

Electronic Floor Mounted Throttle Pedal 965 000 series



1. Mechanical Specifications:

- Two “built-in” return springs
- Polyamide (injection molded) PA66 + 30% Glass Fiber
- Long or short treadle plate
- Interchangeable with 962000 series or wide base
- Complies with FMVSS 124

| | |
|---------------------------|----------------------------------|
| Travel angle | 22° |
| Angle option | 30°, 35°, 45° |
| Protection classification | IP69K |
| Storage temperature | -40°C to +95°C |
| Operating temperature | -40°C to +85°C |
| Connector | AMP - 6 pins - waterproof (IP69) |

- Options:
 - Magnetic kick down virtual feedback with optional kick down signal
 - Swivel arm
 - Connector kit or customized wire harness
- Technical specification sheet and part numbers are available upon request

2. Electrical Specifications:

- Complies with 72/245/EEC
- E1 number 03 5754

All Electronic Throttle Controls are fitted with programmable Hall Effect Sensors.

The signals generated by the Electronic Throttle Controls will allow a smooth and precise engine speed control.

The output values are programmable and hence can be adapted to the customer's specifications. Electronic Throttle Controls can be connected directly to the engine management system, or engine Electronic Control Module.

For available programmable sensor models, please refer to pages 3 and 4.

A/ Programmable single analogue sensor with programmable electronic Idle Validation Switch (IVS)

Analogue channel :

| | |
|----------------------------|--------------------------------------|
| Current consumption | < 7,5mA |
| Supply (Vs) | Between 5V and 28 V DC |
| Output signal value | Between 5% and 95% (+/- 1%) of 5V DC |
| Output current | Max 1mA |

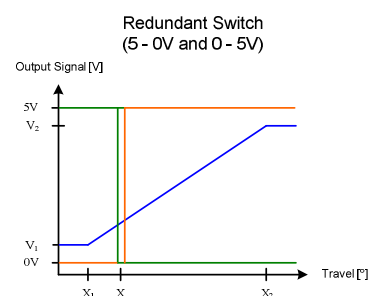
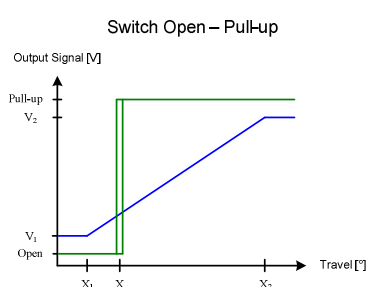
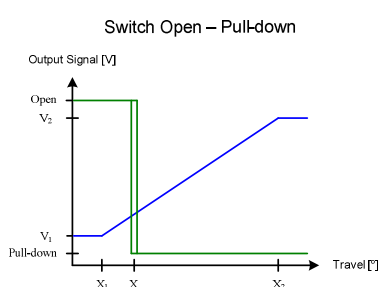
Switch channel option 1 :

| | |
|-------------------------------|---|
| Current consumption | < 10mA |
| Supply (Vs) | Between 8V and 36V DC |
| Idle Validation Switch | Configurable (Open collector, Pull-up or Pull-down) |
| Output current | Max 10mA |

Switch channel option 2 :

| | |
|---|--|
| Current consumption | < 10mA |
| Supply (Vs) | Between 8V and 36V DC |
| Redundant Idle Validation Switch (2 outputs) | Output 1 : High - Low (5 - 0V) Output 2 : Low - High (0 - 5V) |
| Output current | Max 1mA / output |

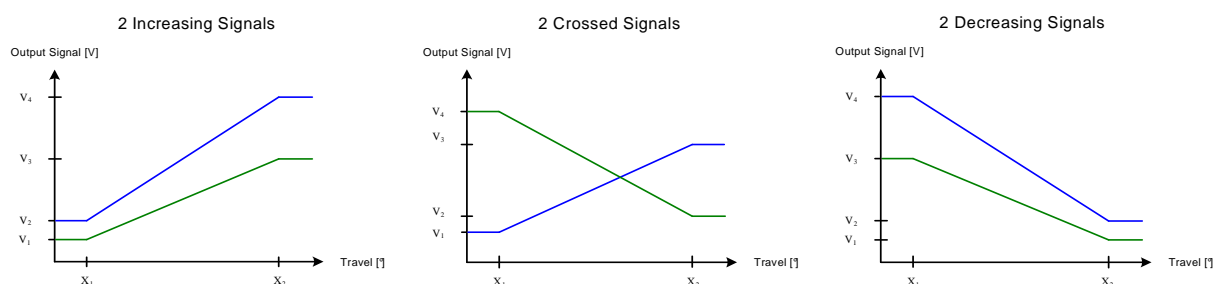
Examples:



B/ Programmable single or dual output analogue sensor

| | |
|----------------------------|-----------------------------------|
| Current consumption | < 8mA / channel |
| Supply (Vs) | 5V DC / channel |
| Output channel #1 | Between 5% and 95% (+/- 1%) of Vs |
| Output channel #2 | Between 5% and 95% (+/- 1%) of Vs |
| Output current | Max 1mA / channel |

Examples:



C/ Programmable single or dual output digital sensor (PWM)

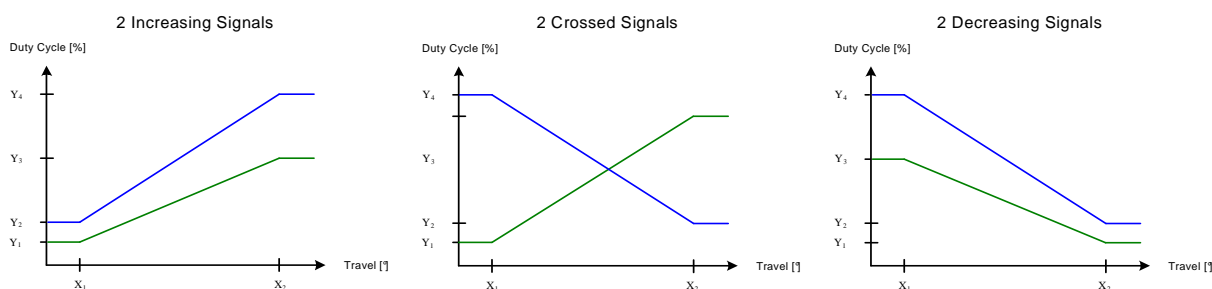
Digital channel(s) :

| | |
|----------------------------|--|
| Current consumption | < 12mA / channel |
| Supply (Vs) | Between 8 and 36 V DC |
| Output channel #1 | Duty cycle between 5% and 95% (+/- 1%) |
| Output channel #2 | Duty cycle between 5% and 95% (+/- 1%) |
| Frequency | 200Hz to 500Hz +/-15% |
| Output current | Max 10mA / channel |

Optional Switch channel with single digital output :

| | |
|-------------------------------|---|
| Current consumption | < 12mA |
| Supply (Vs) | Between 8V and 36V DC |
| Idle Validation Switch | Configurable (Open collector, Pull-up or Pull-down) |
| Output current | Max 10mA |

Examples:



3. Options:

A/ CAN J1939

J1939 Parameters:

- J1939 Messages and signals can be activated according to MCS Throttle default values or customer specifications.
- J1939 Parameters like SA (Source Address) or NAME fields can be set according to MCS Throttle default values or customer specifications.
- Optional messages such as DTC (DMx, FMI, MIL, ...) can be activated upon customer request.

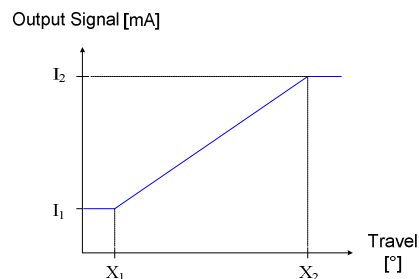
Electrical specifications:

| | |
|---------------------|-------------------------------|
| Power Supply | +8 .. 32VDC |
| Current consumption | 40mA max. |
| J1939 Connector | Deutsch #DT06-3S (J1939/11) |



B/ 4-20mA current output signals

| | |
|-----------------------|-------------|
| Power Supply | +8 .. 32VDC |
| Current output signal | 4 - 20mA |



C/ Customized parts available



With swivel arm



With the wide base

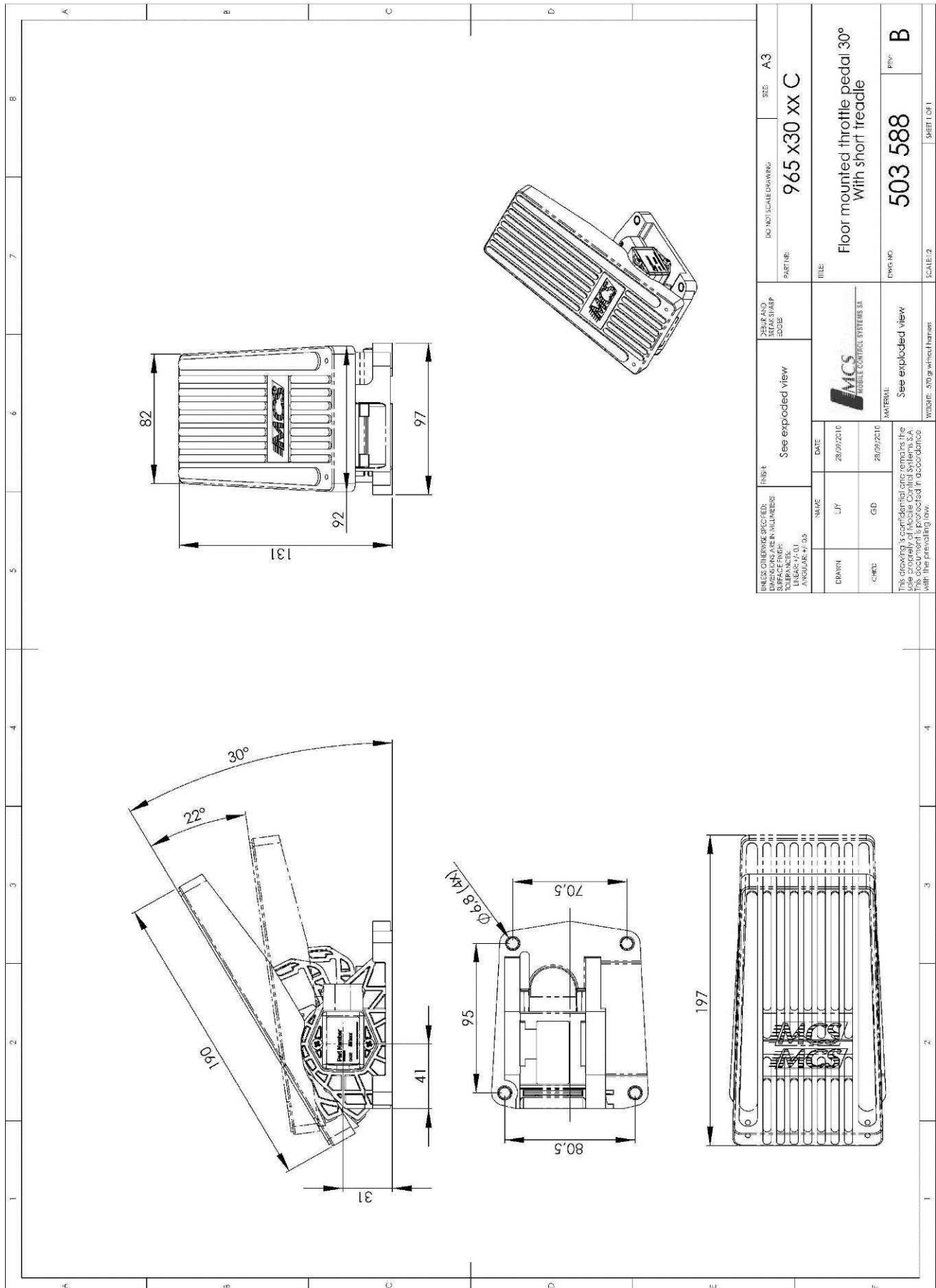


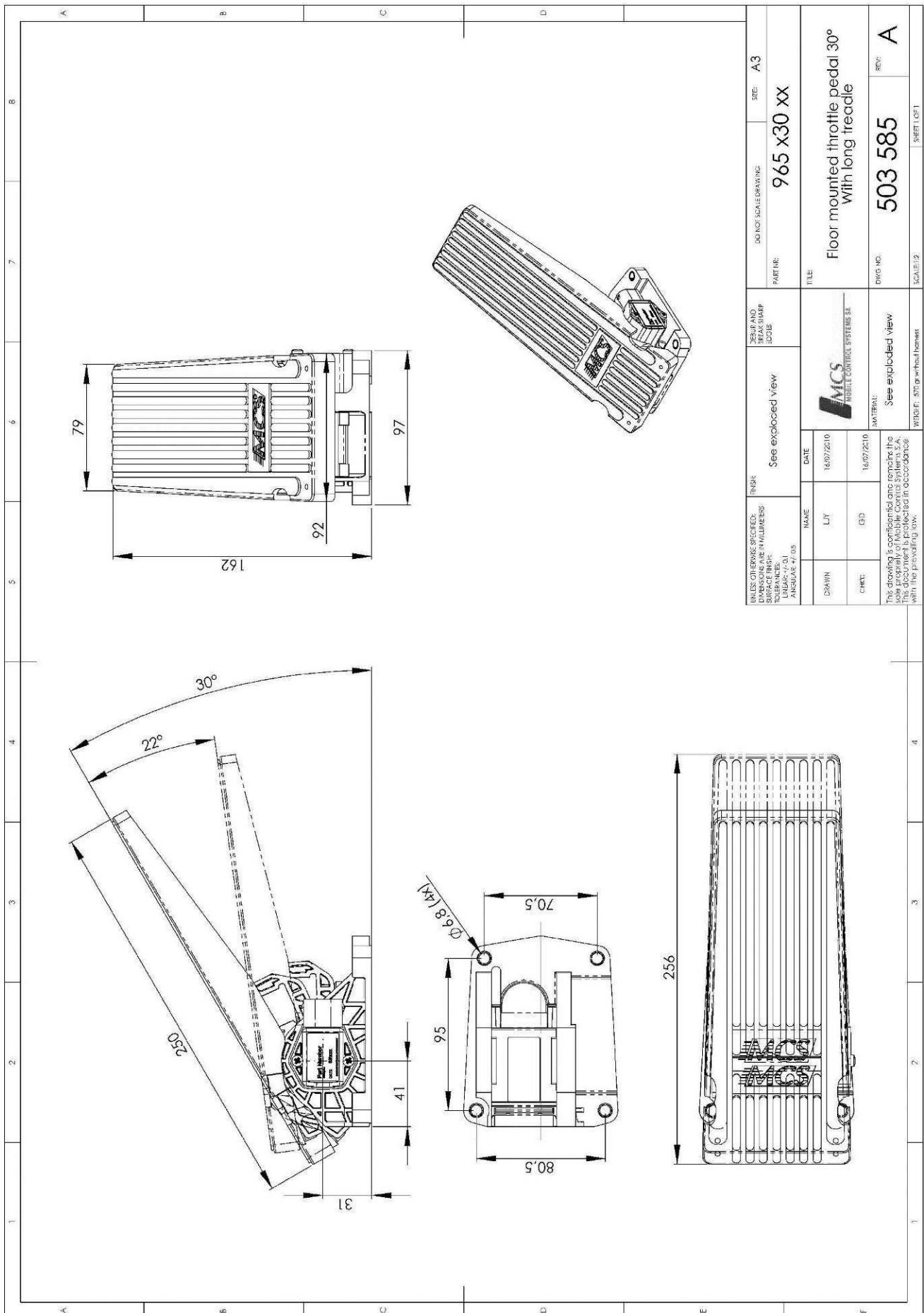
Different treadle plates available

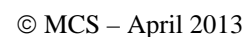


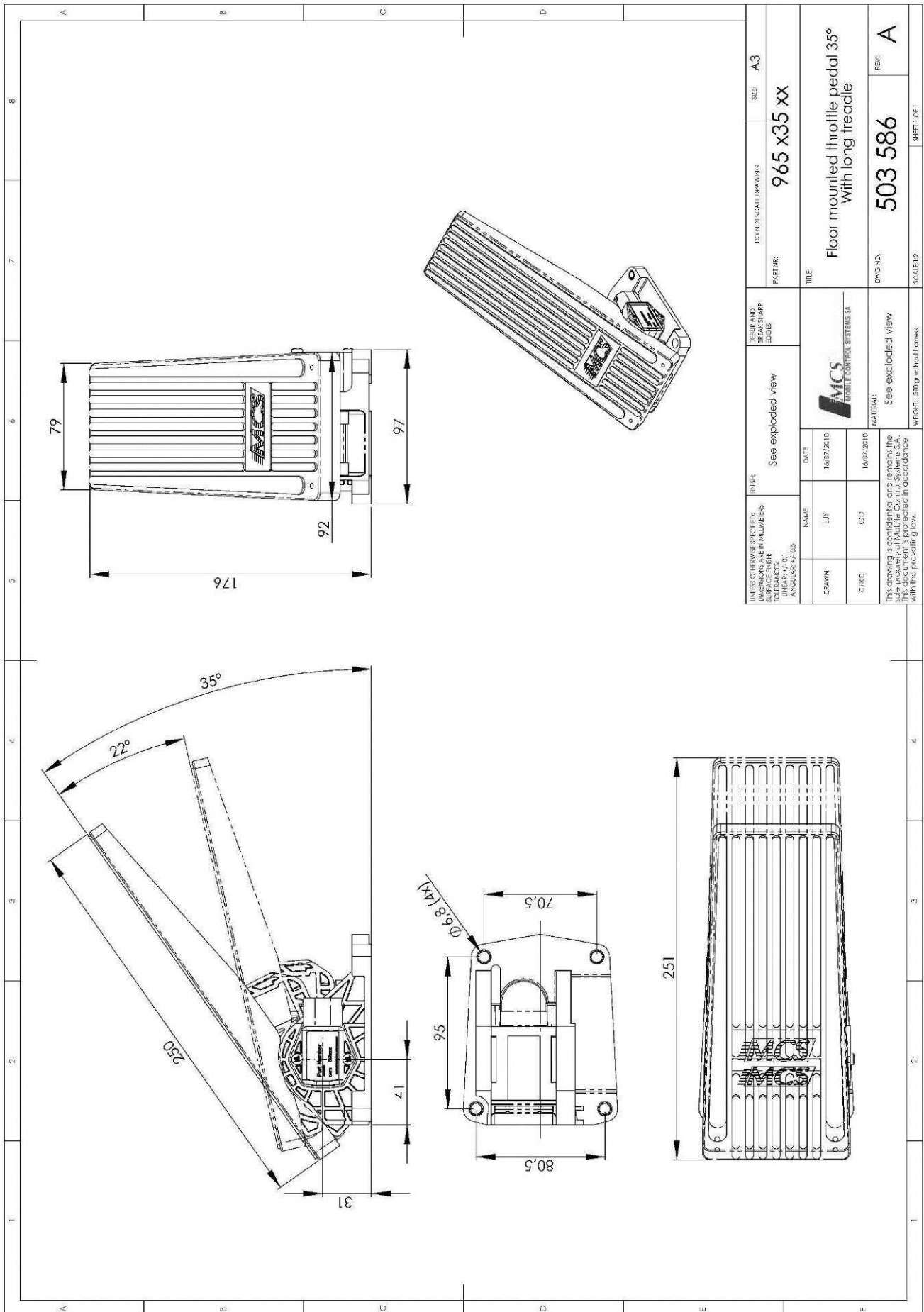
With the short treadle plate

4. Generic drawings:

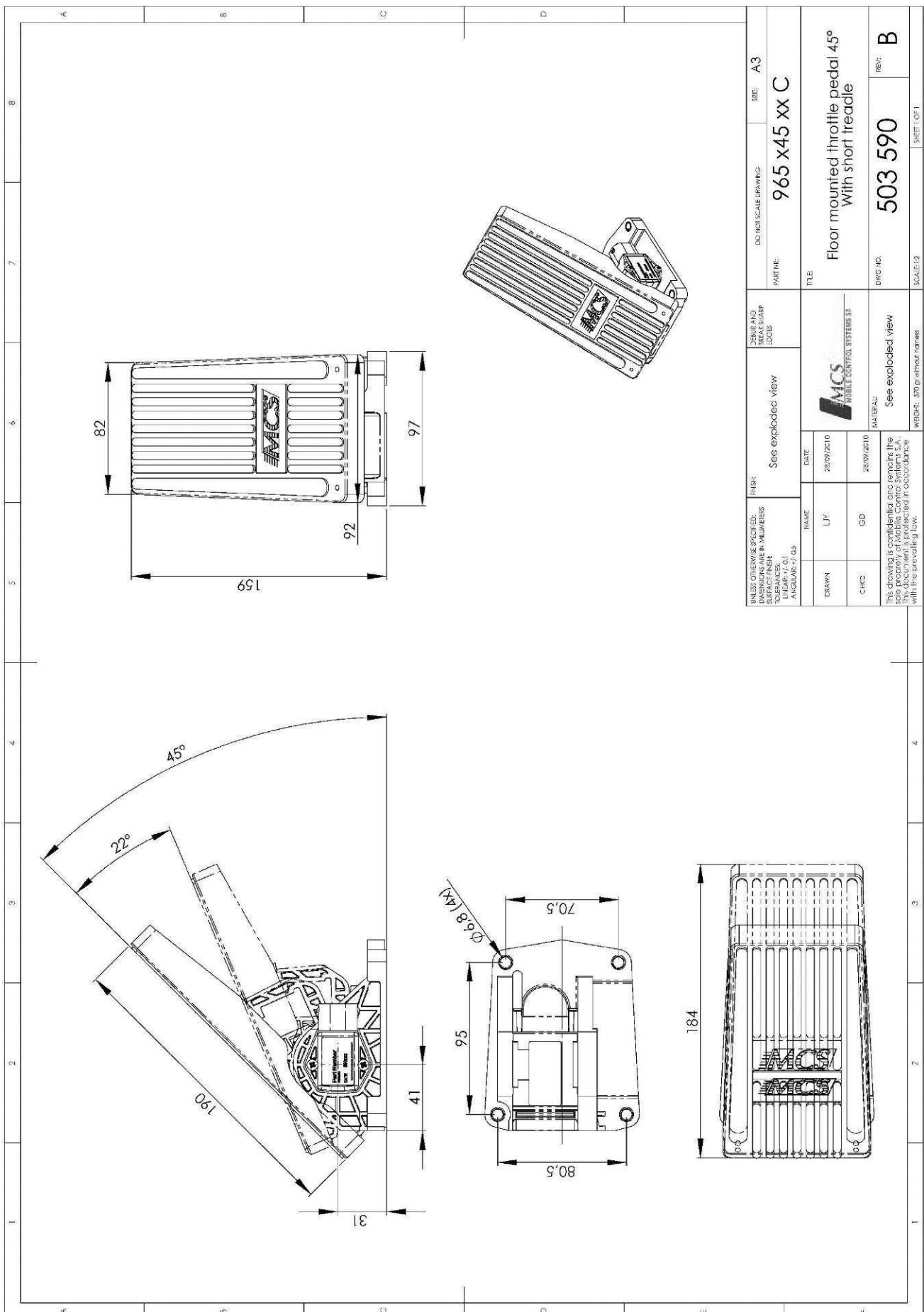


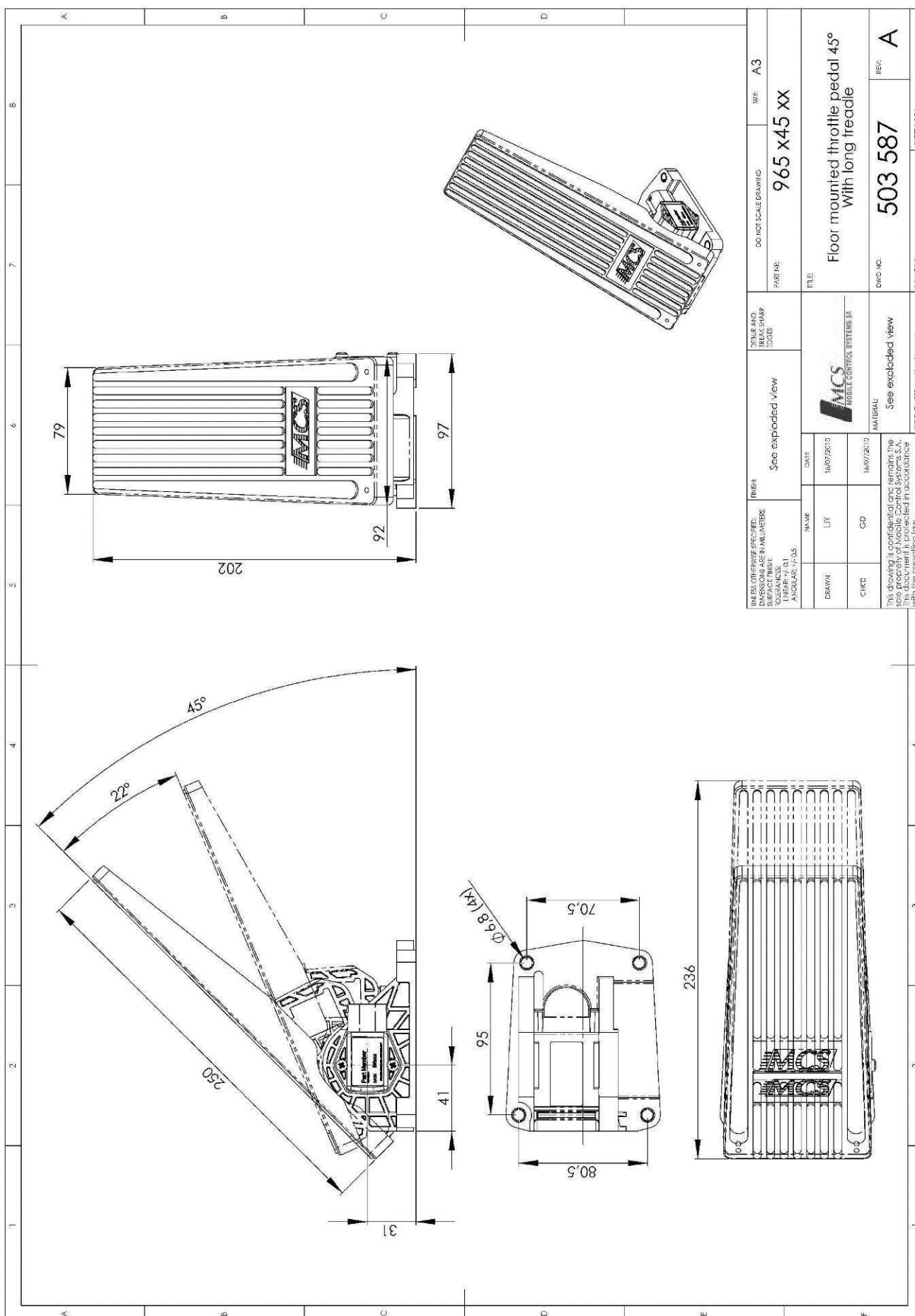


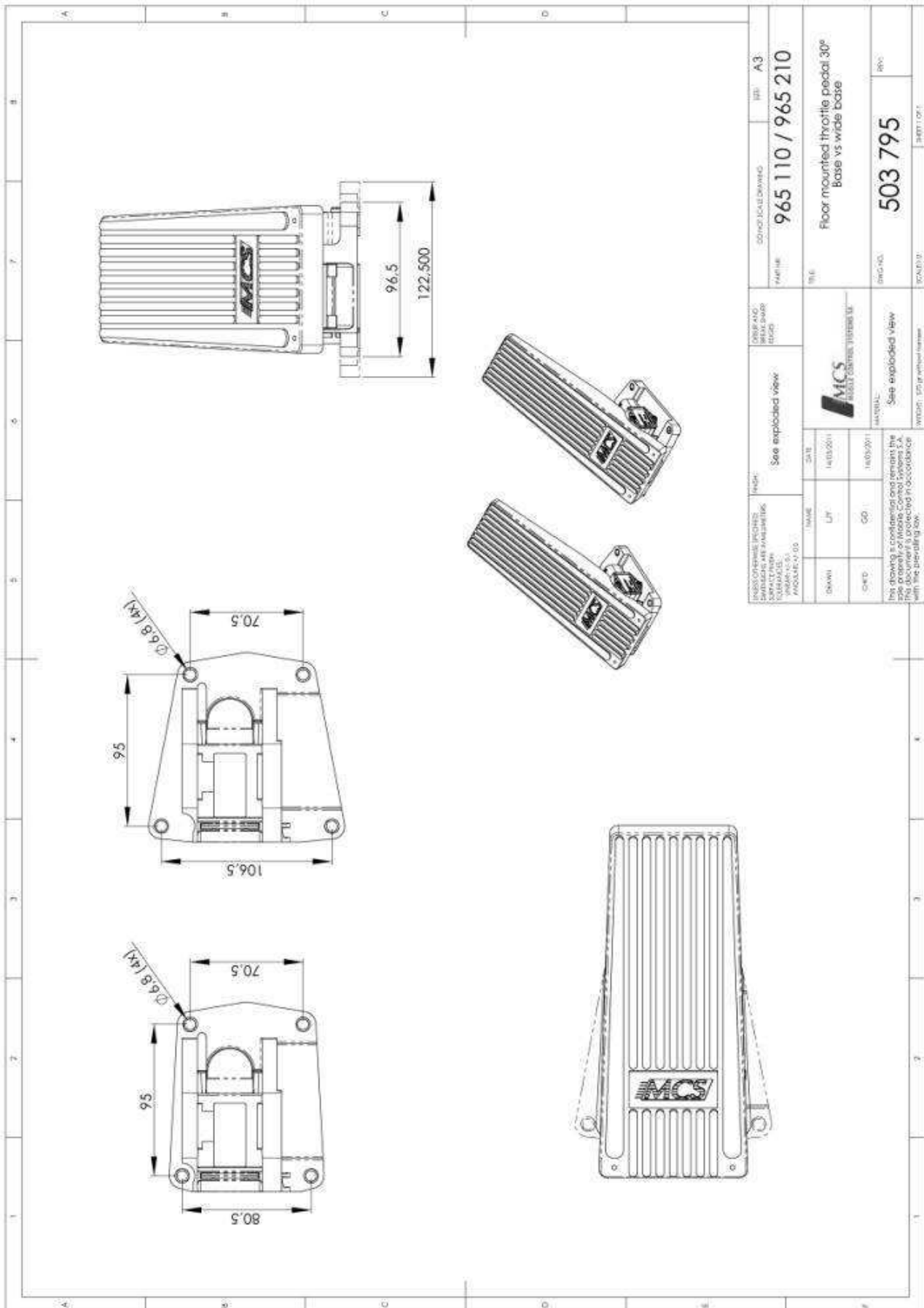




| | | | | | |
|--|-----------|-------------------|---|-------------------------------|--------------|
| UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: LINEAR: 12.5 ANGULAR: 12.5 | ENGINEER | See exploded view | DESIGN AND BREAK SHARP EDGES | DO NOT SCALE DRAWING | SIZE: A3 |
| | | | | | |
| | | | | | |
| | | | | | |
| DRAWN: C/MC | NAME: LJV | DATE: 16/07/2010 | 965 x35 xx | | |
| | | | | | |
| | | | | | |
| C/MC | QD | 16/07/2010 | Floor mounted throttle pedal 35° With long treadle | | |
| MATERIAL: See exploded view | | | DWG NO: 503 586 | REV: A | SHEET 1 OF 1 |
| THIS DRAWING IS CONFIDENTIAL AND REMAINS THE SOLE PROPERTY OF MOBILE CONTROL SYSTEMS S.A. THIS DOCUMENT IS PROTECTED IN ACCORDANCE WITH THE APPLICABLE LAW. | | | SCALE: 1:1 | WEIGHT: 370 g without harness | |







5. Typical Applications:



6. Compatible with the following engines:

- | | | |
|------------------|-----------------|-------------------|
| • CATERPILLAR | • JCB | • PERKINS |
| • CUMMINS | • JOHN DEERE | • RENAULT |
| • DACHAI | • KUBOTA | • SCANIA |
| • DEAWOO | • LIEBHERR | • SHANGHAI DIESEL |
| • DAF | • LOVOL | • SISU DIESEL |
| • DETROIT DIESEL | • MAN | • VOLKSWAGEN |
| • DEUTZ | • MERCEDES-BENZ | • VOLVO |
| • HINO | • MTU | • WEICHAI |
| • ISUZU | • NAVISTAR | • YANMAR |
| • IVECO | • NISSAN | • YUCHAI |