

Airwell

■ Just feel well

SIMPLE TECHNICAL MANUAL

YCZ3-27 [**ECODESIGN**]

High wall residential multisplit
Trio / DC Inverter



NEW



COMPATIBLE WITH

HKD

HND



CBD

DGD



XAD



[**ECODESIGN**] Comply with ECO Design regulation

[TECHNICAL DATA]

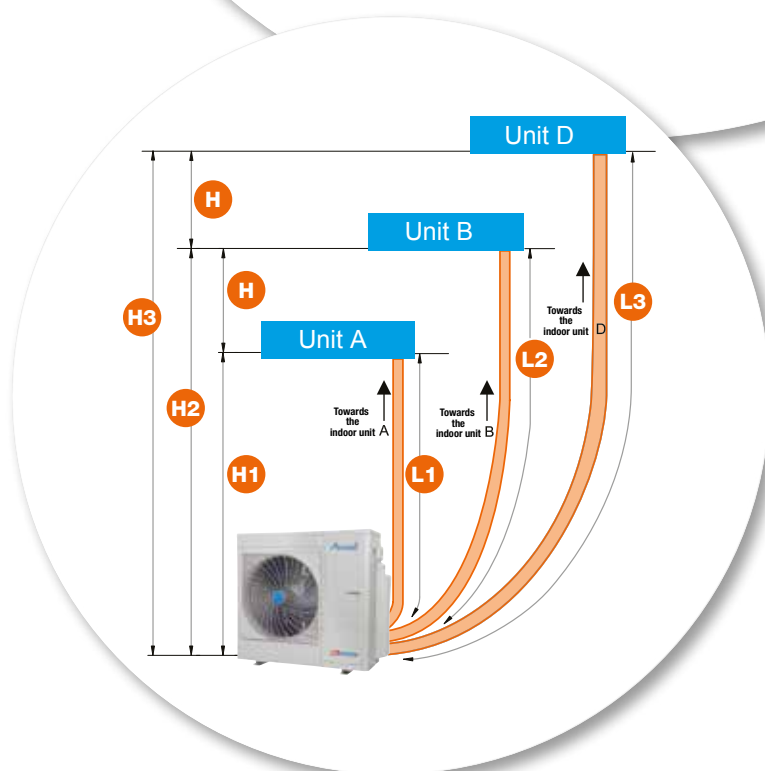
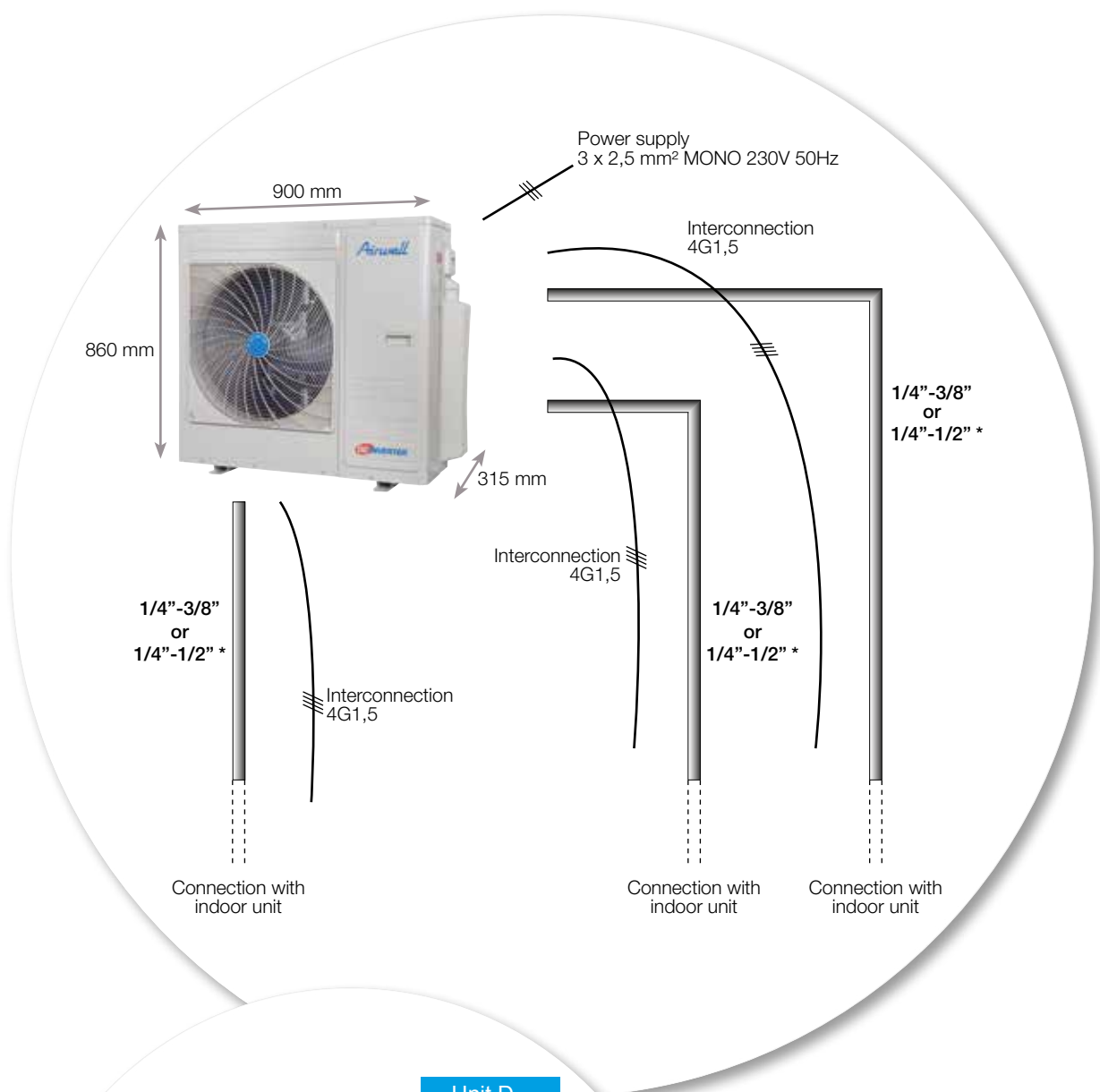
Outdoor unit YCZ3-27		
Cooling capacity	kW	7.8
Heating capacity	kW	8.5
Input power	kW	3.6
Intensity max	A	16.5
Circuit breaker rating	A	25
Sound pressure level outdoor unit	dB(A)	58
Weight outdoor unit	kg	62
Refrigerant charge	kg (10 m)	2.4
Additional charge	kg	15 x (total length for all rooms - 15)

[CAPACITY COMBINATION]

Indoor units combinations	COOLING										HEATING									
	Rated capacity (kW)			Total capacity (kW)			Total input power (kW)			EER	Rated capacity (kW)			Total capacity (kW)			Total input power (kW)			COP
	A	B	C	min.	rated	max.	min.	rated	max.		A	B	C	min.	rated	max.	min.	rated	max.	
9+18	2.60	5.20	-	5.46	7.80	9.44	1.45	2.42	3.05	3.22	2.88	5.87	-	5.94	8.75	10.59	1.45	2.41	3.04	3.63
12+18	3.20	4.80	-	5.95	8.00	9.68	1.49	2.48	3.12	3.23	3.45	3.45	-	6.09	6.90	8.35	1.15	1.91	2.41	3.61
18+18	4.60	4.60	-	6.44	9.20	10.86	1.71	2.85	3.53	3.23	3.39	5.61	-	7.00	9.00	10.62	1.49	2.49	3.08	3.62
9+9+9	2.60	2.60	2.60	5.46	7.80	8.81	1.41	2.43	3.01	3.21	2.83	2.83	2.83	5.94	8.49	9.59	1.51	2.31	2.86	3.68
9+9+12	2.50	2.50	3.50	5.95	8.50	9.61	1.60	2.62	3.24	3.25	2.60	2.60	3.50	6.09	8.70	9.83	1.53	2.37	2.94	3.67
9+9+18	2.30	2.30	4.60	6.44	9.20	10.40	1.73	2.84	3.46	3.24	2.50	2.50	5.00	7.00	10.00	11.30	1.79	2.75	3.35	3.64
9+12+12	2.50	3.50	3.50	6.65	9.50	10.74	1.90	2.94	3.59	3.23	2.50	3.50	3.50	6.65	9.50	10.74	1.71	2.61	3.18	3.64
9+12+18	2.10	3.20	4.50	6.86	9.80	11.07	1.96	3.04	3.71	3.22	2.30	3.20	5.00	7.35	10.50	11.87	1.88	2.90	3.54	3.62
12+12+12	2.90	2.90	2.90	6.09	8.70	9.83	1.63	2.70	3.30	3.22	3.30	3.30	3.30	6.93	9.90	11.19	1.78	2.72	3.32	3.64

Based on wall mounted combination





- $L1 + L2 + L3 \leq 45 \text{ m}$
- $L1, L2, L3 \leq 25 \text{ m}$
- $H \leq 10 \text{ m}$
- $H1, H2, H3 \leq 10 \text{ m}$

— Cable
 — Pipe
 ≡ Number of wires

* Connection in 1/4"-1/2" for indoor unit size 18.

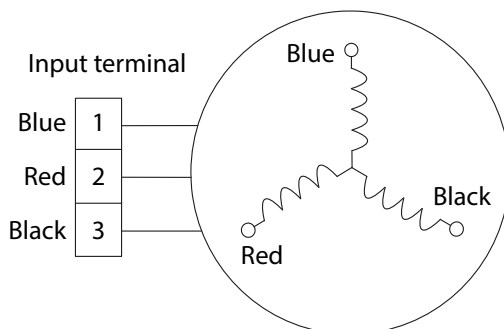
[FAULT CODE / STATUS DISPLAY]

ODU Display	Failure / Status
"--"	STBY
"XX"	Normal operation
0.5S "dF" → 0.5S "XX"	Deicing
0.5S "YY" → 0.5S "XX"	Rated capacity test
0.5S "FC" + 0.5S "XX"	Forced cooling
0.5S "RO" + 0.5S "XX"	Oil return
0.5S "PH" + 0.5S "XX"	Pre-heating
0.5S "LC" + 0.5S "XX"	Low cooling operation
0.5S "E6" + 0.5S "XX"	3 times PFC protection in 15 minutes
E0	ODU Bad EEPROM
E2	Communication failure IDU/ODU
E3	Communication failure Driver / ODU
E4	OAT/OCT/RGT/CTT failure
E5	Over voltage / under voltage
E6	PFC protection (for YCZ430/ YCZ536)
E8	OFAN failure
F1	ICT-A failure
F2	ICT-B failure
F3	ICT-C failure
F4	ICT-D failure
F5	ICT-E failure
P0	Compressor overload
P1	High pressure protection (for YCZ430/ YCZ536)
P2	Low pressure protection (for YCZ430/ YCZ536)
P3	Compressor over current
P4	Compressor overheating
P5	ODU over heating
P6	IPM fault

Remark: "YY" - Targeted compressor frequency. "XX" - Actual compressor running frequency.

[COMPRESSOR CHECKING]

→ Measure the resistance value of each winding by using the tester.



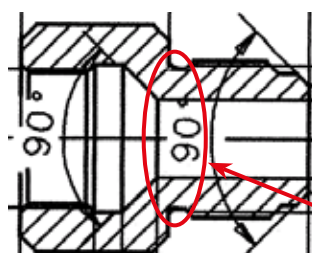
Position	Resistance Value		
	DA150S1C-20FZ	DA250S2C-30MT	TNB306FPGMC-L
Blue - Red	0.95Ω (20°C)	0.55Ω (20°C)	0.53Ω (20°C)



[ADAPTOR FOR SIZE 18]

→ Pipe adaptor (Ø3/8" → Ø1/2") needs to be fixed on the gas valve of outdoor unit when connecting 18K indoor unit.

→ This adaptor is included with indoor unit.



[TEMPERATURE SENSOR RESISTANCE VALUE TABLE FOR RAT, ICT, OAT, OCT, RGT (°C-K)]

°C	K Ohm	°C	K Ohm	°C	K Ohm	°C	K Ohm
-20	115.266	20	12.6431	60	2.35774	100	0.62973
-19	108.146	21	12.0561	61	2.27249	101	0.61148
-18	101.517	22	11.5000	62	2.19073	102	0.59386
-17	96.3423	23	10.9731	63	2.11241	103	0.57683
-16	89.5865	24	10.4736	64	2.03732	104	0.56038
-15	84.2190	25	10.000	65	1.96532	105	0.54448
-14	79.3110	26	9.55074	66	1.89627	106	0.52912
-13	74.5360	27	9.12445	67	1.83003	107	0.51426
-12	70.1698	28	8.71983	68	1.76647	108	0.49989
-11	66.0898	29	8.33566	69	1.70547	109	0.48600
-10	62.2756	30	7.97078	70	1.64691	110	0.47256
-9	58.7079	31	7.62411	71	1.59068	111	0.45957
-8	56.3694	32	7.29464	72	1.53668	112	0.44699
-7	52.2438	33	6.98142	73	1.48481	113	0.43482
-6	49.3161	34	6.68355	74	1.43498	114	0.42304
-5	46.5725	35	6.40021	75	1.38703	115	0.41164
-4	44.0000	36	6.13059	76	1.34105	116	0.40060
-3	41.5878	37	5.87359	77	1.29078	117	0.38991
-2	39.8239	38	5.62961	78	1.25423	118	0.37956
-1	37.1988	39	5.39689	79	1.21330	119	0.36954
0	35.2024	40	5.17519	80	1.17393	120	0.35982
1	33.3269	41	4.96392	81	1.13604	121	0.35042
2	31.5635	42	4.76253	82	1.09958	122	0.3413
3	29.9058	43	4.57050	83	1.06448	123	0.33246
4	28.3459	44	4.38736	84	1.03069	124	0.32390
5	26.8778	45	4.21263	85	0.99815	125	0.31559
6	25.4954	46	4.04589	86	0.96681	126	0.30754
7	24.1932	47	3.88673	87	0.93662	127	0.29974
8	22.5662	48	3.73476	88	0.90753	128	0.29216
9	21.8094	49	3.58962	89	0.87950	129	0.28482
10	20.7184	50	3.45097	90	0.85248	130	0.27770
11	19.6891	51	3.31847	91	0.82643	131	0.27078
12	18.7177	52	3.19183	92	0.80132	132	0.26408
13	17.8005	53	3.07075	93	0.77709	133	0.25757
14	16.9341	54	2.95896	94	0.75373	134	0.25125
15	16.1156	55	2.84421	95	0.73119	135	0.24512
16	15.3418	56	2.73823	96	0.70944	136	0.23916
17	14.6181	57	2.63682	97	0.68844	137	0.23338
18	13.9180	58	2.53973	98	0.66818	138	0.22776
19	13.2631	59	2.44677	99	0.64862	139	0.22231

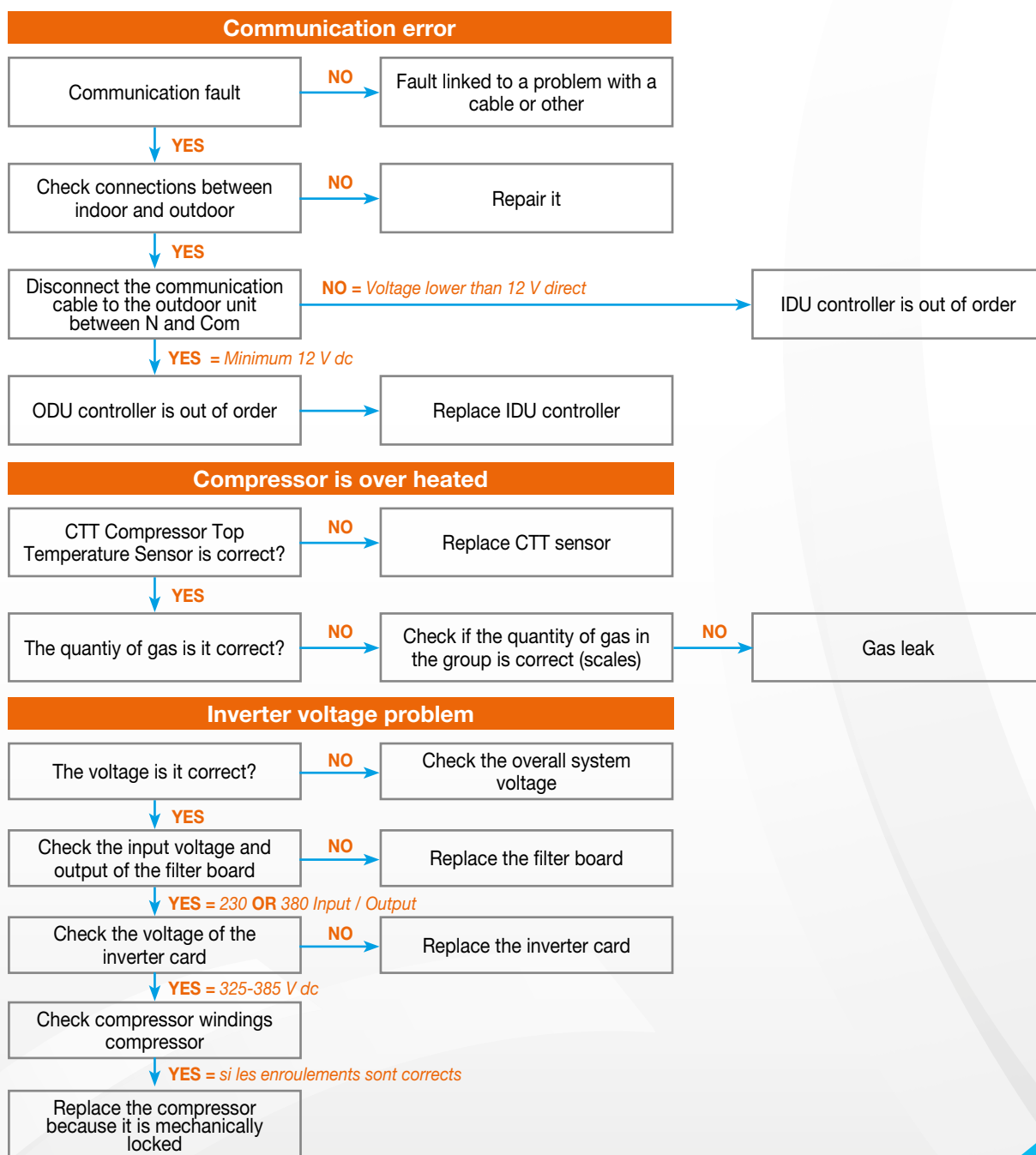
Remark: RAT - Room Air Thermistor. ICT - Indoor Coil Thermistor. OCT - Outdoor Coil Thermistor. OAT - Outdoor Air Thermistor. RGT - Return Gas Thermistor.

[TEMPERATURE SENSOR RESISTANCE VALUE TABLE FOR CTT (°C-K)]

°C	K Ohm	°C	K Ohm	°C	K Ohm	°C	K Ohm
-20	542.7	20	68.66	60	13.59	100	3.702
-19	511.9	21	65.62	61	13.11	101	3.595
-18	483	22	62.73	62	12.65	102	3.492
-17	455.9	23	59.98	63	12.21	103	3.392
-16	430.5	24	57.37	64	11.79	104	3.296
-15	406.7	25	54.89	65	11.38	105	3.203
-14	384.3	26	52.53	66	10.99	106	3.113
-13	363.3	27	50.28	67	10.61	107	3.025
-12	343.6	28	48.14	68	10.25	108	2.941
-11	325.1	29	46.11	69	9.902	109	2.86
-10	307.7	30	44.17	70	9.569	110	2.781
-9	291.3	31	42.33	71	9.248	111	2.704
-8	275.9	32	40.57	72	8.94	112	2.63
-7	261.4	33	38.89	73	8.643	113	2.559
-6	247.8	34	37.3	74	8.358	114	2.489
-5	234.9	35	35.78	75	8.084	115	2.422
-4	222.8	36	34.32	76	7.82	116	2.357
-3	211.4	37	32.94	77	7.566	117	2.294
-2	200.7	38	31.62	78	7.321	118	2.233
-1	190.5	39	30.36	79	7.086	119	2.174
0	180.9	40	29.15	80	6.859	120	2.117
1	171.9	41	28	81	6.641	121	2.061
2	163.3	42	26.9	82	6.43	122	2.007
3	155.2	43	25.86	83	6.228	123	1.955
4	147.6	44	24.85	84	6.033	124	1.905
5	140.4	45	23.89	85	5.844	125	1.856
6	133.5	46	22.89	86	5.663	126	1.808
7	127.1	47	22.1	87	5.488	127	1.762
8	121	48	21.26	88	5.32	128	1.717
9	115.2	49	20.46	89	5.157	129	1.674
10	109.8	50	19.69	90	5	130	1.632
11	104.6	51	18.96	91	4.849	B(25/50) = 3950 K R(90 °C) = 5KΩ ± 3 %	
12	99.69	52	18.26	92	4.703		
13	95.05	53	17.58	93	4.562		
14	90.66	54	16.94	94	4.426		
15	86.49	55	16.32	95	4.294		
16	82.54	56	15.73	96	4.167		
17	78.79	57	15.16	97	4.045		
18	75.24	58	14.62	98	3.927		
19	71.86	59	14.09	99	3.812		

Remark: CTT - Compressor Discharge Thermistor.

[FAULT CODE / STATUS DISPLAY - Case study]



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