

# 6541

## PRECISION WATER LEVEL INSTRUMENT



### MODEL C



The 6541 is a high accuracy float and pulley based shaft encoder instrument for measuring the level of water in many different applications. Float-operated instruments can be the most accurate way to monitor water levels, and they are the most common method to measure river levels. The Unidata 6541 precision water level instrument can achieve operating accuracy and resolution of 0.2mm with high stability and minimum drift.

This accuracy is maintained for the service life of the instrument without calibration or maintenance, apart from battery changes. The 6541 has the range to monitor surface and underground waters and the precision to monitor rainfall and evaporation.

The water level instrument is normally connected to the surface of the water by a float system. As the water level changes, the input shaft rotates. An optical encoder is mounted on the input shaft. On installation, the instrument is set to display the water level.

The encoder is continuously monitored as the instrument tracks water level changes. These changes update the LCD display and the readings can be recorded by an associated datalogger.

The very low mechanical friction and inertia of the instrument means that it can produce data with high precision and accuracy. A replaceable battery pack powers the instrument for more than twelve months. Practical design and rugged construction ensures easy operation and long service life.

## SPECIFICATIONS

PHYSICAL SPECIFICATIONS	
MATERIAL:	Powder coated aluminium mounting with Polycarbonate Enclosure IP66
SIZE:	180mm x 140mm x 275mm (LxWxH)
WEIGHT:	2.7kg (including battery)
OPERATING TEMPERATURE:	-10°C to 60°C
ELECTRICAL SPECIFICATIONS	
BATTERY:	6 x 1.5V industrial grade D size Alkaline battery pack 6910A (non-rechargeable)
BATTERY LIFE:	up to 1 year (based on daily schedule)
EXTERNAL POWER:	External battery power 7-15VDC may be connected
RANGE:	Standard 0m-65.5m or -199.999m to 199.999m
ACCURACY:	1mm, 0.2mm or 0.1inch depending on the chosen float pulley size
RESOLUTION:	1mm, 0.2mm or 0.1inch depending on the chosen float pulley size

I/O:	2 x HSI0 bi-directional channels Up to eight instruments can be daisy chained Optional 4-20mA
SDI-12:	SDI-12V 1.3 recorder (1200 baud smart instrument channel)
LCD TYPE:	Reflective grey no backlight
DISPLAY FORMAT:	One line x 6 Characters, 7 segments
OPTIMUM VIEWING:	6 o'clock
CABLE:	5m 8 core data cable
INTEGRATED LOGGER SPECIFICATIONS - OPTIONAL	
STORAGE MEMORY:	Low power CMOS RAM 512k standard
RAM BACK UP BATTERY:	Lithium Battery 3V, 950mAh
TIME CLOCK:	Crystal regulated, +/- 10 seconds/month
SCAN RATES:	Programmable from 5 seconds to 5 minutes
LOG INTERVALS:	Programmable from 5 seconds to 24 hours
CPU:	80C552 microcontroller, 14.7456 MHz