

# Summary of correlations of sensor kits and sensor modules

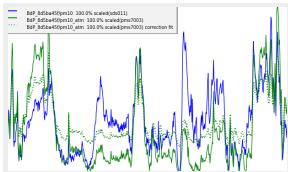
Sensorkits: BdP\_8d5ba45f BdP\_3f18c330 BdP\_33040d54

Report generated on: Sun Sep 17 21:03:32 CEST 2017

## R-square and statistical summary

### Measurement PM10 correlation key values

Correlation 1 - PM10 - kit BdP\_8d5ba45f sensor type **SDS011** with kit BdP\_8d5ba45f sensor type **PMS7003**:



nr samples 672, min= 0.71, max=69.57

avg=19.92, std dev=15.13

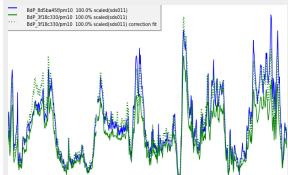
**R-squared:**

**0.4693**

Best fit polynomial coefficients:

[ 1.264e+01, 5.254e-01]

Correlation 2 - PM10 - kit BdP\_8d5ba45f sensor type **SDS011** with kit BdP\_3f18c330 sensor type **SDS011**:



nr samples 670, min= 2.86, max=48.00

avg=18.05, std dev= 8.48

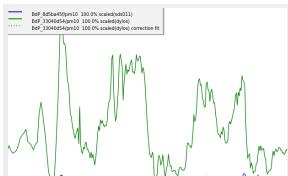
**R-squared:**

**0.9191**

Best fit polynomial coefficients:

[ -6.084e-01, 1.313e+00]

Correlation 3 - PM10 - kit BdP\_8d5ba45f sensor type **SDS011** with kit BdP\_33040d54 sensor type **DYLOS**:



nr samples 284, min=30.00, max=674.00

avg=231.12, std dev=135.27

**R-squared:**

**0.4909**

Best fit polynomial coefficients:

[ 1.105e+01, 6.722e-02]

Correlation 4 - PM10 - kit BdP\_8d5ba45f sensor type **SDS011** with kit BdP\_33040d54 sensor type **PPD42NS**:



nr samples 150, min= 1.00, max=1098.00

avg=41.05, std dev=132.08

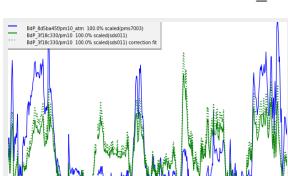
**R-squared:**

**0.0020**

Best fit polynomial coefficients:

[ 2.545e+01, -4.229e-03]

Correlation 5 - PM10 - kit BdP\_8d5ba45f sensor type **PMS7003** with kit BdP\_3f18c330 sensor type **SDS011**:



nr samples 670, min= 2.86, max=48.00

avg=18.05, std dev= 8.48

**R-squared:**

**0.4542**

Best fit polynomial coefficients:

[ -1.776e+00, 1.203e+00]

Correlation 6 - PM10 - kit BdP\_8d5ba45f sensor type **PMS7003** with kit BdP\_33040d54 sensor type **DYLOS**:



nr samples 284, min=30.00, max=674.00

avg=231.12, std dev=135.27

**R-squared:**

**0.0081**

Best fit polynomial coefficients:

[ 1.855e+01, 1.083e-02]

Correlation 7 - PM10 - kit BdP\_8d5ba45f sensor type **PMS7003** with kit BdP\_33040d54 sensor type **PPD42NS**:



nr samples 150, min= 1.00, max=1098.00

avg=41.05, std dev=132.08

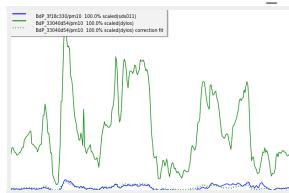
**R-squared:**

**0.0273**

Best fit polynomial coefficients:

[ 1.742e+01, 1.978e-02]

#### Correlation 8 - PM10 - kit BdP\_3f18c330 sensor type SDS011 with kit BdP\_33040d54 sensor type DYLOS:



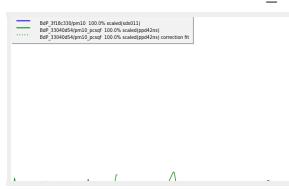
nr samples 306, min=30.00, max=630.25  
avg=226.20, std dev=131.90

R-squared:

**0.5499**

Best fit polynomial coefficients:  
[ 7.885e+00, 5.147e-02 ]

#### Correlation 9 - PM10 - kit BdP\_3f18c330 sensor type SDS011 with kit BdP\_33040d54 sensor type PPD42NS:



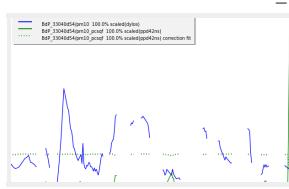
nr samples 144, min= 1.00, max=1098.00  
avg=41.67, std dev=134.87

R-squared:

**0.0011**

Best fit polynomial coefficients:  
[ 1.979e+01, -2.150e-03 ]

#### Correlation 10 - PM10 - kit BdP\_33040d54 sensor type DYLOS with kit BdP\_33040d54 sensor type PPD42NS:



nr samples 131, min= 1.00, max=1098.00  
avg=43.84, std dev=140.95

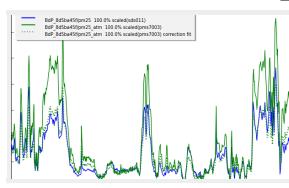
R-squared:

**0.0151**

Best fit polynomial coefficients:  
[ 2.364e+02, -1.133e-01 ]

### Measurement PM2.5 correlation key values

#### Correlation 11 - PM2.5 - kit BdP\_8d5ba45f sensor type SDS011 with kit BdP\_8d5ba45f sensor type PMS7003:



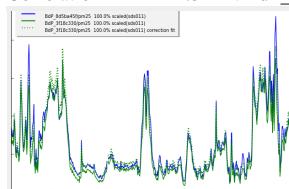
nr samples 672, min=108.43, max=13046.57  
avg=3644.57, std dev=2937.81

R-squared:

**0.9414**

Best fit polynomial coefficients:  
[ 4.946e+02, 5.682e-01 ]

#### Correlation 12 - PM2.5 - kit BdP\_8d5ba45f sensor type SDS011 with kit BdP\_3f18c330 sensor type SDS011:



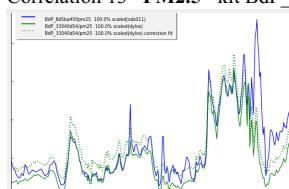
nr samples 670, min=330.00, max=7028.86  
avg=2214.76, std dev=1584.59

R-squared:

**0.9576**

Best fit polynomial coefficients:  
[ 2.122e+02, 1.064e+00 ]

#### Correlation 13 - PM2.5 - kit BdP\_8d5ba45f sensor type SDS011 with kit BdP\_33040d54 sensor type DYLOS:



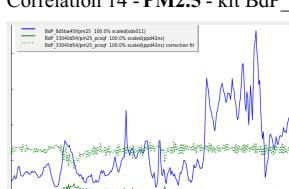
nr samples 284, min=235.00, max=6690.00  
avg=2018.13, std dev=1561.39

R-squared:

**0.7195**

Best fit polynomial coefficients:  
[ 6.752e+02, 1.010e+00 ]

#### Correlation 14 - PM2.5 - kit BdP\_8d5ba45f sensor type SDS011 with kit BdP\_33040d54 sensor type PPD42NS:



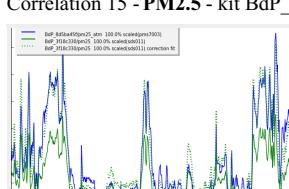
nr samples 309, min=148.27, max=722.53  
avg=310.82, std dev=90.13

R-squared:

**0.0163**

Best fit polynomial coefficients:  
[ 3.401e+03, -2.594e+00 ]

#### Correlation 15 - PM2.5 - kit BdP\_8d5ba45f sensor type PMS7003 with kit BdP\_3f18c330 sensor type SDS011:



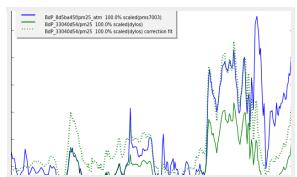
nr samples 670, min=330.00, max=7028.86  
avg=2214.76, std dev=1584.59

R-squared:

**0.9344**

Best fit polynomial coefficients:  
[ -3.230e+02, 1.794e+00 ]

Correlation 16 - PM2.5 - kit BdP\_8d5ba45f sensor type PMS7003 with kit BdP\_33040d54 sensor type DYLOS:



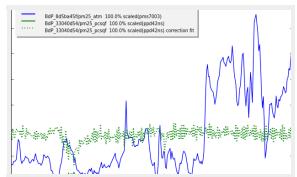
nr samples 284, min=235.00, max=6690.00  
avg=2018.13, std dev=1561.39

R-squared:

0.6083

Best fit polynomial coefficients:  
[ 6.417e+02, 1.577e+00]

Correlation 17 - PM2.5 - kit BdP\_8d5ba45f sensor type PMS7003 with kit BdP\_33040d54 sensor type PPD42NS:



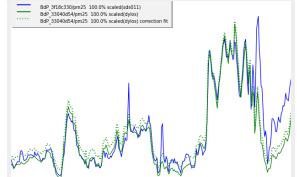
nr samples 309, min=148.27, max=722.53  
avg=310.82, std dev=90.13

R-squared:

0.0268

Best fit polynomial coefficients:  
[ 5.379e+03, -5.633e+00]

Correlation 18 - PM2.5 - kit BdP\_3f18c330 sensor type SDS011 with kit BdP\_33040d54 sensor type DYLOS:



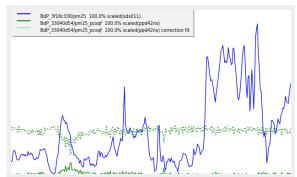
nr samples 306, min=235.00, max=6690.00  
avg=1935.60, std dev=1525.72

R-squared:

0.8238

Best fit polynomial coefficients:  
[ 3.670e+02, 9.655e-01]

Correlation 19 - PM2.5 - kit BdP\_3f18c330 sensor type SDS011 with kit BdP\_33040d54 sensor type PPD42NS:



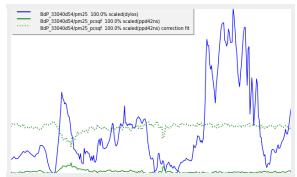
nr samples 309, min=180.76, max=820.71  
avg=311.80, std dev=86.43

R-squared:

0.0115

Best fit polynomial coefficients:  
[ 2.852e+03, -2.011e+00]

Correlation 20 - PM2.5 - kit BdP\_33040d54 sensor type DYLOS with kit BdP\_33040d54 sensor type PPD42NS:



nr samples 280, min=204.20, max=654.77  
avg=311.90, std dev=69.67

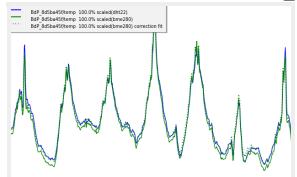
R-squared:

0.0096

Best fit polynomial coefficients:  
[ 2.724e+03, -2.204e+00]

## Measurement TEMP correlation key values

Correlation 21 - TEMP - kit BdP\_8d5ba45f sensor type DHT22 with kit BdP\_8d5ba45f sensor type BME280:



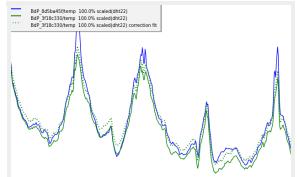
nr samples 672, min=13.43, max=28.03  
avg=17.88, std dev= 2.80

R-squared:

0.9893

Best fit polynomial coefficients:  
[ 1.111e+00, 9.595e-01]

Correlation 22 - TEMP - kit BdP\_8d5ba45f sensor type DHT22 with kit BdP\_3f18c330 sensor type DHT22:



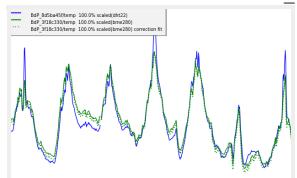
nr samples 441, min= 0.00, max=24.60  
avg=17.43, std dev= 2.79

R-squared:

0.8768

Best fit polynomial coefficients:  
[ 1.024e+00, 9.851e-01]

Correlation 23 - TEMP - kit BdP\_8d5ba45f sensor type DHT22 with kit BdP\_3f18c330 sensor type BME280:



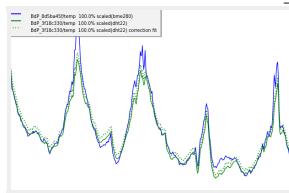
nr samples 670, min=14.07, max=25.21  
avg=18.52, std dev= 2.55

R-squared:

0.9334

Best fit polynomial coefficients:  
[ -7.034e-01, 1.024e+00]

#### Correlation 24 - TEMP - kit BdP\_8d5ba45f sensor type **BME280** with kit BdP\_3f18c330 sensor type **DHT22**:



nr samples 441, min= 0.00, max=24.60

avg=17.43, std dev= 2.79

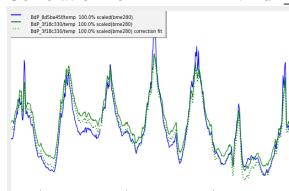
R-squared:

**0.8708**

Best fit polynomial coefficients:

[ 1.655e-02, 1.024e+00]

#### Correlation 25 - TEMP - kit BdP\_8d5ba45f sensor type **BME280** with kit BdP\_3f18c330 sensor type **BME280**:



nr samples 670, min=14.07, max=25.21

avg=18.52, std dev= 2.55

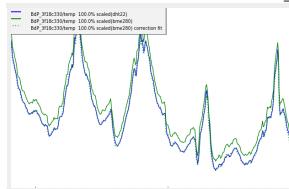
R-squared:

**0.9263**

Best fit polynomial coefficients:

[ -1.710e+00, 1.058e+00]

#### Correlation 26 - TEMP - kit BdP\_3f18c330 sensor type **DHT22** with kit BdP\_3f18c330 sensor type **BME280**:



nr samples 441, min=14.07, max=25.23

avg=18.21, std dev= 2.72

R-squared:

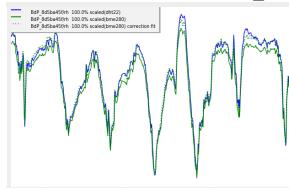
**0.8991**

Best fit polynomial coefficients:

[ -2.871e-01, 9.729e-01]

### Measurement RH correlation key values

#### Correlation 27 - RH - kit BdP\_8d5ba45f sensor type **DHT22** with kit BdP\_8d5ba45f sensor type **BME280**:



nr samples 672, min=33.62, max=80.61

avg=64.99, std dev= 9.94

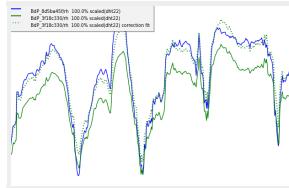
R-squared:

**0.9911**

Best fit polynomial coefficients:

[ -1.104e+00, 1.050e+00]

#### Correlation 28 - RH - kit BdP\_8d5ba45f sensor type **DHT22** with kit BdP\_3f18c330 sensor type **DHT22**:



nr samples 441, min= 0.00, max=75.34

avg=59.55, std dev= 9.72

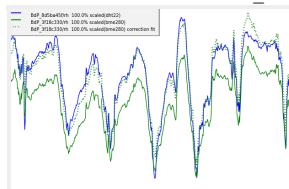
R-squared:

**0.8798**

Best fit polynomial coefficients:

[ 8.241e-01, 1.093e+00]

#### Correlation 29 - RH - kit BdP\_8d5ba45f sensor type **DHT22** with kit BdP\_3f18c330 sensor type **BME280**:



nr samples 670, min=34.60, max=75.89

avg=59.10, std dev= 8.81

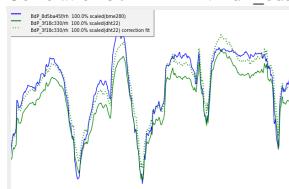
R-squared:

**0.9385**

Best fit polynomial coefficients:

[ -1.070e+00, 1.154e+00]

#### Correlation 30 - RH - kit BdP\_8d5ba45f sensor type **BME280** with kit BdP\_3f18c330 sensor type **DHT22**:



nr samples 441, min= 0.00, max=75.34

avg=59.55, std dev= 9.72

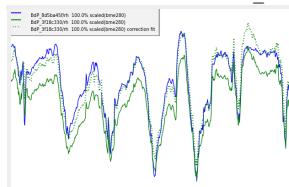
R-squared:

**0.8683**

Best fit polynomial coefficients:

[ 2.721e+00, 1.024e+00]

#### Correlation 31 - RH - kit BdP\_8d5ba45f sensor type **BME280** with kit BdP\_3f18c330 sensor type **BME280**:



nr samples 670, min=34.60, max=75.89

avg=59.10, std dev= 8.81

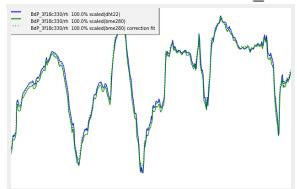
R-squared:

**0.9280**

Best fit polynomial coefficients:

[ 6.933e-01, 1.088e+00]

Correlation 32 - **RH** - kit BdP\_3f18c330 sensor type **DHT22** with kit BdP\_3f18c330 sensor type **BME280**:



nr samples 441, min=35.28, max=75.90

avg=58.90, std dev= 9.64

**R-squared:**

**0.9135**

Best fit polynomial coefficients:

[ 2.751e+00, 9.644e-01]

## Measurement PHA correlation key values

Correlation 33 - **PHA** - kit BdP\_8d5ba45f sensor type **BME280** with kit BdP\_3f18c330 sensor type **BME280**:

nr samples 670, min=99181.25, max=100956.27

avg=99969.64, std dev=515.18

**R-squared:**

**0.9999**

Best fit polynomial coefficients:

[ 4.700e+02, 9.958e-01]