

# **Electronic Heavy Duty Throttle Pedal 962 000 series**



## 1. Mechanical Specifications:

- Two “built-in” return springs
- Additional return spring built in the sensor
- Die cast aluminium treadle and mounting plate
- Complies with FMVSS 124

Travel angle	22°
Angle option	30°, 35°, 45°
Protection classification	IP66
Storage temperature	-40°C to +95°C
Operating temperature	-40°C to +85°C
Connector	AMP - 6 pins - waterproof (IP69)

- Options:
  - Kick down virtual feedback and kick down signal
  - Twin sensors
  - 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 :

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

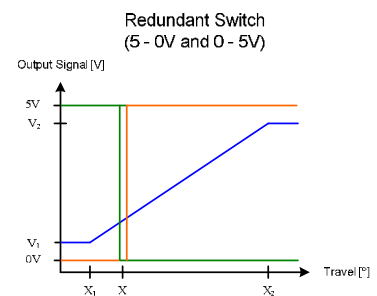
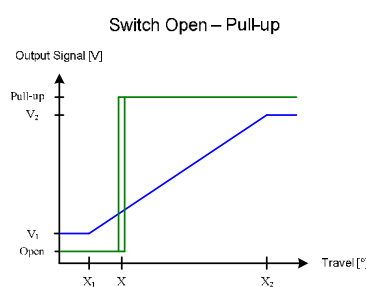
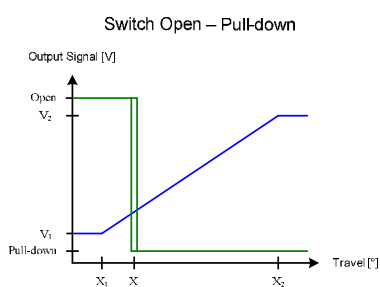
### Switch channel option 1 :

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

### Switch channel option 2 :

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

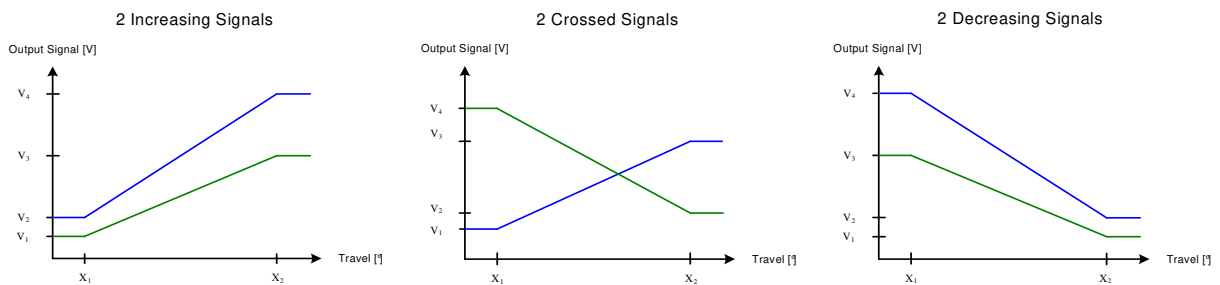
### Examples:



## B/ Programmable dual output analogue sensor

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

### Examples:



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

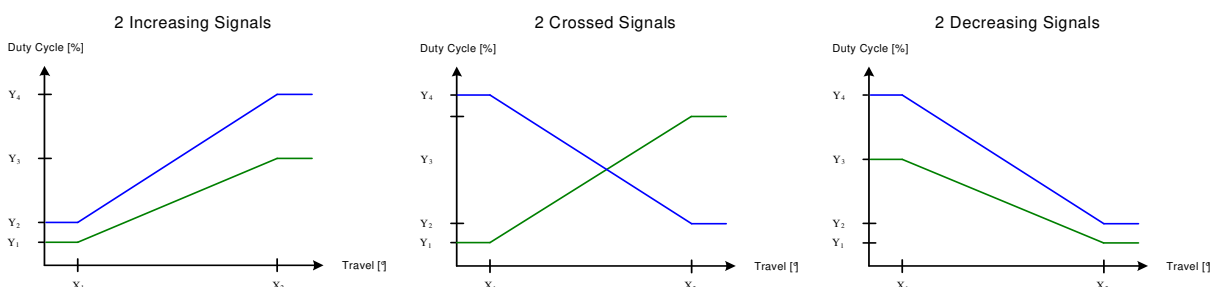
### Digital channel(s):

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

### Optional switch channel with single digital output:

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

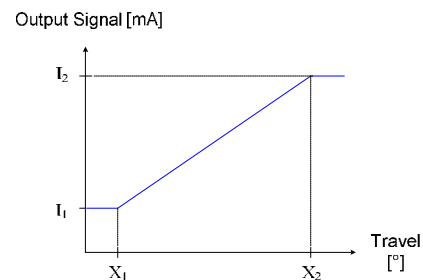
##### Electrical specifications:

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 wire harness and special mounting plate



With a swivel arm

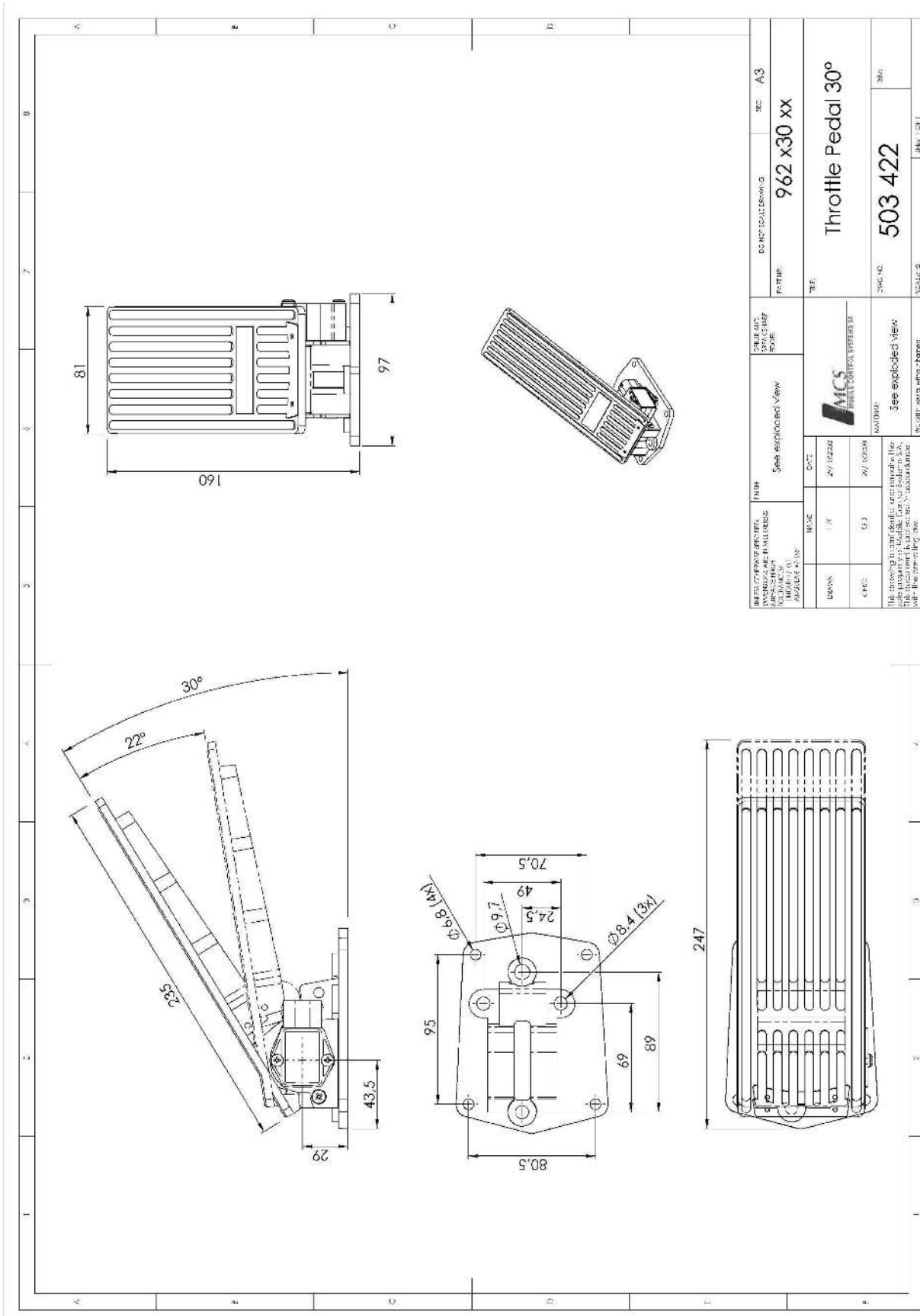


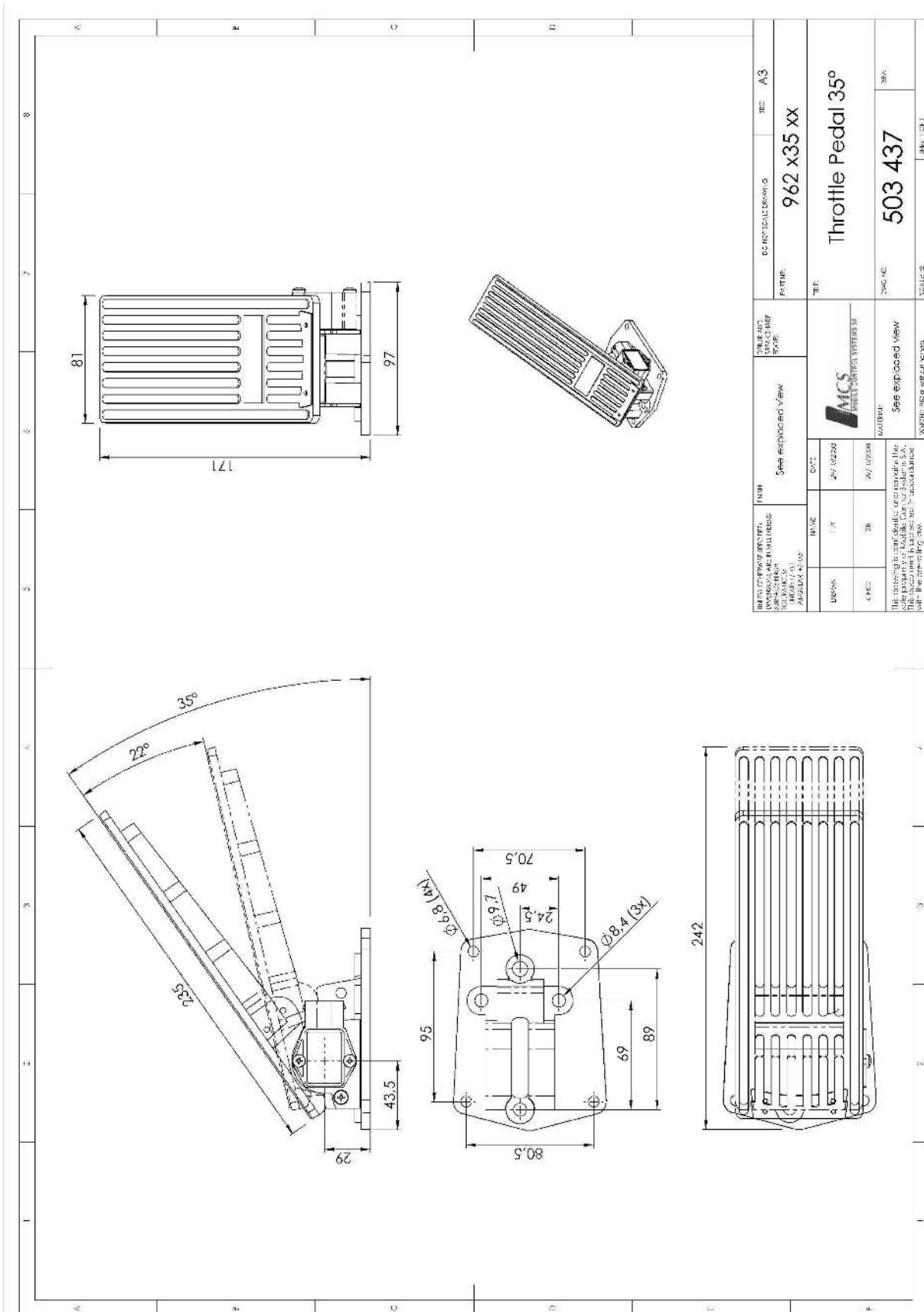
With a rubber cover



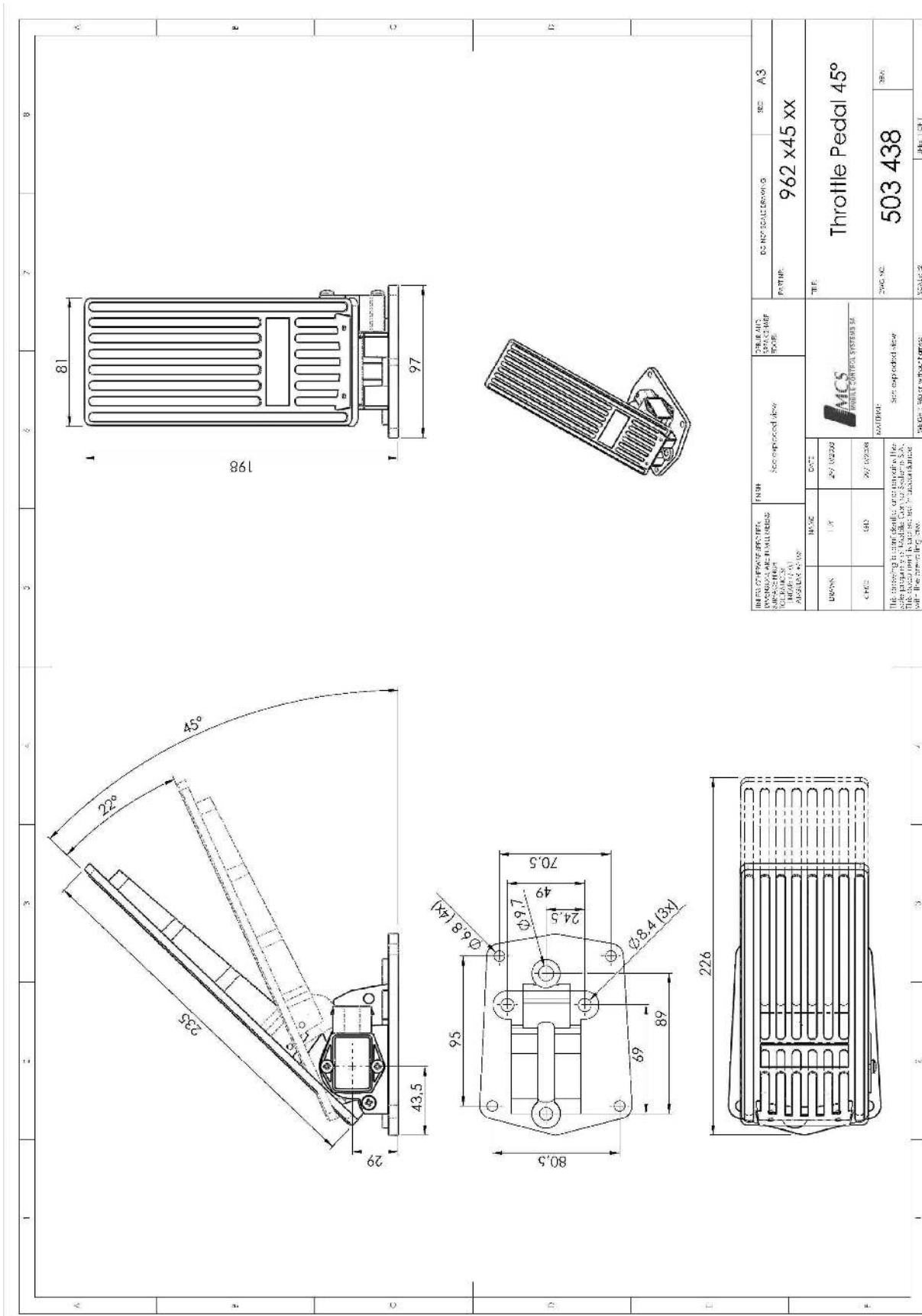
With twin sensor  
(up to 4 output signals)

## 4. Drawings:





INFO CENTER: REF. 1. DIMENSIONS: 2. WEIGHT: 3. MATERIAL: 4. FINISH: 5. COLOR: 6. ACCESSORIES: 7. DRAWING CODE: 8. DATE: 9. DRAWN: 10. CHECKED: 11. THE DRAWING IS THE PROPERTY OF MCS MOBILE CONTROL SYSTEMS SA. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF MCS MOBILE CONTROL SYSTEMS SA.	FINISH: See exploded view DATE: 27/03/2010 DRAWN: JY CHECKED: JY	DRAWING CODE: 962 x35 XX TITLE: Throttle Pedal 35°	REF: A3 DWG NO: 503 437 SCALE: 1:1
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FINISH	See exploded view	DRILLING & TAPING	962 x45 XX	REV	A/3
DRILLING & TAPING	See exploded view	DRILLING & TAPING	962 x45 XX	TITLE	
DRILLING & TAPING	See exploded view	DRILLING & TAPING	962 x45 XX	Throttle Pedal 45°	
DRILLING & TAPING	See exploded view	DRILLING & TAPING	962 x45 XX	DRWG NO.	503 438
DRILLING & TAPING	See exploded view	DRILLING & TAPING	962 x45 XX	SCALE	1:1 (1/1)



## 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          |