

W@de range from Telemecanique  
Product data sheet

# W315 - W320 remote management modules





- Multi-protocol communication gateways
- Embedded web server
- Easy access using an internet browser
- Up to two built-in modems using different media

## Presentation

The W@de W315 and W320 communication modules are remote units intended for typical remote-management applications in the water industry or for infrastructures in general. They operate autonomously or with a Telemecanique PLC.

These remote units can interface with all SCADA systems and HMI software compatible with MODBUS, Modbus TCP, DNP3.0 or IEC870-5-101 or 104.

## Use

These modules offer different functions:

### ■ communication functions:

- to a SCADA system using the standard protocols listed above and via suitable media (PSTN, GSM, GPRS, radio, LL or Ethernet),
- to operators or on-call personnel via a direct or remote (via internet browser) connection using the web server embedded in the modules,
- to other W@de remote-management modules for inter-site links,
- to PLC's via an Ethernet TCP/IP or Modbus serial connection with a "transparency" mode to access all PLC variables in the architecture,

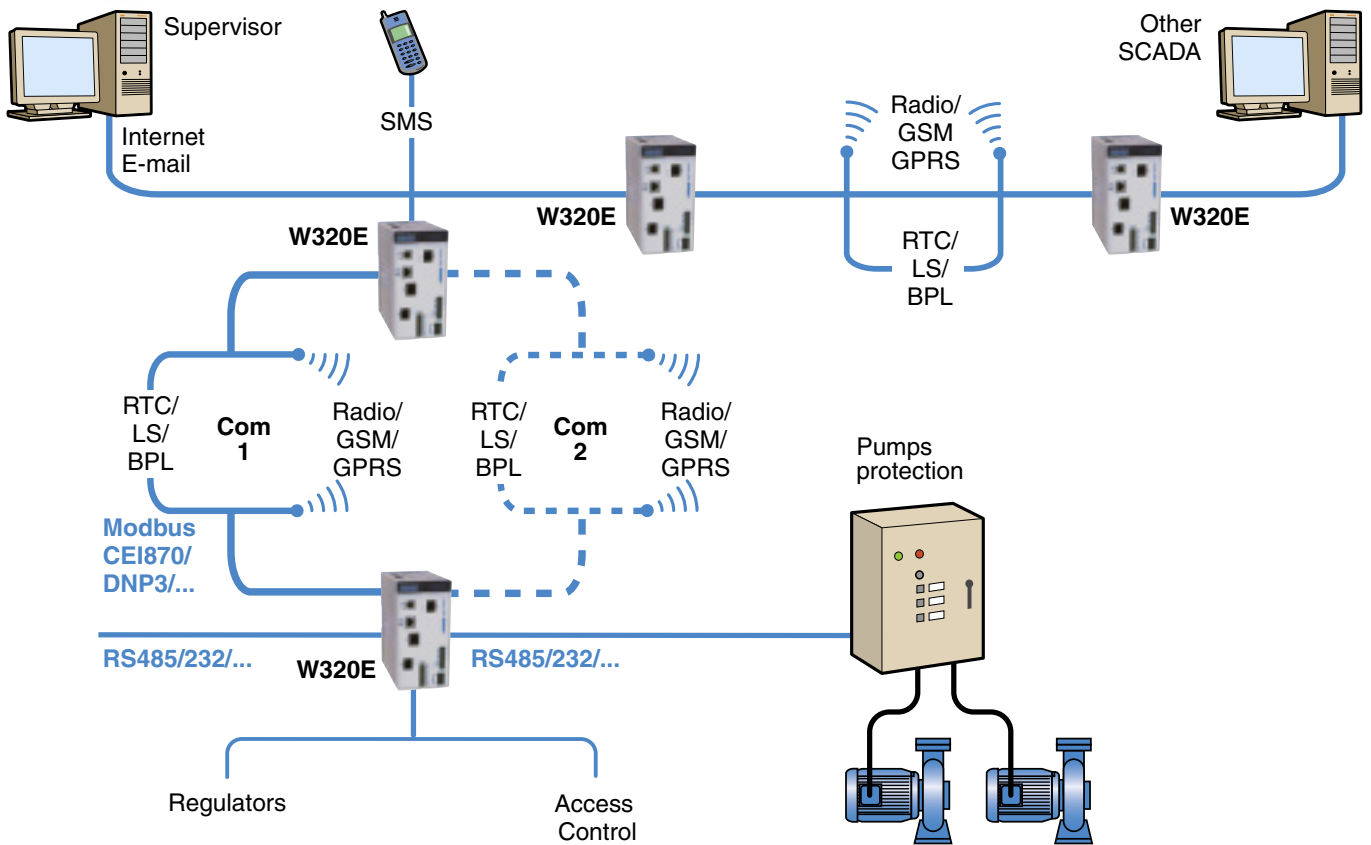
### ■ processing functions:

- acquisition of the I/Os of the modules (W320) or associated PLC's,
- time-stamped logging of events, alarms, analog values or metering data made available to the SCADA system (or PC) as files directly useable by a spread-sheet or a data base management system (DBMS),
- alarm transmission via SMS (GSM) or to the SCADA system for preconfigured events (change in status conditions, threshold overrun, index overrun...),
- management of power outages through failure detection of the internal power supply (W320).



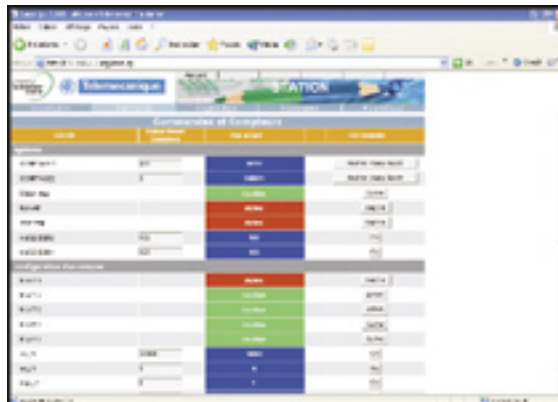
# System architecture

Transparent Ready



W@de modules can be built into:

- existing installations requiring a flexible and cost-effective remote alarm solution,
- hybrid architectures to complement traditional SCADA systems,
- architectures combining PLCs and equipment requiring,
- communication link to the information-management levels,
- distributed architectures with direct controls between remote sites.



## Operation and Set-up

W@de modules use web technology and offer administration and display tools based on HTML-format animated graphic pages.

W@de set-up offers intuitive, user-friendly HMI configuration with settings made via the embedded web site.

No special software is required. A simple internet browser can be used from a PC connected either:

- locally to the Ethernet or USB port,
- remotely via the communication link.

HMI settings can be used to:

- configure the PLC interface,
- configure the modems and protocols,
- configure connections to the data bases.

Depending on profile and access rights, the operator can review data, modify values or issue orders.

## Event logging

W@de modules offer time-stamped logging of data (periodically and/or for specific events).

This data can come from the PLCs or the local W@de module (W320). The logging function is FIFO, i.e. new data replaces the oldest.

## Alarm management

All data can be set to generate one or more types of alarms.

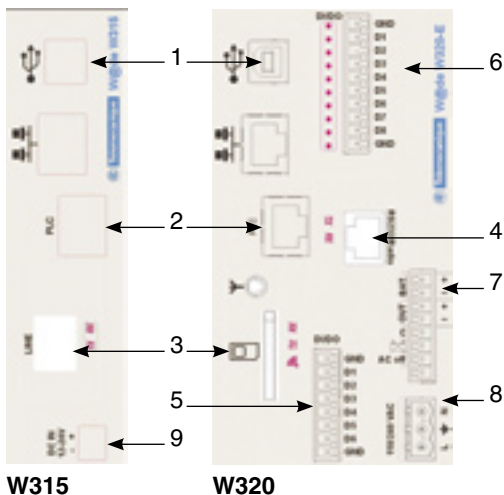
Alarms are sent as events to the SCADA system, by SMS to a telephone or in a file.

## Connections

### Description

The front panel of Telemecanique W@de W315/W320 modules includes:

1. RJ45/USB module for 10/100 base-T interface,
2. RJ45 connector for local PLC link (RS232/RS485 Modbus),
3. PSTN/LL/radio/RS232 modem module (for GSM/GPRS version: SIM card slot and GSM antenna connector on front of case),
4. PSTN/LL/radio/RS232/GPS modem module (2nd modem option),
5. plug-in terminal block for basic 6 digital I/Os,
6. plug-in terminal block for additional 7 digital I/Os,
7. plug-in terminal block for connection of battery, 24 VDC output and battery-fault and VAC failure outputs,
8. plug-in terminal block for 110/230 VAC power supply (W320),
9. plug-in terminal block for 12/24 VDC power supply (W315).



## Technical characteristics

type of module	W315	W320	
<b>Transparent Ready communication services</b>	Transparent Ready class	B10 (June 2006)	
	basic web server	access to PLC variables, alarms, histories and trend curves, file transfers and set-up functions	
	active SMS sending	yes	
	web log histories	50,000 time stamped events in backed-up flash memory (4 MB)	
	server alarm management	sending of alarms via SMS, alarm reset, via modem depending on protocol	
	nbr of I/O variables	> 1 000 variables	
	basic Ethernet TCP/IP communication services	access via telephone, GSM/GPRS, radio or LL transparent for UnityPro, Twido Soft, PL7, Proworx32 and Concept Modbus TCP, CEI 870-5-104 messaging	
<b>structure</b>	ethernet interface	10 base-T/100 base-TX (RJ45)	
	binary throughput	10/100 MB with automatic recognition	
<b>other communication services</b>	via serial port	Modbus	
	via modem	Modbus TCP, Modbus, IEC 870-5-101, IEC 870, DNP3.0	
	modem integrated in case	V34 PSTN or V92 PSTN or ISDN or GMS/GPRS or 1 200 bauds FSK radio or 2 400 bd FFSK radio or LL, with second modem channel possible for the W320 (normal/backup)	
	time synchronisation via modem	by protocol or by GPS (instead of second modem)	
<b>general characteristics</b>	module width	1 slot	2 slots
	dimension for autonomous unit: H x W x D (mm)	150 x 36 x 132	150 x 72 x 132
	operating temperature range	-25, +70 °C (+55 °C for GSM/GPRS)	
	relative humidity	95%	
	degree of protection	IP 20	
	power supply	9 to 30 VDC	110/230 VAC and/or 12 V battery internal battery charger
	EMC standards	LV safety EN60950-IEC61010, immunity EN55024-IEC61000, disturbances EN55022	
	telecom standards	PSTN/ISDN R&TTE, FCC part68, CS03, GSM R&TTE, GCF	
	environmental standards	climate IEC60068-2-1, 2, 3, 11, mechanical IEC60068-2-6, 27	
	other standards	UL508, CSA142 (to come)	
	indication LEDs	supply (ON), fault <input type="checkbox"/> , PLC activity (PLC), modem <input type="checkbox"/> , Ethernet (LINK), Ethernet activity (ACT), DI status, DO status	
	processor	ARM9 TDMI 32-bit RISC, 200 MIPS	
	storage	SDRAM 8 MB (up to 32 MB), flash 4 MB	
	digital I/Os	-	6 transistor I/Os, can be configured in groups of 2 + 5 isolated DI and 2 relay DO

designation	built-in modem	catalogue numbers
W315 module	GSM/GPRS	TSXETW315G1
	PSTN	TSXETW315T1
	radio	TSXETW315R1
W320 module with 2 built-in modems	PSTN and radio	TSXETW320T1R1
	PSTN and GSM	TSXETW320T1G1
	PSTN and RS32	TSXETW320T1S1
	PSTN and synchro GPS	TSXETW320T1P1
	GSM and synchro GPS	TSXETW320G1P1
	others	please consult us
whip antenna GSM 900 MHz/1 800 MHz		TSXETW3GANT1
antenna extension 900/1 800 MHz		TSXETW3GEXT1
20 W/24 VDC power supply and battery charger (-10 to +55 °C)		TSXETW3PWR2

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