

- **Widest flow range, highest accuracy**
 - measures minimal night and peak day flows
- **Tariff function**
 - programmable for daily, weekly & seasonal rates
- **Encoder reading**
 - remote reading using standard inductive pad or via radio link automatic meter reading system
- **Battery operation**
 - 3-year life
 - no external power supply required, facilitates installation in remote locations
- **AC powered with optional battery backup**
 - continuous measurement even during power-down
- **'Fit and Flow™'**
 - foolproof installation; no on-site setup
- **Flow profile-conditioning sensor**
 - tolerant of poor upstream and downstream conditions
- **Buriable sensor and Submersible transmitter**
 - including flooded pits
 - eliminates chamber and ensures fast, low-cost installation



AquaMaster™
– the next generation electronic,
new technology water meter

The Next Generation Commercial Water Flow Meter

AquaMaster™, available in sizes 15 to 600 mm (1/2 in. to 24 in.), is the total solution for flow measurement in the water industry. Outstanding performance, innovative features and user benefits, coupled with low cost of ownership ensures that AquaMaster™ is the first choice for District Metering, Bulk Revenue, Trunk Mains and Treatment Works applications.

AquaMaster™ has been designed specifically for the water industry in response to its stringent demands for enhanced metering capability; enabling ever more efficient and cost effective operation and compliance with increasing legislative requirements.

Based on ABB proven technology, AquaMaster™ is supported by the expertise of ABB – the world's leading flowmeter manufacturer with many pioneering advances in water flow metering over the last decade e.g. AquaMag™, MagMaster™, AquaProbe™, CalMaster™ etc. ABB operates national and internationally accredited flow calibration facilities in the UK, USA, Germany, Australia and India. We also offer comprehensive, locally-based before- and after-sales support and service.

In addition to high measurement performance the AquaMaster offers reading of totalizers via the industry standard inductive pad reader or via radio link automatic meter reading system. This feature allows easy access to billing information without the need to physically read the meter display.

No External Power Required for Remote Locations

- No external power supply (2 internal batteries)
- 3-year battery life
- Site-replaceable batteries
- Unique battery management system gives a battery replacement window in excess of 1 year, with no flat-battery interruption to measurement.

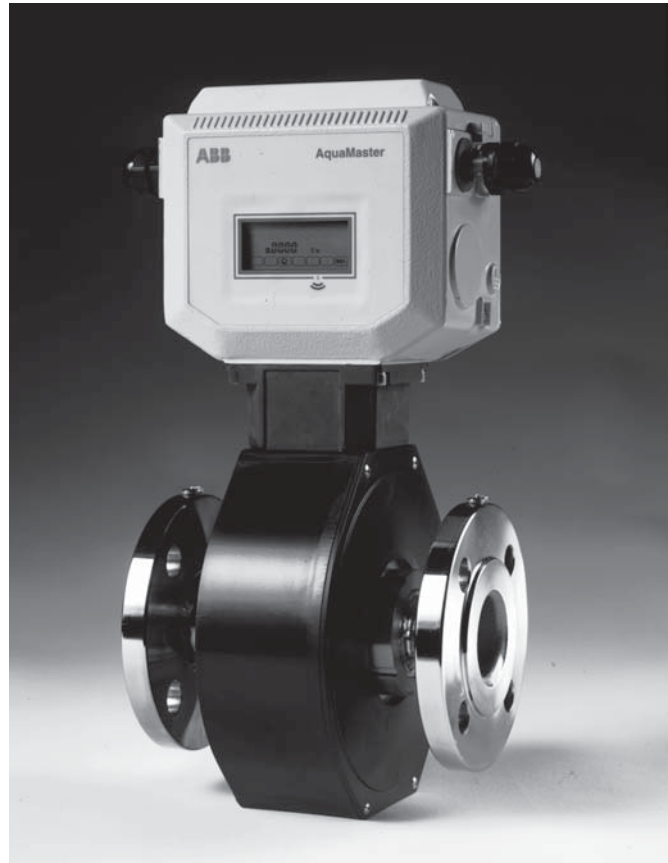
AquaMaster™ is the ideal solution for locations where there is no external power. Two user-replaceable internal batteries provide a 3-year battery life, thus eliminating the high cost of providing a mains supply to the meter.

AquaMaster's extended battery life is achieved through new technology design.

AC-powered units have optional battery backup to ensure no loss of flow measurement during power down periods.

Typical Applications

- Bulk revenue
- District metering
- Trunk mains
- Treatment works



New Performance Standards for Flow Measurement

Widest flow range, optimum accuracy and long term stable calibration mean that AquaMaster™ sets new performance standards in the water industry.

The performance specification for an 80mm (3 in.) AC-powered unit (Figs. 1 and 2) demonstrates how AquaMaster™ significantly better the ISO 4064 Class B and Class C standards for both accuracy and max min flow rates (Q_{max} and Q_{min}).

This unique low flow rate capability enables previously unrecordable minimal night flow rates to be metered; particularly important for bulk revenue and district metering applications.

The clear bore of the AquaMaster™ eliminates the possibility of damage by particulate matter and the absence of moving and wearing components ensures that this unique level of performance is maintained long term.

The unique design of the AquaMaster sensor conditions the flow profile in the measuring section so that distortions in the flow profile, either upstream or downstream, are flattened, resulting in excellent in situ meter performance, even with very bad hydraulic installation conditions. Tests have shown that with a gate valve bolted directly on the upstream flange of the meter, performance is still within ISO4064 Class C, even with the gate virtually shut.

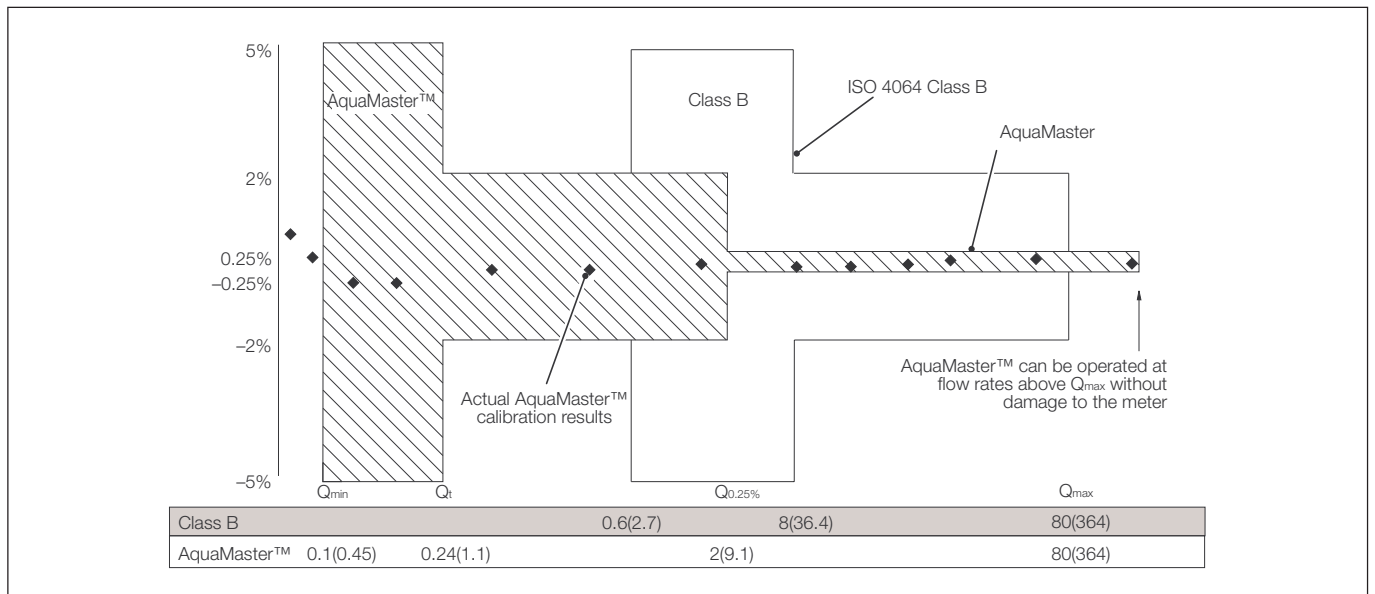


Fig. 1 Comparison of 80mm (3 in.) AC Performance Specification m^3/h (gal/min) with ISO 4064 Class B

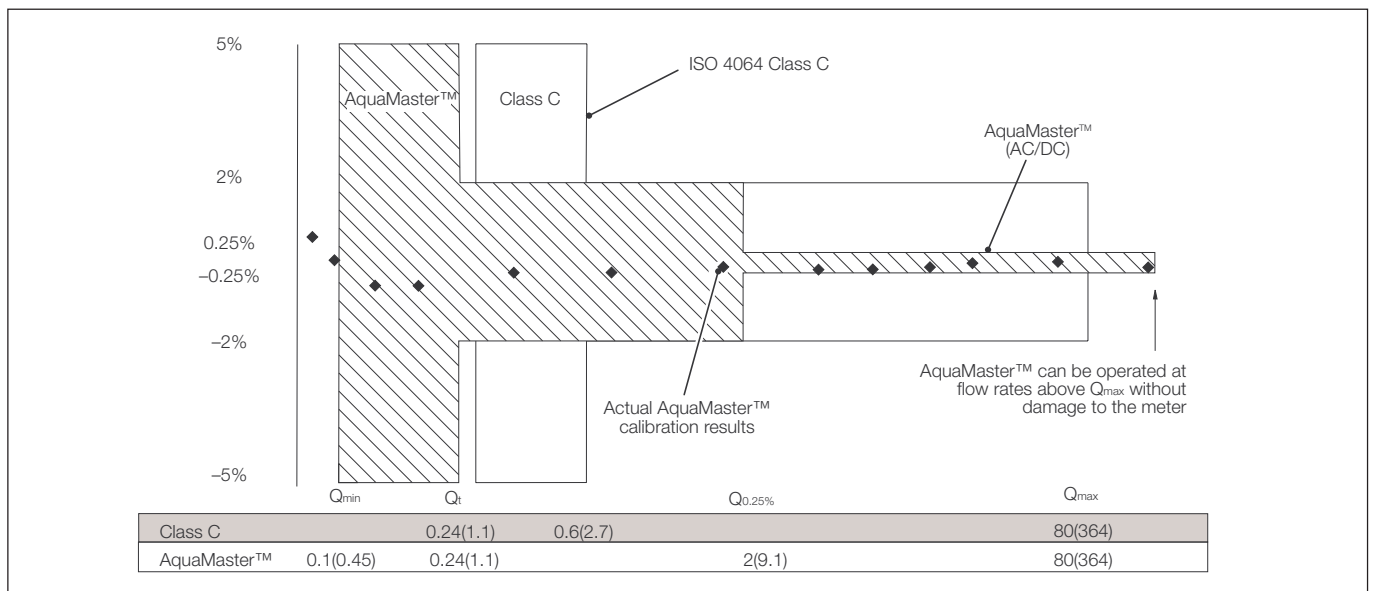


Fig. 2 Comparison of 80mm (3 in.) AC Performance Specification m^3/h (gal/min) with ISO 4064 Class C

Transmitter

- Comprehensive display
- Submersible for use in flooded chambers rated IP68 (NEMA6)
- Resettable or secure totals
- 8mm high displays for Totals (exceeds ISO4064 requirement)
- Tamper resistant
- 3 outputs (forward and reverse pulse, or pulses, direction and alarm)

The AquaMaster™ Transmitter provides the most comprehensive range of flow data and information currently available to the water industry. If all the data is not required, the unit can be configured so that only the required values are displayed, thus ensuring simple reading with no superfluous data. Likewise, the display is available for top or side viewing, depending on the location of the meter, for easy reading in all locations.

Standard Tariff Setting

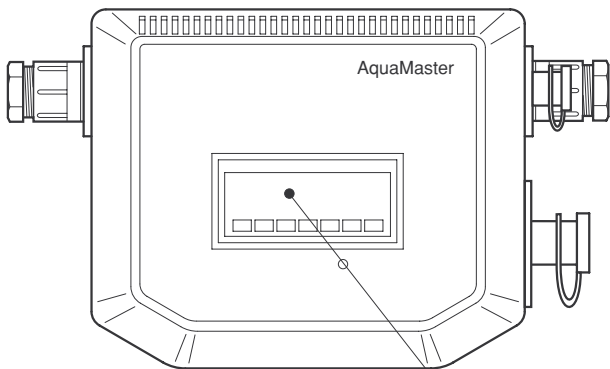
AquaMaster incorporates a multiple tariff feature where the accumulated flow volume is routed to one of two 8-digit signed tariffs; tariff A and tariff B, depending on time and date. It is fully programmable by the user for time of day, day of week or date during the year. These user-defined times/dates can be combined in a variety of modes as illustrated in the tables below to produce the following tariff regimes.

Weekly Cycle Defined

Mode	Tariff A	Tariff B
1	Day time during weekend	Night time at weekend + day and night during week
2	Day time during week	Night time during week + day and night during weekend
3	All day times	All night times
4	Night time during weekend	Day time during weekend + day and night during week
5	Day and night during weekend	Day and night during week
6	Day time during weekend + night time during weekend	Night time during week + day time during weekend
7	All day times + night time during weekend	Night time during week

Yearly Cycle Defined

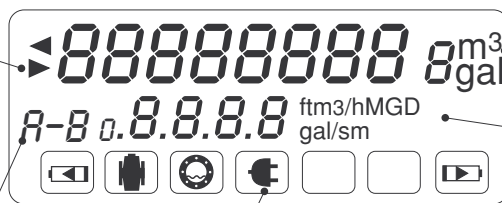
Mode	Tariff A	Tariff B
1	Day time during summer	Night time during summer + day and night during winter
2	Day time during winter	Night time during winter + day and night during summer
3	All day times	All night times
4	Night time during summer	Day time during summer + day and night during winter
5	Day and night during summer	Day and night during winter
6	Day time during winter + night time during summer	Night time during winter + day time during summer
7	All day times + night time during summer	Night time during winter



9-Digit LCD Display

- Cyclic display*
- 8mm High
 - Forward total
 - Reverse total
 - Net total
 - Date
 - Tariff Total

Tariff Indicator



Status Indicators

- Battery A low
- Fault
- Empty pipe
- Battery B low
- Mains off

Choice of Flow Units

to match user requirements

5-Digit LCD Display

- Cyclic display*
- Flow rate
 - Time
 - Velocity

* Can be programmed to display required values only

Easy, Low Cost Installation

No matter what the location or installation requirements, AquaMaster™ provides a cost-effective solution.

Both the sensor and the Transmitter are fully submersible, enabling installation in flooded chambers.

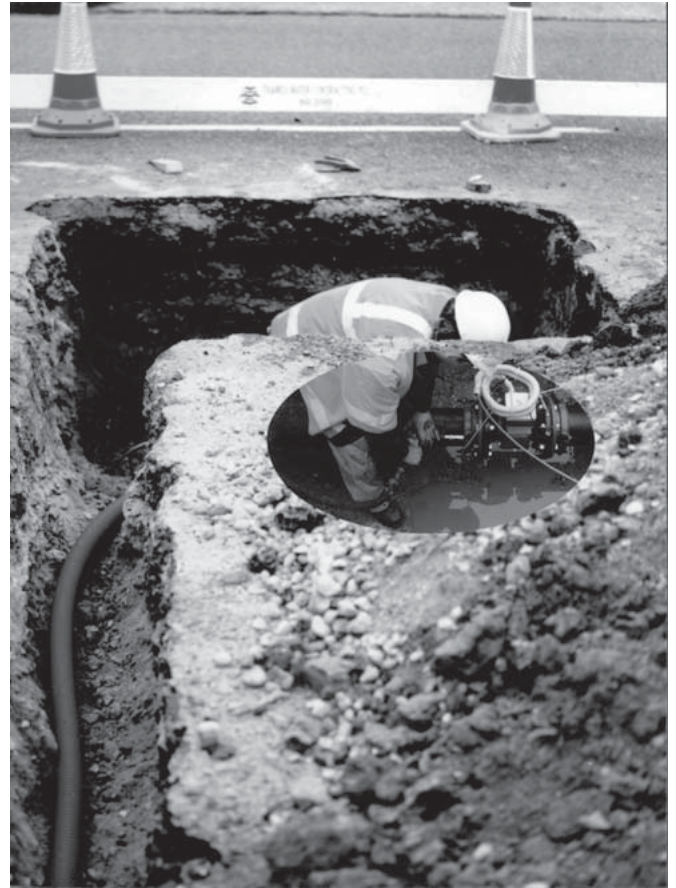
In addition, the sensor is buriable, thus eliminating the need for a chamber. Installation merely involves excavating to the pipeline, fitting the sensor and back filling the hole, to ensure very fast, low cost installation. The associated Transmitter is then located in the most convenient position for the user.

The elimination of bypasses and ancillary items such as strainers, enables the installation cost to be kept to an absolute minimum.

These factors, together with the innovative 'Fit and Flow™' system, ensure foolproof installation with total user confidence.

'Fit and Flow™'

- No need to match sensor and Transmitter
- Fast, reliable installation
- Foolproof, no errors
- Sensor stores all calibration factors, site settings, serial numbers, etc.
- Volume totalizer and tariff values backed-up in sensor for total security
- Multiple, programmable password levels stored for measurement security



Underground Installation of AquaMaster™

Specification

Battery-powered Meters – Flow Requirements per ISO 4064

Size		Q _{max.}	N	Q (0.5%)	Q _t	Q _{min.}
mm	in.	m3/h (Ugal/min)	m3/h (Ugal/min)	m3/h (Ugal/min)	m3/h (Ugal/min)	m3/h (Ugal/min)
15	1/2	3 (13)	1.5 (7)	0.23 (1.0)	0.023 (0.099)	0.009 (0.040)
20	3/4	5 (22)	2.5 (11)	0.38 (1.7)	0.038 (0.165)	0.015 (0.066)
25	1	7 (31)	3.5 (15)	0.53 (2.3)	0.053 (0.23)	0.021 (0.09)
40	1 1/2	20 (88)	10 (44)	1.5 (6.6)	0.150 (0.66)	0.06 (0.26)
50	2	30 (132)	15 (66)	2.3 (9.9)	0.23 (1.0)	0.09 (0.40)
65	2 1/2	50 (220)	25 (110)	3.8 (16.5)	0.38 (1.7)	0.15 (0.66)
80	3	80 (352)	40 (176)	6 (26)	0.6 (2.6)	0.24 (1.06)
100	4	120 (528)	60 (264)	9 (40)	0.9 (4.0)	0.36 (1.59)
150	6	300 (1320)	150 (660)	23 (99)	2.3 (10)	0.9 (4.0)
200	8	500 (2200)	250 (1100)	38 (165)	3.8 (17)	1.5 (6.6)
250	10	800 (3520)	400 (1760)	60 (264)	6 (26)	2.4 (11)
300	12	1200 (5280)	600 (2640)	90 (400)	9 (40)	3.6 (16)
350	14	1600 (7040)	800 (3520)	120 (530)	25 (110)	10 (44)
400	16	2000 (8810)	1000 (4400)	150 (660)	31 (138)	13 (55)
450	18	2600 (11450)	1300 (5720)	195 (860)	44 (193)	18 (77)
500	20	3000 (13210)	1500 (6600)	225 (990)	63 (275)	25 (110)
600	24	5000 (22010)	2500 (11010)	375 (1650)	79 (347)	32 (139)

AC-powered Meters – Flow Requirements per ISO 4064

Size		Q _{max.}	N	Q (0.25%)	Q _t	Q _{min.}
mm	in.	m3/h (Ugal/min)	m3/h (Ugal/min)	m3/h (Ugal/min)	m3/h (Ugal/min)	m3/h (Ugal/min)
15	1/2	3 (13)	1.5 (7)	0.075 (0.33)	0.010 (0.044)	0.004 (0.018)
20	3/4	5 (22)	2.5 (11)	0.125 (0.55)	0.016 (0.069)	0.006 (0.028)
25	1	7 (31)	3.5 (15)	0.175 (0.77)	0.025 (0.11)	0.01 (0.04)
40	1 1/2	20 (88)	10 (44)	1.5 (6.6)	0.063 (0.28)	0.025 (0.11)
50	2	30 (132)	15 (66)	1.5 (6.6)	0.1 (0.4)	0.04 (0.18)
65	2 1/2	50 (220)	25 (110)	1.5 (6.6)	0.16 (0.7)	0.063 (0.28)
80	3	80 (352)	40 (176)	2 (8.8)	0.3 (1.1)	0.1 (0.44)
100	4	120 (528)	60 (264)	3 (13)	0.4 (1.8)	0.16 (0.70)
150	6	300 (1320)	150 (660)	7.5 (33)	1 (4)	0.4 (1.8)
200	8	500 (2200)	250 (1100)	12.5 (55)	1.6 (7)	0.63 (2.8)
250	10	800 (3520)	400 (1760)	20 (88)	2.5 (11)	1 (4)
300	12	1200 (5280)	600 (2640)	30 (132)	4 (18)	1.6 (7)
350	14	1600 (7040)	800 (3520)	80 (352)	8 (35)	3.2 (14)
400	16	2000 (8810)	1000 (4400)	100 (440)	13 (55)	5 (22)
450	18	2600 (11450)	1300 (5720)	130 (572)	18 (77)	7 (31)
500	20	3000 (13210)	1500 (6600)	150 (660)	20 (88)	8 (35)
600	24	5000 (22010)	2500 (11010)	250 (1101)	32 (139)	13 (55)

Battery-powered Meters – Flow Requirements per CEN pr 14154 and latest ISO4064

Size		Q ₄	Q ₃	Q (0.5%)	Q ₂	Q ₁	R
mm	in.	m3/h (Ugal/min)	m3/h (Ugal/min)	m3/h (Ugal/min)	m3/h (Ugal/min)	m3/h (Ugal/min)	
15	1/2	5 (22)	4 (18)	0.23 (1.0)	0.025 (0.110)	0.010 (0.044)	400
20	3/4	8 (35)	6.3 (28)	0.38 (1.7)	0.039 (0.173)	0.016 (0.069)	400
25	1	12.5 (55)	10 (44)	0.5 (2.3)	0.063 (0.28)	0.025 (0.11)	400
40	1 1/2	31 (138)	25 (110)	1.5 (6.6)	0.156 (0.69)	0.063 (0.28)	400
50	2	50 (220)	40 (176)	2.3 (9.9)	0.3 (1.1)	0.1 (0.44)	400
65	2 1/2	79 (347)	63 (277)	3.8 (16.5)	0.39 (1.7)	0.16 (0.69)	400
80	3	125 (550)	100 (440)	6 (26)	0.6 (2.8)	0.25 (1.10)	400
100	4	200 (880)	160 (700)	9 (40)	1 (4.4)	0.4 (1.76)	400
150	6	500 (2200)	400 (1760)	23 (100)	3 (11)	1 (4.4)	400
200	8	788 (3470)	630 (2770)	38 (170)	3.9 (17)	1.6 (6.9)	400
250	10	1250 (5500)	1000 (4400)	60 (260)	6.3 (28)	2.5 (11)	400
300	12	2000 (8810)	1600 (7040)	90 (400)	10 (44)	4 (18)	400
350	14	2000 (8810)	1600 (7040)*	120 (530)	25 (110)	10 (44)	160
400	16	3125 (13760)	2500 (11010)*	150 (660)	31 (138)	13 (55)	200
450	18	4375 (19260)	3500 (15410)*	195 (860)	44 (193)	18 (77)	200
500	20	5000 (22010)	4000 (17610)*	225 (990)	63 (275)	25 (110)	160
600	24	7875 (34670)	6300 (27740)*	375 (1650)	79 (347)	32 (139)	200

AC-powered Meters – Flow Requirements per CEN pr 14154 and latest ISO4064

Size		Q ₄	Q ₃	Q (0.25%)	Q ₂	Q ₁	R
mm	in.	m3/h (Ugal/min)	m3/h (Ugal/min)	m3/h (Ugal/min)	m3/h (Ugal/min)	m3/h (Ugal/min)	
15	1/2	5 (22)	4 (18)	0.075 (0.33)	0.010 (0.044)	0.004 (0.018)	1000
20	3/4	7.9 (35)	6.3 (28)	0.13 (0.55)	0.016 (0.069)	0.006 (0.028)	1000
25	1	12.5 (55)	10 (44)	0.18 (0.77)	0.025 (0.11)	0.01 (0.04)	1000
40	1 1/2	31 (138)	25 (110)	1.5 (6.6)	0.063 (0.28)	0.025 (0.11)	1000
50	2	50 (220)	40 (176)	1.5 (6.6)	0.1 (0.4)	0.04 (0.18)	1000
65	2 1/2	79 (247)	63 (277)	1.5 (6.6)	0.16 (0.7)	0.063 (0.28)	1000
80	3	125 (550)	100 (440)	2 (8.8)	0.3 (1.1)	0.1 (0.44)	1000
100	4	200 (880)	160 (700)	3 (10)	0.4 (1.8)	0.16 (0.70)	1000
150	6	500 (2200)	400 (1760)	8 (30)	1 (4)	0.4 (1.8)	1000
200	8	788 (3470)	630 (2770)	13 (60)	1.6 (7)	0.63 (2.8)	1000
250	10	1250 (5500)	1000 (4400)	20 (90)	2.5 (11)	1 (4)	1000
300	12	2000 (8810)	1600 (7040)	30 (132)	4 (18)	1.6 (7)	1000
350	14	2000 (8810)	1600 (7040)*	80 (352)	8 (35)	3.21 (14)	500
400	16	3125 (13760)	2500 (11010)*	100 (440)	13 (55)	5 (22)	500
450	18	4375 (19260)	3500 (15410)*	130 (570)	18 (77)	7 (31)	500
500	20	5000 (22010)	4000 (17610)*	150 (660)	20 (88)	8 (35)	500
600	24	7875 (34760)	6300 (27740)*	250 (1100)	32 (139)	13 (55)	500

*Note. Rated for continuous operation at these flowrates. In order to minimize pumping losses typical flowrates should be half these values

...Specification

Wetted Materials

Screw-end meters

Brass

Flanged meters

Electrodes – stainless steel 316L

Lining

Suitable for potable water (UKWFBS listed)

Pressure limitations

As flange rating

Pressure equipment directive 97/23/EC

This product is applicable in networks for the supply, distribution and discharge of water and associated equipment and is therefore exempt.

Conductivity

>50µS/cm

End Connections

Thread-end connections

15mm – G 3/4 in. B 3/4 in. NPSM
20mm – G 1 in. B 1 in. NPSM
25mm – G 1 1/4 in. B 1 1/4 in. NPSM

40 to 300mm (1.5 to 12 in.) flanged

BS4504/ISO 7005 – PN16, PN10
ANSI B16.5 1.5 Class 150
AS 2129 Tables C, D and E
AS 4087/14, AS4087/16
JIS to BS2210, 5k, 10k and 30k
BS10 Tables D and E

350 to 600mm (14 to 24 in.) flanged

BS4504/ISO 7005 – PN10, PN16
BS10 Table D & E
AS 2129 Tables D and E
AS4087/14
AS4087/16

Transmitter

Mounting

Integral with sensor

or

Remote up to 200m (650 ft)

Housing

IP68 (NEMA 6P) Aluminum Alloy with Glass Window

Electrical connections

20mm glands (plastic or armored), or accepts 1/2 in. NPT threaded or military style plug & socket

Sensor cable

ABB cable supplied as standard

Special cable available on application

SWA cable available on application

Power supply

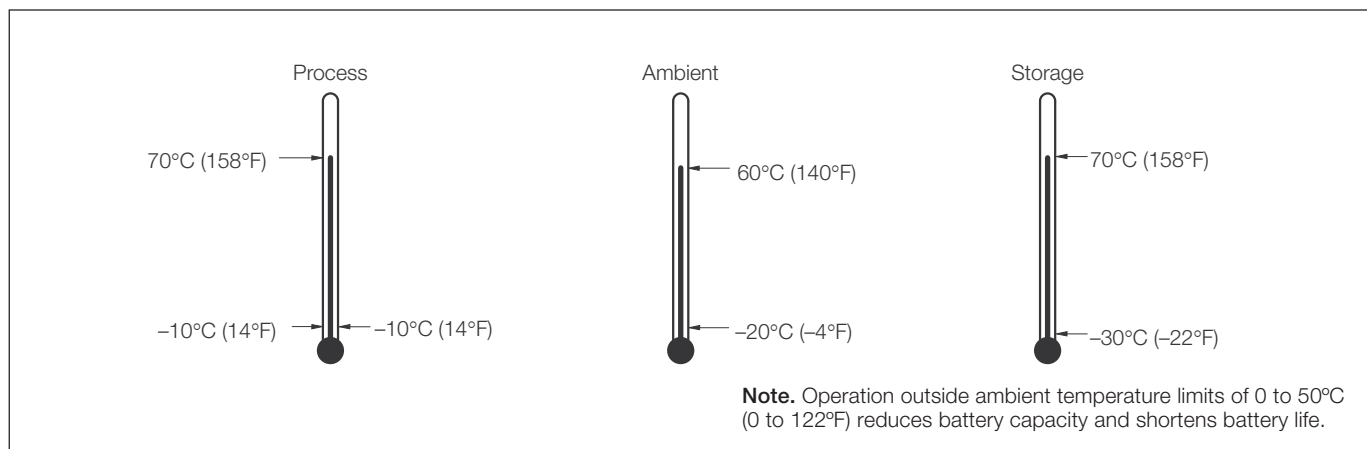
Battery life @ 0 to 50°C (32 to 122°F)

1 battery – typically 1.2 years

2 batteries – typically 3 years

Type	Voltage Range (V) Absolute Rating	Frequency (Hz)	VA
AC	85 to 265	47 to 440	<10
Battery	3.6 (Lithium)	–	–

Temperature Ranges



...Transmitter

Pulse and alarm outputs

Three bi-directional solid state switches with common isolation $\pm 35V$ DC 50mA.

- Output 1 Forward only, or forward plus reverse pulses
- Output 2 Reverse pulses, or direction indicator
- Pulse output 50Hz maximum, 50% nominal duty cycle
- Output 3 Alarm indicates any problems with the measurement or unit power

Serial data communications

- Local Port RS232 compatible via ABB lead (Option)
- Remote Port (Option) RS232 with RI, RTS and CTS handshaking

Encoder Interface

Function

Remote reading of totalizer and serial no.

Protocol

ABB encoder

Connections

- 2-wire for inductive pads (max. cable length 80m)
- 3-wire for AMR

Compatible readers

- Severn Trent Services Smart reader
- ABB SR100 and SR50
- Logicon Versaprobe
- Itron ERT

Compatible inductive pads

- Starpad
- ABB

Response Time (Programmable)

Minimum

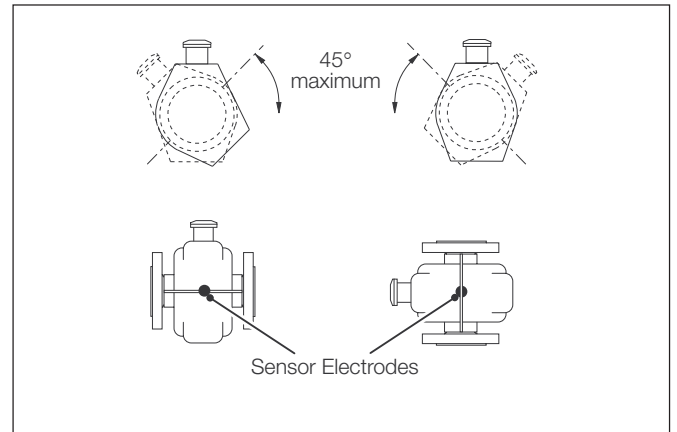
- 1s (mains-powered)
- 15s (battery-powered)

Languages

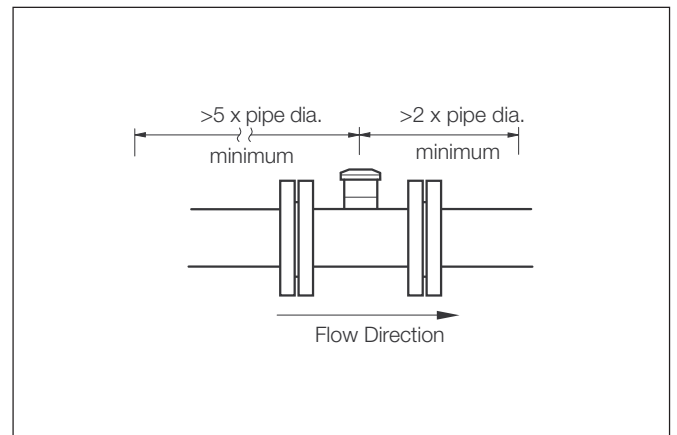
- English
- French
- German
- Spanish
- Italian
- Dutch

Languages can be changed via Windows download program (contact ABB)

Mounting



Pipe Conditions



Pressure Loss

Flow Rate	Pressure Loss
	bar (PSI)
Q_3 (CEN)	<0.63 (9.1)
ISO 4064 Q_{max}	<0.3 (4.4)
ISO 4064 Q_n	<0.075 (1.1)
ISO 4064 $Q^{1/2}$	<0.019 (0.3)

...Specification

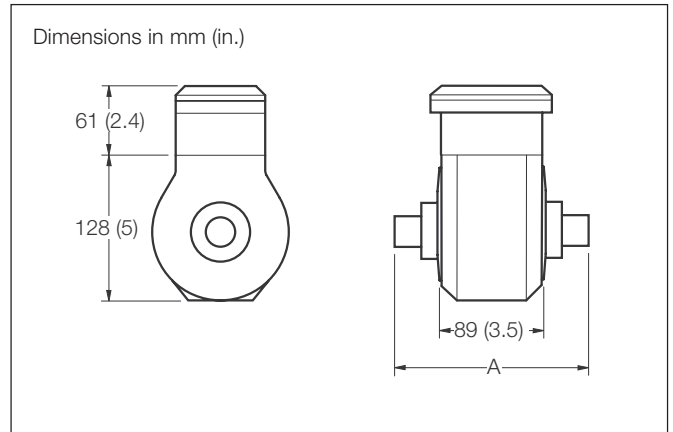
Default Settings Table

Configuration Parameter	Default European	Default North American
Pulse Factor	1	1
Pulse Units	m ³	Ugal
Totalizer Units	m ³	Ugal
Full Scale Flow	ISO 4064 Qn	ISO 4064 Qn
Flow Units	m ³ /h	MUGD
Velocity Units	m/s	ft/s
Date Format from Country Code	DDMMYY	MMDDYY
Flow Response Time (s)	3	3
Display Flow Rate	Yes	Yes
Display Forward Total	Yes	Yes
Display Reverse Total	Yes	Yes
Display Net Total	No	No
Display Date	No	No
Display Velocity	No	No
Output Option Pulse Forward	Pulses Forward	Pulses Forward
Output Option Pulse Reverse	Pulses Reverse	Pulses Reverse
Profile Factor	1	1
Probe Insertion Factor	1	1

Sensor Specification (nominal dimensions)

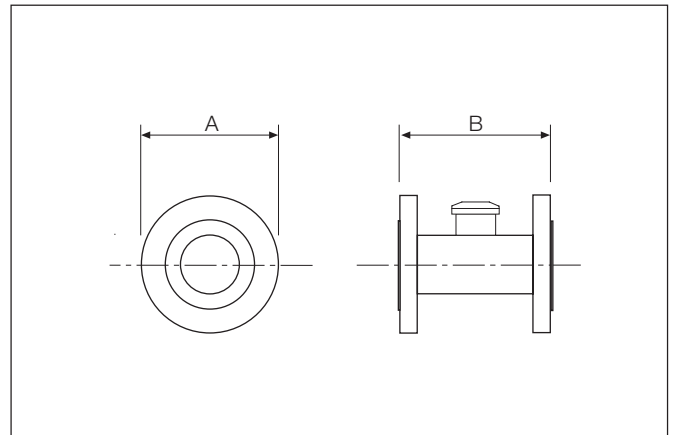
15 to 25mm (1/2 to 1 in.) – Screw Ends

Meter Size		Dimensions mm (in.)	Connection	Approx. Weight	
mm	in.	A		kg	lb
15	1/2	119 (4.7)	G 3/4 in. B or 3/4 in. NPSM	2.5	5
20	3/4	127 (5)	G 1 in. B or 1 in. NPSM	2.5	5
25	1	127 (5)	G 1 1/4 in. B or 1 1/4 in. NPSM	2.5	5



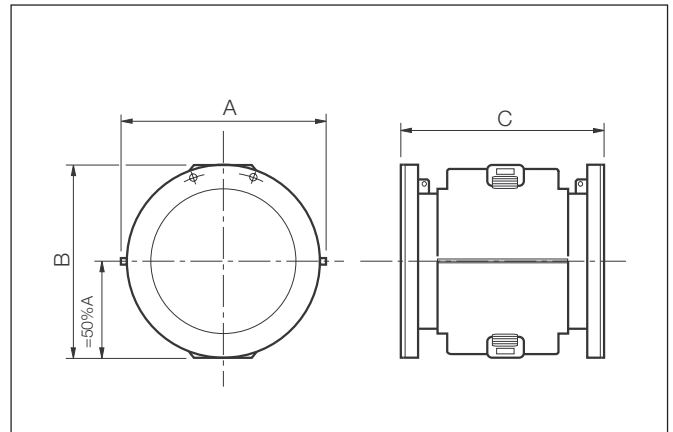
40 to 300mm (1 1/2 to 12 in.) – Flanged

Meter Size		Dimensions mm (in.)		Approx. Weight	
mm	in.	A	B	kg	lb
40	1 1/2	176 (7)	200 (7.9)	11	24
50	2	176 (7)	200 (7.9)	12	27
65	2 1/2	219 (8.6)	200 (7.9)	13	29
80	3	219 (8.6)	200 (7.9)	18	40
100	4	230.5 (9.8)	250 (9.8)	15	33
150	6	281 (11.8)	300 (11.8)	31	68
200	8	402 (15.8)	350 (13.8)	48	106
250	10	440 (17.3)	450 (17.7)	75	165
300	12	480 (18.9)	500 (19.7)	112	247



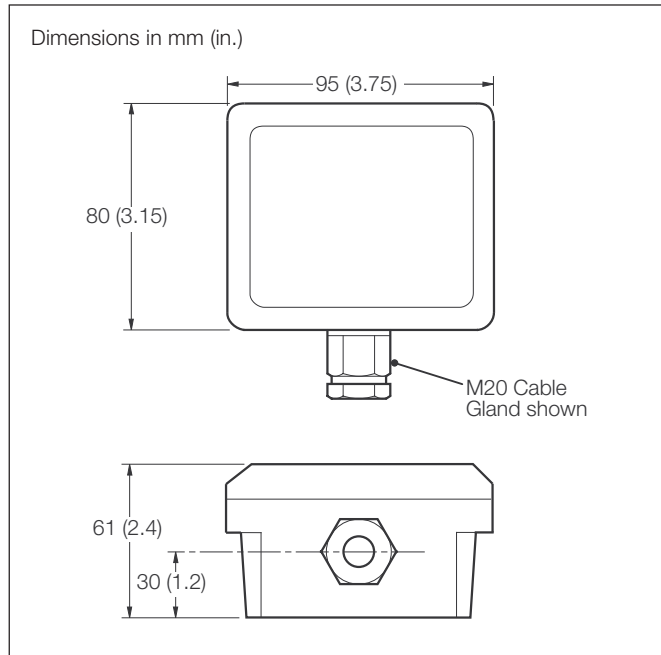
350 to 600mm (14 to 24 in.) – Flanged

Meter Size		Dimensions mm (in.)			Approx. Weight	
mm	in.	A	B	C	kg	lb
350	14	513 (20.2)	520 (20.5)	550 (21.7)	100	220
400	16	570 (22.4)	576 (22.7)	600 (23.6)	115	253
450	18	632 (24.9)	627 (24.7)	698 (27.5)	160	352
500	20	686 (27.0)	679 (26.7)	768 (30.2)	217	455
600	24	772 (30.4)	770 (30.3)	918 (36.1)	315	693

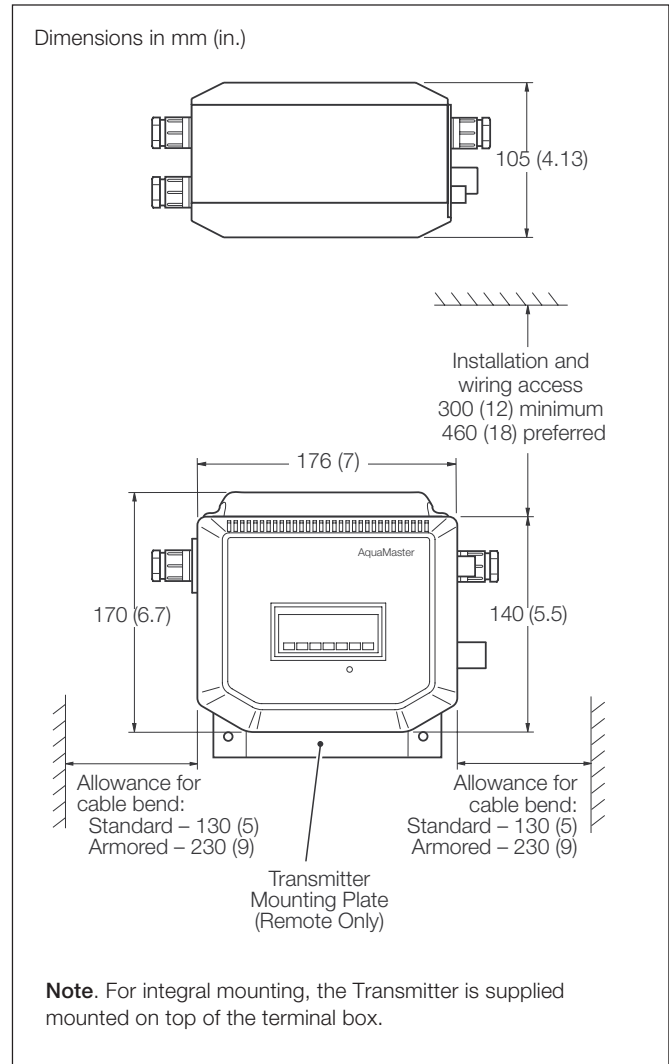


Overall Dimensions

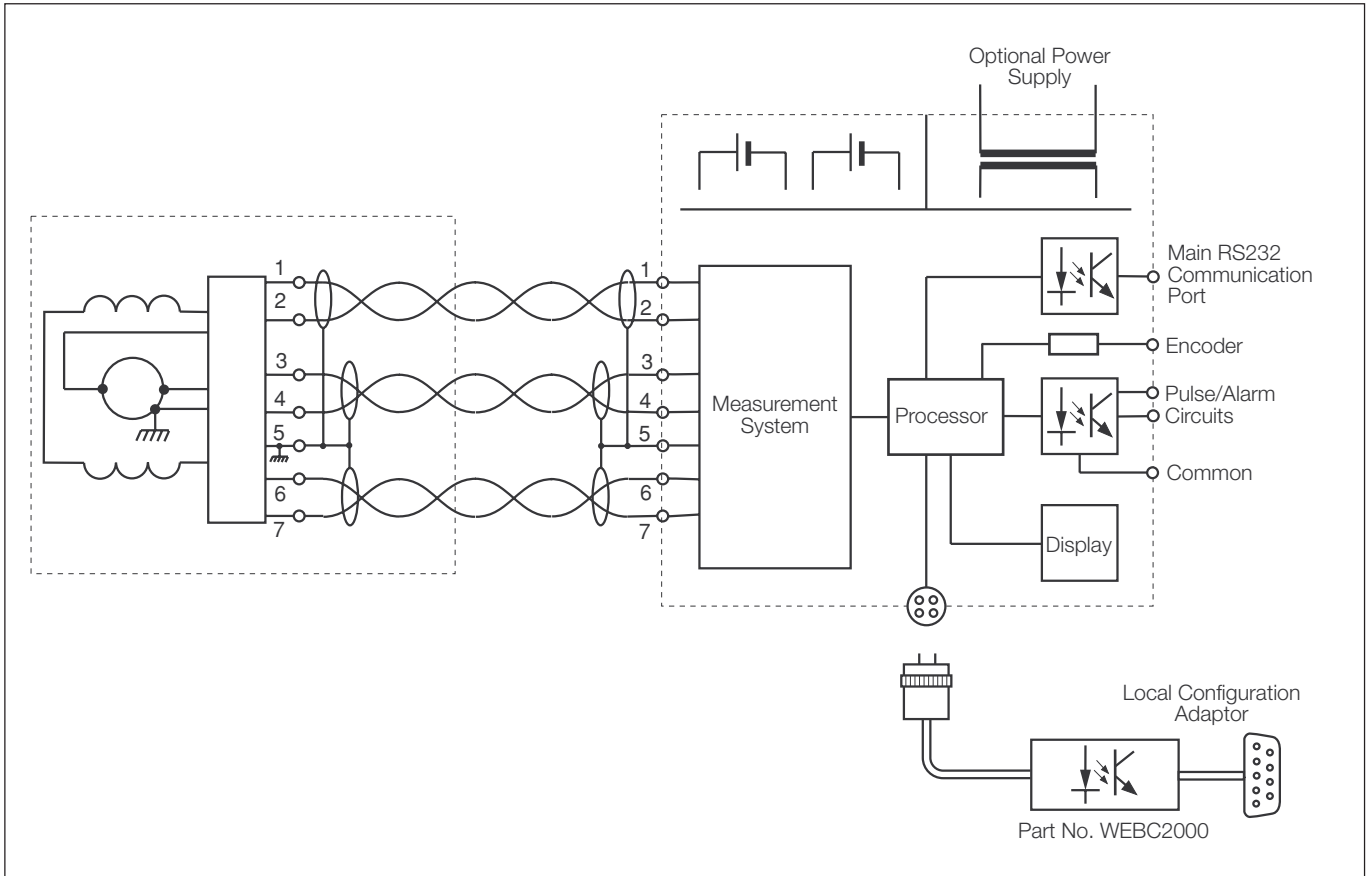
Terminal Box – Sensor Mounted



Transmitter



Electrical Connections



Ordering Information

Main Code

Additional Code

AquaMaster Electronic Water Meter				MM/G A	X	XXXX	X	X	X	X
Country	Default Flange Type 40 to 300mm	Default Flange Type 3 to 25mm	Default Cable Entry							
Australia	AS4087 Class 16	Threaded ISO 228	20mm							
Germany	ISO7005 PN16	Threaded ISO 228	20mm							
Spain	ISO7005 PN16	Threaded ISO 228	20mm							
France	ISO7005 PN16	Threaded ISO 228	20mm							
UK	ISO7005 PN16	Threaded ISO 228	20mm							
Holland	ISO7005 PN16	Threaded ISO 228	20mm							
Italy	ISO7005 PN16	Threaded ISO 228	20mm							
USA	ANSI B 16.5 Class 150	Threaded NPSM	1/2 in. NPT							
Calibrated Bore										
mm	in.									
15	5/8					0015				
20	3/4					0020				
25	1					0025				
40	1 1/2					0040				
50	2					0050				
65	2 1/2					0065				
80	3					0080				
100	4					0100				
150	6					0150				
200	8					0200				
250	10					0250				
300	12					0300				
350	14					0350				
400	16					0400				
450	18					0450				
500	20					0500				
600	24					0600				
Transmitter Version and Mounting										
Integral with Sensor Horizontal Display (DN40 to 600)										1
Integral with Sensor Vertical Display (DN40 to 600)										2
Remote from Sensor										3
Close-coupled with Sensor, Horizontal Display, Metal Transmitter (DN40 to 600)										A
Close-coupled with Sensor, Vertical Display, Metal Transmitter (DN40 to 600)										B
Close-coupled Sensor only, to suit Explorer Transmitter (DN40 to 600, Transmitter ordered separately under code AM/E)										D
Remote Sensor only, to suit Explorer Transmitter (DN40 to 600, Transmitter ordered separately under code AM/E)										E
Power Supply										
AC										L
AC (with Battery Backup)										A
Battery										B
Options										
With Earthing Rings (≥DN100)										2
With Earthing Rings (≥DN100) & Potting for Transmitter termination wiring										C
Cable Length										
Not Required										0
10m										1
20m										2
30m										3
40m										4
50m										5
60m										6
70m										7
80m										8
100m										A
125m										B
150m										C
175m										D
200m										E

X	X	X	0	X	0	0	X	0	0	0
---	---	---	---	---	---	---	---	---	---	---

	Main Code						Additional Code														
	MM/G	A	X	XXX	X	X	X	X	X	X	0	X	0	0	X	X	X	X			
Labelling/Construction																					
ABB UK								0													
ABB USA								1													
Flange Style/End Connections																					
As defined by Country digit (see page 18)								0													
AS4087 Class 14 Flanges (50 to 600mm [2 to 24 in.] only)								A													
AS4087 Class 16 Flanges (50 to 600mm [2 to 24 in.] only)								Z													
AS2129 Table C Flanges (40 to 600mm [1.5 to 24 in.] only)								C													
AS2129 Table D Flanges (40 to 600mm [1.5 to 24 in.] only)								D													
AS2129 Table E Flanges (40 to 80mm [1.5 to 3 in.] only)								H													
ISO7005 PN10 Flanged (40 to 600mm [1.5 to 24 in.] only)								M													
ISO7005 PN16 Flanged (40 to 600mm [1.5 to 24 in.] only)								E													
ANSI B16.5 Class 150 Flanged (1.5 to 12 in. only)								U													
BS10 Table D Flanged (40 to 600mm [1.5 to 24 in.] only)								F													
BS10 Table E Flanged (40 to 600mm [1.5 to 24 in.] only)								G													
JIS B2210, 5k Flanged (40 to 600mm [1.5 to 24 in.] only)								L													
JIS B2210, 10k Flanged (40 to 600mm [1.5 to 24 in.] only)								J													
Parallel thread to ISO228-1 Class B (15 to 25mm [⁵ / ₈ to 1 in.] only)								T													
Threaded to NPSM (⁵ / ₈ to 1 in. only)								Y													
Cable Entries																					
As defined by Country digit (see page 18). Cable not fitted/potted to sensor								0													
20/16mm plastic glands. Cable not fitted/potted to sensor								1													
20/16mm plastic glands. Cable fitted/potted to sensor								B													
¹ / ₂ in. NPT (USA only). Cable not fitted/potted to sensor								3													
20mm armored. Cable not fitted/potted to sensor								2													
20mm armored. Cable fitted/potted to sensor								C													
MIL connector (sensor) + 16mm plastic glands. Cable fitted/potted to remote sensor								5													
MIL connector (sensor) + 19 way MIL connector + 16mm plastic gland. Cable fitted/potted to remote sensor								6													
20mm armored (sensor) + 16mm plastic glands. Cable not fitted to sensor								7													
20mm armored (sensor) + 16mm plastic glands. Cable fitted/potted to sensor								D													
Not Used								0													
Calibration																					
1 Point (with Pressure Test)																				1	
3 Point (with Pressure Test)																				3	
NAMAS with Pressure Test (≥250mm [10 in.] only)																				4	
Bulk Revenue Version, 1 Point (with Pressure Test)																				7	
Bulk Revenue Version, 3 Point (with Pressure Test)																				8	
Not Used																				0	0
Communications Option																					
Not Required																				0	
Remote Port RS232 C																				1	
ScanReader – no cable fitted																				2	
ScanReader – 5m cable fitted																				3	
GSM Modem, with internal antenna																				6	
GSM Modem, 1m remote antenna (not fitted)																				7	
GSM Modem, 5m remote antenna (not fitted) (future option)																				8	
Logger																					
Not required																				0	
ABB Logger enabled for ABB Software																				1	
ABB Logger enabled for CBV Software																				2	
ABB Logger enabled for Technolog Software																				3	
ABB Logger enabled for Primayer Software																				4	
ABB Logger enabled for Hydreka Software																				5	
Pressure Transducer/Cable Length																					
Not required																				0	
Remote 1m cable																				1	
Remote 5m cable																				2	
Remote 10m cable																				3	
Remote 20m cable																				4	
Remote, no transducer																				Y	
Pressure Transducer Span/Type																					
Not required																				0	
10bar Absolute Transducer																				1	
16bar Absolute Transducer																				2	
300 lb/in ² Absolute Transducer																				3	

ABB has Sales & Customer Support expertise in over 100 countries worldwide

www.abb.com

The Company's policy is one of continuous product improvement and the right is reserved to modify the information contained herein without notice.

Printed in UK (08.05)

© ABB 2005



ABB Limited
Oldends Lane, Stonehouse
Gloucestershire
GL10 3TA
UK
Tel: +44 (0)1453 826661
Fax: +44 (0)1453 829671

ABB Inc.
125 E. County Line Road
Warminster
PA 18974
USA
Tel: +1 215 674 6000
Fax: +1 215 674 7183