

# Examples for setting Parameters of DMMD

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The setting of DMMD parameters can be realised by connecting specific wires of the open ended parameter cable accessory. This can be done e.g. with

- Switches
- Plugs / Insolation Screw
- Twisting / Soldering of the stripped ends

Some examples are described on the following slides.

e.g.: Single Handle Bar Switches



e.g.: 3 Positions Handle Bar Switch



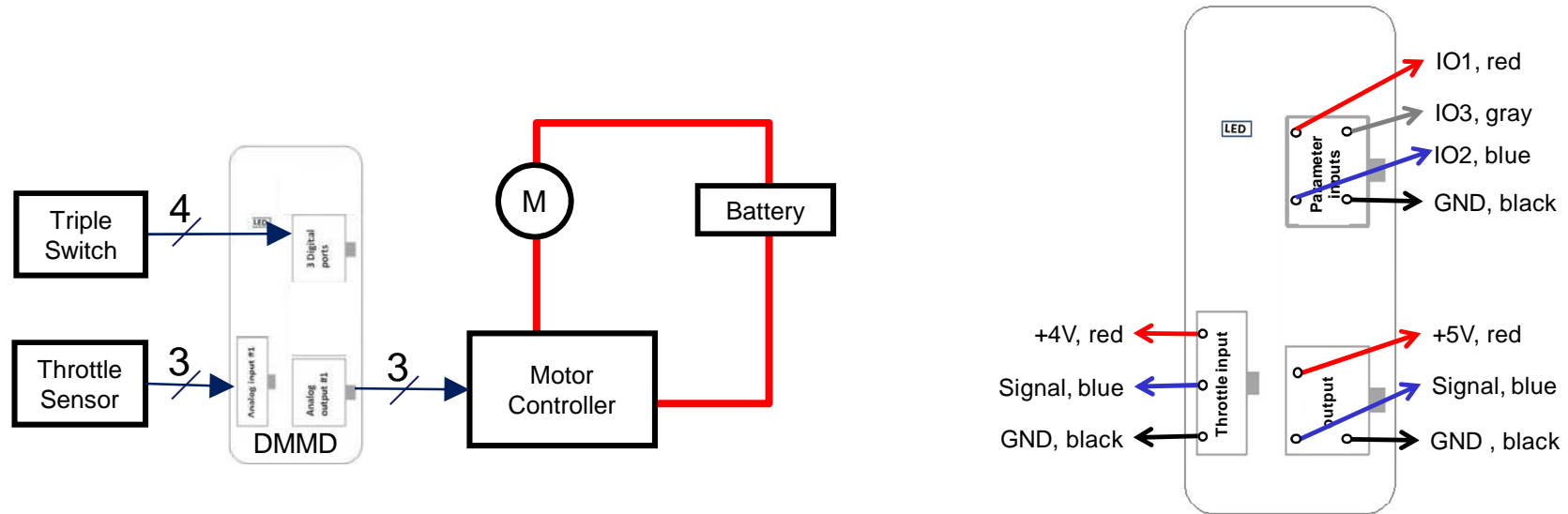
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# DMMD wiring diagram for OSET PI-type open loop controller



## Parameter settings for OSET PI-type open loop controller

Switch to GND		Time Constant	Switch to GND		Adjusting Range
IO2	IO1	0% bis 100% [sec]	IO3	/ Throttle Signal	
open	open	3.5 (slow) *)	open	medium 45% *)	
open	closed	2.3	closed	large 80%	
closed	open	1.5			
closed	closed	0.8 (fast)			

\*) default setting without switch

Adjusting range: Percentage of the full throttle range to cover the range of 0 ... 100% torque  
 Large Range = soft throttle response, smaller range = more aggressive response  
 Setting time: time that elapses from opening throttle until steady state of the output signal

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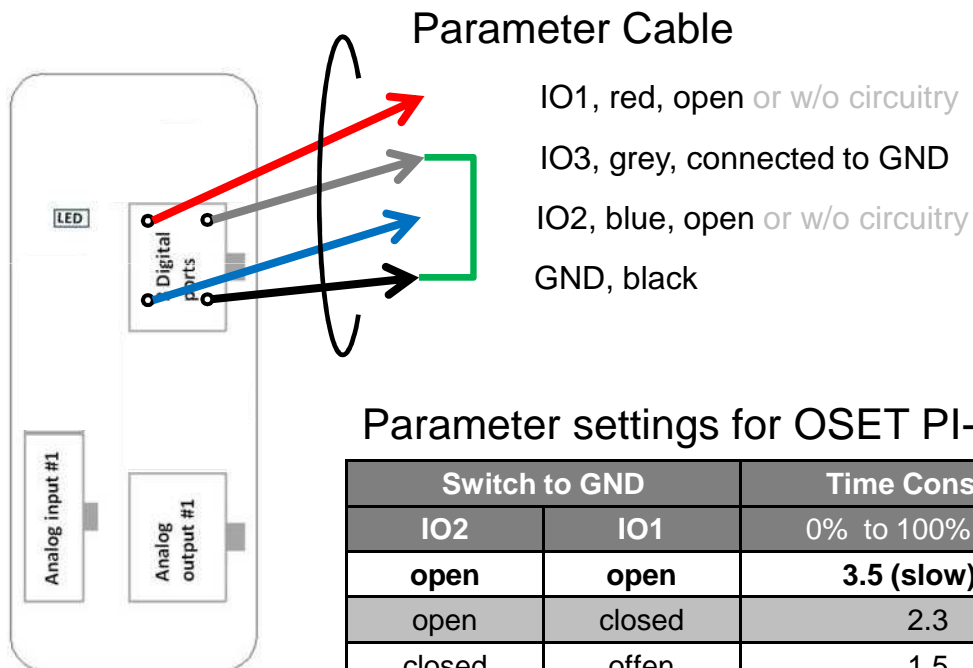


# PI-type open loop controller OSET: Fixed setting for Time Constant and Adjusting Range



Example of **fixed setting of Adjusting Range** using:

- Twisting stripped ends of parameter cable



Resulting Parameters :  
Time Constant: 3,5 Seconds  
Adjusting Range large 80%

## Parameter settings for OSET PI-type open loop controller

Switch to GND		Time Constant	Switch to GND	Adjusting Range
IO2	IO1	0% to 100% [sec]	IO3	/ Throttle Signal
<b>open</b>	<b>open</b>	<b>3.5 (slow) *)</b>	open	medium 45% *)
open	closed	2.3	<b>closed</b>	<b>large 80%</b>
closed	open	1.5		
closed	closed	0.8 (fast)		

\*) default setting without switch

Adjusting range: Percentage of the full throttle range to cover the range of 0 ... 100% torque  
Large Range = soft throttle response, smaller range = more aggressive response  
Setting time: time that elapses from opening throttle until steady state of the output signal

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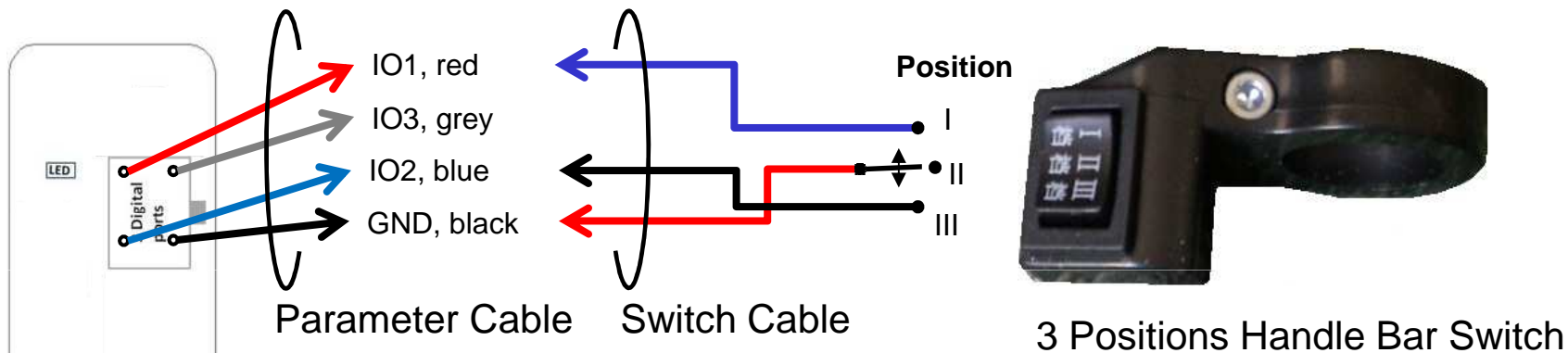


# PI-type open loop controller OSET: Setting of Time Constant with Switch



Example of **switching between 3 Time Constants** using:

- 3 Positions Handle Bar Switch



## Switching Parameter settings for OSET PI-type open loop controller

3 Positions Switch	Time Constant
	0% to 100% [sec]
<b>Position II</b>	<b>3.5 (slow) *)</b>
<b>Position I</b>	<b>2.3</b>
<b>Position III</b>	<b>1.5</b>
Not available	0.8 (fast)

Switch to GND	Adjusting Range
IO3	/ Throttle Signal
offen	medium 45% *)

\*) default setting without switch

Adjusting range: Percentage of the full throttle range to cover the range of 0 ... 100% torque  
Large Range = soft throttle response, smaller range = more aggressive response  
Setting time: time that elapses from opening throttle until steady state of the output signal

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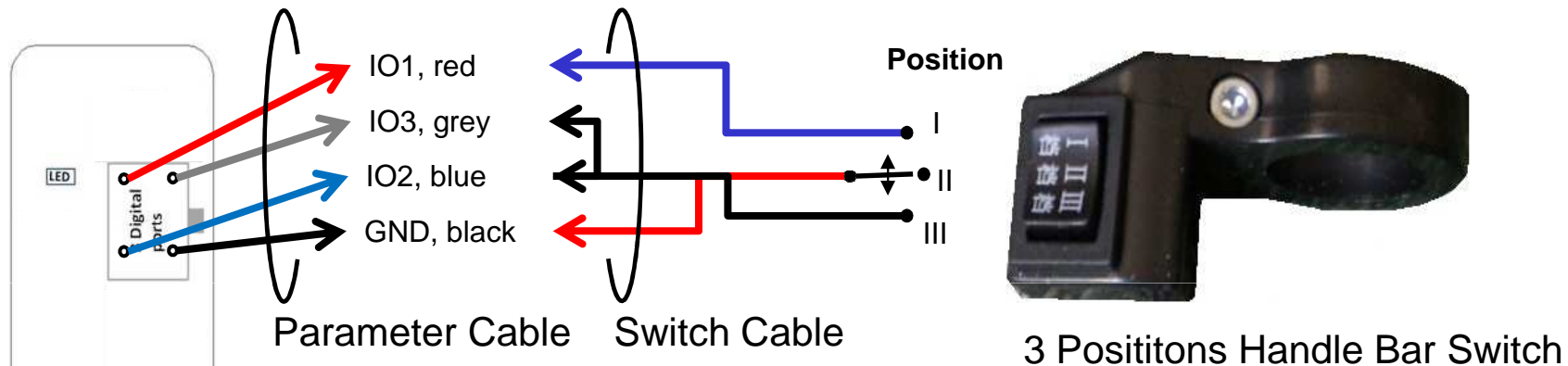
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# PI-type open loop controller OSET: Setting of Time Constant and Adjustment Range with Switch



Example of **combined switching between 3 Time Constants and 2 Adjustment Ranges** using 3 Positions Handle Bar Switch



Switching Parameter settings for OSET PI-type open loop controller

3 Positions Switch	Time Constant
	0% to 100% [sec]
<b>Position II</b>	<b>3.5 (slow) *)</b>
<b>Position I</b>	<b>2.3</b>
<b>Position III</b>	<b>1.5</b>
Not available	0.8 (fast)

3 Positions Switch	Adjusting Range / Throttle Signal
<b>Position II</b>	<b>medium 45% *)</b>
<b>Position I</b>	<b>medium 45% *)</b>
<b>Position III</b>	<b>large 80%</b>

\*) default setting without switch

Adjusting range: Percentage of the full throttle range to cover the range of 0 ... 100% torque

Large Range = soft throttle response, smaller range = more aggressive response

Setting time: time that elapses from opening throttle until steady state of the output signal

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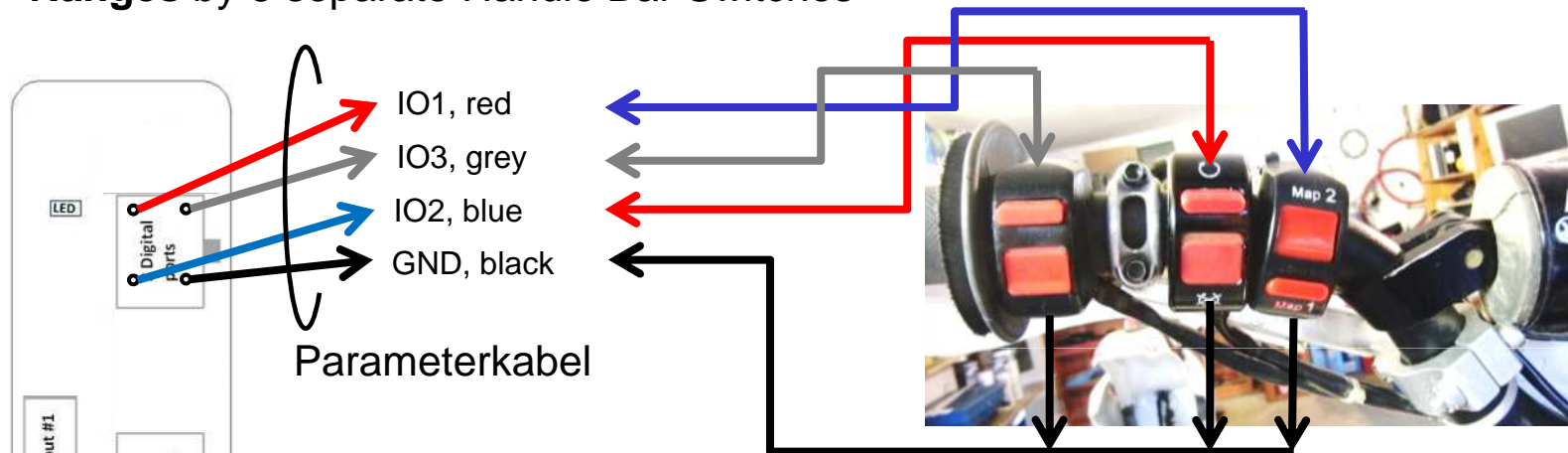
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# PI-type open loop controller OSET: Setting of Time Constant and Adjustment Range with 3 Switches



Example of **ubiquitous switching** between **4 Time Constants** and **2 Adjustment Ranges** by 3 separate Handle Bar Switches



Parameter settings for OSET PI-type open loop controller

Switch to GND		Time Constant	Switch to GND	Adjusting Range
IO2	IO1	0% bis 100% [sec]	IO3	/ Throttle Signal
open	open	3.5 (slow) *)	open	medium 45% *)
open	closed	2.3	closed	large 80%
closed	open	1.5		
closed	closed	0.8 (fast)		

\*) default setting without switch

Adjusting range: Percentage of the full throttle range to cover the range of 0 ... 100% torque  
 Large Range = soft throttle response, smaller range = more aggressive response  
 Setting time: time that elapses from opening throttle until steady state of the output signal

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