




MANUFACTURER'S DECLARATION
No. V14224-3XXXXXXXXXX


Test Item, Tests, Test Results


Manufacturer:	ABB Automation Products GmbH Borsigstrasse 2 D-63755 Alzenau
Type of unit:	Thermal Mass Flowmeter for operation in Zone 2 and Zone 22. (Dust hazardous area of Zone 22 is for non-conducting dust particles for layers up to 5 mm thickness)
Type identification:	FMT500-iG (Sensyflow iG)
Ordering No.:	V14224-3XXXXXXXXXX
Supply circuit:	with type of protection non-sparking EEx nA II $U_n = 24V AC/DC \pm 20\%$, $P_n < 20 VA$ $U_n = 110...230V DC/AC \pm 10\%$, $P_n < 20 VA$
Profibus DP RS-485:	with type of protection non-sparking EEx nA II $U_n = < 8V$
Analog – HART:	
- Output circuit: (active)	with type of protection non-sparking EEx nA II $U_n = 30 V$
- Digital output: (passive)	with type of protection non-sparking EEx nA II $U_n = 30 V$ $I_{max} \leq 100mA$
- Digital input: (passive)	with type of protection non-sparking EEx nA II $U_n = 30 V$
PE – circuit:	with type of protection non-sparking EEx nA II
PA – circuit:	with type of protection non-sparking EEx nA II

Ambient temperature: Compact version and remote housing -20°C ... +50°C
 Remote sensor -20°C ... + 80°C

Medium Temperature: - 20°C ... + 150°C

Marking:
Compact housing: ABB Sensyflow iG-Ex
 FMT500-iG
 II 3G EEx nA II T4 X
 II 3D IP 67 T 150°C X
 $T_{amb} = -20^{\circ}\text{C} \dots +50^{\circ}\text{C}$
 $T_{medium} = -20^{\circ}\text{C} \dots +150^{\circ}\text{C}$

Remote housing: ABB Sensyflow iG-Ex
 FMT500-iG
 II 3G EEx nA II T4 X
 II 3D IP 67 T 115°C X
 $T_{amb} = -20^{\circ}\text{C} \dots +50^{\circ}\text{C}$

Remote sensor : ABB Sensyflow iG-Ex
 FMT500-iG
 II 3G EEx nA II T4 X
 II 3D IP 66 T 150°C X
 $T_{amb} = -20^{\circ}\text{C} \dots +80^{\circ}\text{C}$
 $T_{medium} = -20^{\circ}\text{C} \dots +150^{\circ}\text{C}$

Remarks: The medium temperature must not exceed 150° C.
 This is also the maximum surface temperature. User must take appropriate measures to ensure that the following conditions are also met:
 The temperature at the housing of the remote sensor must not exceed + 80°C.
 The temperature at the compact-version housing and the remote housing must not exceed +50°C.

Start-up: The process connection of the Thermal Mass Flowmeter is effected with a flange or coupling nut respectively.
 With a closed cover, the housings used guarantee the types of protection IP 66 or IP 67.

- Application:** The Thermal Mass Flowmeter FMT500-IG is used for the measurement of gas flows in various nominal sizes according to the Data Sheet.
- Mounting and Dismounting:** During mounting and dismounting operations, no electrical voltages may be applied.
If the Thermal Mass Flowmeter is to be dismounted, it must be ascertained that the process has been shut down and that no pressures exist, or that a hot tap fitting is used.
Appropriate measures must be taken to ensure that no leakage of dangerous media occurs.
- Maintenance:** The function must be checked regularly and the Thermal Mass Flowmeter must be replaced in case of malfunction. Only genuine parts may be used.
When mounting the flange, the user must ensure its immunity to dust.
- Scaffolding:** Not applicable.
- Equipotential bonding:** Should a connection to the equipotential bonding become necessary, this can be effected via the sensor housing, the remote housing or the compact version housing.
- Use:** The Sensyflow FMT500-IG V 14224-3xxxxxxxxxxx can be used as operating equipment of Category 3 for Zone 2 and Zone 22, if the electrical characteristics are respected.

Please observe EN 50281-1-2 or EN 61241-14 (classification VDE 0165 Part 2 or Part 2/A2) on dust and the DIN EN 60079-14 (VDE 0165 Part 1) for gas at installation time.
The operating instructions of the FMT500-iG must also be taken into account.

Alzenau, 29. April 2005


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In Charge of Explosion Protection

ABB Automation Products GmbH