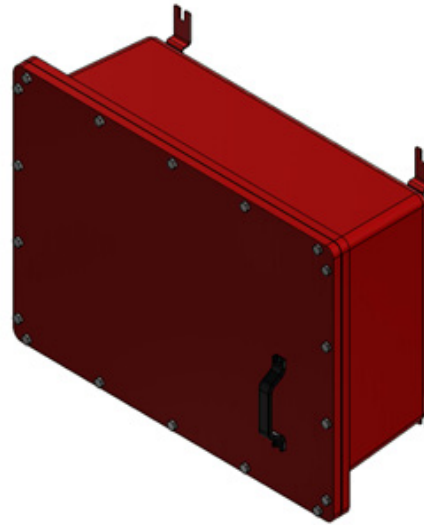


Monsoon Monitor Interface Box (AMMIB)



The Angus Monsoon Monitor Interface Box is specifically designed for power remote controlled monitors electric and electro-hydraulic. The standard solutions available are the following: MIB A, MIB B, MIB C and MIB D which allow the composition of various control architectures. In detail, MIB A contains the power components of the actuators of the single-phase and three-phase monitors and of 1 deluge valves (redundant), the MIB B version satisfies the power supplies of MIB A and can also supply a second deluge valve (redundant). Instead the MIB C supplies the actuators of the electric monitors and 1 motorized valve in three-phase and single-phase voltage, finally the MIB D supplies the power for the actuators of the electric monitors and 2 motorized valves only in three-phase voltage. The available solutions allow the composition of architectures suitable for installation both in a safe area and classified in accordance with the ATEX or IECEx directives. This junction box must be added in the modular fibre optic control system, please refer to the following Data Sheets, for the control part:

Main control module:
AMMCM

Technical Characteristics

Power Module:

- Housing to be selected among:
 - Carbon Steel Sheets (1)
 - Stainless Steel AISI 316
 - Aluminium alloy (2)
 - Polyurethane Gasket (1)
 - Earth connection terminals for each component
 - Main switch
 - Anti-condensation heater
 - Power Supply:
 - 380/400/415 Vac 50Hz 3 Ph + G
 - 380/440/480 Vac 60 Hz 3 Ph + G
 - 230 Vac 50 Hz 1Ph+N+G
 - 230 Vac 60 Hz 1Ph+N+G
 - 110/120 Vac 60 Hz 1Ph+N+G
 - Construction suitable for installation within:
 - Safe Area protection grade IP 55, IP 65 or IP 67
 - Classified area ATEX II (2)1 GD Ex-d II B / II B + H2 (2)
 - Classified area IEC Ex II (2)1 Ga/Gb Ex-d II B / II B + H2 (2)

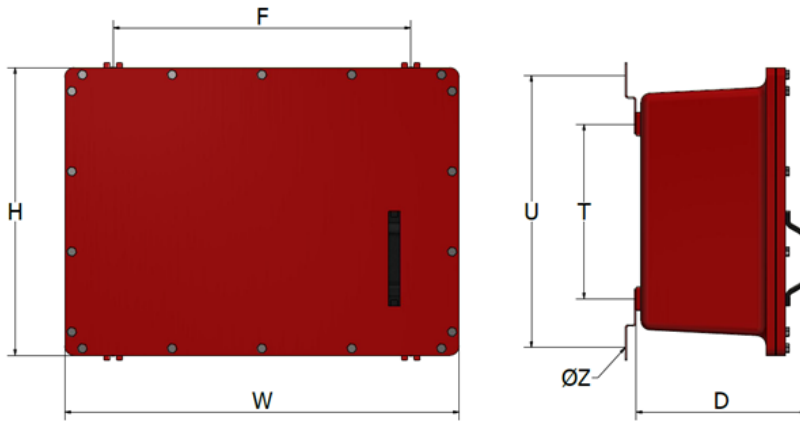
Finish:

- Natural finish
- Colour red RAL 3000
- Colour grey RAL 7035

(1) Valid only for IP junction box

(2) Valid only for Ex-d junction box

Monsoon Monitor Interface Box

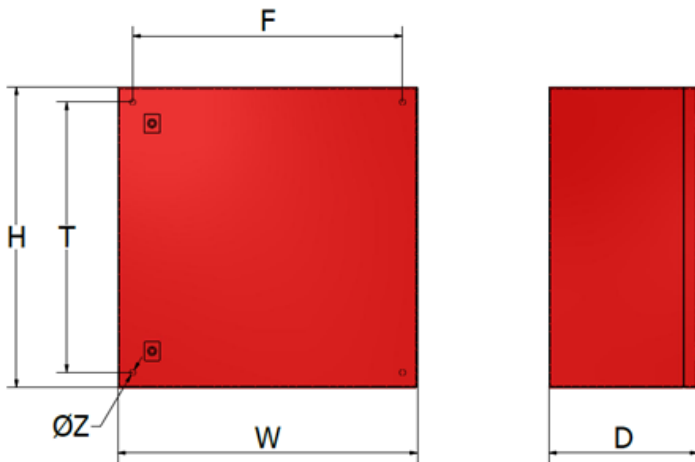


Monitor Interface Box MIB



Options front panel control

Type	Installation	Monitor Power Supply 380÷440VAC 50/60Hz 3Ph	Monitor Power Supply 120÷230VAC 50/60Hz 1Ph+N	N°1 Deluge Valve	N°2 Deluge Valve	N°1 Motorized Valve	N°2 Motorized Valve	Material	W mm (inch)	H mm (inch)	D mm (inch)	T mm (inch)	F mm (inch)	U mm (inch)	ØZ	
MIB A	Hazardous Area	✓	✓	✓	✗	✗	✗	Stainless Steel	545 (21.4)	600 (23.6)	325 (12.7)	405 (15.9)	550 (21.6)	538 (21.1)	M16	
MIB B		✓	✓	✓	✓	✗	✗		615 (24.2)	835 (32.8)	365 (14.3)	630 (24.8)	605 (23.8)	604 (23.7)	M10	
MIB C		✓	✓	✗	✗	✓	✗		615 (24.2)	835 (32.8)	365 (14.3)	630 (24.8)	605 (23.8)	604 (23.7)	M10	
MIB D		✓	✗	✗	✗	✓	✓		615 (24.2)	835 (32.8)	365 (14.3)	630 (24.8)	605 (23.8)	604 (23.7)	M10	
MIB A		✓	✓	✓	✗	✗	✗	✗	Aluminium	595 (23.4)	540 (21.2)	365 (14.3)	400 (15.7)	545 (21.4)	559 (22.1)	M10
MIB B		✓	✓	✓	✓	✗	✗	✗		610 (24.0)	835 (32.8)	365 (14.3)	630 (24.8)	605 (23.8)	604 (23.7)	M10
MIB C		✓	✓	✗	✗	✓	✗	✗		610 (24.0)	835 (32.8)	365 (14.3)	630 (24.8)	605 (23.8)	604 (23.7)	M10
MIB D		✓	✗	✗	✗	✓	✓	✗		610 (24.0)	835 (32.8)	365 (14.3)	630 (24.8)	605 (23.8)	604 (23.7)	M10


Monitor Interface Box MIBS

Options front panel control

Type	Installation	Monitor Power Supply 380÷440VAC 50/60Hz 3Ph	Monitor Power Supply 120÷230VAC 50/60Hz 1Ph+N	N°1 Deluge Valve	N°2 Deluge Valve	N°1 Motorized Valve	N°2 Motorized Valve	Material	W mm (inch)	H mm (inch)	D mm (inch)	T mm (inch)	F mm (inch)	ØZ
MIB A	Safe area	✓	✓	✓	✗	✗	✗	Stainless Steel	500 (19.6)	500 (19.6)	200 (7.9)	430 (16.9)	430 (16.9)	M8
MIB B		✓	✓	✓	✓	✗	✗		600 (23.6)	800 (31.5)	300 (11.8)	430 (16.9)	430 (16.9)	M8
MIB C		✓	✓	✗	✗	✓	✗		600 (27.5)	800 (19.6)	300 (7.9)	730 (28.7)	530 (20.8)	M8
MIB D		✓	✗	✗	✗	✓	✓		600 (27.5)	800 (19.6)	300 (7.9)	730 (28.7)	530 (20.8)	M8
MIB A		✓	✓	✓	✗	✗	✗	Carbon Steel	500 (19.6)	500 (19.6)	200 (7.9)	430 (16.9)	430 (16.9)	M8
MIB B		✓	✓	✓	✓	✗	✗		600 (23.6)	800 (31.5)	300 (11.8)	430 (16.9)	430 (16.9)	M8
MIB C		✓	✓	✗	✗	✓	✗		600 (27.5)	800 (19.6)	300 (7.9)	730 (28.7)	530 (20.8)	M8
MIB D		✓	✗	✗	✗	✓	✓		600 (27.5)	800 (19.6)	300 (7.9)	730 (28.7)	530 (20.8)	M8

Optional

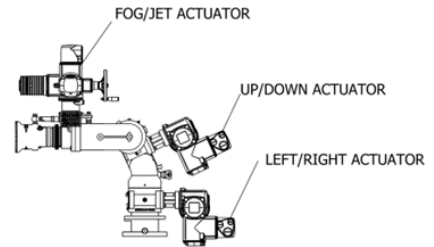
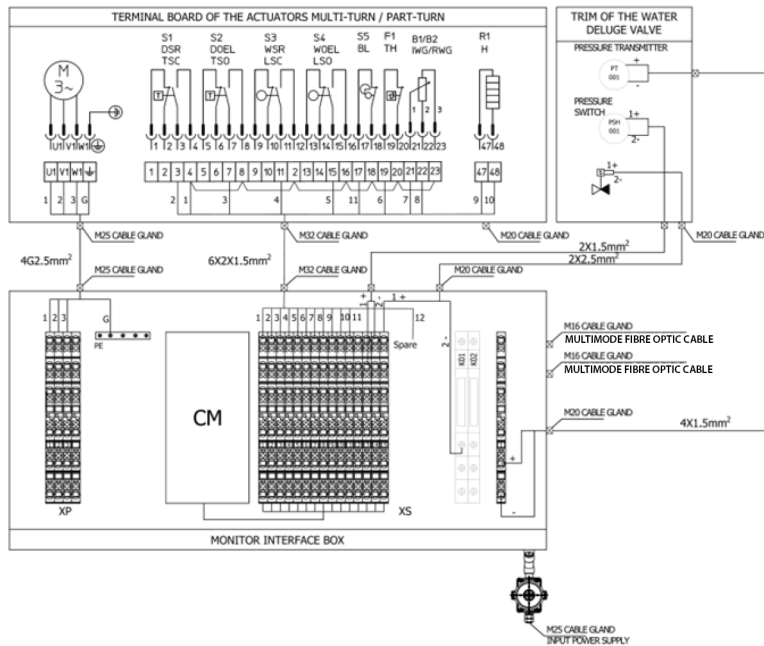
- Version with front panel 1 monitor command

Electrical Wiring Diagram

ELECTRICAL MONITOR, MOTORIZED VALVE AND DELUGE VALVE

Version 380/400/415 Vac 50 Hz 3Ph+G

Version 380/440/480 Vac 60 Hz 3Ph+G



- 1- S1 DSR/TSC Torque switch, closing, clockwise rotation
- 2- S2 DOEL/TSO Torque switch, closing, counter-clockwise rotation
- 3- S3 WSR/LSC Limit switch, closing, clockwise rotation
- 4- S4 WOEL/LSO Limit switch, closing, counter-clockwise rotation
- 5- S5 BL Blinker transmitter
- 6- F1 TH Thermostats
- 7- R1 H Heater
- 8- Spare clamps 45%
- 9- B1/B2 Variable Resistor

NOTE:

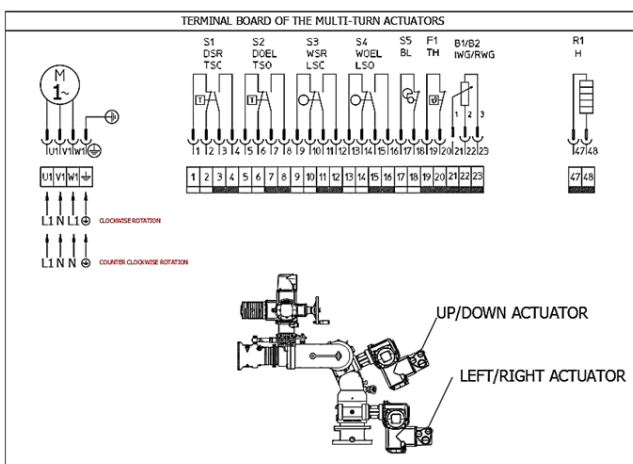
- 1 - This connection is valid only for one motor

Electrical Wiring Diagram

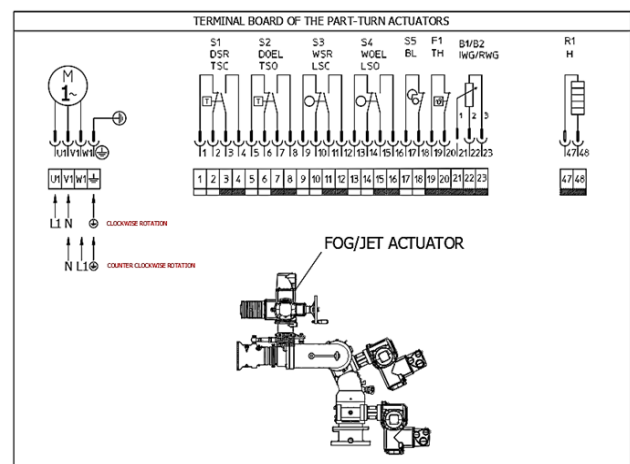
Version 230 Vac 50 Hz 1Ph+N+G

Version 230 Vac 60 Hz 1Ph+N+G

Version 110/120 Vac 60 Hz 1Ph+N+G



Horizontal and vertical actuator



Nozzle actuator

ELECTRO-HYDRAULIC MONITOR

Version 380/400/415 Vac 50 Hz 3Ph+G
Version 380/440/480 Vac 60 Hz 3Ph+G

Accessories

- **Signal cable 6x2x1.5mm² MOD.SC1 (Motorized Valve/Monitor Signals)**

Flexible bare copper class 5 acc. standards
 Fire resistant Mica glass tape over each conductor
 Insulation: special XLPE compound
 Internal wire colour: white – black (both numbered)
 Pairs assembly: cores twisted in pairs
 Total assembly: pairs twisted with optimal lay length
 Separator tape: Polyester tape
 Overall shield: Aluminium/polyester tape with stranded tinned copper drain wire, nominal section 0,50mm² (7x0,30mm)
 Inner sheath: special low smoke zero halogen compound
 Armour: galvanized steel wire armour, nominal wire diameter 1,6mm
 Outer sheath: special low smoke zero halogen hydrocarbon resistant compound type M1 according CEI EN 50363
 Used only in the KCE electric monitor cable kit

- **Power Cable 4G2.5mm² MOD.PC1 (Motorized Valve / Monitor Power)**

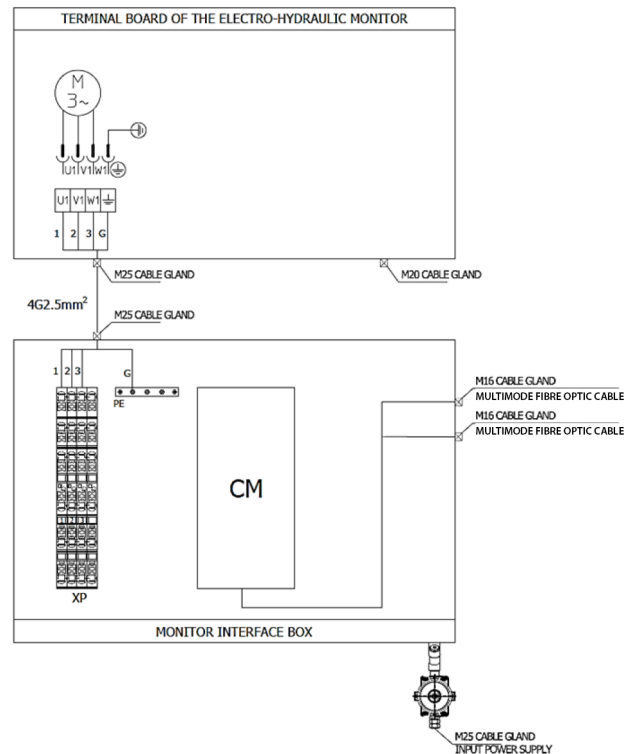
Flexible bare copper class 5 acc. standards
 Fire resistant Mica glass tape over each conductor
 Insulation: special XLPE compound
 Internal wire colour: black numbered + yellow/green
 Total assembly: cores twisted with optimal lay length
 Inner sheath: special low smoke zero halogen compound
 Armour: galvanized steel wire armour, nominal wire diameter 1,6mm
 Outer sheath: special low smoke zero halogen hydrocarbon resistant compound type M1 according CEI EN 50363
 Used in the KCE / KCH electric and electric hydraulic monitor cables kit

- **Power Cable 2x2.5mm² MOD.DP1 (Solenoid Valve)**

Flexible bare copper class 5 acc. standards
 Fire resistant Mica glass tape over each conductor
 Insulation: special XLPE compound
 Internal wire colour: black numbered + yellow/green
 Total assembly: cores twisted with optimal lay length
 Inner sheath: special low smoke zero halogen compound
 Armour: galvanized steel wire armour, nominal wire diameter 1,6mm
 Outer sheath: special low smoke zero halogen hydrocarbon resistant compound type M1 according CEI EN 50363
 Used in the KDV deluge valve cables kit

- **Power Cable 2X1.5mm² MOD.DS1 (Pressure Switch)**

Flexible bare copper class 5 acc. standards
 Fire resistant Mica glass tape over each conductor
 Insulation: special XLPE compound
 Internal wire colour: black - white
 Total assembly: cores twisted with optimal lay length
 Inner sheath: special low smoke zero halogen compound
 Armour: galvanized steel wire armour, nominal wire diameter 1,6mm
 Outer sheath: special low smoke zero halogen hydrocarbon resistant compound type M1 according CEI EN 50363
 Used in the KDV deluge valve cables kit



- **Power Cable 4X1.5mm² MOD.DA1 (Pressure Transmitter)**

Flexible bare copper class 5 acc. standards
 Fire resistant Mica glass tape over each conductor
 Insulation: special XLPE compound
 Internal wire colour: white – black (both numbered)
 Total assembly: cores twisted with optimal lay length
 Inner sheath: special low smoke zero halogen compound
 Armour: galvanized steel wire armour, nominal wire diameter 1,6mm
 Outer sheath: special low smoke zero halogen hydrocarbon resistant compound type M1 according CEI EN 50363.
 Used in the KDV deluge valve cables kit

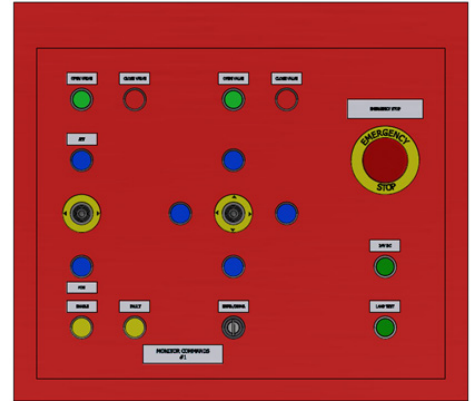
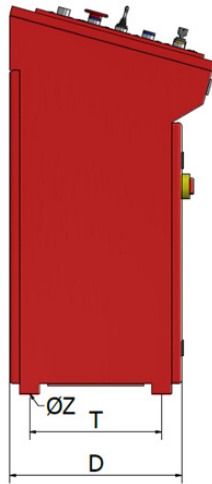
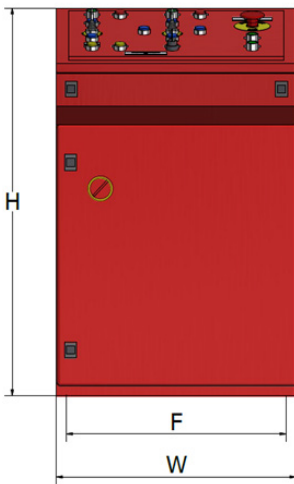
- **Multimode Fibre optic cable OM3 MOD FC1**

Core: n.4 (1Tx + 1Rx + 2 Spare)
 LC Connector
 Core Diameter: 50 ± 2,5 µm
 Cladding Diameter: 125 ± 2 µm
 External Diameter: 7,0 mm
 Glass fibre for rodent protection and tensile strength
 Stripping wire: PET
 Sheath: LSZH compound (Indoor installation) or Polyethylene (Outdoor installation)
 Bending radius:(during the laying 15 cm) (installed 10 cm)
 Wavelength: 850 nm-1300 nm
 Bandwidth: ≥ 1500 MHz x km - ≥ 500 MHz x km
 Refractive index:1482 - 1477

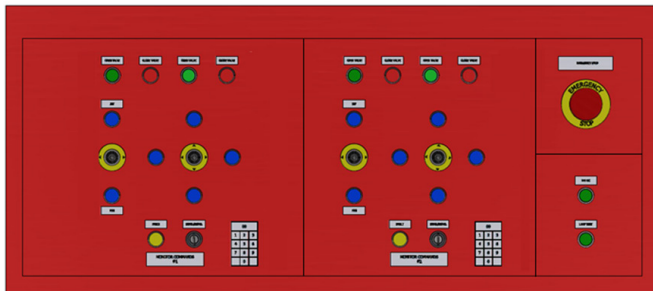
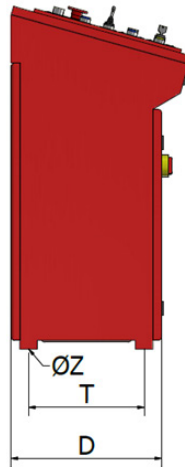
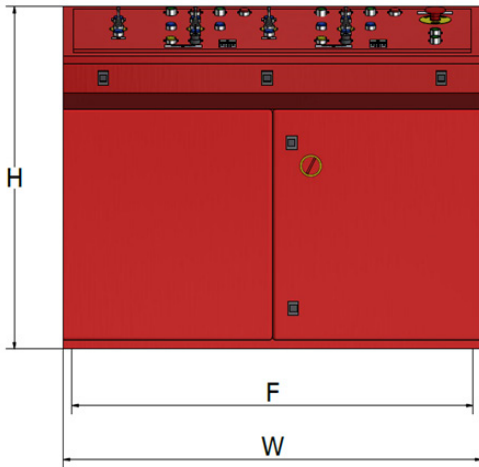
- Cable gland in nickel-plated brass or in stainless steel suitable for armoured cable, available in metric or imperial size



**ANGUS
FIRE**



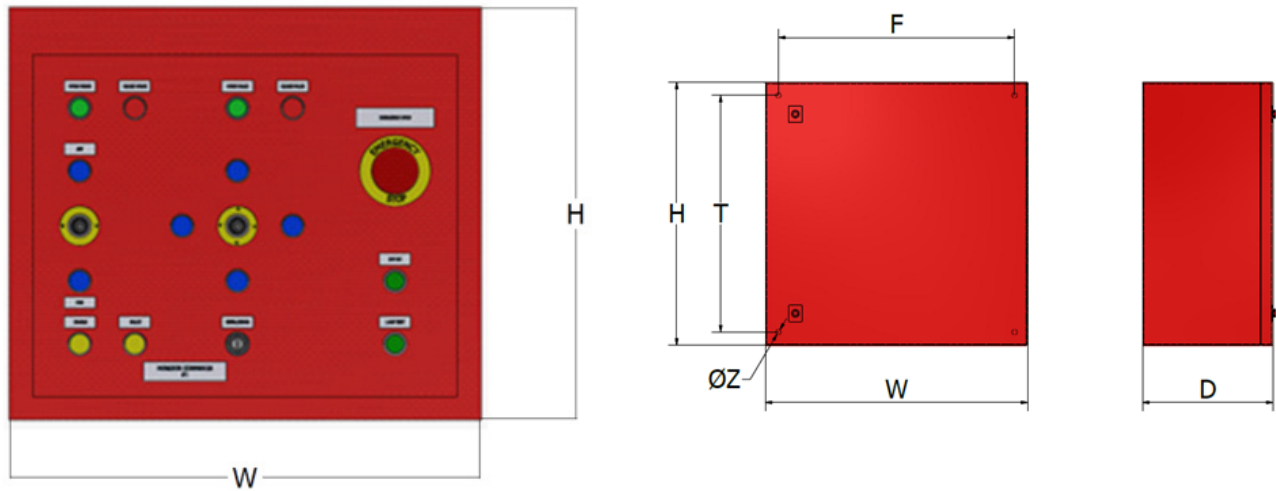
Installation	Panel Type	Controllable Monitors	W mm (inch)	H mm (inch)	D mm (inch)	T mm (inch)	F mm (inch)	ØZ mm (inch)
Safe	Main Control Module MCMS	1 Monitor	800 (31.5)	1000 (39.3)	400 (15.7)	273 (10.7)	730 (28.7)	11 (0.4)



Installation	Panel Type	Controllable Monitors	W mm (inch)	H mm (inch)	D mm (inch)	T mm (inch)	F mm (inch)	ØZ mm (inch)
Safe	Main Control Module MCMS	From 2 to 128 Monitors	1200 (47.2)	1000 (39.3)	400 (15.7)	273 (10.7)	1130 (44.4)	11 (0.4)

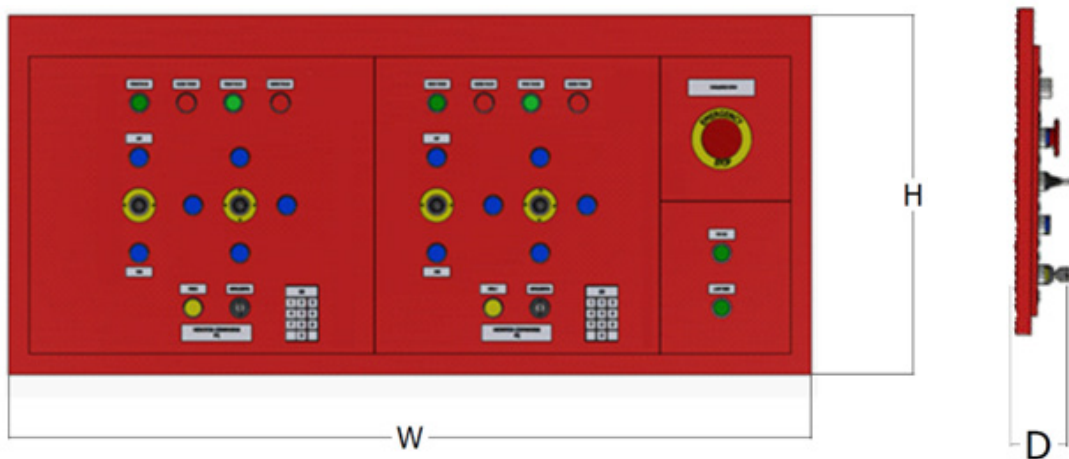
Command monitor desk solution MCMS-1

One command monitor



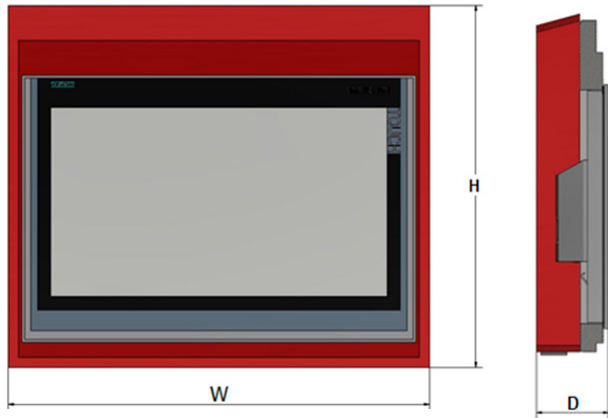
Command monitor desk solution MCMS

Two command monitors

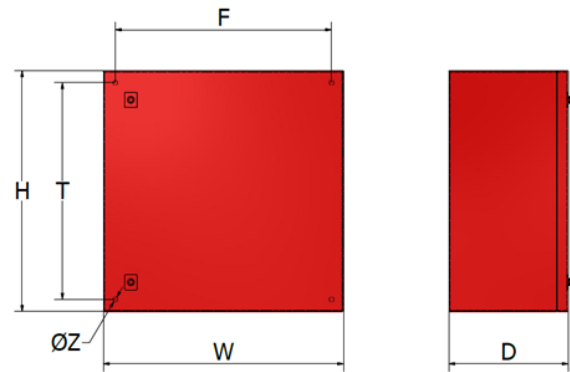


Installation	Panel Type	Controllable Monitors	W mm (inch)	H mm (inch)	D mm (inch)	T mm (inch)	F mm (inch)	ØZ mm (inch)
Safe	Desk Top	1 Monitor	960 (37.8)	635 (25)	215 (8.46)			M8
Safe	Desk Top	From 2 to 128 Monitors	1700 (66.9)	635 (25)	215 (8.46)			M8
Safe	Wall Mounted	From 2 to 128 Monitors	800 (31.5)	600 (39.3)	300 (15.7)	730 (28.7)	530 (20.8)	M8

Command monitor desk evolution solution MCMS



Control Module



Installation	Panel Type	Controllable Monitors	W mm (inch)	H mm (inch)	D mm (inch)	T mm (inch)	F mm (inch)	ØZ mm (inch)
Safe	Main Control Module MCMS Desk Evolution Solution	From 2 to 128 Monitors	960 (37.8)	635 (25)	215 (8.46)			M8
Safe	Main Control Module MCMS	From 2 to 128 Monitors	800 (31.5)	600 (39.3)	300 (15.7)	730 (28.7)	530 (20.8)	M8

Accessories

- **Multimode Fibre optic cable OM3 MOD FC001**

Core: n.4 (1Tx + 1Rx + 2 Spare)
 LC Connector
 Core Diameter: 50 ± 2,5 µm
 Cladding Diameter: 125 ± 2 µm
 External Diameter: 7,0 mm
 Glass fibre for rodent protection and tensile strength
 Stripping wire: PET
 Sheath: LSZH compound (Indoor installation) or Polyethylene (Outdoor installation)
 Bending radius:(during the laying 15 cm) (installed 10 cm)
 Wavelength: 850 nm-1300 nm
 Bandwidth: ≥ 1500 MHz x km - ≥ 500 MHz x km
 refractive index:1482 - 1477

- **Signal cable 12x1.5mm2 MOD.SM1 (Command monitor Signals)**

Flexible bare copper class 5 acc. standards
 Fire resistant Mica glass tape over each conductor
 Insulation: special XLPE compound
 Internal wire colour: white – black (both numbered)
 Total assembly: pairs twisted with optimal lay length
 Inner sheath: special low smoke zero halogen compound
 Armour: galvanized steel wire armour, nominal wire diameter 1,6mm
 Outer sheath: special low smoke zero halogen hydrocarbon resistant compound type M1 according CEI EN 50363

- Cable gland in nickel-plated brass or in stainless steel suitable for armoured cable, available in metric or imperial size

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