



PRODUCT SPECIFICATIONS

AutoFLEX Flow Computer

The Thermo Scientific™ AutoFLEX instrument is built on the field-proven AutoCONFIG platform. Designed to reduce pipeline disruptions and maintain worker safety.

Features

- Application scalability
- Instrument health
- Seamless integration

Scalable All-in-One Platform

From a single measurement point to large delivery points, the AutoFLEX flow computer coupled with the Thermo Scientific™ AutoCONFIG interface helps oil and gas transporters maximize flow throughput with quick field deployment and enhanced station visibility.

Flawless Integration

Avoid unnecessary downtime, the AutoFLEX flow computer easily and efficiently integrates into existing measurement and control systems. For simplified SCADA connection, single click exporting and importing MODBUS mapping is available.

Operator Safety

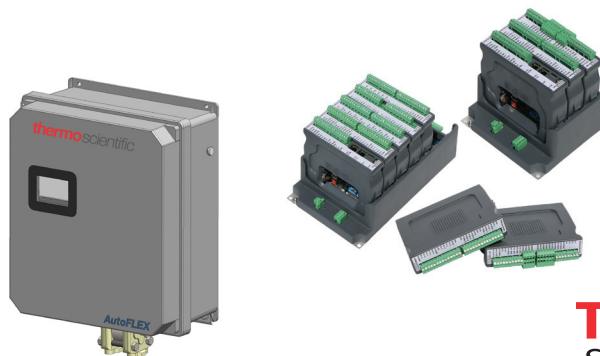
With an extended range through Bluetooth 5.1 connectivity, operators are removed from potential hazardous environments. The 200+ alarm configurability provides real-time insight to site operations for quick decision making regardless of being onsite or remote.

AutoCONFIG Configuration Software

The field proven AutoCONFIG software unlocks the power of our AutoFLEX platform with effortless configuration, health status and field proven control functions that enable field technicians to effectively and efficiently manage product delivery.



Thermo Scientific AutoCONFIG built-in software



Thermo Scientific AutoFLEX 3-slot and 7-slot options

Thermo Scientific AutoFLEX

AutoFLEX Flow Computer

General specifications

Processor	792MHz 32 bit High Performance ultra low power ARM processor with Neon co-processor
Program memory	256MB
CPU board communication port	(2) Serial (2) Ethernet (1) USB
Input power	10 VDC to 30 VDC
Historical data storage	User configurable; defaulting to 65 days of daily, 35 days of hourly
Audit trails	User configurable; defaulting to 200 audit events, 60 different types of audits
Alarm log storage	User configurable; defaulting to 200 alarm events, 15 different types of alarms

Environmental specifications

Operating temperature	-40°C to +85°C (-40°F to +185°F)
Operating humidity	0-95% RH, non-condensing
Enclosure rating	NEMA 4X/IP65
Certifications	CSA/C-US Class I, Div 2, Groups C and D hazardous locations; ambient temperature range of -40C to +85C, temperature code T3Cl Type 4X enclosure)

Physical specifications

Rack/Panel Mount Dimensions	7.18"W X 7.5"H X 6.9"D
NEMA 4X Dimensions	15.27"W X 17.28"H X 8.15"D
Display	128 x 65 backlit LCD display; User programmable scroll list and menus

Natural gas calculations

Supercompressibility	(Fpv) AGA 8 Gross-1992; AGA 8 Gross-2017; AGA 8-1992/2017; AGA 8 Short-1988; NX-19; NX-19 Analysis; GERG
Differential meters	(DP, Orifice) AGA 3/ANSI/API 2530-1992 Method 2; AGA 3/ANSI/API 2530-1985; ISO 5167; Cone meters; Annubar; GOST
Linear meters	(Turbine) AGA 7; AGA 9; AGA 11
Energy	AGA 5; GPA 2172; ISO 6976
Diagnostic	AGA 10 SoS
Additional factors/equations	Fwv (manual, partial or full); Fws
Turbine meter linearization	10 Point Frequency/K-factor Table

Liquid calculations

API tables	Table A (generalized crude oils); Table B (generalized products); Table C (alpha 15/60 supplied); Table D (Lubricating Oils); Old Table (NGL, LPG SG range 0.425 to 0.650); Table 23/24 E, 53/54 E (NGL, LPG); VCF (CH 11.1 2004); Propylene (CH 11.3.3.2); Ethylene (API 2565/CH 11.3.2.1); Ethylene (NBS 1045)
Volume correction factor (VCF)	Consistent with API 2540/ASTM D1250-80/IP 200; 5/6 A/B; 23/24 A/B/D; 53/54 A/B/D; 6/24/54 C; CH 11.1 2004; Note: natural gas liquids (NGL) and liquefied petroleum gases (LPG); OLD 23/24, OLD 53/54; Table E is new standard to replace OLD 23/24.
Correction for effect of pressure on liquid	Ch 11.2.1/Ch 11.2.2; Ch 11.2.1M/Ch 11.2.2M (compressibility factors for hydrocarbons), GPA TP15 equilibrium pressure
Propylene density	API Ch 11.3.3.2
Ethylene density	API 2565 (Ch 11.3.2.1); Ethylene NBS 1045; IUPAC
Live density input	Thermo Scientific Sarasota liquid density meter, Solartron, UGC, 4-20 mA

	Point Count	Electrical	Isolation
Communication Board	(2) RS232/485 2/4 wire (1) isolated 485 4 wire (1) non-isolated 485 4 wire	Up to 2 Comm modules in one system Up to 115.2K baud rate	1500 V
Non-isolated Combo Board	Multifunction points: (2) PI/DI/DO (4) DI/DO (1) DO/FO/DI (5) AI (1) AO (1) RTD	PI: SW selectable dry contact, slot sensor or magnetic input with internal pull up; DO: FET, 1A /channel, 30VDC max. DI: Dry contact or an open collector AI: SW selectable, 4-20 mA or 1-5VDC FO: 0-100 KHz RTD: -100 to 400 deg F	
Analog Input Board	(12) AI	SW selectable, 4-20 mA or 1-5VDC	1500 V
Analog Output Board	(6) AO	SW selectable, 4-20 mA or 1-5VDC	1500 V
Digital Input Board	(8) DI	DI: Dry contact or an open collector	1500 V
Digital Output Board	(8) Relay output	250VAV/300VDV max, current 3A max	1500 V
Isolated Combo Board	(4) PI/DI/DO (4) DI/DO (4) AI (1) AO (1) RTD	PI: SW selectable dry contact, slot sensor or magnetic input with internal pull up DO: FET, 1A /channel, 30VDC max DI: Dry contact or an open collector AI: SW selectable, 4-20 mA or 1-5VDC RTD: -100 to 400 deg F	1500 V
Prover Board	(2) switch input	Switch input for start/stop	1500 V
Digital Multi-function Board	(6) PI (4) DI (4) DO	PI: SW selectable dry contact, slot sensor or magnetic input with internal pull up DO: FET, 1A /channel, 30VDC max DI: Dry contact or an open collector	1500 V

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