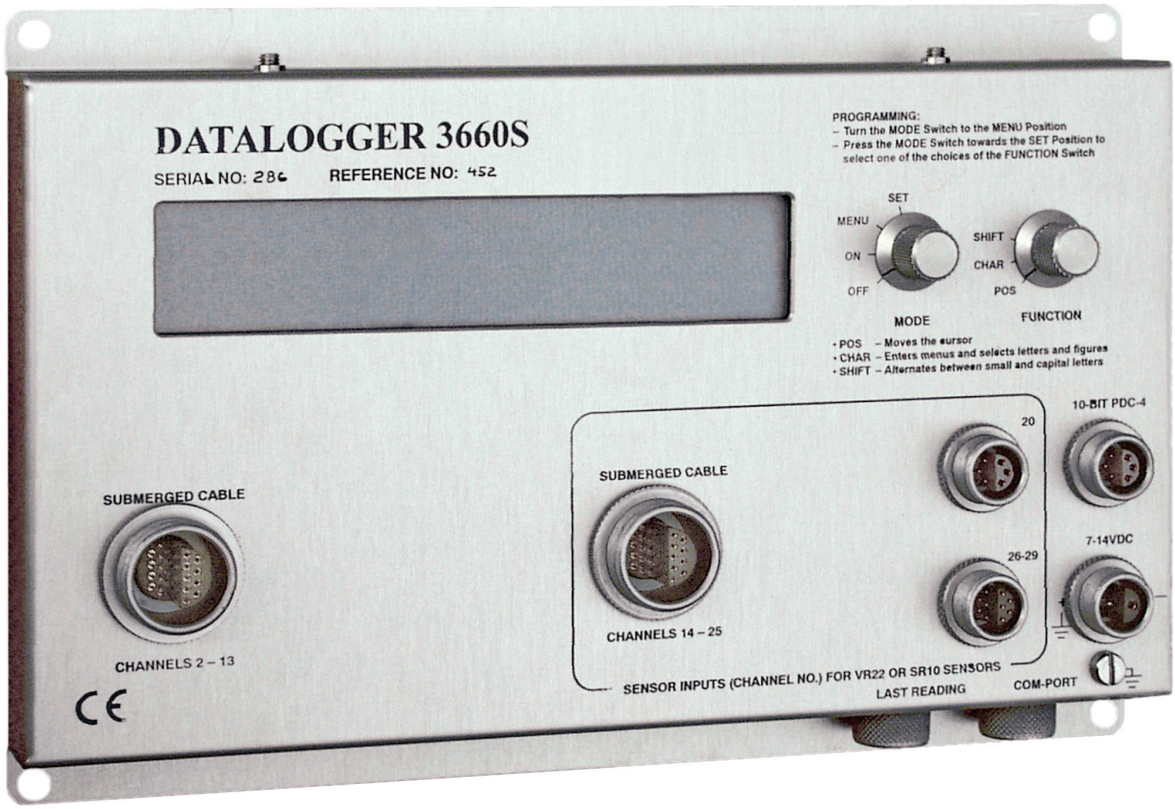
AANDERAA

a xylem brand



Datalogger 3660S

A rugged unit for reading standard Aanderaa sensors and for displaying, storing and transmitting the data in engineering units.

Datalogger 3660S, 29 and 30 channels

D 312S - Dec 2012

Field of application

The Datalogger 3660S is a low power, lightweight and watertight field operating devices displaying data in engineering units. It is designed for battery operation and can operate with all Aanderaa standardized sensors. The 3660S unit scans up to 28 or 29 sensors respectively making it well suited for a variety of field datalogging applications such as Automatic Weather Stations, Road Weather Stations, Wind Monitoring Systems and Water Level Measuring Systems.

Data can be transmitted as raw-data in 10-bit code by VHF or UHF-radio, or as engineering units by modem. Data can also be presented as a voice message by connecting Voice Generator 3420. If connected directly to a PC, or via modem, the Display Program 3710 can be used for real-time data display.

When the unit is connected to a modem, alarm limits can be set for each sensor connected. When an alarm is triggered the unit can dial a preset telephone number and send an alarm message to another modem or to a pager.

The electronic circuit-board is molded in Scotchcast, housed in an 28x178x271mm anodized aluminum cover, designed for wall mounting. It is furnished with a 4-line 40 character LCD, two control switches and a set of watertight receptacles for electrical connection. If power is lost the unit will retain its programmed information and data due to an internal back-up battery.

A built-in quarts clock generates the trigger pulse for the unit. Selectable recording intervals are : 0.5, 1, 2, 5, 10, 20, 30, 60, 120 and 180 minutes.

The unit also has a non-stop mode and a remote-start mode. In the latter case a single measurement cycle is per- formed on reception of a remote triggering signal. When triggered by the clock or by a remote-start signal, the unit scans up to 29 or 30 channels in sequence. Channel 1 is a built-in reference channel, while the other is for connecting sensors. The analog to digital converter converts the sensor readings into raw data in 10-bit binary code which is fed to the PDC-4 output.

When operating the readings are displayed successively in engineering units on an LCD and at the same time stored in the units internal memory. After measuring the last channel, the display will go blank until the unit is trigged again. The stored data can be accessed directly from a personal computer or over the telephone network by connecting the unit to a modem.

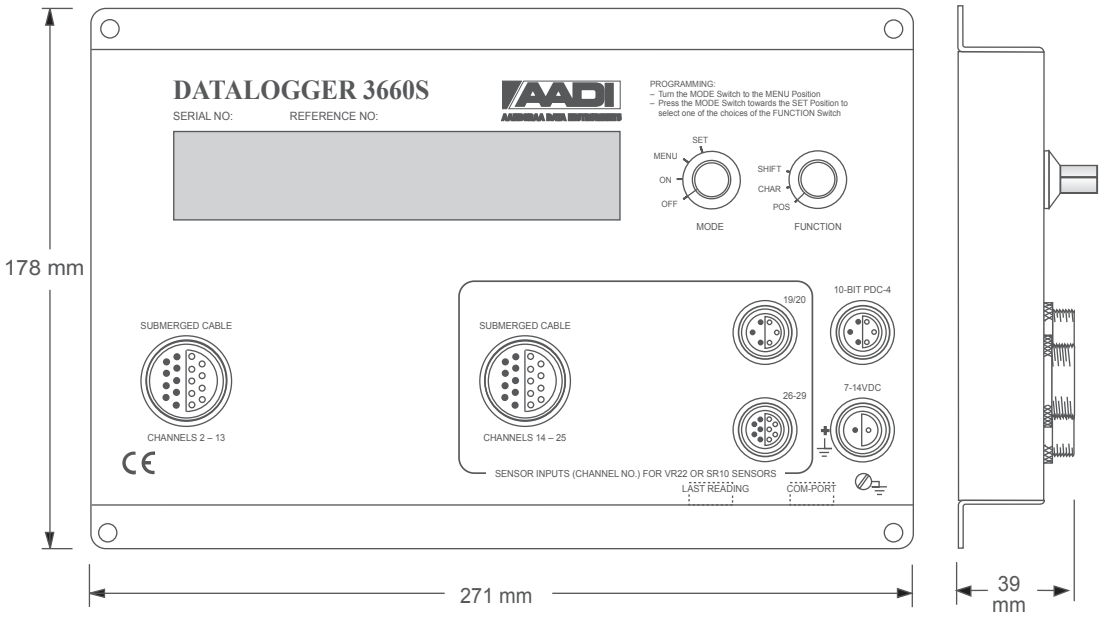
The Last Reading output will send an ASCII string after each channel has been measured, containing the channel number, parameter name, reading and unit for each channel (see page 6).

Although the datalogger is either a 29 or 30 channel logger the first channel is always allocated a reference reading which is a number between 0 and 1023. This is a fixed reading in the beginning of every measuring cycle and it serves as a station identification number as well as a performance test. If a special number is needed as reference value, coefficients can be entered for this channel as for the other channels. The other channels are available for sensors.

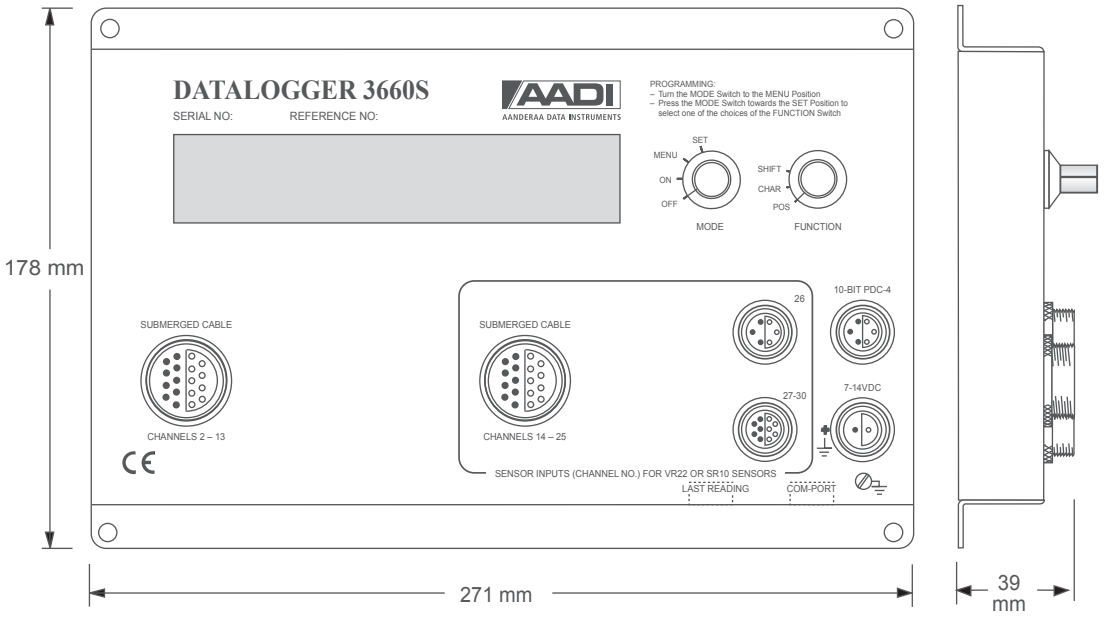
Safety back-up of raw data, in addition to the internal stored data in engineering units, is recommended using an external data storage unit DSU 2990,2990E or 2990F. The 2990 version can store up to 65000 data words, the 2990E version up to 262000 data words and these versions will, when full, block for further data storage. The 2990F version, however, will continue to store data but then overwrite the oldest ones. The same storage units are also used for long-term data storage exceeding the internal storage capacity.

Storage Capacity in days. The figures are estimated values and must be considered as a guideline.

interval	Number of Channels															
minutes	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	31
0,5	5	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-
1	10	8	6	5	4	4	3	-	-	-	-	-	-	-	-	-
2	19	15	11	10	8	7	6	6	5	5	5	4	4	4	-	-
5	48	38	28	24	20	18	15	14	13	12	11	10	10	9	8	8
10	96	75	56	48	40	36	31	28	25	24	21	20	19	18	16	16
20	190	149	112	96	80	71	62	56	50	46	42	40	37	35	32	31
30	282	221	167	144	119	106	92	84	75	69	63	59	54	52	48	47
60	543	430	327	282	234	210	182	164	149	136	124	117	108	102	95	93
120	1003	809	626	543	454	408	355	327	292	258	244	230	212	201	186	182
180	1379	1138	896	784	659	596	520	480	430	384	358	338	312	296	276	270



29 Channel Datalogger



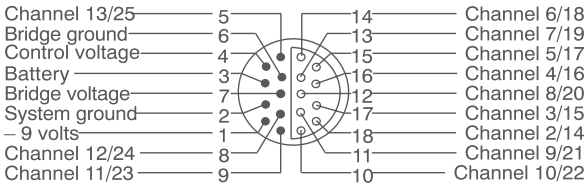
30 Channel Datalogger

Specifications 3660S

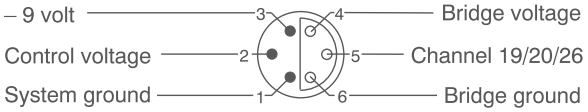
PIN CONFIGURATION

Receptacle, exterior view; pin = ●; bushing = ○

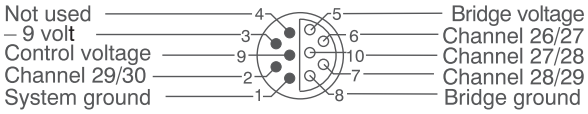
Submerged Cable, 29 and 30 channel versions



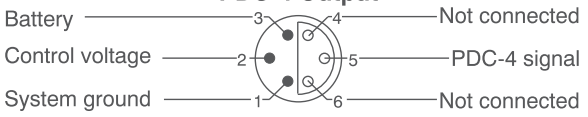
Single Parameter Sensor Input
Channel 19 or 20 for 29 channel version
Channel 26 for 30 channel version



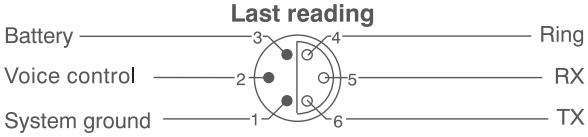
Multiparameter Sensor Input
Channel 26 - 29 for 29 channel version
Channel 27 - 30 for 30 channel version



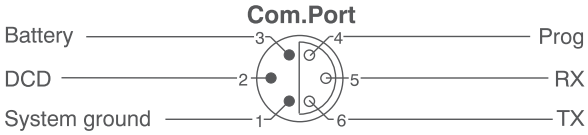
PDC-4 Output



Last reading



Com.Port



Power Input,7-14VDC

Input signal, 3660S:	Up to 29 VR22 or SR10 sensors
Recording intervals:	0.5, 1, 2, 5, 10, 20, 30, 60, 120, 180 minutes. In addition: nonstop and remote start. 4 seconds each channel
Remote Start:	5V positive pulse to pin 5 of the PDC-4 output receptacle
Resolution:	10 bit binary
Accuracy:	±1bit binary
Battery indication:	Range: 6-15 V
Output signals:	
Aanderaa code:	10 bit PDC-4
LAST READING and COM PORT:	ASCII coded selectable from 1200 to 9600 baud, 8 data bit, 1 stop bit, no parity, no handshake. RS-232C string, See below
Internal storage:	RAM. (See table page 2)
Power Supply:	7-14 volt DC
Current consumption:	Quiescent: 50µA, 15mA average when operating
Operatingtemp.:	-40 to +60°C LCD:-15 to +60°C
Material and finish:	Scotchcast molding with hard anodized aluminum case, 10-15µ
Weight:	1.9kg
Warranty:	Two years against faulty materials and workmanship
Accessories included:	AC/DC Adapter 3786 and Data/Programming Cable 3204
Approvals:	CE certified

Ready made cables are available for connecting the Dataloggers to:

DSU 2990	Cable 2842
Voice Generator 3420	Cable 3296
PC/CRT	Cable 3204
Field Modem 3431	Cable 2842
Printer (Epson)	Cable 3206
Printer (Seiko)	Cable 3279
External Modem, 25 pins	Cable 3205

RS-232C String, Available on Last Reading receptacle:

01 Reference	834.00
02 Water level	3.43 m

Protocol:

CHANNEL NO.: 2 CHAR.<SPACE>. **PARAMETER NAME:** 19 CHAR. <SPACE>

READING: 5 CHAR. <POINT> **DECIMALS:** 2 CHAR.<SPACE>

UNIT: 5 CHAR.<LF>& <CR> WITH AN EXTRA <LF>& <CR> AFTER THE LAST CHANNEL.

Printout of time and battery voltage is optional

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Let's Solve Water

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