



Monsoon Remote Control Monitor

AMRC

The Angus Monsoon AMRC is an electric remote-controlled monitor with a single water way body. The monitor is capable of withstanding flows up to 20000 lpm (5200 gpm) and may be base flanged 3", 4", 6" or 8" UNI or ANSI. Movements on the vertical & horizontal plane are performed by electric actuators that transfer the force through a gearbox to the monitor joints. The joints are built in the monitor cast using a double channel system that host the rotational spheres. The "S" shaped body is designed to balance the reaction force and couple the monitor with several different discharge outlets such as water branch pipes, foam branch pipes and nozzles.

The Angus Monsoon AMRC is suitable for installation within hazardous areas classified ATEX zone 1 G and zone 21 D and can also be supplied in SIL 2 configuration for integration in control systems where certified levels of safety and availability are requested.

The Angus Monsoon AMRC material construction makes it suitable for use with sea water or foam solutions, and in harsh environments & offshore applications.

Technical Characteristics

Monitor

Body material options:

- Bronze EN 1982 – CC491K
- Marine Bronze EN 1982 – CC492K
- Nickel Aluminium Bronze EN 1982 – CC 333G
- Aluminium alloy G-AlSi9 (1)

- Bronze joints installed on stainless steel AISI 316 balls, with greasers
- Inlet flange ANSI or UNI casted CC333G or Aluminium alloy G-AlSi9
- Internal diameter of the body 80 mm (3") / 100 mm (4") / 150 mm (6")
- Horizontal plane rotation 360° with dead center
- Actuators cooling system
- NBR gaskets
- Suitable for installation in harsh and marine environments, and for use with sea water and foam solutions
- Vertical installation
- Max working pressure 16 bar (232 psi)
- Design pressure 16 bar (232 psi)
- Test pressure 24 bar (348 psi)

Painting System Standard:

See Monsoon monitor paint specification data sheet
Colour red RAL 3000

Actuator

- Horizontal / Vertical movements driven by electric actuators ATEX II 2 G Ex d e IIC T4
- Emergency manual controls for both movements, with disengageable safety hand wheel (does not rotate during operation)
- Anticondensation Resistor
- Mechanical continuous position indicator with quadrant
- Colour Grey RAL 7037

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Conventional actuators:

400 V ac Version: (MNE40050)

- Horizontal / vertical movements driven by electric actuators ATEX II 2 G Ex d e IIC T4, supply voltage 400 V 3Ph 50 Hz – 0,03 Kw – IP 67. Equipped with N° 2 torque limit contacts (NO/NC) and N°2 limit switch (NO/NC)

400 V ac SIL2 Version: (MNES40050)

- Horizontal / vertical movements driven by electric actuators ATEX II 2 G Ex d e IIC T4, supply voltage 400 V 3Ph 50 Hz – 0,03 Kw – IP 67. Equipped with N° 2 torque limit contacts (NO/NC) and N°2 limit switch (NO/NC)
- System: Type A
- Operation Low demand
- HFT = 0
- $4,57E-03 < PFDAvg < 6,39E-03$ depending on diagnostic test frequency
- TI = 1 year
- Data are referred to the assembly Actuators + Monitors

480 V ac Version: (MNE48060)

- Horizontal / vertical movements driven by electric actuators ATEX II 2 G Ex d e IIC T4, supply voltage 480 V 3Ph 60 Hz – 0,03 Kw – IP 67. Equipped with N° 2 torque limit contacts (NO/NC) and N°2 limit switch (NO/NC)

230 V ac Version: (MNE23050)

- Horizontal / vertical movements driven by electric actuators ATEX II 2 G Ex d e IIC T4, supply voltage 230 V 1Ph 50 Hz – 0,115 Kw – IP 67. Equipped with N° 2 torque limit contacts (NO/NC) and N°2 limit switch (NO/NC)

24 V dc Version: (MNE24)

- Horizontal / vertical movements driven by an electric actuators ATEX II 2 G Ex d e IIC T4, supply voltage 24 V – 0,13 Kw – IP 67. Equipped with N° 2 torque limit contacts (NO/NC) and N°2 limit switch (NO/NC)

Auma Matic actuators:

Horizontal / vertical movements driven by electric actuators ATEX II 2 G Ex d e IIC T4. Equipped with:

N° 1 encoder calibration control unit MWG connected with AUMATIC control unit for:

- Open/Close Position indication
- Torque limitation
- Position Transmitter
- Intermediate status signals

N° 1 integral control AUMATIC with microprocessor and serial interface Profibus including:

- Electric and mechanical interlock connectors
- Outlet Voltage 24 VCC max 100 mA (galvanic isolated)
- N° 1 Analogue input 0/4-20 mA for percentual position of the valve
- N° 1 Analogue output 0/4-20 mA with galvanic segregation (max. load 500 ohm) for position indicator. (opzional)
- N° 1 Analogue output 0/4-20 mA with galvanic segregation (max. load 500 ohm) for torque measurement
- N° 6 digital input 24 V available for: Open-Close-Stop
- ESD Programmable
- Mode-Interface for selecting input priorities
- Interface board Profibus
- Non-intrusive position selector Local/off/Remote, lockable in each position.
- Non-intrusive local push-buttons Open-Stop-Close-Reset with 6 LED for indication.
- Graphic Display indicating programming parameters and data visualisation
- Bluetooth Interface

Anti-condensation Resistor

Mechanical continuous position indicator with quadrant

400 V ac Version: (MNEM40050)

Horizontal / vertical movements driven by electric actuators ATEX II 2 G Ex d e IIC T4, supply voltage 400 V 3Ph 50 Hz – IP 67.

480 V ac Version: (MNEM48060)

Horizontal / vertical movements driven by electric actuators ATEX II 2 G

Ex d e IIC T4, supply voltage 480 V 3Ph 60 Hz – IP 67.

230 V ac Version: (MNEM23050)

Horizontal / vertical movements driven by electric actuators ATEX II 2 G Ex d e IIC T4, supply voltage 230 V 1Ph 50 Hz – IP 67.

AUMATIC actuators:

Horizontal / vertical movements driven by electric actuators ATEX II 2 G Ex d e IIC T4. Equipped with:

N° 1 encoder calibration control unit MWG connected with AUMATIC control unit for:

- Open/Close Position indication
- Torque limitation
- Position Transmitter
- Intermediate status signal

N° 1 integral control AUMATIC with microprocessor and serial interface Profibus including:

- Electric a mechanical interlock connector
- Outlet Voltage 24 VCC max 100 mA (galvanic isolated)
- N° 1 Analogue input 0/4-20 mA for percentual position of the valve
- N° 1 Analogue output 0/4-20 mA
- N° 1 Analogue output 0/4-20 mA with galvanic segregation (max. load 500 ohm) for torque measurement
- N° 6 digital input 24 V available for: Open-Close-Stop
- ESD Programmable
- Mode-Interface for selecting input priorities
- Interface board Profibus DP-V0 EN 50170 compliant
- Non-intrusive position selector Local/off/Remote, lockable in each position
- Non-intrusive local push-buttons Open-Stop-Close-Reset with 6 LED for indication
- Graphic Display indicating programming parameters and data visualisation
- Bluetooth Interface

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Anti-condensation Resistor
Mechanical continuous position
indicator with quadrant.

Profibus 400 V ac Version: (MNEPB40050)

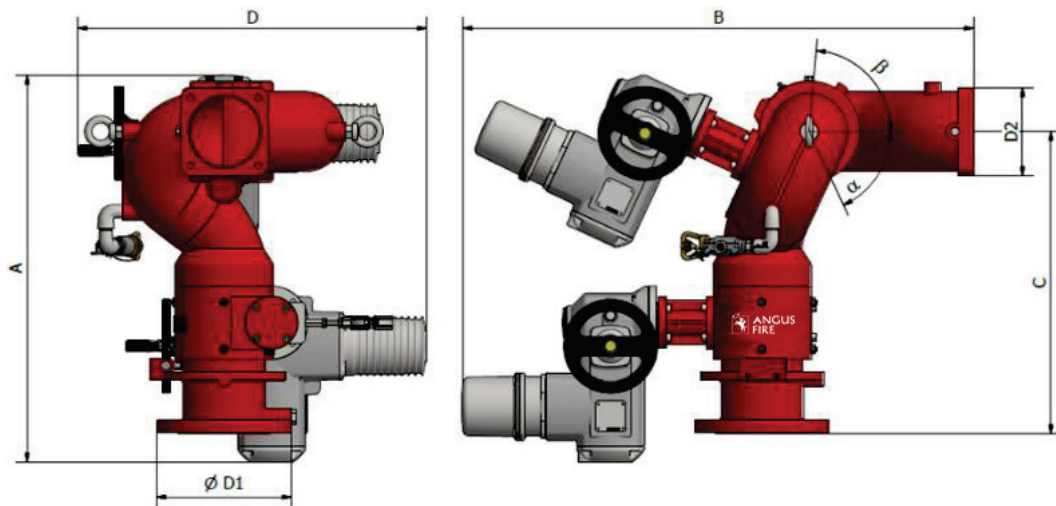
- Horizontal / vertical movements
driven by electric actuators ATEX
II 2 G Ex d e IIC T4, supply voltage
400 V 3Ph 50 Hz – IP 67.

Profibus 480 V ac Version: (MNEPB48060)

- Horizontal / vertical movements
driven by electric actuators ATEX
II 2 G Ex d e IIC T4, supply voltage
480 V 3Ph 60 Hz – IP 67.

Profibus 230 V ac Version: (MNEPB23050)

- Horizontal / vertical movements
driven by electric actuators ATEX
II 2 G Ex d e IIC T4, supply voltage
230 V 1Ph 50 Hz – IP 67.



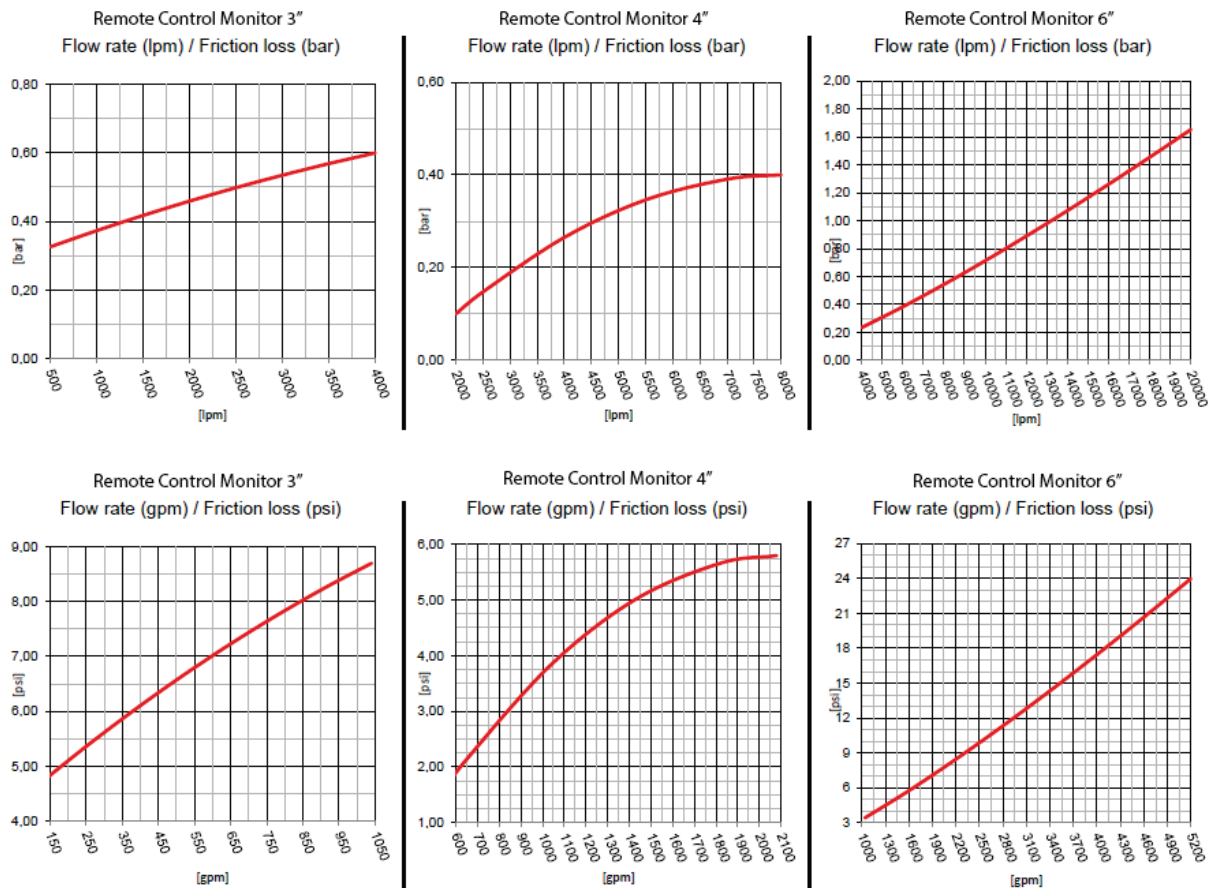
Optional

- Different elevation upward and downward angles
- Inlet flange with automatic drainage
- Pressure gauge on monitor body
- Painting system different Standard

For additional options or special versions contact Angus Fire

Ø Body	Ø D1	D2	A mm (inch)	B mm (inch)	C mm (inch)	D mm (inch)	α	β	Max Flow Rate lpm (gpm)	Weight kg (lb)
3"	3"	FQ125 SF125	610 (24)	807 (31.8)	456 (18)	584 (23)	-65°	+85°	4000 (1000)	103 (226.6)
	4"									105 (231)
4"	4"	FQ150 SF150	660 (26)	870 (34.3)	516 (20.3)	593 (23.3)			6500 (1600)	128 (281.6)
	6"								8500 (2250)	131 (288.2)
6"	6"	ANSI 150	814 (32)	1082 (42.6)	643 (25.3)	740 (29.1)			15000 (3900)	238 (523.6)
	8"								20000 (5200)	245 (539)

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