

# Temperature/Water-holdup-Flowmeter Sub (TWFS)

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## OVERVIEW

The temperature/water holdup/flowmeter tool is a combination tool designed for measuring the said three downhole parameters. This combination tool incorporates a capacitance sensor for measuring water hold-up in fluid and a fast-response platinum sensor for measuring temperature. The tool bottom is intended for attaching to a flowmeter mechanical section for flow rate measuring. The data from three sensing sections are all processed in the electronics section in this combination tool.

## APPLICATION

- ❑ Water holdup measurement for fluid composition
- ❑ Location of leaks and crossflow by the temperature sensor
- ❑ Quantitative measurement of flowrate



## SPECIFICATIONS

Parameters	Description	
	TWFS-BA	TWFS-CA
Model	TWFS-BA	TWFS-CA
OD	35mm (1 3/8")	43mm (1 11/16")
Max Working Temperature	175°C	175°C
Max Working Pressure	103MPa (15,000psi)	103MPa (15,000psi)
Cable	Mono-conductor	Mono-conductor
Operating Voltage	18V (WRTbus)	18V (WRTbus)
Operating Current	45mA±3mA	45mA±3mA
Water Holdup Measuring Range	0-45%	0-45%
Water Holdup Measuring Accuracy	0.01	0.01
Temperature Measuring Range	0 - 175°C	0 - 175°C
Temperature Measuring Resolution	0.01°C	0.01°C
Temperature Measuring Accuracy	± 0.5°C	± 0.5°C
Response Time	< 0.5S	< 0.5S
Flowrate Output	10 Pulses/Resolution	10 Pulses/Resolution
Logging Speed	> 400 m /h	> 400 m /h