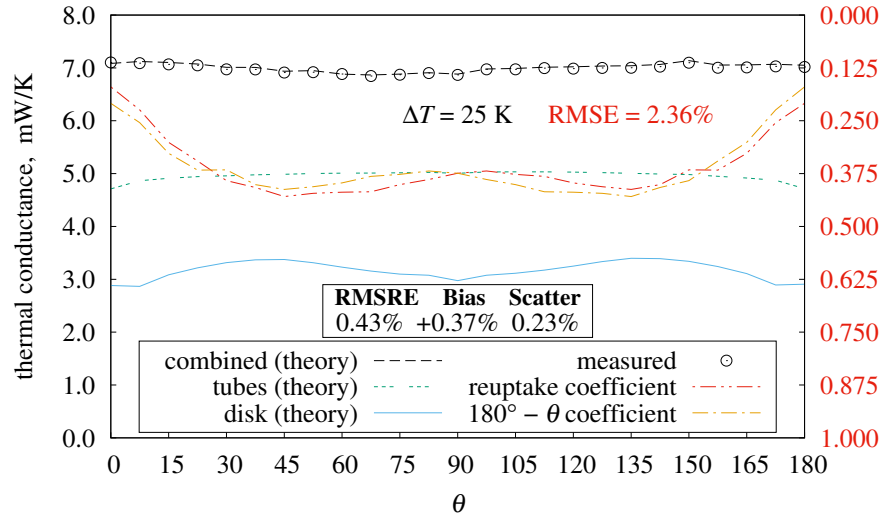
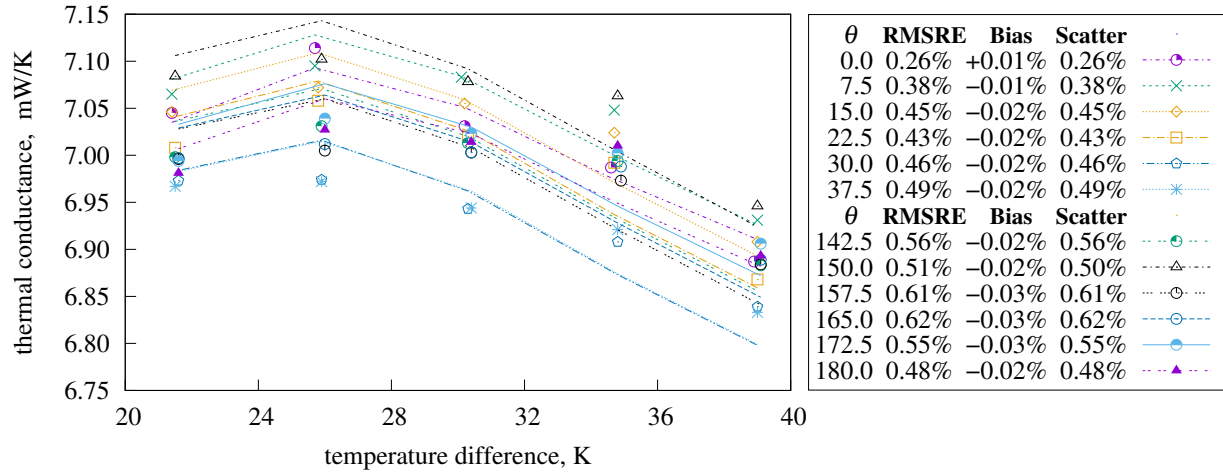
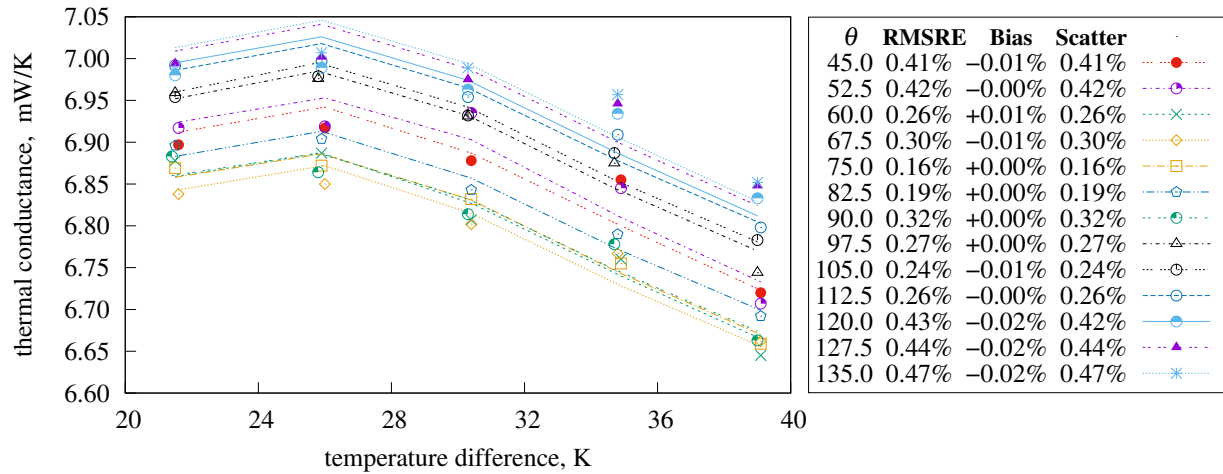




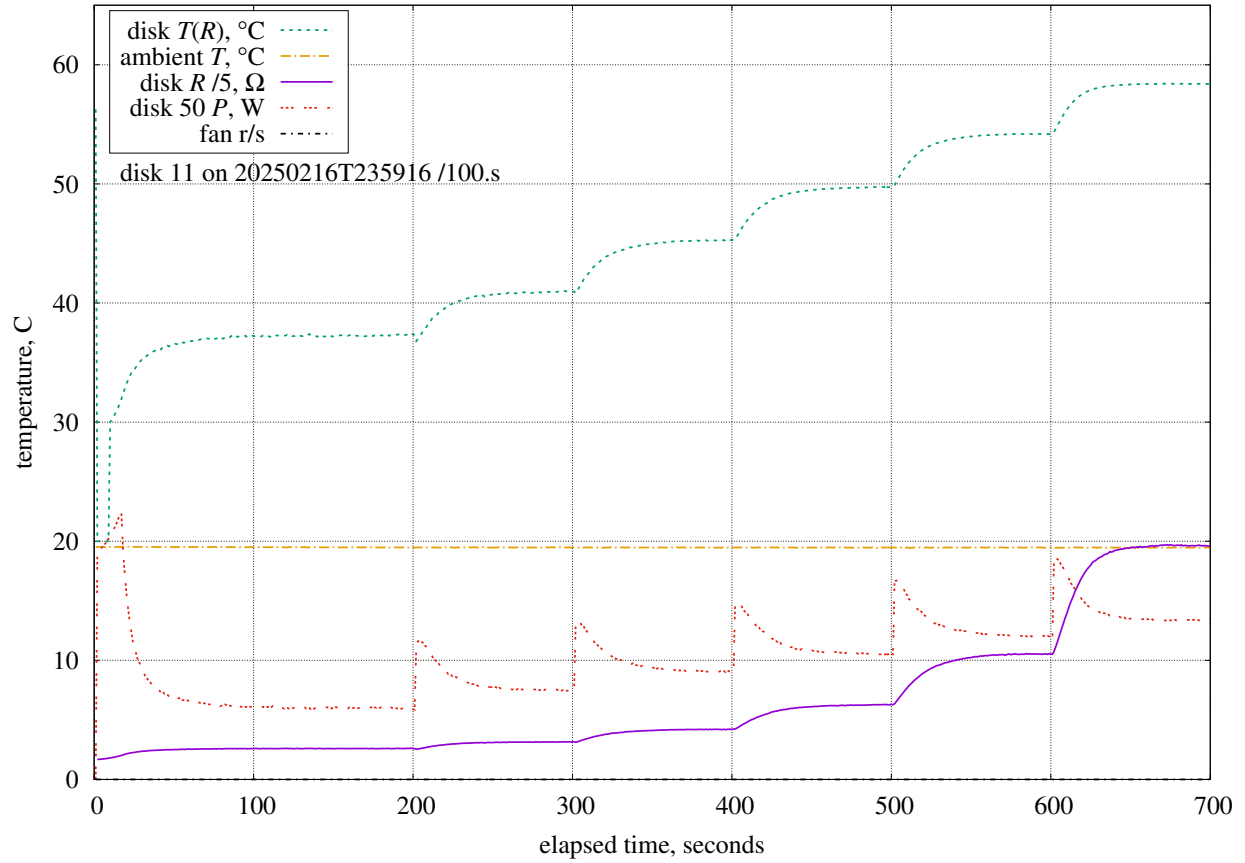
Disk convection versus θ at $\Delta T = 25 \text{ K}$



Disk convection versus $0^\circ \leq \theta < 45^\circ$ and $135^\circ < \theta \leq 180^\circ$



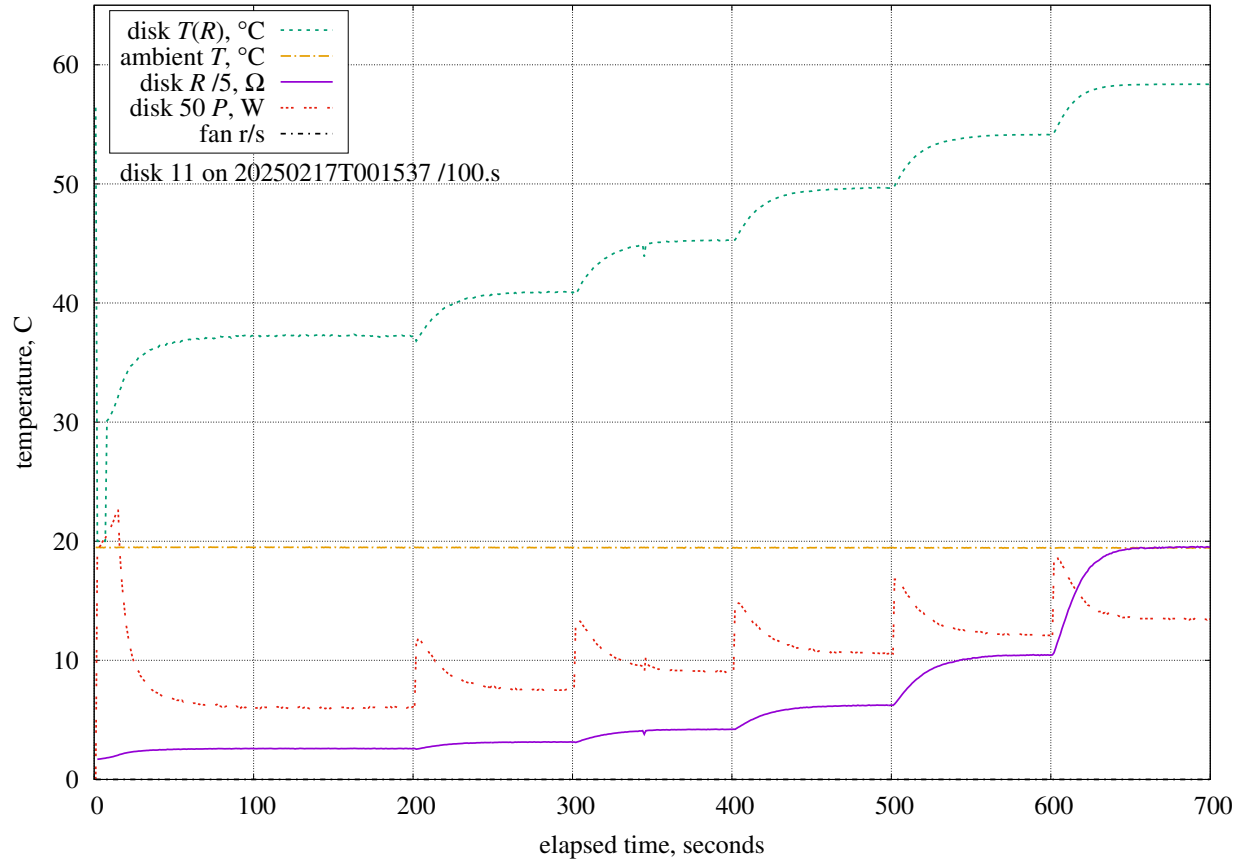
Disk convection versus $45^\circ \leq \theta \leq 135^\circ$



$\theta = 0.0^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 0.0$.

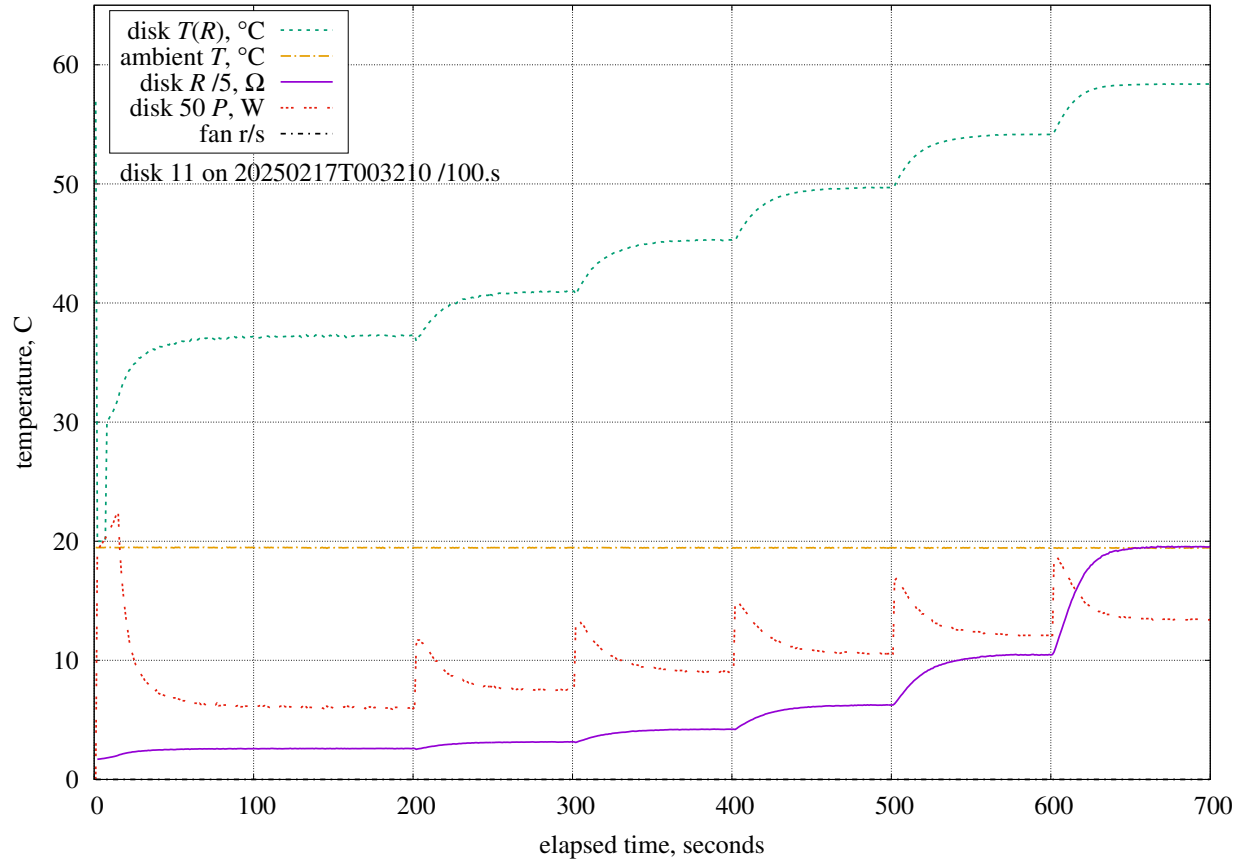
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.37%/K	0.10.K	0.44%	LM35C differential
P	97.0.kPa	+0.0002%/Pa	1.5.kPa	0.26%	MPXH6115A6U air pressure
D_o	2.81.mm	+3786%/m	500.um	1.89%	tube outer diameter
D_i	1.11.mm	+3969%/m	200.um	0.79%	tube inner diameter
L_{wire}	38.0.mm	+1020%/m	500.um	0.51%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.123%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.10%	ABS thermal conductivity
d	12.0.mm	+4447%/m	100.um	0.44%	disk diameter
θ	50.0.m°	+3.69%/°	0.20.°	0.74%	plate angle
				2.60%	combined bias uncertainty



$\theta = 7.5^\circ$; $V = 0.000 \text{ m/s}$ (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 7.6$.

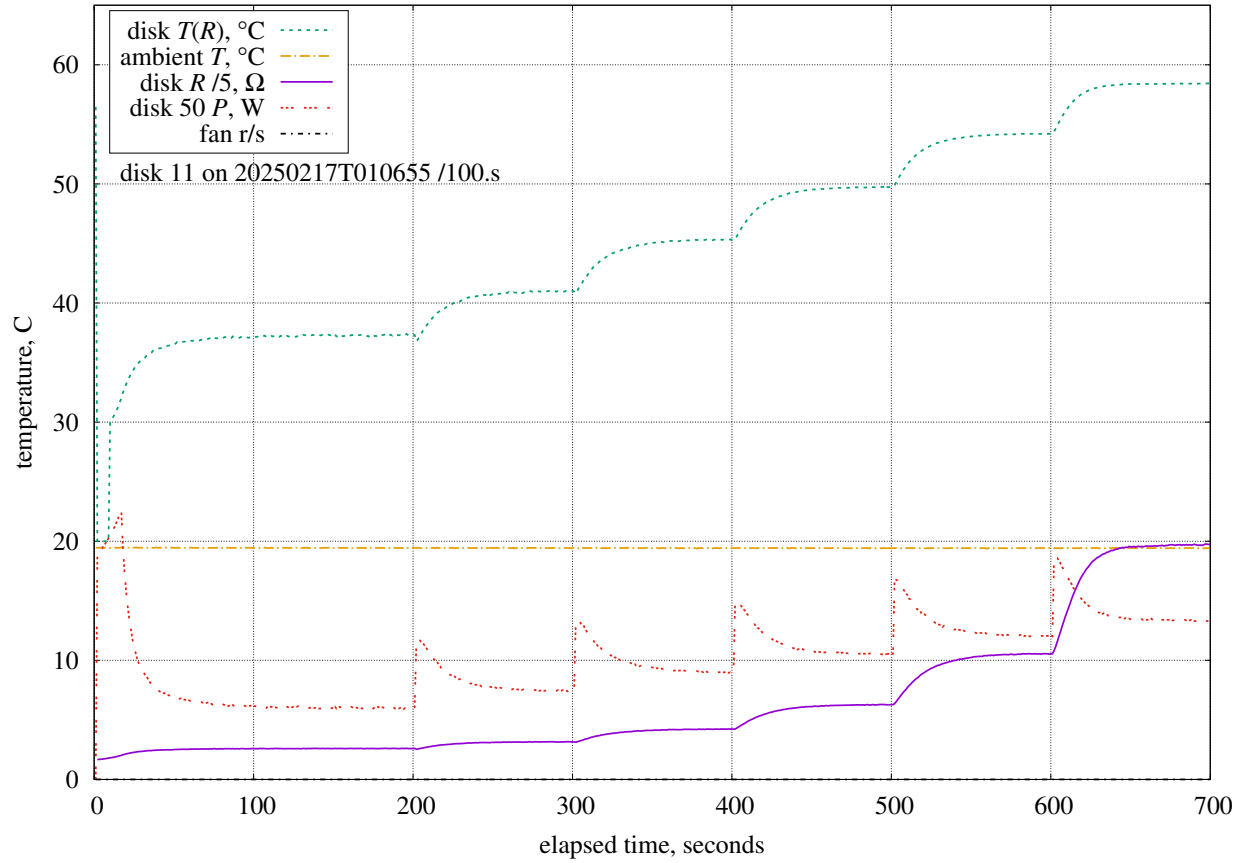
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.35%/K	0.10.K	0.44%	LM35C differential
P	97.0.kPa	+0.0002%/Pa	1.5.kPa	0.25%	MPXH6115A6U air pressure
D_o	2.81.mm	+3263%/m	500.um	1.63%	tube outer diameter
D_i	1.11.mm	+5060%/m	200.um	1.01%	tube inner diameter
L_{wire}	38.0.mm	+1110%/m	500.um	0.56%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.132%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.18%	ABS thermal conductivity
d	12.0.mm	+4181%/m	100.um	0.42%	disk diameter
				2.43%	combined bias uncertainty



$\theta = 15.0^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 15.0$.

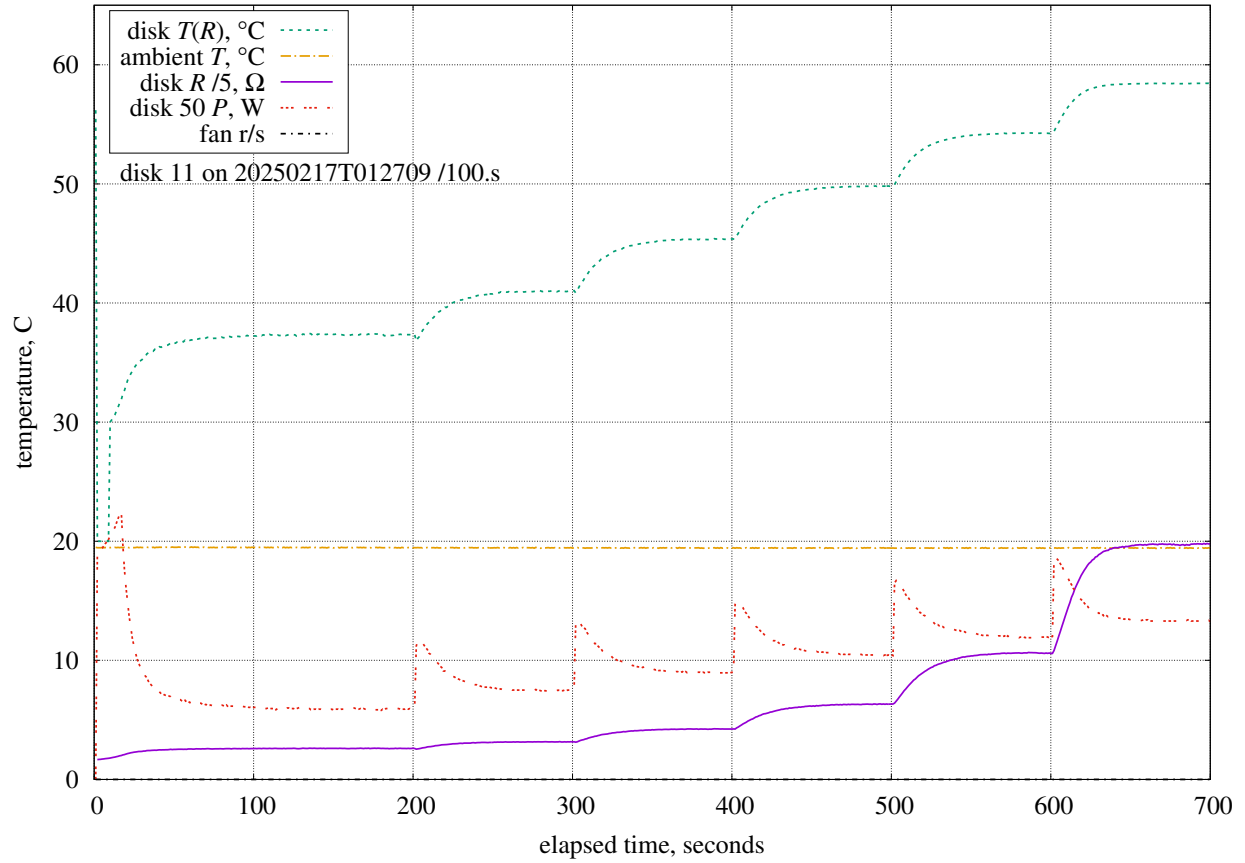
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.33%/K	0.10.K	0.43%	LM35C differential
P	97.0.kPa	+0.0002%/Pa	1.5.kPa	0.23%	MPXH6115A6U air pressure
C_S	0.420	-9.33%	0.050	0.47%	rim shape factor
D_o	2.81.mm	+3156%/m	500.um	1.58%	tube outer diameter
D_i	1.11.mm	+5372%/m	200.um	1.07%	tube inner diameter
D_g	166.um	-273%/m	750.um	0.20%	tube air gap
L_{wire}	38.0.mm	+1138%/m	500.um	0.57%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.135%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.21%	ABS thermal conductivity
d	12.0.mm	+3964%/m	100.um	0.40%	disk diameter
				2.48%	combined bias uncertainty



$\theta = 22.5^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 22.6$.

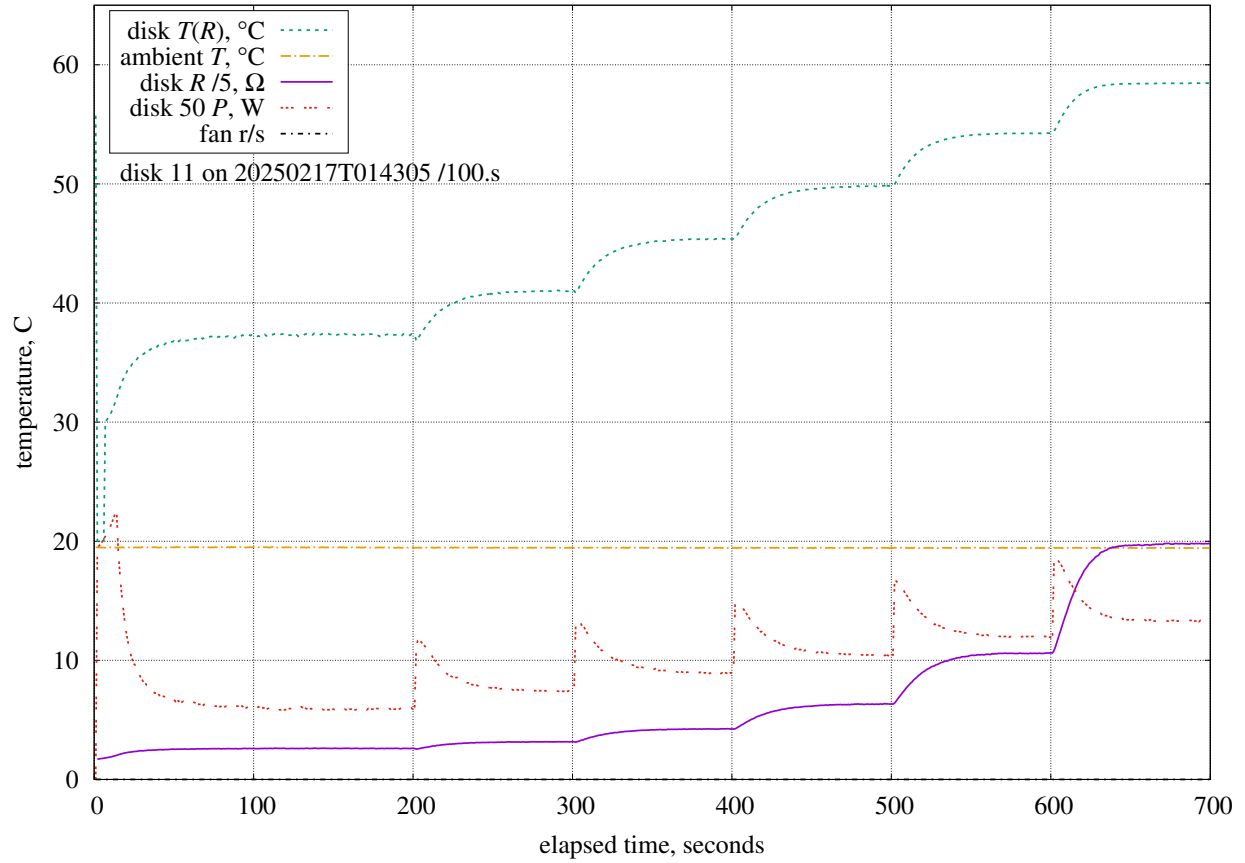
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.32%/K	0.10.K	0.43%	LM35C differential
P	97.0.kPa	+0.0002%/Pa	1.5.kPa	0.23%	MPXH6115A6U air pressure
C_S	0.420	-8.59%	0.050	0.43%	rim shape factor
D_o	2.81.mm	+3098%/m	500.um	1.55%	tube outer diameter
D_i	1.11.mm	+5590%/m	200.um	1.12%	tube inner diameter
D_g	166.um	-278%/m	750.um	0.21%	tube air gap
L_{wire}	38.0.mm	+1159%/m	500.um	0.58%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.138%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.23%	ABS thermal conductivity
d	12.0.mm	+3857%/m	100.um	0.39%	disk diameter
				2.48%	combined bias uncertainty



$\theta = 30.0^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 30.0$.

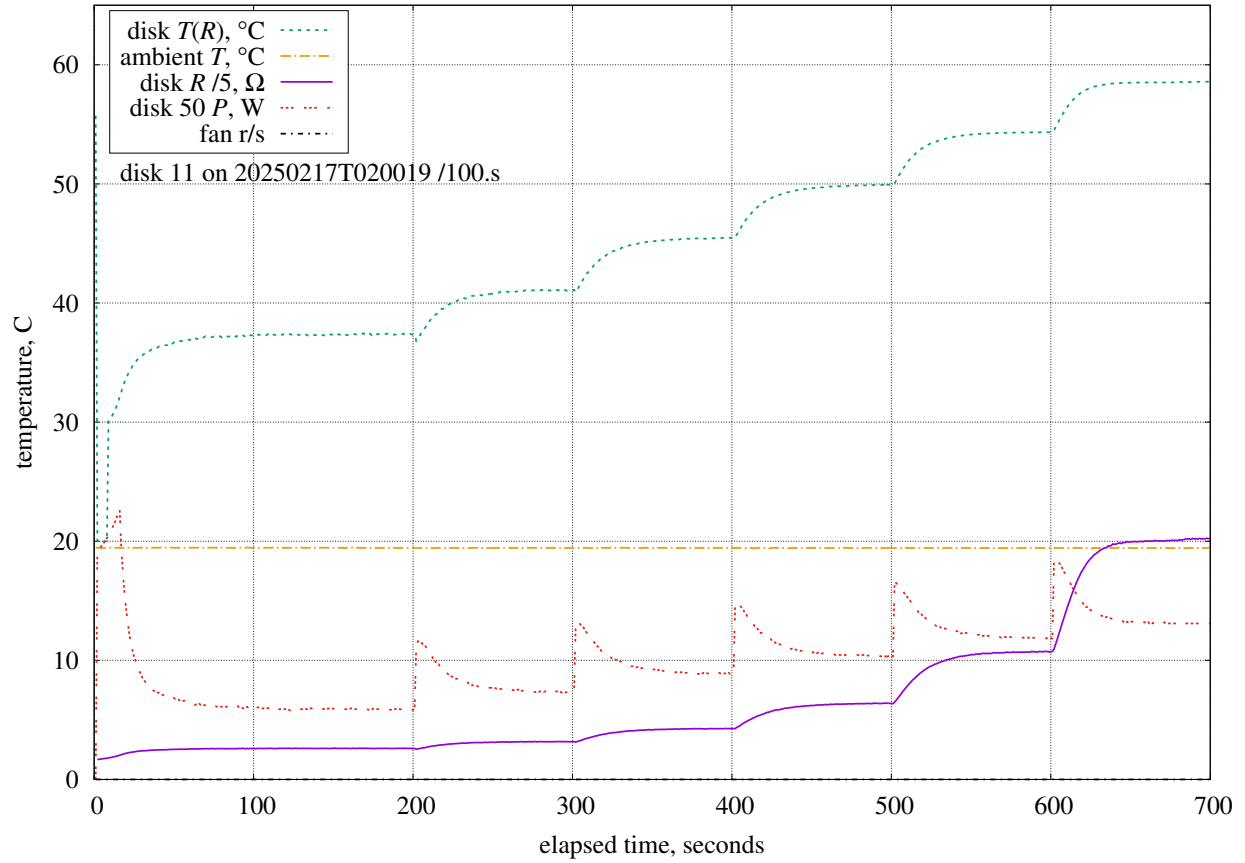
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.32%/K	0.10.K	0.43%	LM35C differential
P	97.0.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-7.78%	0.050	0.39%	rim shape factor
D_o	2.81.mm	+3081%/m	500.um	1.54%	tube outer diameter
D_i	1.11.mm	+5796%/m	200.um	1.16%	tube inner diameter
D_g	166.um	-283%/m	750.um	0.21%	tube air gap
L_{wire}	38.0.mm	+1178%/m	500.um	0.59%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.140%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.25%	ABS thermal conductivity
d	12.0.mm	+3748%/m	100.um	0.37%	disk diameter
				2.50%	combined bias uncertainty



$\theta = 37.5^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 37.6$.

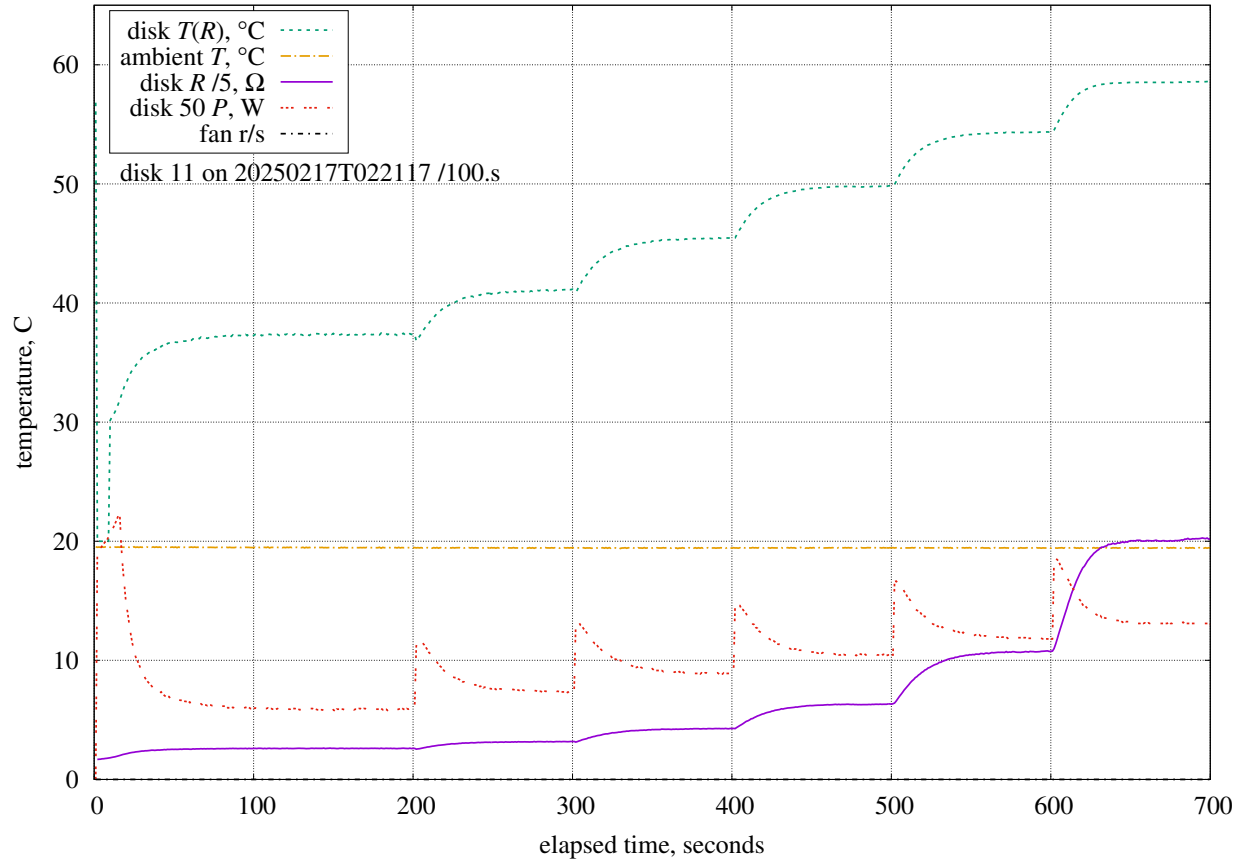
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.32%/K	0.10.K	0.43%	LM35C differential
P	97.1.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-7.44%	0.050	0.37%	rim shape factor
D_o	2.81.mm	+3041%/m	500.um	1.52%	tube outer diameter
D_i	1.11.mm	+5913%/m	200.um	1.18%	tube inner diameter
D_g	166.um	-285%/m	750.um	0.21%	tube air gap
L_{wire}	38.0.mm	+1188%/m	500.um	0.59%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.141%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.26%	ABS thermal conductivity
d	12.0.mm	+3714%/m	100.um	0.37%	disk diameter
				2.50%	combined bias uncertainty



$\theta = 45.0^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 45.0$.

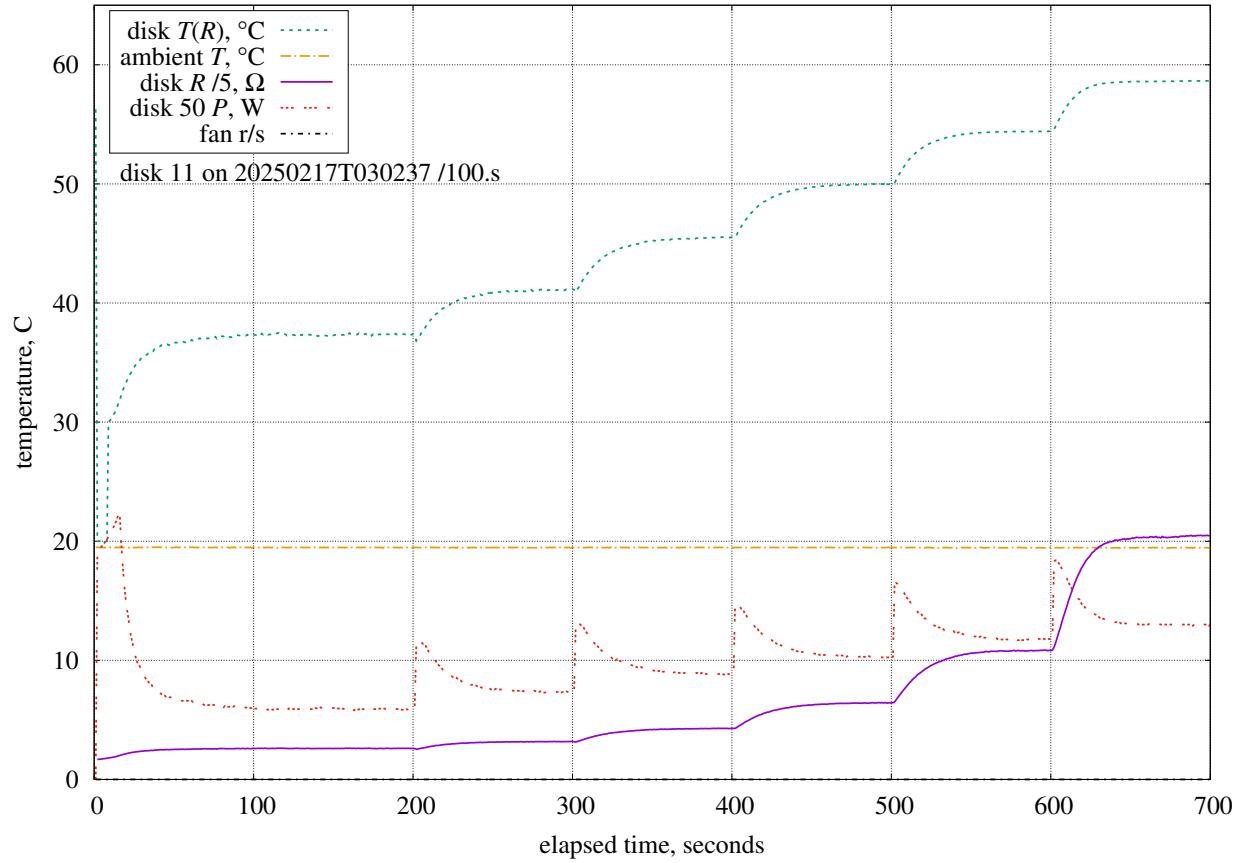
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.31%/K	0.10.K	0.43%	LM35C differential
P	97.1.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-7.14%	0.050	0.36%	rim shape factor
D_o	2.81.mm	+3044%/m	500.um	1.52%	tube outer diameter
D_i	1.11.mm	+6073%/m	200.um	1.21%	tube inner diameter
D_g	166.um	-289%/m	750.um	0.22%	tube air gap
L_{wire}	38.0.mm	+1206%/m	500.um	0.60%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.144%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.29%	ABS thermal conductivity
d	12.0.mm	+3603%/m	100.um	0.36%	disk diameter
				2.53%	combined bias uncertainty



$\theta = 52.5^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 52.6$.

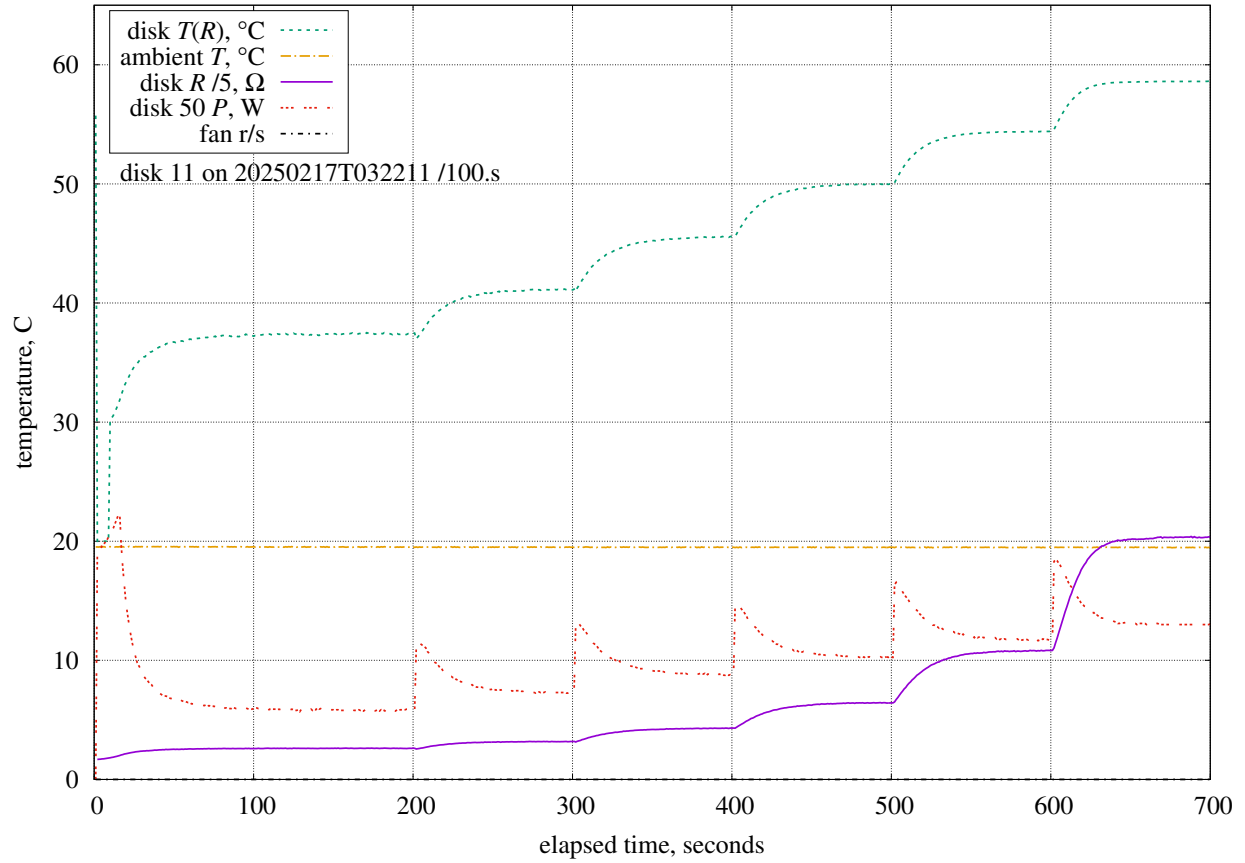
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.31%/K	0.10.K	0.43%	LM35C differential
P	97.2.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-7.21%	0.050	0.36%	rim shape factor
D_o	2.81.mm	+3008%/m	500.um	1.50%	tube outer diameter
D_i	1.11.mm	+6135%/m	200.um	1.23%	tube inner diameter
D_g	166.um	-291%/m	750.um	0.22%	tube air gap
L_{wire}	38.0.mm	+1211%/m	500.um	0.61%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.144%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.29%	ABS thermal conductivity
d	12.0.mm	+3583%/m	100.um	0.36%	disk diameter
				2.52%	combined bias uncertainty



$\theta = 60.0^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 60.0$.

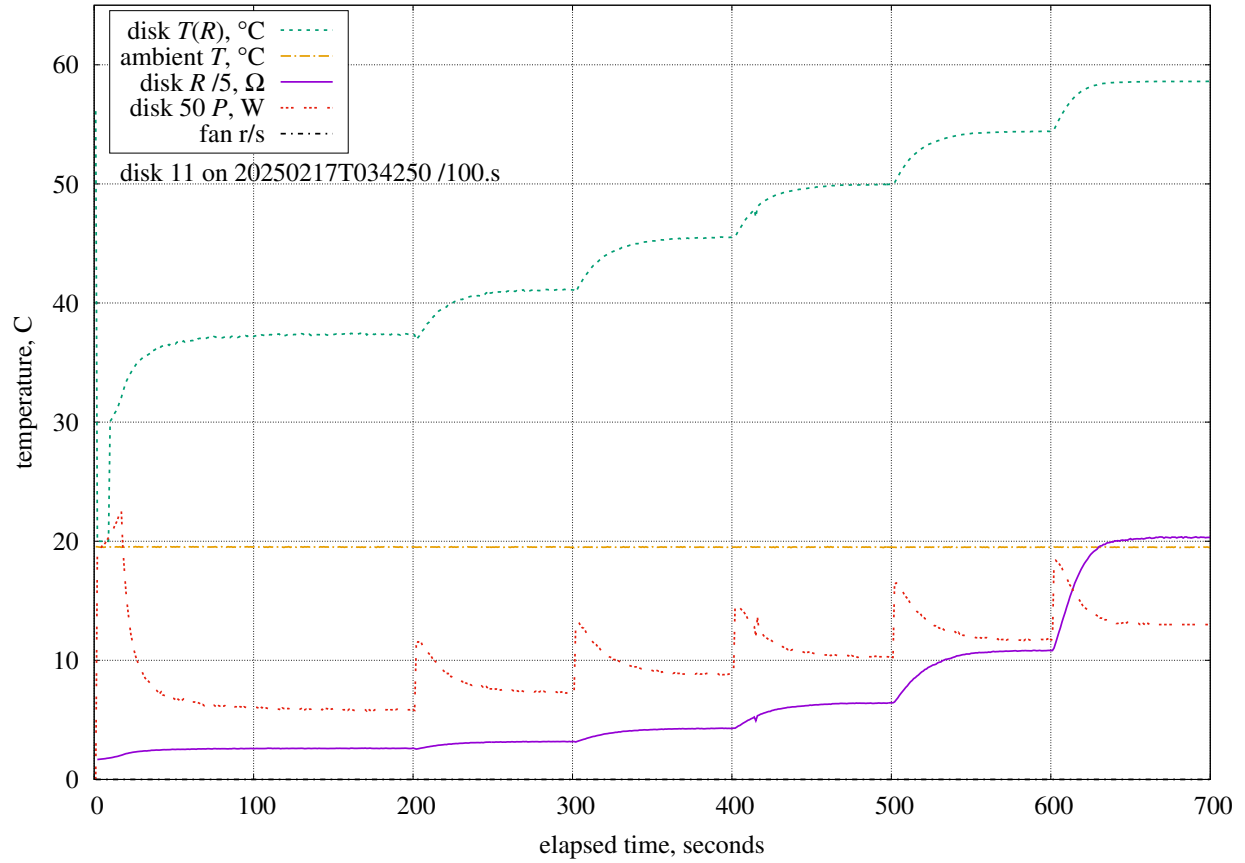
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.31%/K	0.10.K	0.43%	LM35C differential
P	97.2.kPa	+0.0001%/Pa	1.5.kPa	0.21%	MPXH6115A6U air pressure
C_S	0.420	-7.15%	0.050	0.36%	rim shape factor
D_o	2.81.mm	+3014%/m	500.um	1.51%	tube outer diameter
D_i	1.11.mm	+6252%/m	200.um	1.25%	tube inner diameter
D_g	166.um	-294%/m	750.um	0.22%	tube air gap
L_{wire}	38.0.mm	+1225%/m	500.um	0.61%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.146%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.31%	ABS thermal conductivity
d	12.0.mm	+3497%/m	100.um	0.35%	disk diameter
				2.55%	combined bias uncertainty



$\theta = 67.5^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 67.6$.

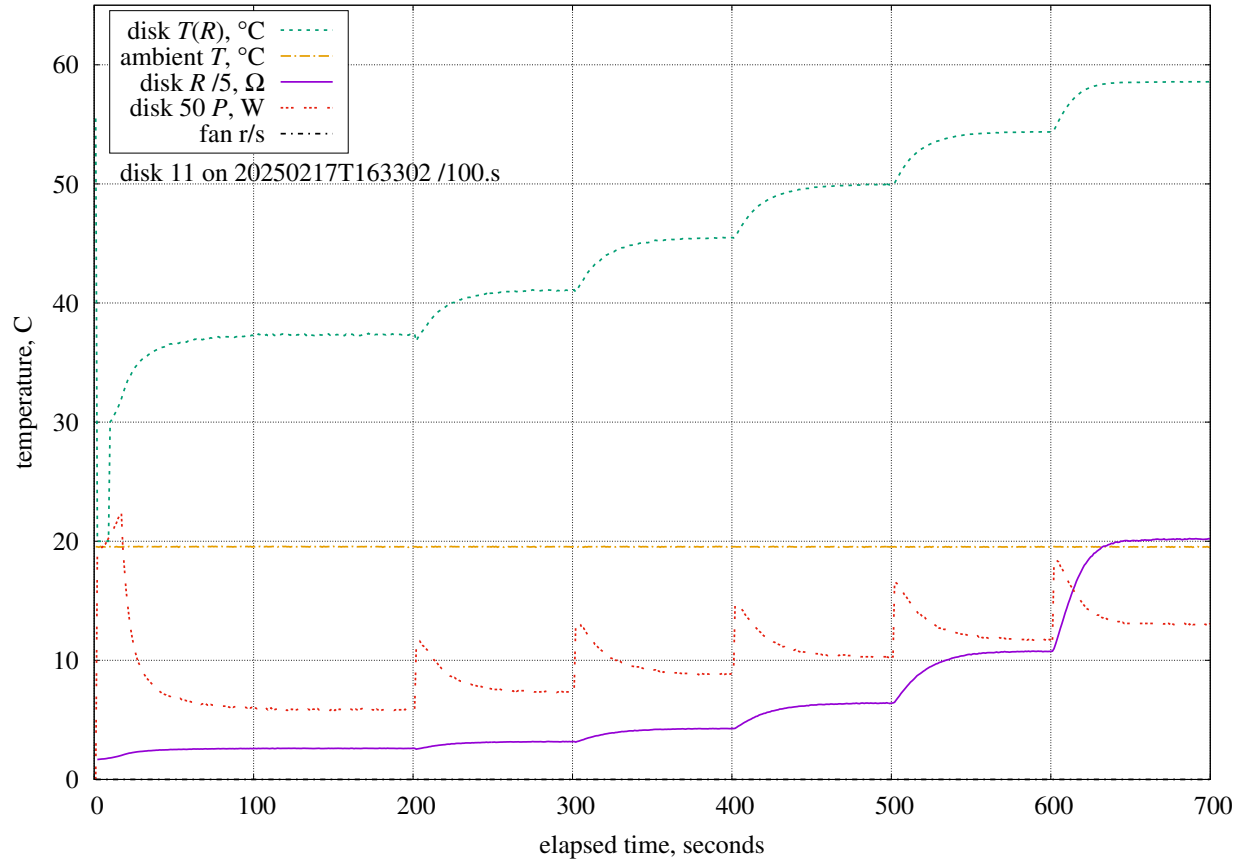
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.31%/K	0.10.K	0.43%	LM35C differential
P	97.4.kPa	+0.0001%/Pa	1.5.kPa	0.21%	MPXH6115A6U air pressure
C_S	0.420	-7.20%	0.050	0.36%	rim shape factor
D_o	2.81.mm	+2996%/m	500.um	1.50%	tube outer diameter
D_i	1.11.mm	+6305%/m	200.um	1.26%	tube inner diameter
D_g	166.um	-295%/m	750.um	0.22%	tube air gap
L_{wire}	38.0.mm	+1229%/m	500.um	0.61%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.147%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.31%	ABS thermal conductivity
d	12.0.mm	+3482%/m	100.um	0.35%	disk diameter
				2.55%	combined bias uncertainty



$\theta = 75.0^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 75.0$.

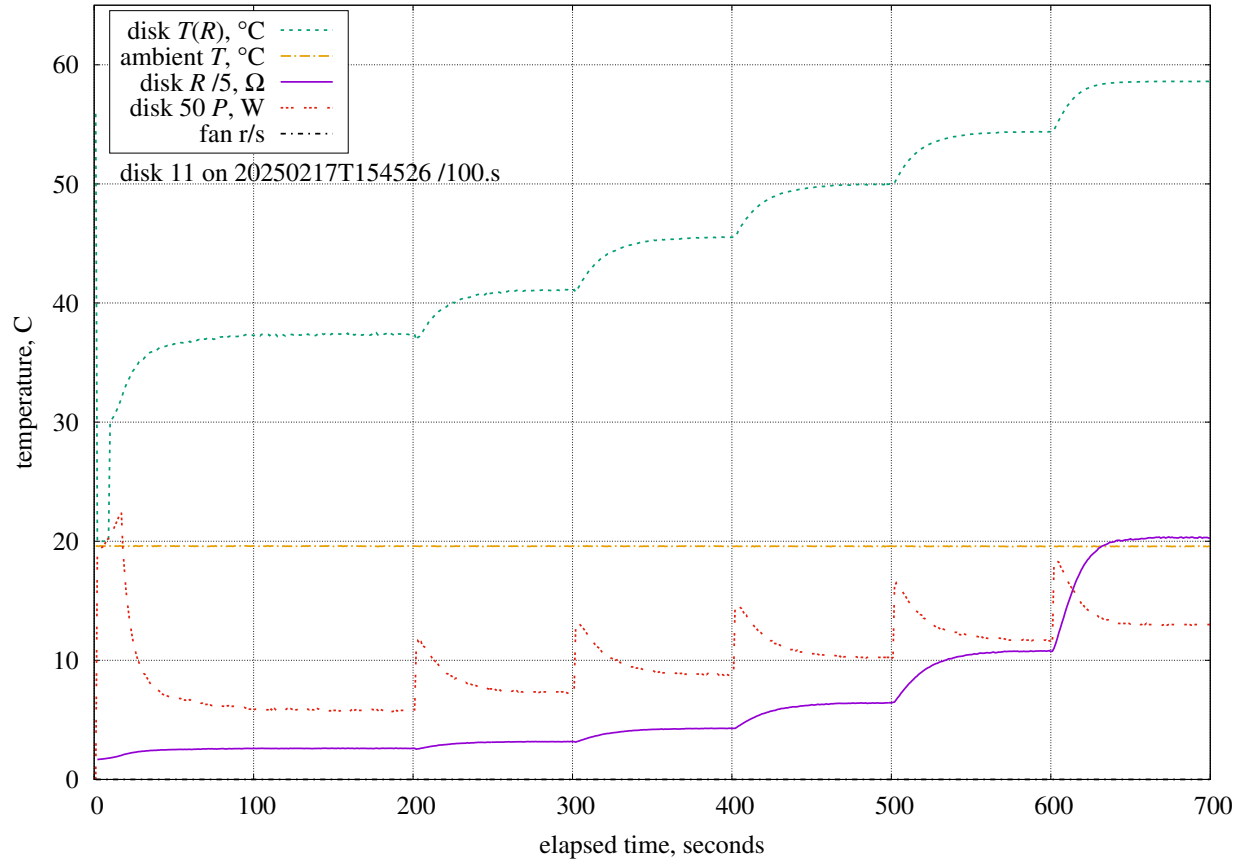
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.31%/K	0.10.K	0.43%	LM35C differential
P	97.4.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-7.23%	0.050	0.36%	rim shape factor
D_o	2.81.mm	+2956%/m	500.um	1.48%	tube outer diameter
D_i	1.11.mm	+6301%/m	200.um	1.26%	tube inner diameter
D_g	166.um	-295%/m	750.um	0.22%	tube air gap
L_{wire}	38.0.mm	+1229%/m	500.um	0.61%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.147%/K·m	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.31%	ABS thermal conductivity
d	12.0.mm	+3498%/m	100.um	0.35%	disk diameter
				2.54%	combined bias uncertainty



$\theta = 82.5^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 82.6$.

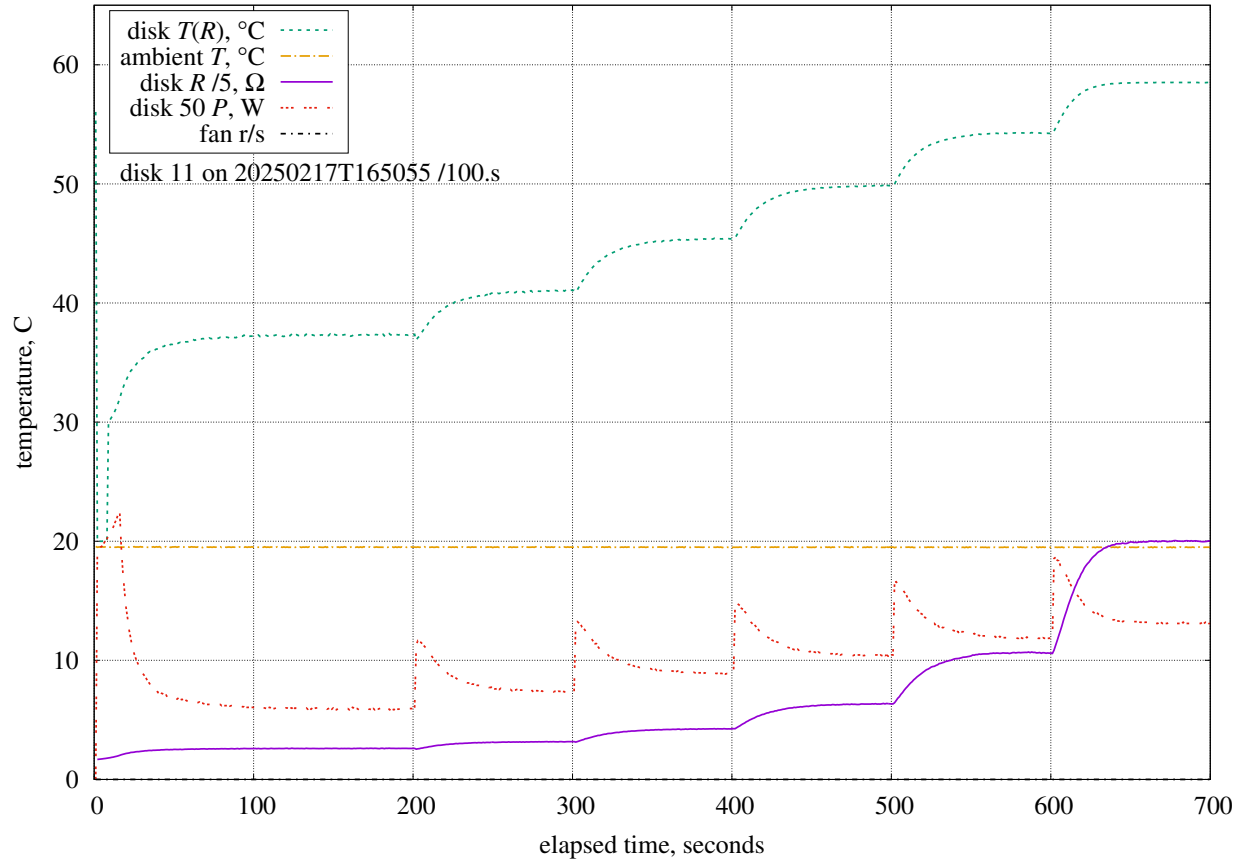
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.31%/K	0.10.K	0.43%	LM35C differential
P	98.9.kPa	+0.0001%/Pa	1.5.kPa	0.21%	MPXH6115A6U air pressure
C_S	0.420	-7.14%	0.050	0.36%	rim shape factor
D_o	2.81.mm	+2899%/m	500.um	1.45%	tube outer diameter
D_i	1.11.mm	+6287%/m	200.um	1.26%	tube inner diameter
D_g	166.um	-295%/m	750.um	0.22%	tube air gap
L_{wire}	38.0.mm	+1228%/m	500.um	0.61%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.146%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.31%	ABS thermal conductivity
d	12.0.mm	+3527%/m	100.um	0.35%	disk diameter
				2.52%	combined bias uncertainty



$\theta = 90.0^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 90.0$.

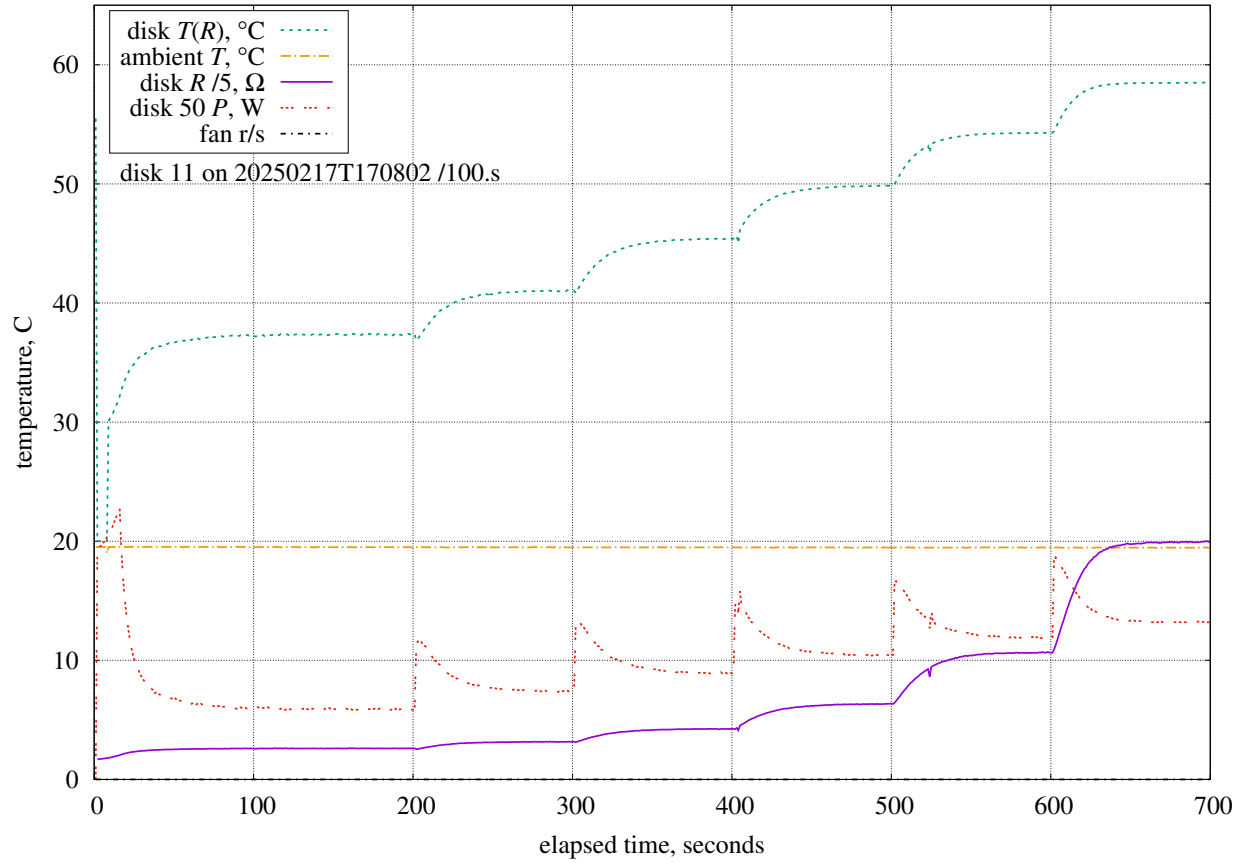
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.31%/K	0.10.K	0.43%	LM35C differential
P	98.8.kPa	+0.0001%/Pa	1.5.kPa	0.21%	MPXH6115A6U air pressure
C_S	0.420	-6.33%	0.050	0.32%	rim shape factor
D_o	2.81.mm	+2785%/m	500.um	1.39%	tube outer diameter
D_i	1.11.mm	+6198%/m	200.um	1.24%	tube inner diameter
D_g	166.um	-293%/m	750.um	0.22%	tube air gap
L_{wire}	38.0.mm	+1219%/m	500.um	0.61%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.146%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.31%	ABS thermal conductivity
d	12.0.mm	+3552%/m	100.um	0.36%	disk diameter
θ	90.0.°	+1.49%/°	0.20.°	0.30%	plate angle
				2.49%	combined bias uncertainty



$\theta = 97.5^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 97.6$.

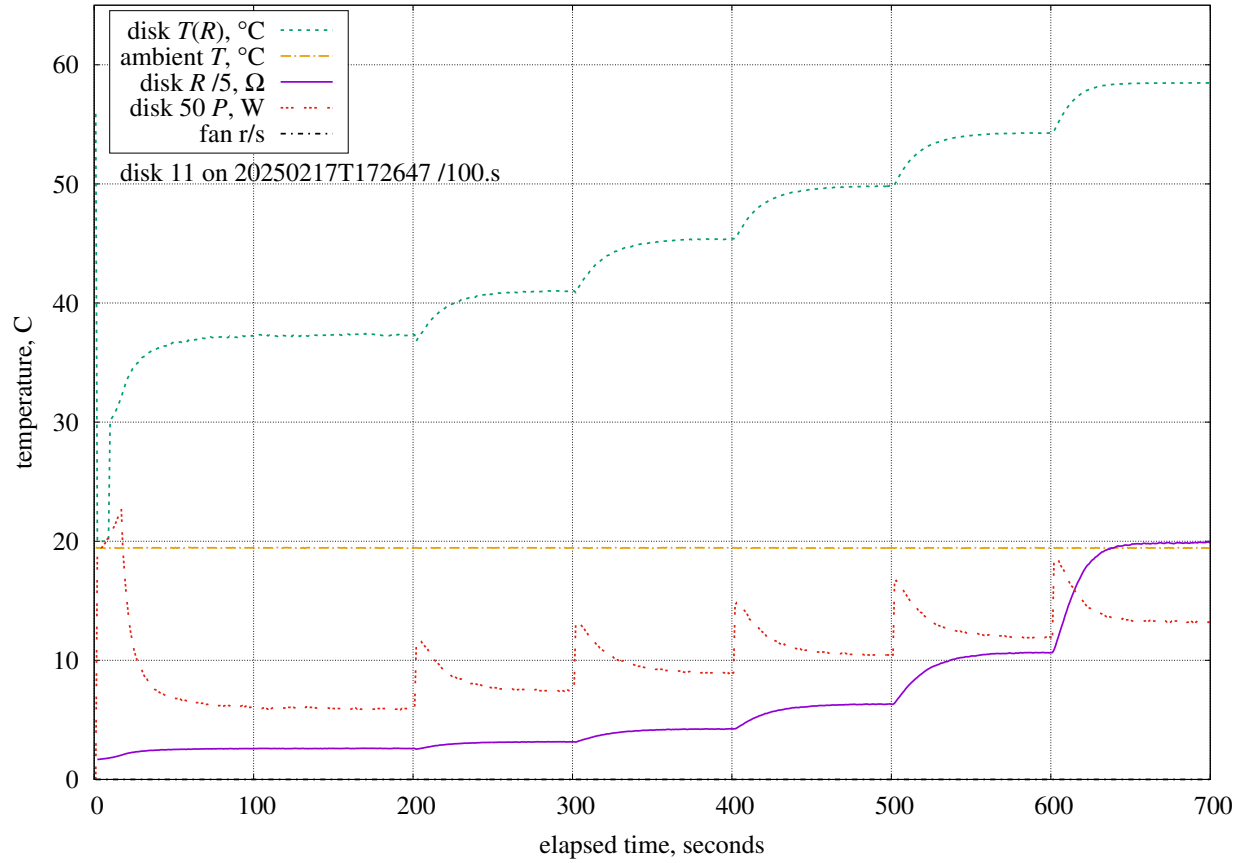
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.32%/K	0.10.K	0.43%	LM35C differential
P	98.9.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-7.31%	0.050	0.37%	rim shape factor
D_o	2.81.mm	+2861%/m	500.um	1.43%	tube outer diameter
D_i	1.11.mm	+6211%/m	200.um	1.24%	tube inner diameter
D_g	166.um	-293%/m	750.um	0.22%	tube air gap
L_{wire}	38.0.mm	+1220%/m	500.um	0.61%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.145%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.30%	ABS thermal conductivity
d	12.0.mm	+3606%/m	100.um	0.36%	disk diameter
				2.49%	combined bias uncertainty



$\theta = 105.0^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 105.0$.

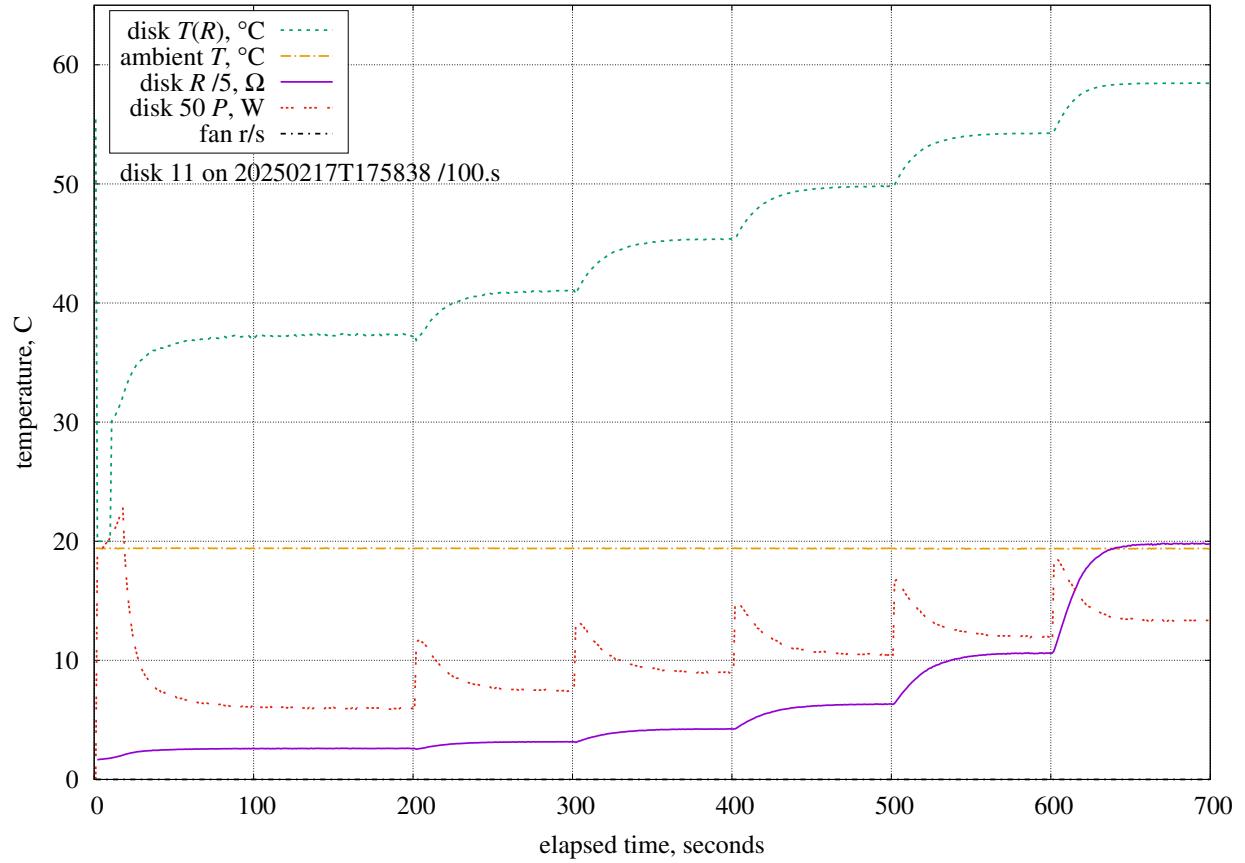
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.32%/K	0.10.K	0.43%	LM35C differential
P	98.9.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-7.47%	0.050	0.37%	rim shape factor
D_o	2.81.mm	+2897%/m	500.um	1.45%	tube outer diameter
D_i	1.11.mm	+6216%/m	200.um	1.24%	tube inner diameter
D_g	166.um	-292%/m	750.um	0.22%	tube air gap
L_{wire}	38.0.mm	+1219%/m	500.um	0.61%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.145%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.30%	ABS thermal conductivity
d	12.0.mm	+3612%/m	100.um	0.36%	disk diameter
				2.51%	combined bias uncertainty



$\theta = 112.5^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 112.6$.

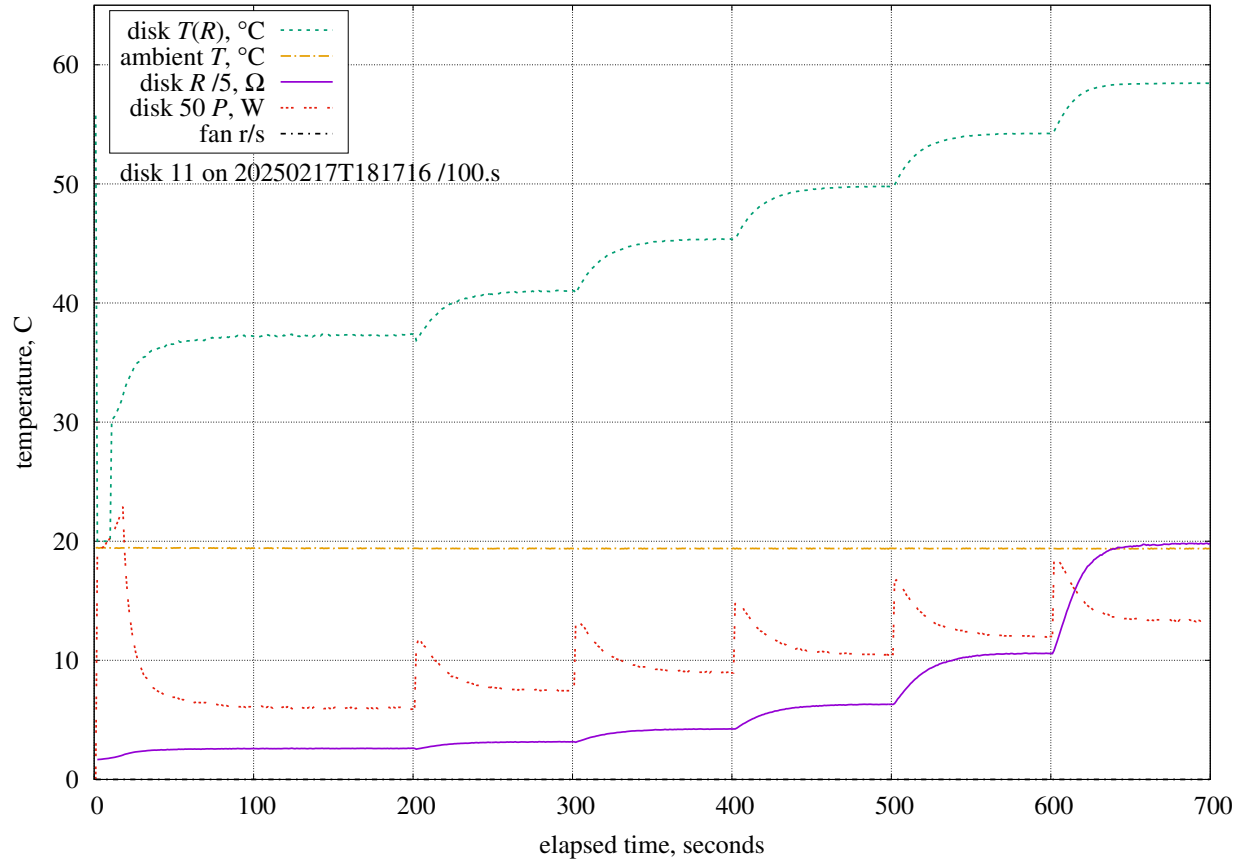
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.32%/K	0.10.K	0.43%	LM35C differential
P	98.9.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-7.53%	0.050	0.38%	rim shape factor
D_o	2.81.mm	+2914%/m	500.um	1.46%	tube outer diameter
D_i	1.11.mm	+6180%/m	200.um	1.24%	tube inner diameter
D_g	166.um	-292%/m	750.um	0.22%	tube air gap
L_{wire}	38.0.mm	+1215%/m	500.um	0.61%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.144%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.29%	ABS thermal conductivity
d	12.0.mm	+3635%/m	100.um	0.36%	disk diameter
				2.50%	combined bias uncertainty



$\theta = 120.0^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 120.0$.

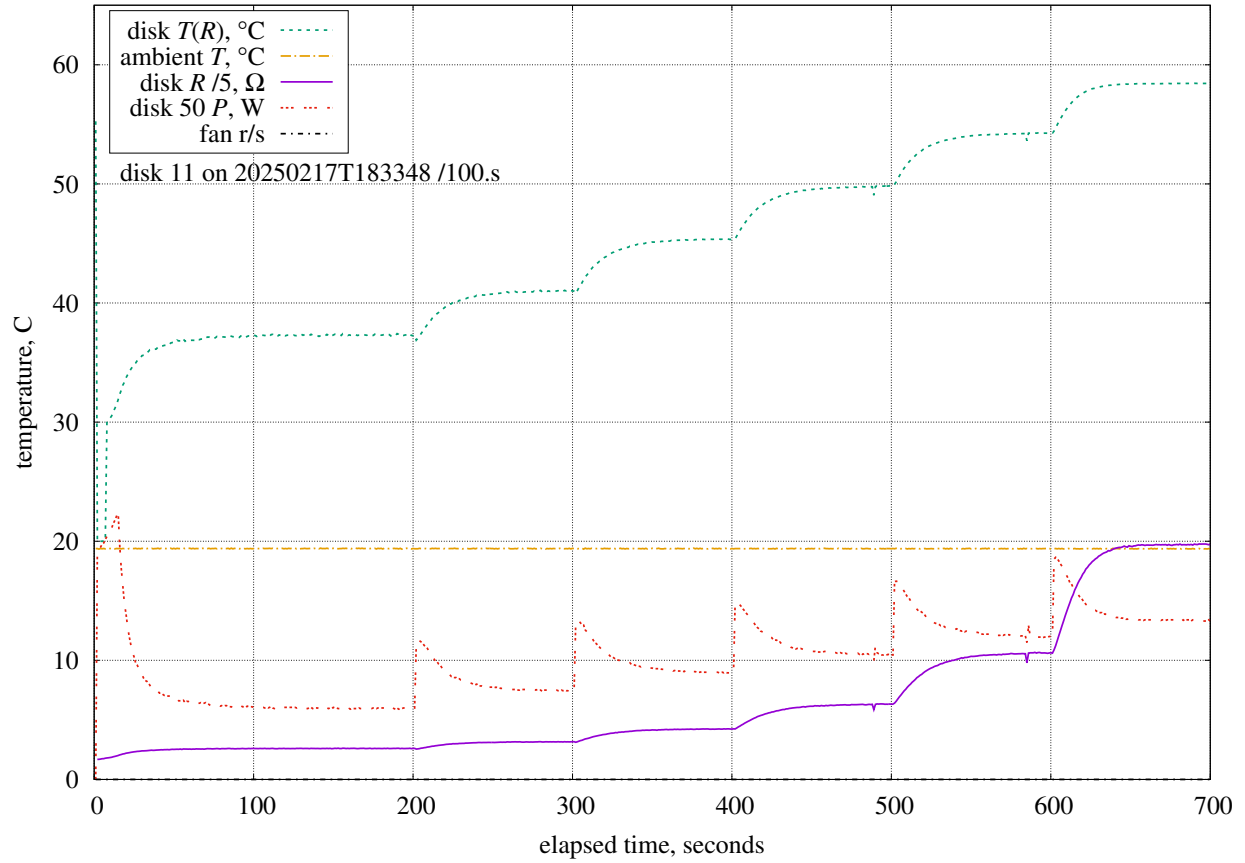
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.32%/K	0.10.K	0.43%	LM35C differential
P	98.9.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-7.47%	0.050	0.37%	rim shape factor
D_o	2.81.mm	+2938%/m	500.um	1.47%	tube outer diameter
D_i	1.11.mm	+6140%/m	200.um	1.23%	tube inner diameter
D_g	166.um	-291%/m	750.um	0.22%	tube air gap
L_{wire}	38.0.mm	+1211%/m	500.um	0.61%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.144%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.29%	ABS thermal conductivity
d	12.0.mm	+3647%/m	100.um	0.36%	disk diameter
				2.50%	combined bias uncertainty



$\theta = 127.5^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 127.6$.

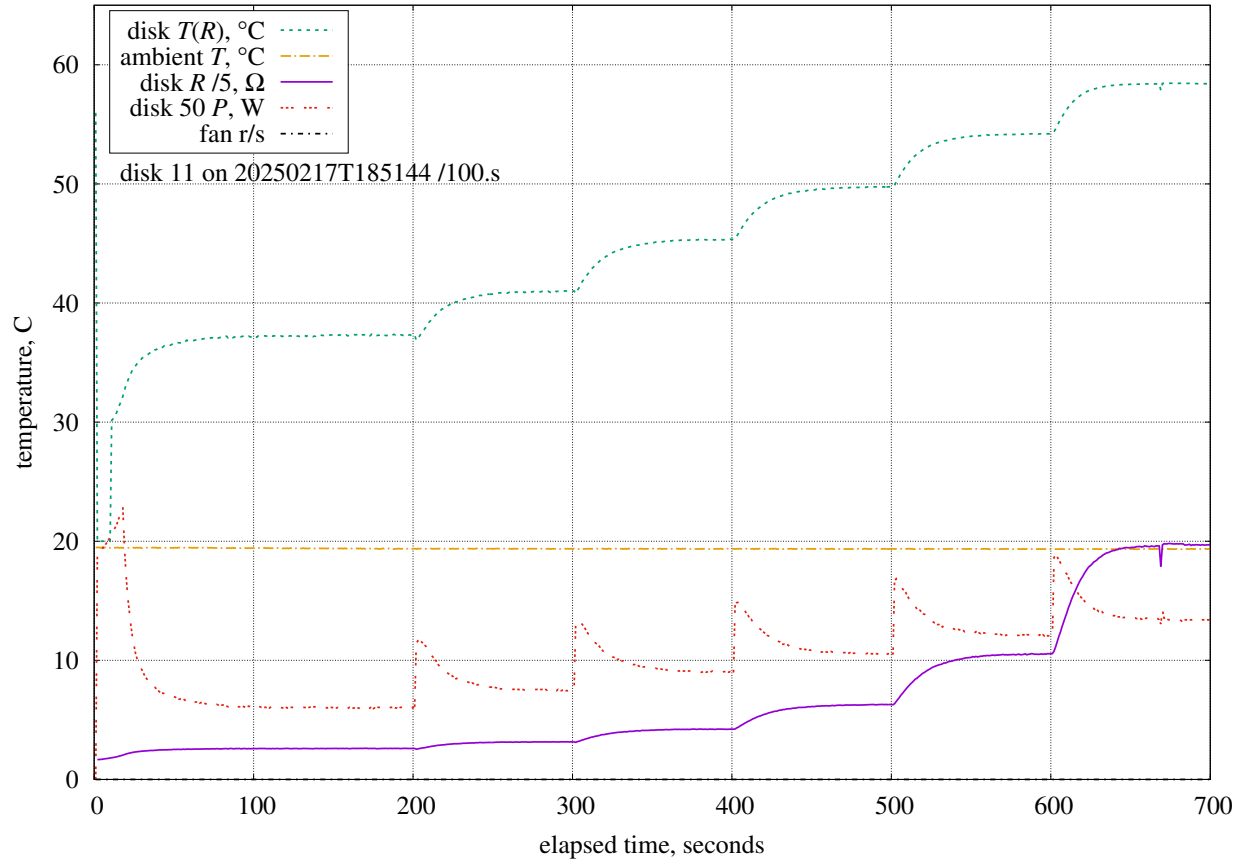
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.31%/K	0.10.K	0.43%	LM35C differential
P	99.0.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-7.39%	0.050	0.37%	rim shape factor
D_o	2.81.mm	+2958%/m	500.um	1.48%	tube outer diameter
D_i	1.11.mm	+6076%/m	200.um	1.22%	tube inner diameter
D_g	166.um	-289%/m	750.um	0.22%	tube air gap
L_{wire}	38.0.mm	+1204%/m	500.um	0.60%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.143%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.28%	ABS thermal conductivity
d	12.0.mm	+3669%/m	100.um	0.37%	disk diameter
				2.50%	combined bias uncertainty



$\theta = 135.0^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 135.0$.

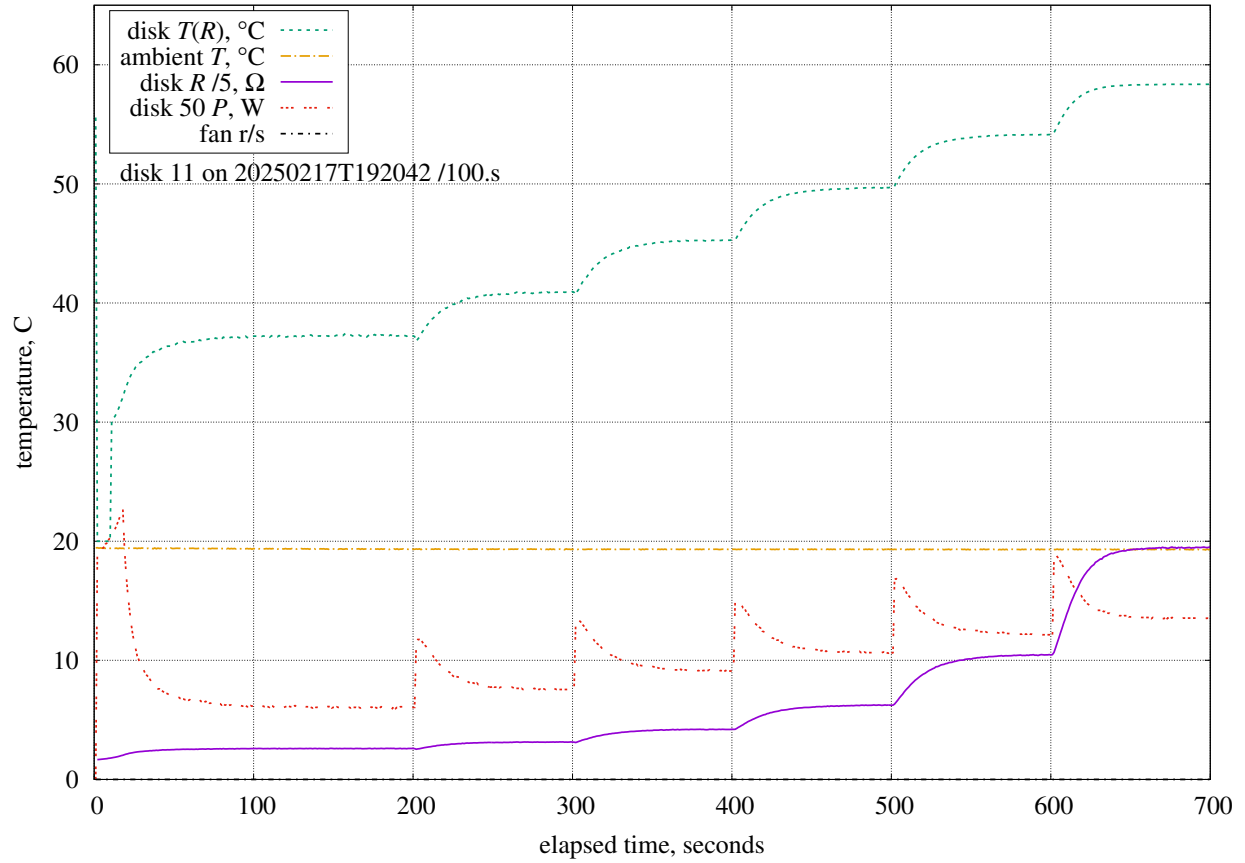
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.32%/K	0.10.K	0.43%	LM35C differential
P	99.0.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-7.34%	0.050	0.37%	rim shape factor
D_o	2.81.mm	+2986%/m	500.um	1.49%	tube outer diameter
D_i	1.11.mm	+6002%/m	200.um	1.20%	tube inner diameter
D_g	166.um	-287%/m	750.um	0.22%	tube air gap
L_{wire}	38.0.mm	+1197%/m	500.um	0.60%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.142%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.27%	ABS thermal conductivity
d	12.0.mm	+3705%/m	100.um	0.37%	disk diameter
				2.50%	combined bias uncertainty



$\theta = 142.5^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 142.6$.

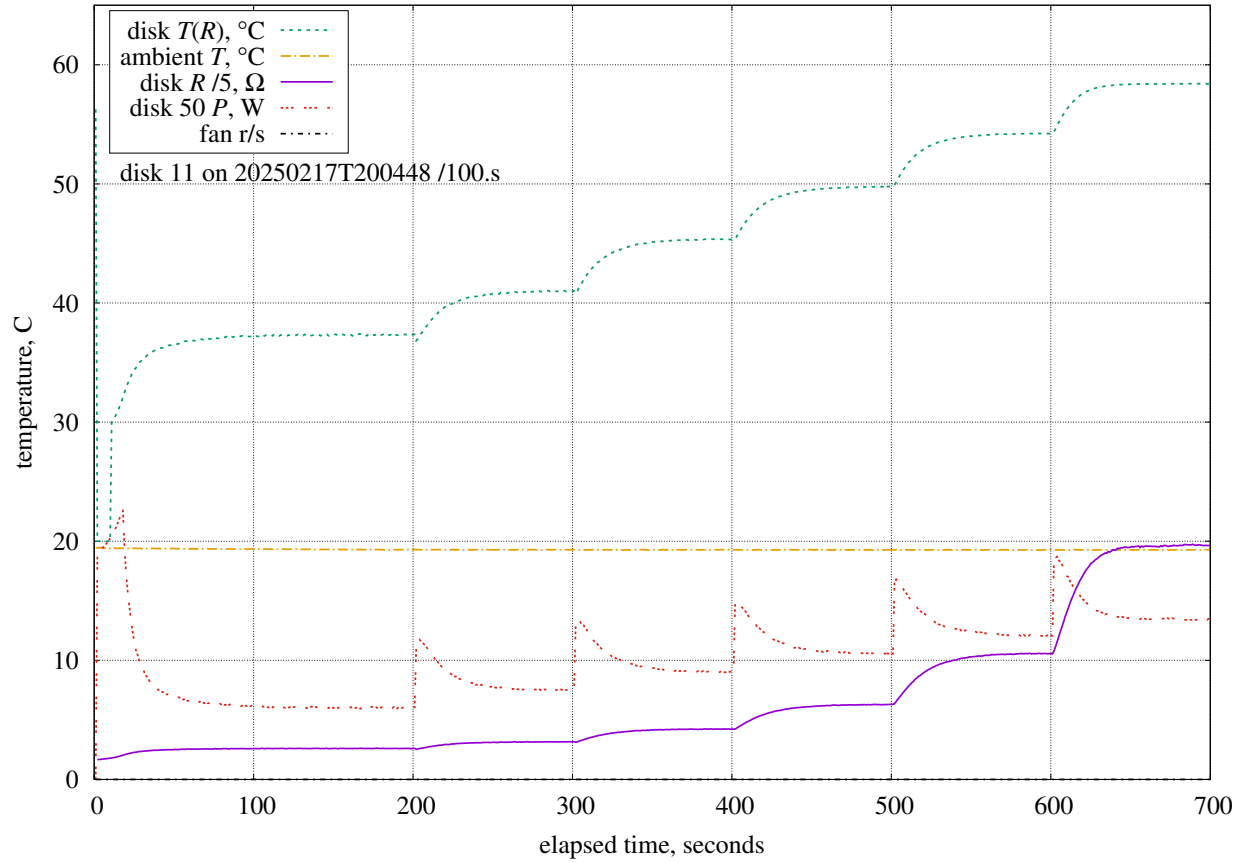
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.32%/K	0.10.K	0.43%	LM35C differential
P	99.0.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-7.53%	0.050	0.38%	rim shape factor
D_o	2.81.mm	+3006%/m	500.um	1.50%	tube outer diameter
D_i	1.11.mm	+5887%/m	200.um	1.18%	tube inner diameter
D_g	166.um	-285%/m	750.um	0.21%	tube air gap
L_{wire}	38.0.mm	+1186%/m	500.um	0.59%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.141%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.26%	ABS thermal conductivity
d	12.0.mm	+3759%/m	100.um	0.38%	disk diameter
				2.49%	combined bias uncertainty



$\theta = 150.0^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 150.0$.

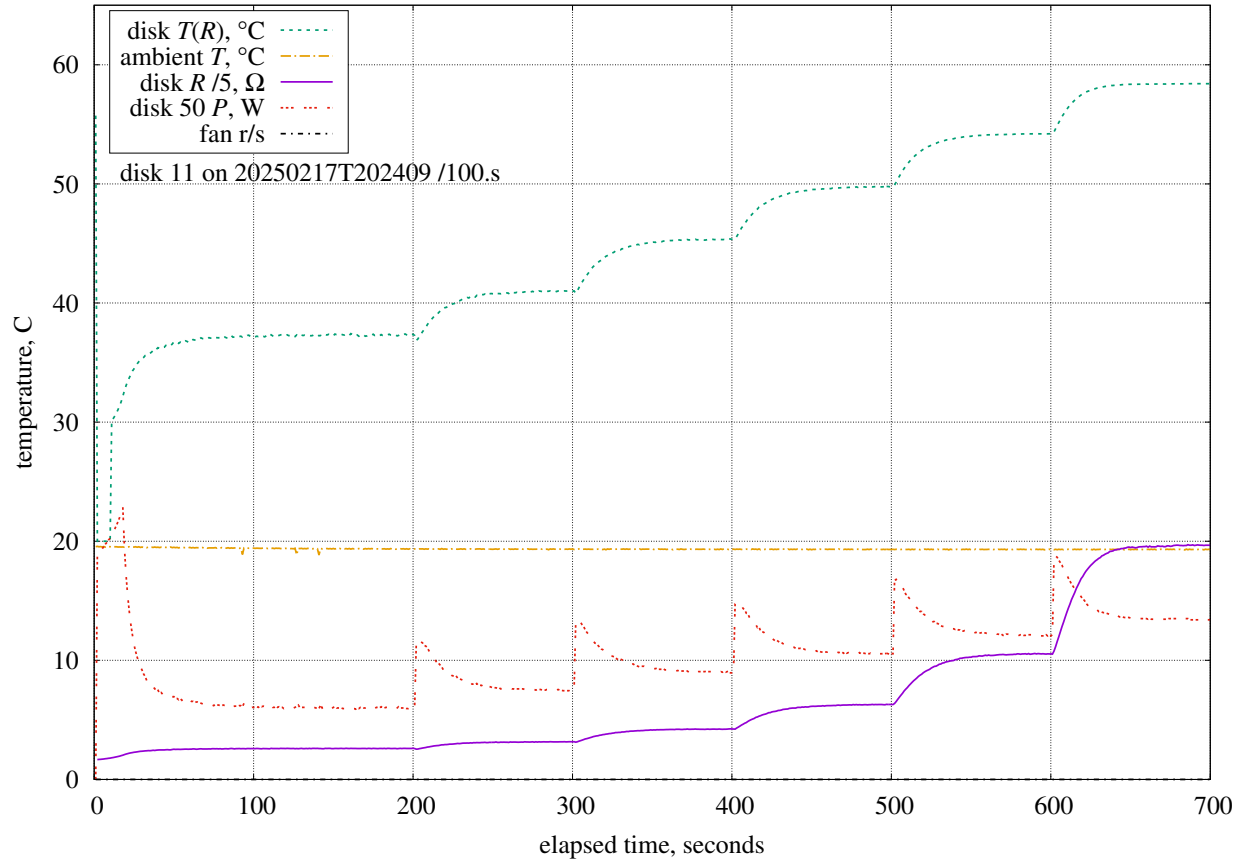
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.32%/K	0.10.K	0.43%	LM35C differential
P	99.1.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-8.03%	0.050	0.40%	rim shape factor
D_o	2.81.mm	+3007%/m	500.um	1.50%	tube outer diameter
D_i	1.11.mm	+5705%/m	200.um	1.14%	tube inner diameter
D_g	166.um	-281%/m	750.um	0.21%	tube air gap
L_{wire}	38.0.mm	+1169%/m	500.um	0.58%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.138%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.24%	ABS thermal conductivity
d	12.0.mm	+3864%/m	100.um	0.39%	disk diameter
				2.46%	combined bias uncertainty



$\theta = 157.5^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 157.6$.

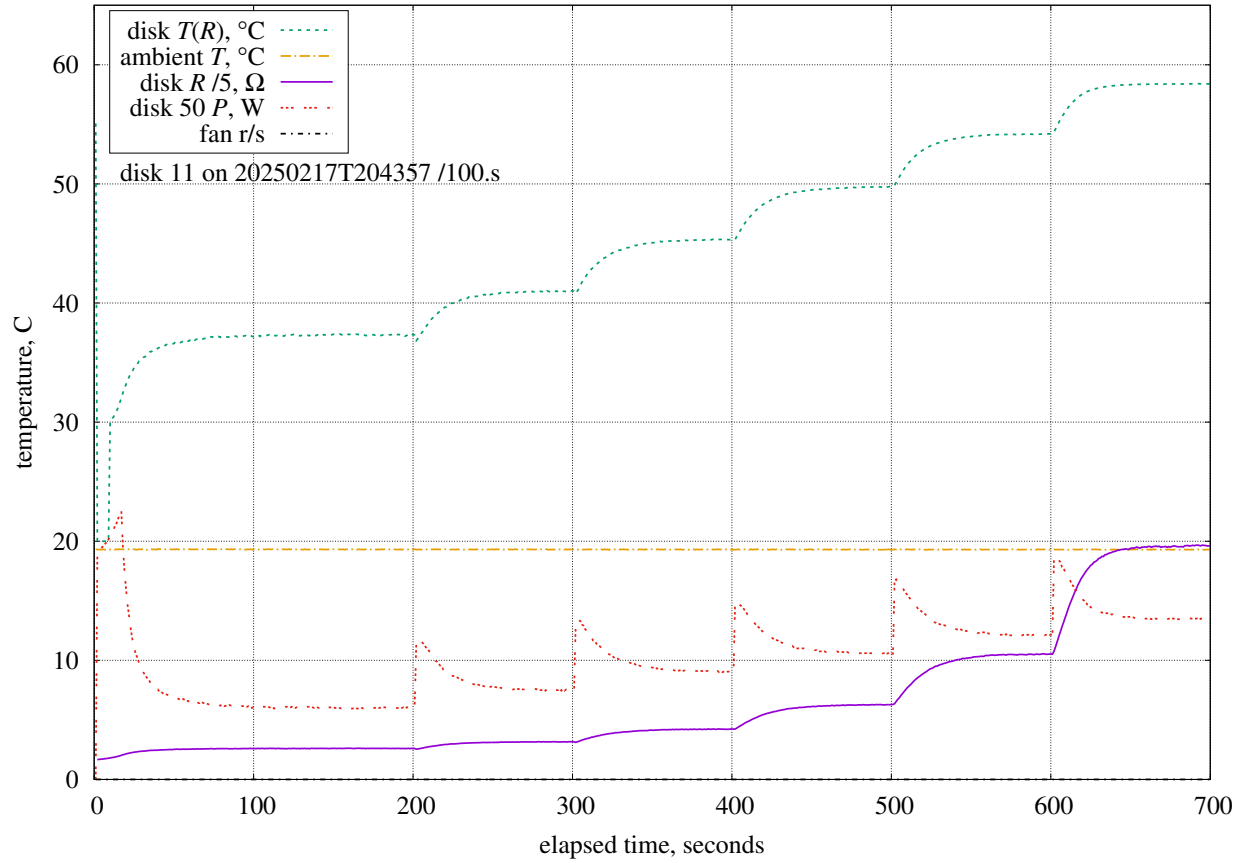
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.32%/K	0.10.K	0.43%	LM35C differential
P	99.1.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-8.50%	0.050	0.43%	rim shape factor
D_o	2.81.mm	+3104%/m	500.um	1.55%	tube outer diameter
D_i	1.11.mm	+5635%/m	200.um	1.13%	tube inner diameter
D_g	166.um	-280%/m	750.um	0.21%	tube air gap
L_{wire}	38.0.mm	+1166%/m	500.um	0.58%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.138%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.24%	ABS thermal conductivity
d	12.0.mm	+3820%/m	100.um	0.38%	disk diameter
				2.49%	combined bias uncertainty



$\theta = 165.0^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 165.0$.

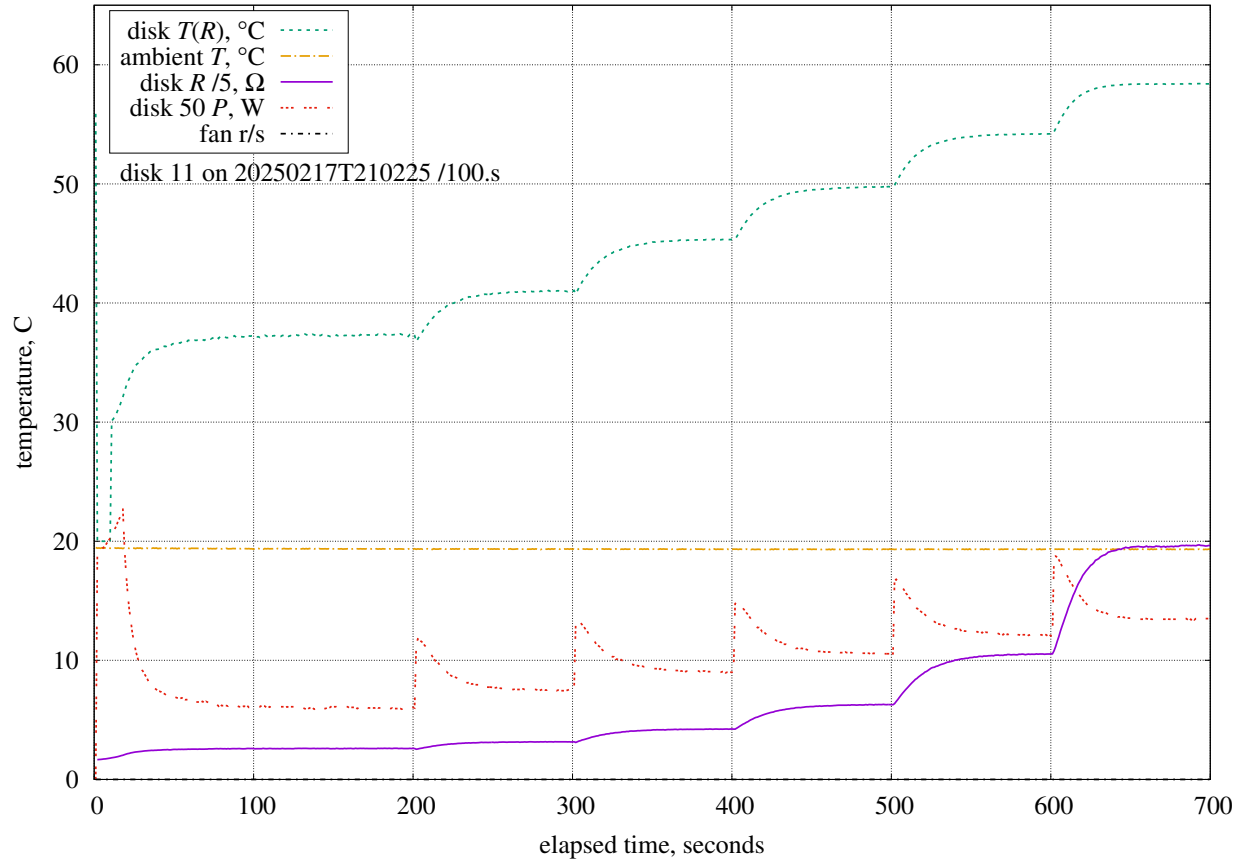
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.33%/K	0.10.K	0.43%	LM35C differential
P	99.2.kPa	+0.0001%/Pa	1.5.kPa	0.22%	MPXH6115A6U air pressure
C_S	0.420	-9.15%	0.050	0.46%	rim shape factor
D_o	2.81.mm	+3179%/m	500.um	1.59%	tube outer diameter
D_i	1.11.mm	+5438%/m	200.um	1.09%	tube inner diameter
D_g	166.um	-275%/m	750.um	0.21%	tube air gap
L_{wire}	38.0.mm	+1148%/m	500.um	0.57%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.136%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.22%	ABS thermal conductivity
d	12.0.mm	+3901%/m	100.um	0.39%	disk diameter
				2.49%	combined bias uncertainty



$\theta = 172.5^\circ$; $V = 0.000 \text{ m/s}$ (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 172.6$.

Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.35%/K	0.10.K	0.43%	LM35C differential
P	99.2.kPa	+0.0002%/Pa	1.5.kPa	0.24%	MPXH6115A6U air pressure
D_o	2.81.mm	+3290%/m	500.um	1.65%	tube outer diameter
D_i	1.11.mm	+5122%/m	200.um	1.02%	tube inner diameter
D_g	166.um	-269%/m	750.um	0.20%	tube air gap
L_{wire}	38.0.mm	+1121%/m	500.um	0.56%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.133%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.19%	ABS thermal conductivity
d	12.0.mm	+4107%/m	100.um	0.41%	disk diameter
				2.45%	combined bias uncertainty



$\theta = 180.0^\circ$; $V = 0.000$ m/s (0 r/min)

Estimated measurement uncertainties of natural convection at $\theta = 180.0$.

Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.36%/K	0.10.K	0.44%	LM35C differential
P	99.3.kPa	+0.0002%/Pa	1.5.kPa	0.25%	MPXH6115A6U air pressure
D_o	2.81.mm	+3814%/m	500.um	1.91%	tube outer diameter
D_i	1.11.mm	+4016%/m	200.um	0.80%	tube inner diameter
L_{wire}	38.0.mm	+1027%/m	500.um	0.51%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.124%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.11%	ABS thermal conductivity
d	12.0.mm	+4400%/m	100.um	0.44%	disk diameter
θ	180. $^\circ$	+3.68%/°	0.20. $^\circ$	0.74%	plate angle
				2.61%	combined bias uncertainty