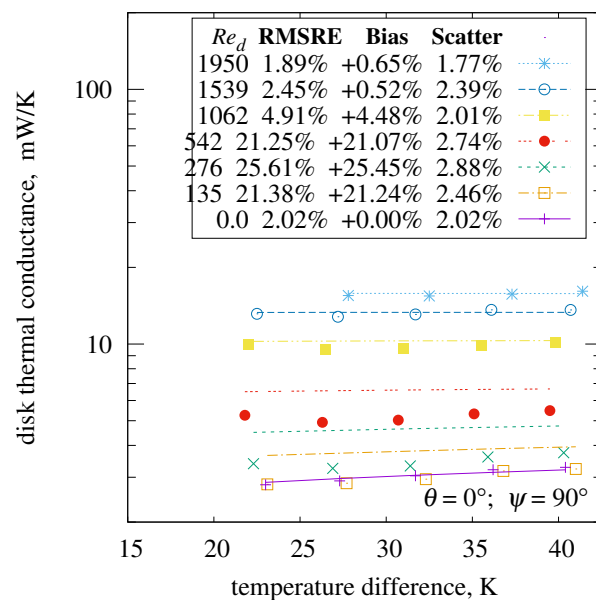
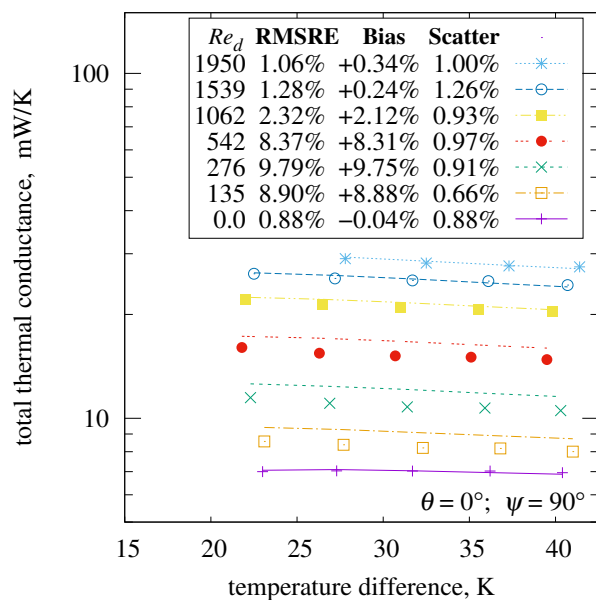
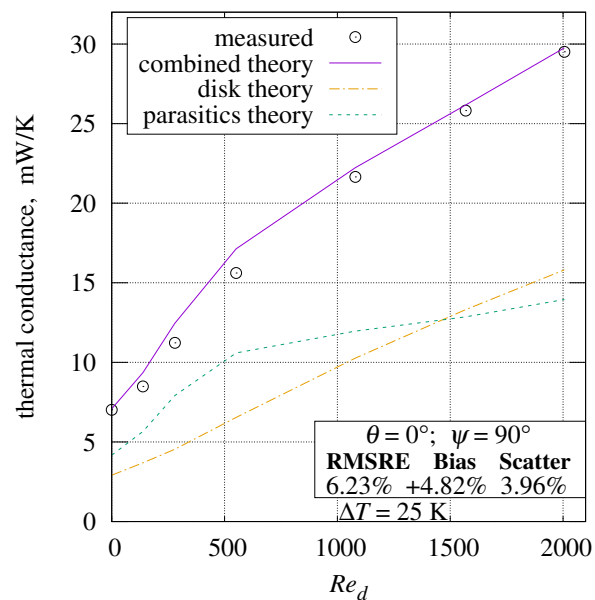
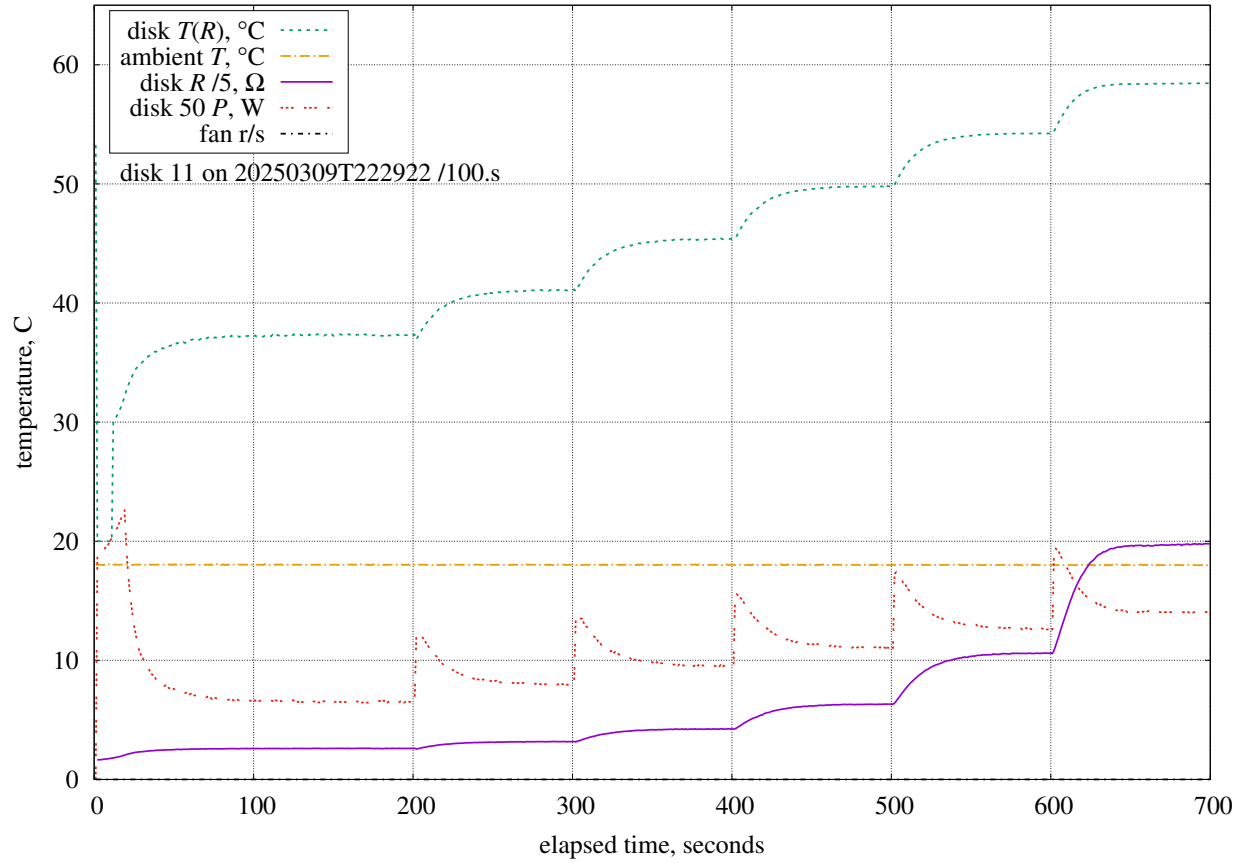


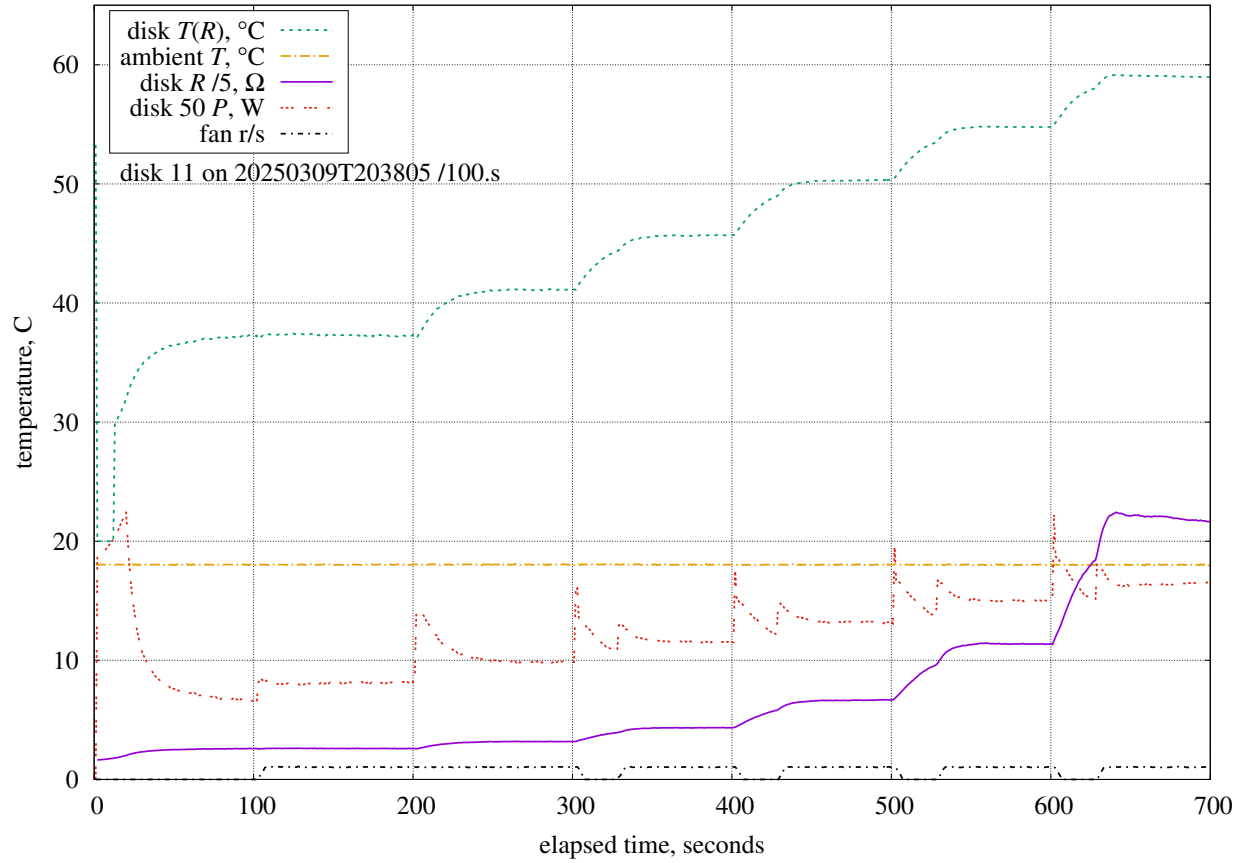




$\theta = 0.0^\circ$; $\psi = 90.0^\circ$; $V = 0.000$ m/s (0 r/min)

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

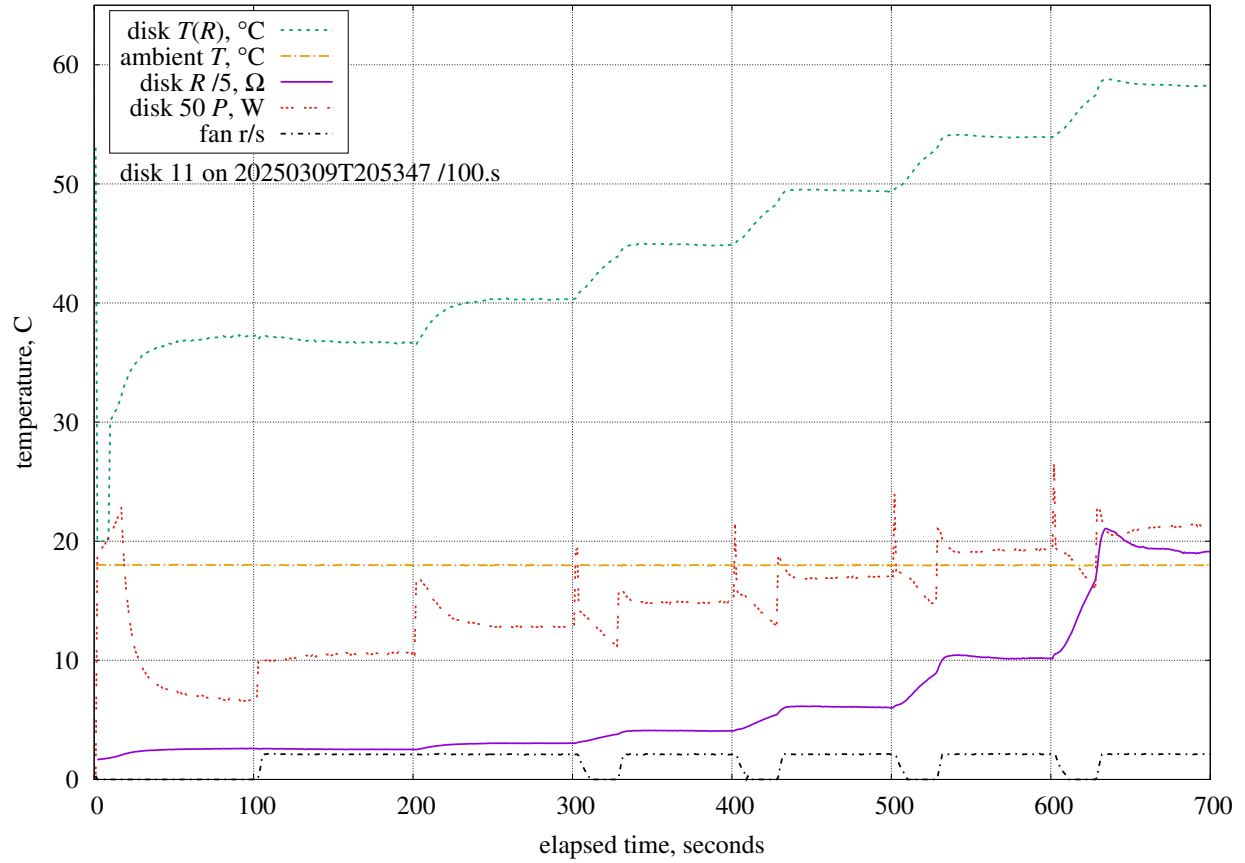
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.36%/K	0.10.K	0.44%	LM35C differential
P	99.6.kPa	+0.0002%/Pa	1.5.kPa	0.25%	MPXH6115A6U air pressure
D_o	2.81.mm	+3716%/m	500.um	1.86%	tube outer diameter
D_i	1.11.mm	+3915%/m	200.um	0.78%	tube inner diameter
L_{wire}	38.0.mm	+1054%/m	500.um	0.53%	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	+4324%/m	100.um	0.43%	disk diameter
θ	50.0.m°	+3.64%/°	0.20.°	0.73%	plate angle
				2.57%	combined bias uncertainty



$\theta = 0.0^\circ$; $\psi = 90.0^\circ$; $V = 0.188 \text{ m/s}$ (62 r/min)

Estimated measurement uncertainties at $Re = 138$.

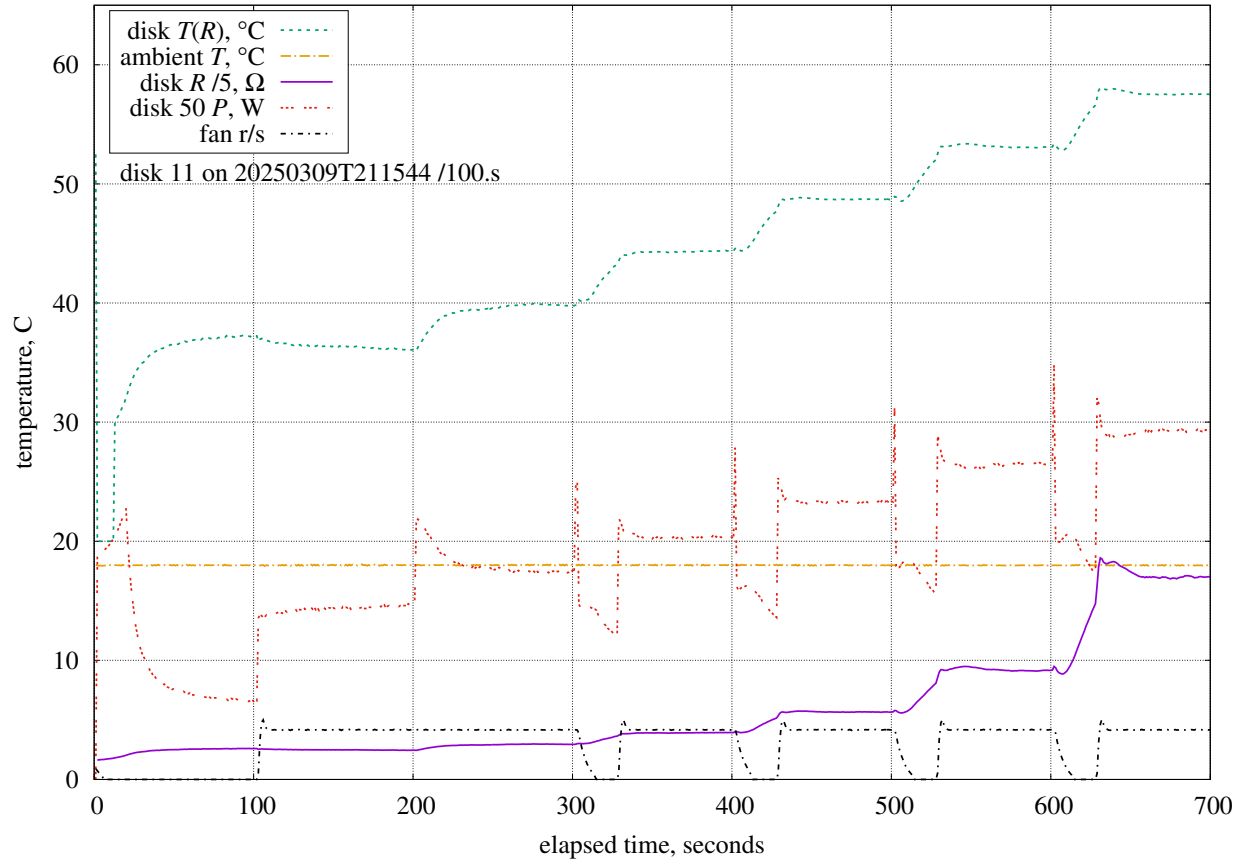
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.10%/K	0.10.K	0.41%	LM35C differential
P	99.5.kPa	+0.0003%/Pa	1.5.kPa	0.45%	MPXH6115A6U air pressure
η	0.340	+77.3%	0.007	0.53%	anemometer calibration
Re_0	600	-0.0046%	60	0.27%	integration lower-bound
D_o	2.81.mm	+596%/m	500.um	0.30%	tube outer diameter
D_i	1.11.mm	+6512%/m	200.um	1.30%	tube inner diameter
D_g	166.um	-342%/m	750.um	0.26%	tube air gap
L_{wire}	38.0.mm	+1427%/m	500.um	0.71%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.149%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.33%	ABS thermal conductivity
d	12.0.mm	+4468%/m	100.um	0.45%	disk diameter
θ	50.0.m°	+6.01%/°	0.20.°	1.20%	plate angle
				2.55%	combined bias uncertainty
Symbol	Nominal	Sensitivity	Variability	Uncertainty	Component
ω	62.3.r/min	+0.422%/(r/min)	0.94.r/min	0.40%	fan rotation rate
				2.67%	RSS combined uncertainty



$\theta = 0.0^\circ$; $\psi = 90.0^\circ$; $V = 0.381 \text{ m/s}$ (126 r/min)

Estimated measurement uncertainties at $Re = 280$.

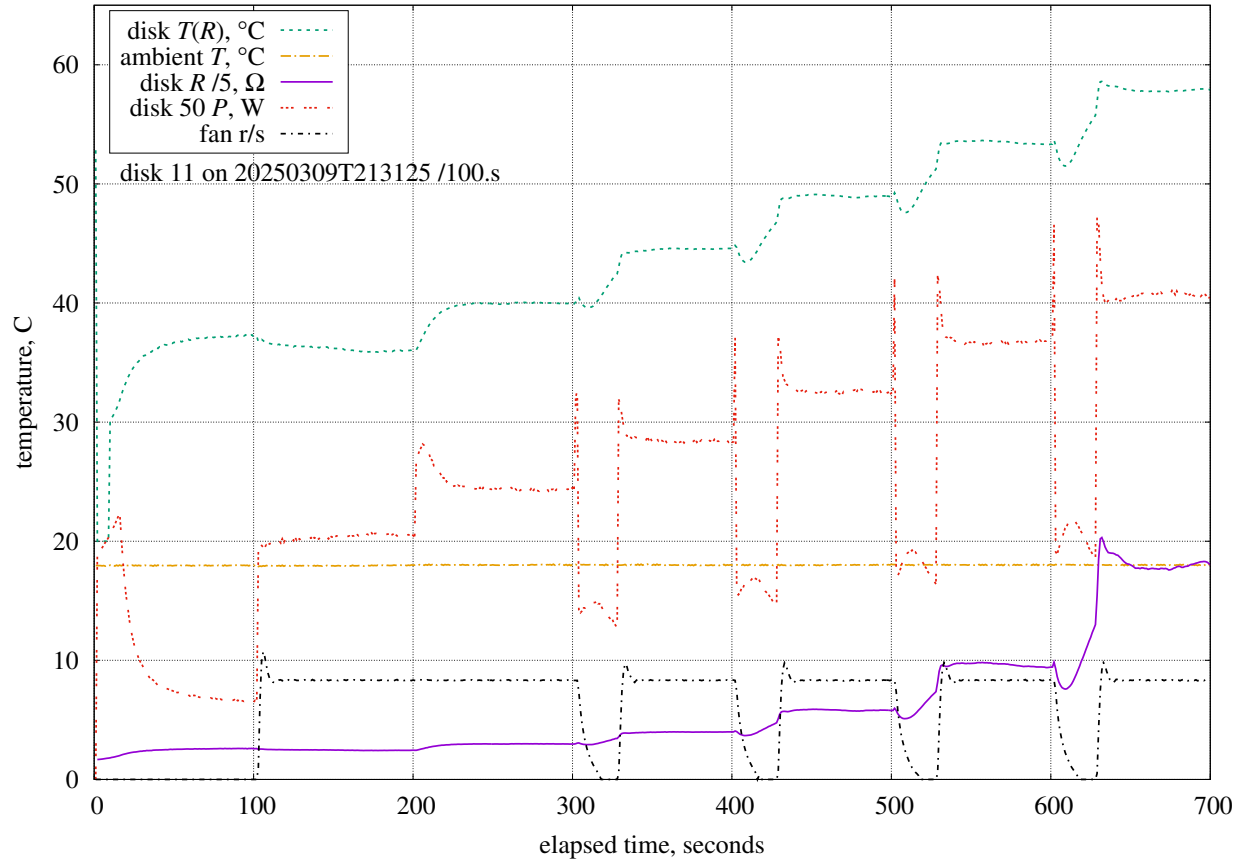
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.07%/K	0.10.K	0.41%	LM35C differential
P	99.5.kPa	+0.0005%/Pa	1.5.kPa	0.80%	MPXH6115A6U air pressure
η	0.340	+150%	0.007	1.02%	anemometer calibration
Re_0	600	-0.0065%	60	0.39%	integration lower-bound
D_o	2.81.mm	+5429%/m	500.um	2.71%	tube outer diameter
D_i	1.11.mm	+10449%/m	200.um	2.09%	tube inner diameter
D_g	166.um	-466%/m	750.um	0.35%	tube air gap
L_{wire}	38.0.mm	+1944%/m	500.um	0.97%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.171%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.53%	ABS thermal conductivity
d	12.0.mm	+4543%/m	100.um	0.45%	disk diameter
θ	50.0.m°	+2.76%/°	0.20.°	0.55%	plate angle
				4.21%	combined bias uncertainty
Symbol	Nominal	Sensitivity	Variability	Uncertainty	Component
ω	126.r/min	+0.404%/(r/min)	0.96.r/min	0.39%	fan rotation rate
				4.28%	RSS combined uncertainty



$\theta = 0.0^\circ$; $\psi = 90.0^\circ$; $V = 0.748$ m/s (250 r/min)

Estimated measurement uncertainties at $Re = 551$.

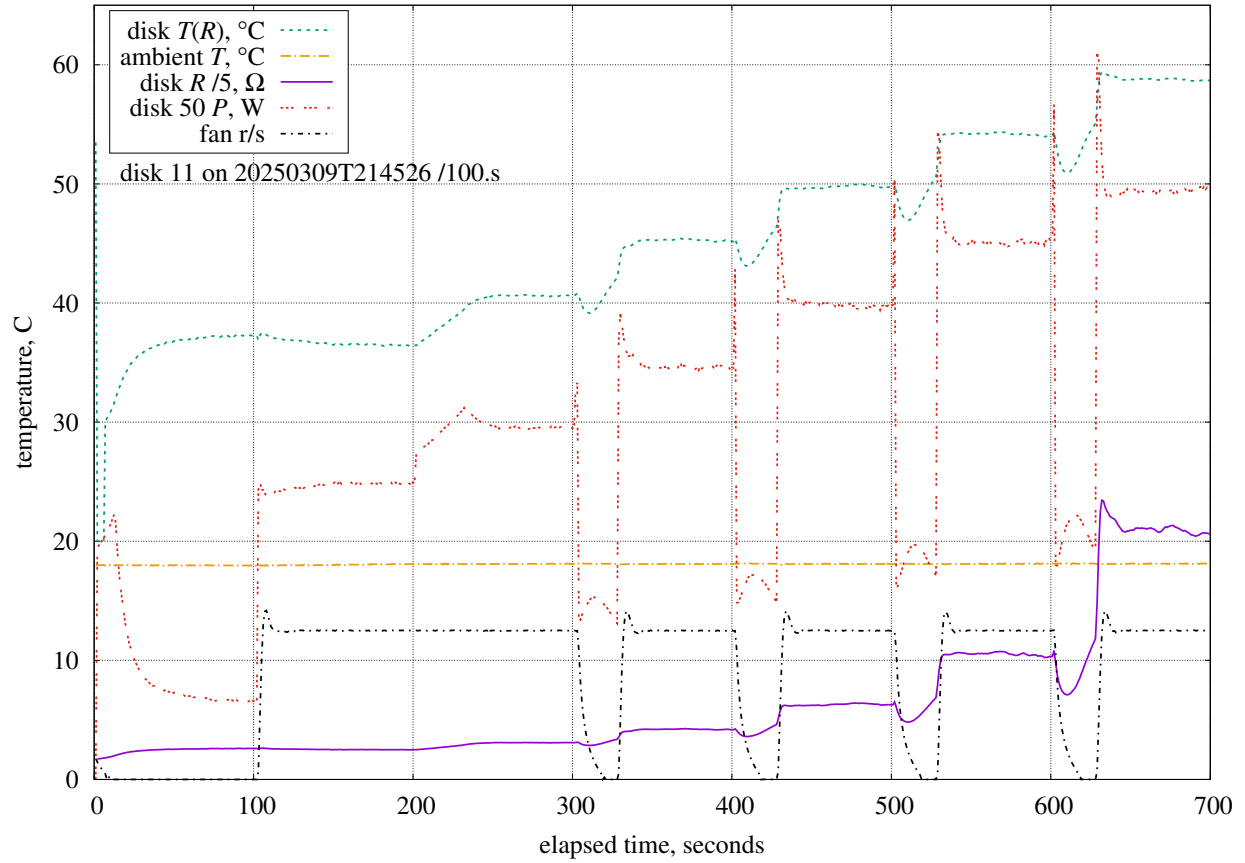
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.04%/K	0.10.K	0.40%	LM35C differential
P	99.6.kPa	+0.0004%/Pa	1.5.kPa	0.54%	MPXH6115A6U air pressure
η	0.340	+104%	0.007	0.71%	anemometer calibration
Re_0	600	-0.0076%	60	0.46%	integration lower-bound
C_B	0.541	+4.77%	0.100	0.48%	bypass coefficient
D_o	2.81.mm	-5158%/m	500.um	2.58%	tube outer diameter
D_i	1.11.mm	+14003%/m	200.um	2.80%	tube inner diameter
D_g	166.um	-583%/m	750.um	0.44%	tube air gap
L_{wire}	38.0.mm	+2429%/m	500.um	1.21%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.184%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.65%	ABS thermal conductivity
d	12.0.mm	+5317%/m	100.um	0.53%	disk diameter
θ	50.0.m $^\circ$	+1.13%/ $^\circ$	0.20. $^\circ$	0.23%	plate angle
				4.54%	combined bias uncertainty
Symbol	Nominal	Sensitivity	Variability	Uncertainty	Component
ω	250.r/min	+0.142%/(r/min)	1.0.r/min	0.15%	fan rotation rate
				4.55%	RSS combined uncertainty



$\theta = 0.0^\circ$; $\psi = 90.0^\circ$; $V = 1.466 \text{ m/s}$ (500 r/min)

Estimated measurement uncertainties at $Re = 1080$.

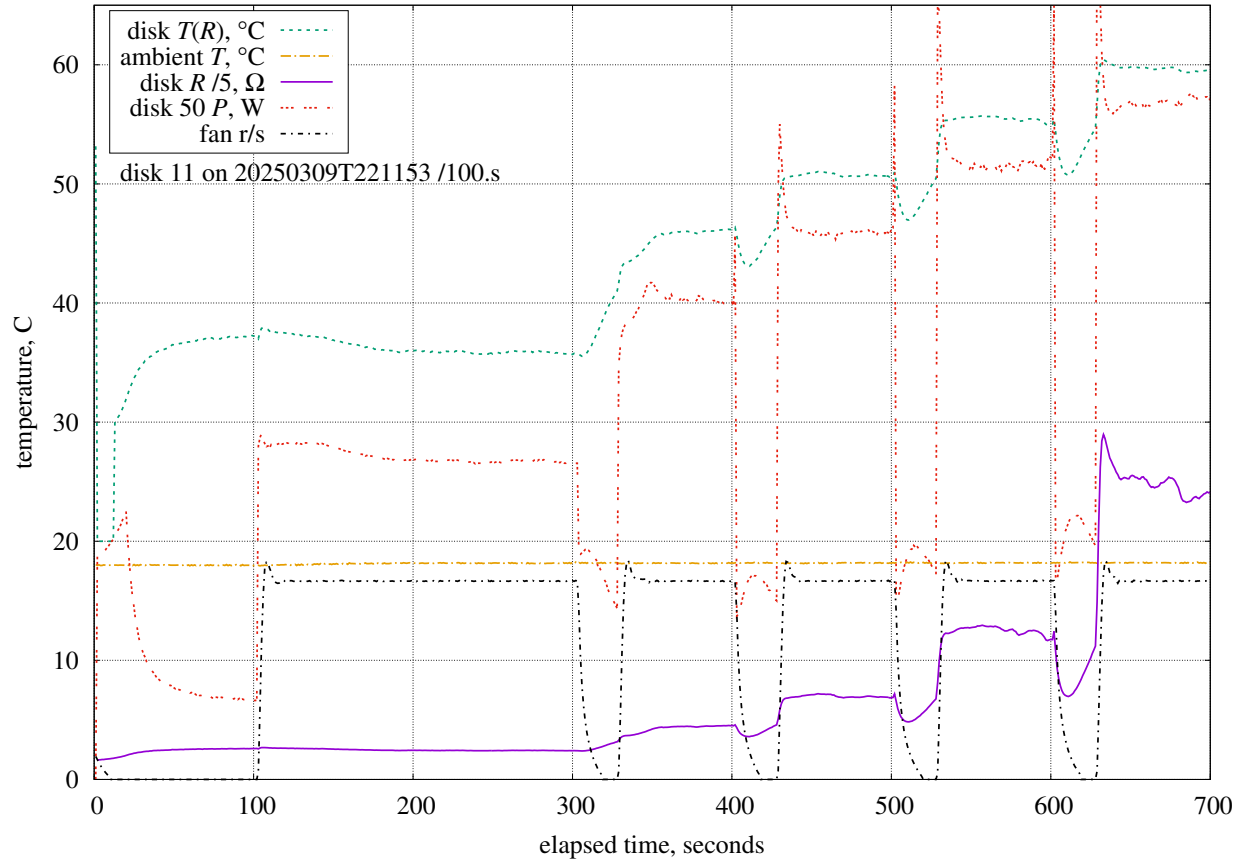
Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.01%/K	0.10.K	0.40%	LM35C differential
P	99.6.kPa	+0.0003%/Pa	1.5.kPa	0.46%	MPXH6115A6U air pressure
η	0.340	+89.3%	0.007	0.61%	anemometer calibration
Re_0	600	-0.0085%	60	0.51%	integration lower-bound
C_B	0.541	+7.09%	0.100	0.71%	bypass coefficient
D_o	2.81.mm	-9099%/m	500.um	4.55%	tube outer diameter
D_i	1.11.mm	+12772%/m	200.um	2.55%	tube inner diameter
D_g	166.um	-574%/m	750.um	0.43%	tube air gap
L_{wire}	38.0.mm	+2393%/m	500.um	1.20%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.164%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.46%	ABS thermal conductivity
d	12.0.mm	+6517%/m	100.um	0.65%	disk diameter
				5.74%	combined bias uncertainty
Symbol	Nominal	Sensitivity	Variability	Uncertainty	Component
ω	500.r/min	+0.061%/(r/min)	1.7.r/min	0.10%	fan rotation rate
				5.74%	RSS combined uncertainty



$\theta = 0.0^\circ$; $\psi = 90.0^\circ$; $V = 2.131 \text{ m/s}$ (750 r/min)

Estimated measurement uncertainties at $Re = 1569$.

Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.00%/K	0.10.K	0.40%	LM35C differential
P	99.6.kPa	+0.0004%/Pa	1.5.kPa	0.64%	MPXH6115A6U air pressure
η	0.340	+118%	0.007	0.80%	anemometer calibration
Re_0	600	-0.0087%	60	0.52%	integration lower-bound
C_B	0.541	+8.22%	0.100	0.82%	bypass coefficient
D_o	2.81.mm	-5636%/m	500.um	2.82%	tube outer diameter
D_i	1.11.mm	+12043%/m	200.um	2.41%	tube inner diameter
D_g	166.um	-564%/m	750.um	0.42%	tube air gap
L_{wire}	38.0.mm	+2350%/m	500.um	1.17%	wire length
k_{ABS}	179. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	+0.152%/ $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	9.0. $\frac{\text{mW}}{\text{K}\cdot\text{m}}$	1.36%	ABS thermal conductivity
d	12.0.mm	+7170%/m	100.um	0.72%	disk diameter
				4.45%	combined bias uncertainty
Symbol	Nominal	Sensitivity	Variability	Uncertainty	Component
ω	750.r/min	+0.053%/(r/min)	1.0.r/min	0.06%	fan rotation rate
				4.46%	RSS combined uncertainty



$\theta = 0.0^\circ$; $\psi = 90.0^\circ$; $V = 2.724 \text{ m/s}$ (999 r/min)

Estimated measurement uncertainties at $Re = 2006$.

Symbol	Nominal	Sensitivity	Bias	Uncertainty	Component
ΔT	25.0.K	+4.00%/K	0.10.K	0.40%	LM35C differential
P	99.6.kPa	+0.0004%/Pa	1.5.kPa	0.66%	MPXH6115A6U air pressure
η	0.340	+111%	0.007	0.76%	anemometer calibration
Re_0	600	-0.0085%	60	0.51%	integration lower-bound
C_B	0.541	+8.80%	0.100	0.88%	bypass coefficient
D_o	2.81.mm	-5551%/m	500.um	2.78%	tube outer diameter
D_i	1.11.mm	+11964%/m	200.um	2.39%	tube inner diameter
D_g	166.um	-581%/m	750.um	0.44%	tube air gap
L_{wire}	38.0.mm	+2423%/m	500.um	1.21%	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	+7477%/m	100.um	0.75%	disk diameter
				4.43%	combined bias uncertainty
Symbol	Nominal	Sensitivity	Variability	Uncertainty	Component
ω	999.r/min	+0.038%/(r/min)	2.0.r/min	0.08%	fan rotation rate
				4.43%	RSS combined uncertainty