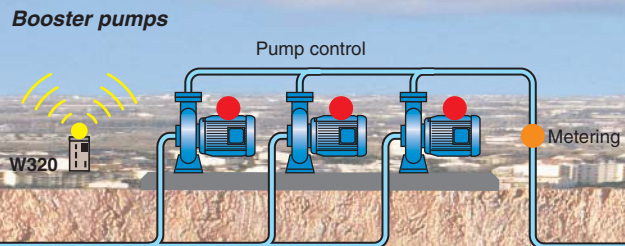
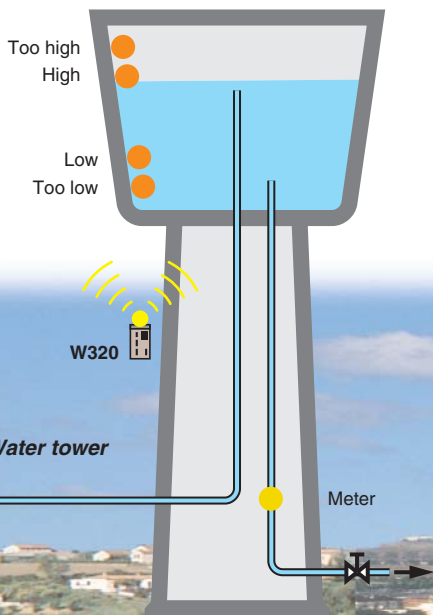


W320E

Thanks to their on-board Web server and standard communications protocols on Ethernet, the W315, W320E and W330 modular solutions facilitate integration of the automatic control architecture with the plant and/or water network supervision systems. These products also allow access to the process PLCs in transparent mode and can incorporate a call-back procedure. These high-performance, upgradeable solutions can provide an answer for simple or complex applications thanks to numerous extension modules.



(*) BPL: Broadband Power Line. Communication over LV or MV network (< 30 kV).



Application software supplied

Water (above 4 pumps, contact us)	Pumping station
	Recovery station
	Waste water lifting station
	Tank
Other	RTU (site monitoring)
	PLC remote maintenance gateway
	Wind-power farm remote maintenance

Functionalities adapted to needs

Multiprotocol communications and protocol conversion

Each remote terminal unit communicates locally with the Modbus open protocol and remotely with a supervisor in Modbus protocol, IEC 870-5-101 or IEC 870-5-104, DNP3, other or a Web server via any communication medium (Radio, PSTN, LL, GSM, ADSL, Ethernet TCP/IP on optical fibre or cable).

Data concentrator

The Telemecanique w@de product range performs the function of data concentrator with PLCs, variable speed drives, controllers, sensors, etc. via Ethernet or RS232 or RS485 link.

Data processing and archiving

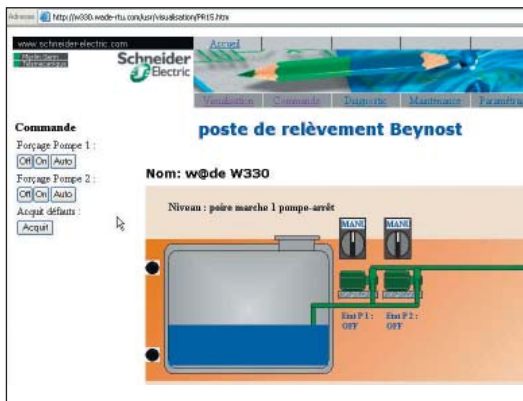
- Archiving of the time stamped event and alarm log with historical reports,
- Sampling and time stamped archiving of analogue inputs and meters at parameterizable time intervals with historical reports.

Direct alert to operators

Three levels of parameterizable alarms for each item of information with chaining of standby duty calls and deferred call management.

- Notification of alarms via SMS or to the supervisor,
- SMTP client service for sending e-mails (W330 only).

Schneider Electric and its network of partners are at your disposal to propose to you an appropriate supervision architecture.



Central station: remote maintenance facilities adapted to needs

Web W502 portal: simplicity

The Web W502 server is an interface allowing communication and history management with W320 RTU in Modbus protocol.

Its main characteristics are:

- Management of at most 8,000 W320 remote terminal units,
- Access portal, via Intranet or Internet, to W320s.

Web server: compatibility with existing systems

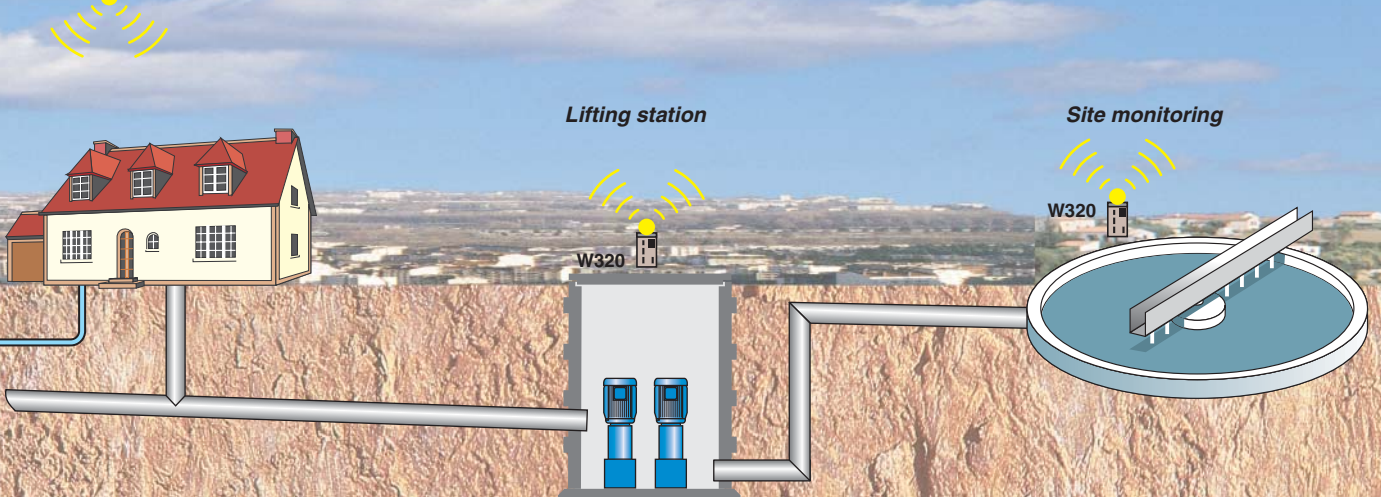
The W315, W320E and W330 incorporate their own Web server.

All that is needed is a PC provided with a PSTN modem and a standard Web browser to access W3xx via its IP address and the passwords ensuring security. The W3xx is compatible with most of the available supervisors.

SCADA

The w@de product range is compatible with many supervisors: Monitor pro, Vijeo Look, PC Vue, Topkapi, Citect, etc.

Central station



A global partner to support you

from design to operation of your supervision solution

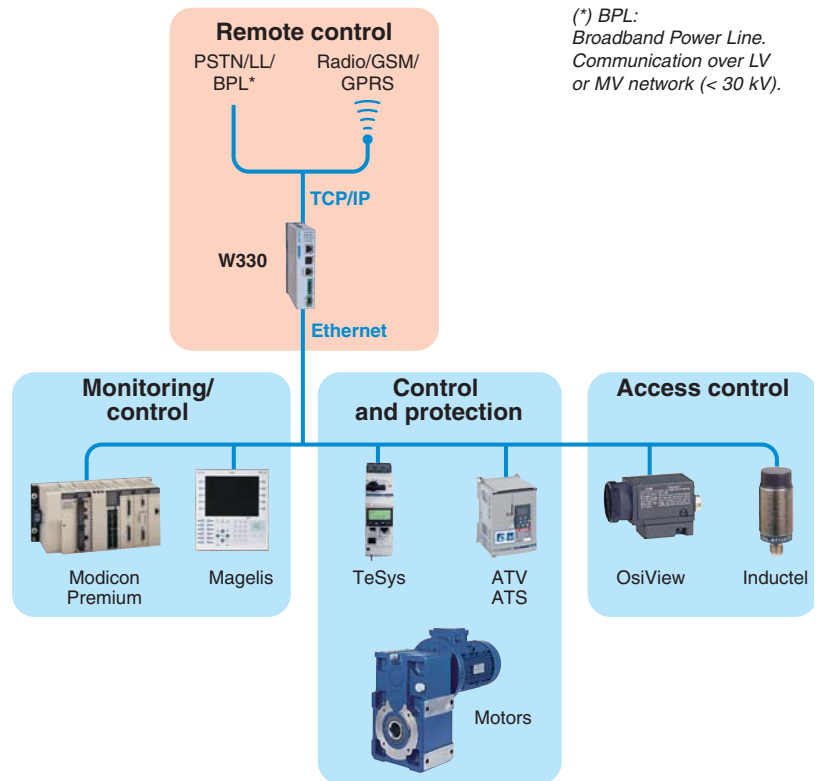


RTU pack enclosure

Transparent Ready

Schneider Electric's Transparent Ready™ solutions are the result of integration of Web technologies so as to make our products "transparent" for all authorized users.

Transparent Ready™ allows simple, fast and secure sharing of information in all places and at all times for all the authorized players involved in equipment operation and maintenance.



(* BPL: Broadband Power Line. Communication over LV or MV network (< 30 kV).

Present in 130 countries, Schneider Electric supports you from design engineering through to maintenance of your facilities by providing you with its expertise in the development of architectures based on a sustainable service and product offering:

- Control of motor start-up/stoppage,
- Speed drives,
- Motorization (motors and reduction gears),
- Access security,
- Programmable logic controllers,
- Local and/or central control desks.

Public lighting



Wind-power farm



Technical data

Function		W305 Modem	W310 Compact controller	W3201	W315	W320E Modular controller	W330
Mechanical							
Mounting	DIN rail	■		■	■	■	■
Dimensions	Single width (W = 40, H = 150, D = 136)	■			■		■
	Double width (W = 80, H = 150, D = 136)			■		■	
	Other format		■				
Degree of protection	IP (others on request)	IP20	IP65			IP20	
Electrical							
Power supply	90 to 240 Vac	■		■		■	
	Integral battery charger			■		■	
	DC	12 - 24 Vdc	Lithium batt. Cell (5 years)	12 Vdc Battery	12 - 24 Vdc	12 Vdc Battery	12 - 24 Vdc
Battery or cell							
Integral inputs/outputs							
Status indicator	By LEDs on the front panel	■		■	■	■	■
Digital inputs			4	15		6 to 16	1
Analogue inputs			0 to 4	3		ext.	
Analogue outputs				0		ext.	
Outputs				8		0 to 4	1
External extensions							
Digital inputs	8 or 16 (ref. 8DT or 16DT)				■	■	■
Digital outputs					■	■	■
DIs/DOs	8 (4 DIs+4 DOs ref. 8DRT)				■	■	■
4-20 mA ANA inputs	2 (ref. 2HT)				■	■	■
4-20 mA ANA outputs					■	■	■
4-20 mA ANA Is/Os	3 (2ANA-Is + 1 ANA-O, ref. 3HT)				■	■	■
Environment							
Temperature	Operation	-25 to +70°C		-25 to +55°C	-25 to +70°C		-25 to +55°C
	Storage	-40 to +70°C					
Communication							
IP services	Web server/Ethernet				■	■	■
Internal modems	PSTN/LL	■		■	■	■	■
	GSM	■	■	■	■	■	■
	GPRS				■	■	■
	Radio	■		■	■	■	■
External modem	Via RS232 port				■	■	
Double port	2nd embedded modem on option					■	
Protocols							
Local port	Modbus to PLCs				■	■	■
	Unitelway	■					■
Remote port	Modem only	■			■	■	■
	Modbus		■	■	■	■	
	Modbus TCP/IP				■	■	■
	IEC 870-5-101				■	■	
	IEC 870-5-104				■	■	
	DNP3				■	■	
Supervision							
Compatibility with remote W502				■	■	■	
Compatibility with other SCADAs		■	■	■	■	■	■

For further information, refer to the technical data sheets.

Options and extensions

- **Surge protection:** power supply, radio antenna, analogue inputs, RS485 port, telephone channel,
- **Power supply:** 220 Vac/24 Vdc, solar 12 V or 24 V.

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