SMARTFLOW

TRACER[®]_{VM} Bluetooth Interface

General Description

Tracer_{VM} **Bluetooth Interface** collects, transmits and saves data from Tracer_{VM} Base flowmeters installed in injection mold cooling circuits.

Flowmeters purchased separately are connected via cable to the Tracer $_{VM}$ Bluetooth Interface. The Interface provides power to each flowmeter and receives voltage signals for temperature and flow.

The Bluetooth Interface wirelessly transmits flow and temperature to display on a mobile device. Flow condition data log files can be created via app and saved on USB flash drive documenting the mold cooling water conditions.

The Interface also communicates over Ethernet connection to PC software for network file storage and alerts. The files are easily read into database software for reference or analysis. Scientific Molders can use data to confirm processing parameters and optimize cycle times and cooling water efficiency.

When used with PC software, a dry contact switch is available for connection to a peripheral or machine control to signal an alarm for out of limit cooling water conditions.



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Form #196 (5.18)

SMARTFLOW[®] TRACER[®]VM</sub> Bluetooth Interface

 $\mathsf{Tracer}_{\mathsf{VM}}$ Bluetooth Interface includes the Interface module and all software necessary to create cooling line log files.

Mobile app allows for creation of log files to be saved on Interface connected USB. The Ethernet port on the Interface connects to local network enabling log file creation, storage and process alerts including a dry contact switch.

Peripheral equipment such as PC, Mobile Device or flash drives are user provided. Input comes from Tracer_{VM} Base models. Please refer to Smartflow catalog 186 for details.

Features and Benefits

- Transmits temperature and flow conditions in real time to mobile devices for process monitoring up to 20 meters away.
- Simplifies multiple Tracer_{VM} Base installations by providing power, ground and signal termination near the process.
- Gasketed, water-resistant plastic enclosure provides secure mounting in locations where occasional water spray is present.
- Ethernet port connects the Interface to a local network for communication with Data Logger software.
- USB port provides mobile device charging plus flash drive connection.
- Smartflow Data Logger PC software included.
- When used with PC software, dry contact switch is available to signal out of limit flow conditions (temperature and flow rate).

Specifications

Housing	NEMA4X compliant
Operating Temperature	.0°C to 52°C (32°F to 125°F)
Maximum Wireless Range	20 meters (65.6ft)
Maximum TracerVM Base Flowmeter	r
Distance to Bluetooth I/F	3 meters (10ft)
Power Required 8 to 28VDC	with earth ground (external)
require	ed to maintain signal integrity
Relay Switch Rating	1A, 30VDC/30VAC
Data Logging Software	included

Mobile App

Tracer_{VM} Mobile App is available for free download from iTunes or the Google Play store. Search for "Tracer_{VM}". The mobile app displays temperature and flow rate data from one Interface module with up to 8 flowmeters at one time.

Functions:

- Saves .csv file to USB data storage device connected to the Bluetooth Interface Module for archiving and analysis.
 - Display and data logging options include:
 - * Name Interfaces
 - * Name individual cooling circuits on the device
 - * Name .csv file
 - * Manual or Scheduled duration
 - * Selectable log rate between 1 and 3600 seconds
 - * Metric or English units





Tracer_{VM} Bluetooth Interface must be used with at least one Tracer_{VM} Base Flowmeter for flow and temperature input. Up to eight flowmeters can be connected to one Bluetooth Interface. See Smartflow Catalog 186 for Tracer_{VM} Base details.

STANDARD METRIC 34:81:F4:01:51:2E Cooling Circuit1 23.67°C 0.00 LPM Cooling Circuit2 0.00°C 0.00 LPM Cooling Circuit3 0.00°C 0.00 LPM Cooling Circuit4	Tracer vm by	
34:81:F4:01:51:2E Cooling Circuit1 23.67°C 0.00 LPM Cooling Circuit2 0.00°C 0.00 LPM Cooling Circuit3 0.00°C 0.00 LPM Cooling Circuit4	MARTFLOW	STANDARD METRIC
Cooling Circuit1 23.67°C 0.00 LPM Cooling Circuit2 0.00°C 0.00 LPM Cooling Circuit3 0.00°C 0.00 LPM Cooling Circuit4	34:81:F4:	01:51:2E
Cooling Circuit2 0.00°C 0.00 LPM Cooling Circuit3 0.00°C 0.00 LPM Cooling Circuit4	Cooling Cir 23.67°C	rcuit1 0.00 LPM
Cooling Circuit3 0.00°C 0.00 LPM Cooling Circuit4	Cooling Ci 0.00°C	rcuit2 0.00 LPM
Cooling Circuit4	Cooling Ci 0.00°C	rcuit3 0.00 LPM
	Cooling C	ircuit4



Model Number: VMBTI-102

Enclosure Dimensions



Data Logger (PC Based Software)

The Data Logger Software is provided to you free of charge as a download from the product web page. The Data Logger displays temperature and flow rate data from up to 10 Tracer_{VM} Interface Modules with each module on a separate tab.

Functions:

- Saves .csv file to specified location for archiving and analysis.
 - Display and data logging options include:
 - * Name Interfaces
 - * Name individual cooling circuits in the session (display only)
 - * Name .csv file
 - * Manual or Scheduled duration
 - * Selectable log rate between 1 and 3600 seconds
 - * Metric or English units
 - * Alerts are disabled when recording is not active. Set alerts and provide a dry contact switch for low or high temperature and flow rates. Switch can be connected to external device such as low voltage stack light or machine control.
 - View real-time graph for each Tracer_{VM} Base unit. View data from each Tracer_{VM} Interface module in individual tabs.



SMARTFLOW[®] Tracer[®]VM</sub> Bluetooth Interface

PC-Based **Smartflow Data Logger Software** provides temperature and flow process data that can be used in database software for reference and analysis. These data records are useful to injection molders maintaining compliance to regulatory requirements and quality control.

Two screen views are available: Home View and Session View.

Home View

The Home View displays graphs of temperature and flow cooling water conditions for all $\mathsf{Tracer}_{\mathsf{VM}}$ Base flowmeters connected to $\mathsf{Tracer}\mathsf{VM}$ Bluetooth Interfaces.

Up to 10 Interfaces can be displayed graphically on one screen. The maximum number of Tracer_{VM} Bluetooth Interface Units visible for selection is 30. The Home View can show overall health of cooling water lines across the shop floor. An unexpected value for flow or temperature can be seen quickly and may be an indication of a blocked cooling line or out-of-tolerance processing conditions resulting in poor molded part quality.

Session View

Session view displays one Tracer_{VM} Bluetooth Interface with temperature and flow values for each connected Tracer_{VM} Base flowmeter. A maximum of eight flowmeters can be viewed on the screen in Session View. A maximum of 10 Interfaces can be accessed as tabs in the session view at one time.

Log files are created in Session View. These can be started manually or scheduled as needed. Maximum recorded log length is 72 hours.

Session Controls box allow users to set alerts for low or high temperature and flow conditions. When data is being recorded, an alert will pop up on screen to notify the user when a parameter has been breached. Dry contact switch changes state to indicate the out of limit condition. The indicator will disappear as soon as the condition that caused the alert has cleared.

Alerts and dry contact switch are disabled when session recording is not active.

Session Indicators at the top of the screen display current temperature and flow values from Tracer_{VM} Base Flowmeters that are connected to the selected Interface. Real Time Graphs are also displayed for each flowmeter connected to the Interface. Unused flowmeter locations may be disabled as needed. Active Interface units are selected via tabs located near the top of the screen.



Home View

Session View

For An Inside Look at Turbulent Flow and other helpful processing articles, visit the Technical Documents section of the Smartflow-usa.com web site.

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