

C#:	C121703	Serial:	760786	Equipment	Equip. #	Cal. Due
Cust.:	BEIJING ACI CONTROL TECHNOLOGY...	Date:	March 19, 2025	(Act):	EL-851	04-Apr-25
Tag:	041F711103_T	TagR1:	041F711103_T	(Ref):	EL-547	17-Dec-25
TagL2:	N/A	TagR2:	N/A	DVM:	EL-848	16-Apr-25
TagL3:	N/A	TagR3:	N/A	250 ohm:	EL-852	16-Jul-25

Nominal Sensor Resistance:		1000 Ω	Test Tech.	System Firmware Version	
Temperature at Nominal Resistance:		0.0 C		2.05L	
Notes:	ST80, calibration group 1.			Date	
				03 24 23	
				Checksum	
				2393F69	

Internal Resistance Check						4-20 mA Output Check			
Range	Exp'd Ohms	Meas'd Ohms	Diff. Ohms	Tol. Ohms	Results	Flow Rate	Expected mA	Meas'd VDC across 250 Ω	Meas'd mA
Low	59.010	59.041	0.03	0.50	Pass	0.000	4.00	1.000	4.00
Mid	99.216	99.237	0.02	0.50	Pass	7000	12.00	3.000	12.00
High	148.96	148.98	0.02	0.50	Pass	14000	20.00	5.000	20.00

Serial #:	760786	Anag. Out 2	Temperature	Curve	Spline	Oper. Mode:	AST
C Number:	C121703	4 mA:	-20	Spl1:	85.137, 11.376, -5.67	L2:	0.005588
Range		4 mA DAC2:	10639	Spl2:	194.98, 12.363, -48.4	L3:	0.0254
Cust Min:	0	20 mA:	400	Spl3:	309.12, 13.651, 92.90	Kbase_70F:	0.025729
Cust Max:	14000	20 mA DAC2:	53999	Spl4:	527.41, 15.02, -1.79	Ktc:	0.495000
Flow Unit:	75 (KG/H)	Namur:	OFF, 53947	Spl5:	857.72, 16.753, 27.00	CalGas:	Air
Line Size0:	406.3999938	Normalization	Low Temp	Spl6:	1506.6, 19.536, 9.569	Cal_K1:	-0.00039068
Line Size1:	0	dR Gain:	1.249554038	Spl7:	2321.0, 22.432, 36.36	Cal_K2:	0.00010571
Line Units:	mm	dR Offset:	0.586847186	Spl8:	3371.0, 25.3, 21.74	Cal_K3:	-6.644e-08
Correctors		RefR Gain:	1.249500989	Spl9:	4538.6, 27.939, 42.74	Cal_K4:	3.002e-11
KFactor1:	0	RefR Offset:	0.434496790	Spl10:	5802.1, 30.35, 2.099	Cal_Cp1:	1.035435
KFactor2:	1	Low dR Gn:	1.249554038	Spl11:	6873.6, 32.274, 40.19	Cal_Cp2:	-0.00027999
KFactor3:	0	Low dR Off:	0.586847186	Spl12:	7950.8, 34.029, 21.69	Cal_Cp3:	6.729e-07
KFactor4:	0	Low R Gn:	1.249500989	Spl13:	9191.4, 35.864, 82.14	Cal_Cp4:	-2.737e-10
CalParams		Low R Off:	0.434496790	Spl14:	11111, 38.212, 60.41	Cal_u1:	8.270e-07
Min SFPS:	0.760269999					Cal_u2:	7.250e-08
Max SFPS:	92.62799835					Cal_u3:	-5.166e-11
Std. Dens.:	0.080766998					Cal_u4:	2.116e-14
dR Min:	11.37600040					CustGas:	Air
dR Max:	38.21200180					Cust_K1:	-0.00039068
Cal Ref:	1082.25					Cust_K2:	0.00010571
Heater	75 mA					Cust_K3:	-6.64e-08
Htr 1 DAC:	18150					Cust_K4:	3.00e-11
Htr 2 DAC:	34264					Cust_Cp1:	1.035435
Core SN:	760786					Cust_Cp2:	-0.00027999
Anag. Out 1	Flow (HART)					Cust_Cp3:	6.73e-07
4 mA:	0					Cust_Cp4:	-2.74e-10
4 mA DAC1:	10691					Cust_u1:	8.27e-07
20 mA:	14000					Cust_u2:	7.25e-08
20 mA DAC1:	54271					Cust_u3:	-5.17e-11
Namur:	OFF, 10118					Cust_u4:	2.12e-14

CALIBRATION CERTIFICATE**BEIJING ACI CONTROL TECHNOLOGY CO, LTD**

Customer Order Number:	C121703	End User Name:	Guangzhou Laska Engineering Technology Co., LTD
Serial Number:	760786	Part Number:	ST80-90Y0198FB0JABA003
Purchase Order Number:	NFA254010	FCI Calibration Procedure:	19EN000072 Rev. A
Customer Flow Range:	140 to 14000 KG/HR	Local Tag #1:	041F711103_T
Customer Line Size:	16 inches i.d.	Local Tag #2:	N/A
Customer Temperature Range:	0 to 350 deg C	Local Tag #3:	N/A
Customer Pressure Range:	50 to 60 KPa(g)	Remote Tag #1:	041F711103_T
Customer Installation:	Orientation Code F	Remote Tag #2:	N/A
Customer Standard Conditions:	0 deg C and 1.01325 Bar(abs)	Remote Tag #3:	N/A
Customer Actual Media:	Air		
FCI Calibration Media:	Air		

4-20 mA Output Information**Output #1:** 4-20 mA = 0 to 14000 KG/HR**Calibration Equation:** $\text{KG/HR} = 875.00 \times \text{mA} - 3500$
(step = 140 KG/HR @ 4.160 mA)**Output #2:** 4-20 mA = -20 to 400 Deg C**Temperature Equation:** $\text{Deg C} = 26.25 \times \text{mA} - 125$
(Based on manufacturer's recommended temperature vs. resistance equation)**Calibration Notes**

• Calibration performed using equipment traceable to N.I.S.T. (US National Institute of Standards and Technology) and ISO/IEC 17025, International Standards for Test lab Quality systems.

Final Flow Verification performed on B Stand

<u>Desired</u> <u>KG/HR</u> <u>Per Stand</u>	<u>Model ST80</u> <u>Indicated</u> <u>KG/HR</u>	<u>Actual</u> <u>% Reading</u> <u>Difference</u>	<u>Allowed</u> <u>% Reading</u> <u>Difference</u>
13767	13653	-0.83	±1.51
10574	10591	+0.17	±1.66
7022.2	7007.5	-0.21	±2.00
3518.8	3533.6	+0.42	±2.99

N.I.S.T. Traceable Equipment: B Stand

<u>Calibration Control Number</u>	<u>Calibration Date</u>	<u>Calibration Due date</u>	<u>Equipment Description</u>
EL-819	22-Jan-25	22-Jan-26	HP Data Acquisition Unit
EL-905	3-Dec-24	3-Dec-25	Freq. Counter
FM-063	23-Dec-24	23-Jun-25	4" Turbine Meter
FM-067	23-Dec-24	23-Jun-25	2" Turbine Meter
FM-195	23-Dec-24	23-Jun-25	2" Rotary Meter
PG-123	22-Jul-24	22-Jul-25	Pressure Transducer
TE-227	3-Dec-24	3-Dec-25	Temperature RTD

Technician: S. Traih

313

Calibration Date: 03-19-25