

WALL HUNG SPLIT SYSTEM

1 Phase
1 Stage
8.50 kW



UNIT FEATURES

- Reverse Cycle Wall Hung Split System
- Mono & Multi Compatible Heads
- Rotary Compressor
- Superior Operating Range:
 - Cooling: up to 60°C DB
 - Heating: down to -25°C DB
- Adjustable Airflow
- 3D Multi-Directional Airflow
 - Up / Down Auto Swing
 - Left / Right Auto Swing
- Louvre Position Memory
- Fan Speed: Auto, Low, Medium and High
- Powder Coated Panels - Outdoor Unit
- Hydrophilic Indoor and Outdoor Coil Protection
- Self-Diagnosis and Auto Protection
- Fire Proof Electrical Box - Indoor and Outdoor Units
- Dehumidification Mode
- Super Ionizer Technology
- Intuitive Proximity Sensor
- R-32 low GWP Refrigerant

UNIT OPTIONS

- Left or Right Hand Drain Connection
- Fault Alarm Output

CONTROL FEATURES

- Digital Display
- Auto Restart After Power Failure
- Timer ON/OFF Operation
- Remote ON/OFF Input
- Manual ON/OFF Operation
- 12-speed Indoor Fan
- 5-speed Outdoor Fan
- Sleep Mode
- Boost Mode
- Quiet Operation
- Dry Mode Operation
- Demand Response Ready
- 1W Standby Power Consumption
- Auto Defrost Function
- Follow Me Function
- Mute Operation
- Self Clean Function

UNIT COMPLIANCE

- AS/NZS 3823.2 (MEPS)
- AS/NZS 4755.3.1 (DRM 1, 2 and 3)
- AS/NZS CISPR 14.1 (EMC)
- AS/NZS 60335.1 (ELECTRICAL APPLIANCE SAFETY)
- AS/NZS 60335.2.40 (ELECTRICAL APPLIANCE SAFETY - AIR CONDITIONERS)

SPECIFICATION SUMMARY

OUTDOOR UNIT MODEL	WRC-085CS	
INDOOR UNIT MODEL	WRE-085CS	
	NETT	
⁽¹⁾⁽²⁾ COOLING CAPACITY (kW) - NOMINAL (MIN - MAX)	8.50 (3.60 - 9.60)	
⁽¹⁾⁽³⁾ HEATING CAPACITY (kW) - NOMINAL (MIN - MAX)	9.45 (3.55 - 11.00)	
⁽¹⁾⁽⁴⁾ COOLING INPUT POWER (kW)	2.40	
⁽¹⁾⁽⁴⁾ HEATING INPUT POWER (kW)	2.52	
⁽¹⁾⁽²⁾ EER	3.54	
⁽¹⁾⁽³⁾ COP	3.75	
⁽⁵⁾ INDOOR AIRFLOW (l/s) - TURBO / HI / MED / LOW / QUIET	431 / 322 / 250 / 221	
MOISTURE REMOVAL (l/hr)	3.5	
INDOOR SOUND PRESS. LEVEL dB(A) - SILENT/LOW/MED/HIGH	32 / 38/42/47	
OUTDOOR SOUND PRESS. LEVEL @ 1M dB(A)	61	
⁽⁶⁾ OUTDOOR SOUND POWER LEVEL dB(A)	69	
POWER SUPPLY	220 - 240V / 1Ph+N / 50 Hz	
⁽¹⁾ RATED LOAD AMPS - COOLING / HEATING	10.5 / 11.3	
⁽⁷⁾ FULL LOAD AMPS	17.5	
⁽⁸⁾ CIRCUIT BREAKER	20.0	
WEIGHT (kg) - INDOOR / OUTDOOR	19.7 / 43.3	
OUTDOOR OPERATING RANGE (°C)	COOLING	-15 to 60
	HEATING	-25 to 30

- ⁽¹⁾ Measured and tested in accordance with AS/NZS 3823.1.1.
- ⁽²⁾ At 27°C DB / 19°C WB entering air temperatures and 35°C ambient.
- ⁽³⁾ At 20°C DB entering air temperature and 7°C DB / 6°C WB ambient.
- ⁽⁴⁾ Input power includes indoor fan kW.
- ⁽⁵⁾ Max. - Min. airflow application range.
- ⁽⁶⁾ Determination of Sound Power Levels of Noise Sources per AS1217.2.
- ⁽⁷⁾ Full Load Amps are based on compressor and fan motors' maximum expected current.
- ⁽⁸⁾ See Specifications sheet for circuit breaker size details.

Note: Use input power to estimate running cost.

CAPACITY SELECTION DATA

WRC-085CS / WRE-085CS

COOLING PERFORMANCE

OUTDOOR TEMPERATURE (DB)	WB°C	INDOOR CONDITIONS (°C - DB)															
		17.0				18.0				19.0				22.0			
		24.0	25.0	27.0	29.0	24.0	25.0	27.0	29.0	24.0	25.0	27.0	29.0	24.0	25.0	27.0	29.0
18°C	Nett Capacity, kW	9.29	9.29	9.29	9.38	9.55	9.55	9.55	9.55	9.84	9.84	9.84	9.84	10.56	10.56	10.56	10.56
	Sensible Capacity, kW	6.41	6.78	7.62	8.44	5.92	6.30	7.07	7.83	5.41	5.80	6.59	7.38	4.22	4.64	5.38	6.12
	Power Input, kW	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.71	1.71	1.71	1.71	1.70	1.70	1.70	1.70
25°C	Nett Capacity, kW	8.69	8.69	8.69	8.77	8.97	8.97	8.97	8.97	9.23	9.23	9.23	9.23	9.92	9.92	9.92	9.92
	Sensible Capacity, kW	6.08	6.51	7.30	8.07	5.65	6.01	6.82	7.63	5.17	5.54	6.28	7.11	3.97	4.37	5.06	5.85
	Power Input, kW	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99
30°C	Nett Capacity, kW	8.28	8.28	8.28	8.37	8.54	8.54	8.54	8.54	8.80	8.80	8.80	8.80	9.49	9.49	9.49	9.49
	Sensible Capacity, kW	5.88	6.30	7.04	7.87	5.47	5.81	6.58	7.35	4.93	5.37	6.16	6.87	3.80	4.18	4.94	5.70
	Power Input, kW	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.19	2.19	2.19	2.19
35°C	Nett Capacity, kW	7.88	7.88	7.88	7.97	8.14	8.14	8.14	8.14	8.37	8.37	8.50	8.51	9.03	9.03	9.03	9.03
	Sensible Capacity, kW	5.67	6.07	6.86	7.65	5.21	5.62	6.43	7.16	4.77	5.11	6.12	6.81	3.52	3.97	4.70	5.51
	Power Input, kW	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.40	2.40	2.40	2.40	2.41	2.41	2.41	2.41
40°C	Nett Capacity, kW	7.42	7.42	7.44	7.52	7.66	7.66	7.66	7.69	7.89	7.89	7.97	7.89	8.53	8.53	8.53	8.53
	Sensible Capacity, kW	5.56	5.93	6.77	7.52	5.06	5.44	6.28	7.07	4.58	4.97	5.82	6.55	3.33	3.75	4.52	7.67
	Power Input, kW	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.65	2.65	2.65	2.65	2.66	2.66	2.66	2.66
46°C	Nett Capacity, kW	6.87	6.87	6.92	6.98	7.10	7.10	7.10	7.15	7.33	7.33	7.33	7.33	7.93	7.93	7.93	7.93
	Sensible Capacity, kW	5.22	5.56	6.37	6.98	4.76	5.11	5.89	6.73	4.25	4.69	5.42	6.82	3.09	3.49	4.28	7.30
	Power Input, kW	2.93	2.93	2.93	2.93	2.94	2.94	2.94	2.94	2.95	2.95	2.95	2.95	2.97	2.97	2.97	2.97
60°C	Nett Capacity, kW	5.20	5.26	5.32	5.37	5.40	5.40	5.46	5.52	5.60	5.60	5.60	5.66	6.12	6.12	6.12	6.12
	Sensible Capacity, kW	4.42	4.84	5.32	5.37	4.00	4.38	5.19	5.52	3.53	3.92	4.71	5.49	2.39	2.75	3.55	5.94
	Power Input, kW	3.93	3.93	3.93	3.93	3.93	3.93	3.93	3.93	3.94	3.94	3.94	3.94	3.97	3.97	3.97	3.97

HEATING PERFORMANCE

INDOOR CONDITIONS		OUTDOOR TEMPERATURE							
		-15°C D -16°C W	-7°C D -8°C W	-5°C D -6°C W	0°C D -1°C W	4°C D 3°C W	7°C D 6°C W	12°C D 11°C W	24°C D 18°C W
15°C - DB	Nett Capacity, kW	3.72	6.76	7.45	8.25	8.78	10.64	11.70	9.82
	Power Input, kW	1.44	2.33	2.05	2.52	2.83	2.80	3.08	2.58
18°C - DB	Nett Capacity, kW	3.56	6.46	7.12	7.88	8.38	10.17	11.18	9.38
	Power Input, kW	1.38	2.25	1.98	2.43	2.73	2.69	2.97	2.48
20°C - DB	Nett Capacity, kW	3.33	6.03	6.65	7.36	7.84	9.45	10.45	8.76
	Power Input, kW	1.31	2.12	1.87	2.29	2.58	2.52	2.81	2.35
22°C - DB	Nett Capacity, kW	3.23	5.85	6.45	7.14	7.60	9.22	10.14	8.50
	Power Input, kW	1.34	2.17	1.91	2.34	2.63	2.60	2.86	2.39
27°C - DB	Nett Capacity, kW	2.89	5.25	5.79	6.40	6.82	8.27	9.09	7.62
	Power Input, kW	1.34	2.17	1.91	2.35	2.64	2.61	2.87	2.40

PIPE LENGTH CORRECTION MULTIPLIER

* Indoor Unit Higher Than Outdoor Unit*	COOLING	PIPE LENGTH (m)								
		7.5	10	20	30	40	50			
		H = Height Difference (m)	25	---	---	---	0.872	0.834	0.797	
** Indoor Unit Lower Than Outdoor Unit**	Indoor Unit Higher Than Outdoor Unit*	20	---	---	0.923	0.885	0.847	0.809		
		10	---	0.975	0.937	0.898	0.860	0.822		
		5	0.995	0.985	0.946	0.908	0.869	0.830		
	Indoor Unit Lower Than Outdoor Unit**	0	1.000	0.990	0.951	0.912	0.873	0.834		
		-5	1.000	0.990	0.951	0.912	0.873	0.834		
		-10	---	0.990	0.951	0.912	0.873	0.834		
		-20	---	---	0.951	0.912	0.873	0.834		
		-25	---	---	---	0.912	0.873	0.834		
		HEATING	PIPE LENGTH (m)							
			7.5	10	20	30	40	50		
H = Height Difference (m)	25		---	---	---	0.960	0.942	0.924		
Indoor Unit Higher Than Outdoor Unit*	20	---	---	0.978	0.960	0.942	0.924			
	10	---	0.996	0.978	0.960	0.942	0.924			
	5	1.000	0.996	0.978	0.960	0.942	0.924			
	0	1.000	0.996	0.978	0.960	0.942	0.924			
	-5	0.992	0.988	0.970	0.952	0.934	0.917			
	-10	---	0.980	0.962	0.944	0.927	0.909			
	-20	---	---	0.954	0.937	0.919	0.902			
-25	---	---	---	0.929	0.912	0.895				



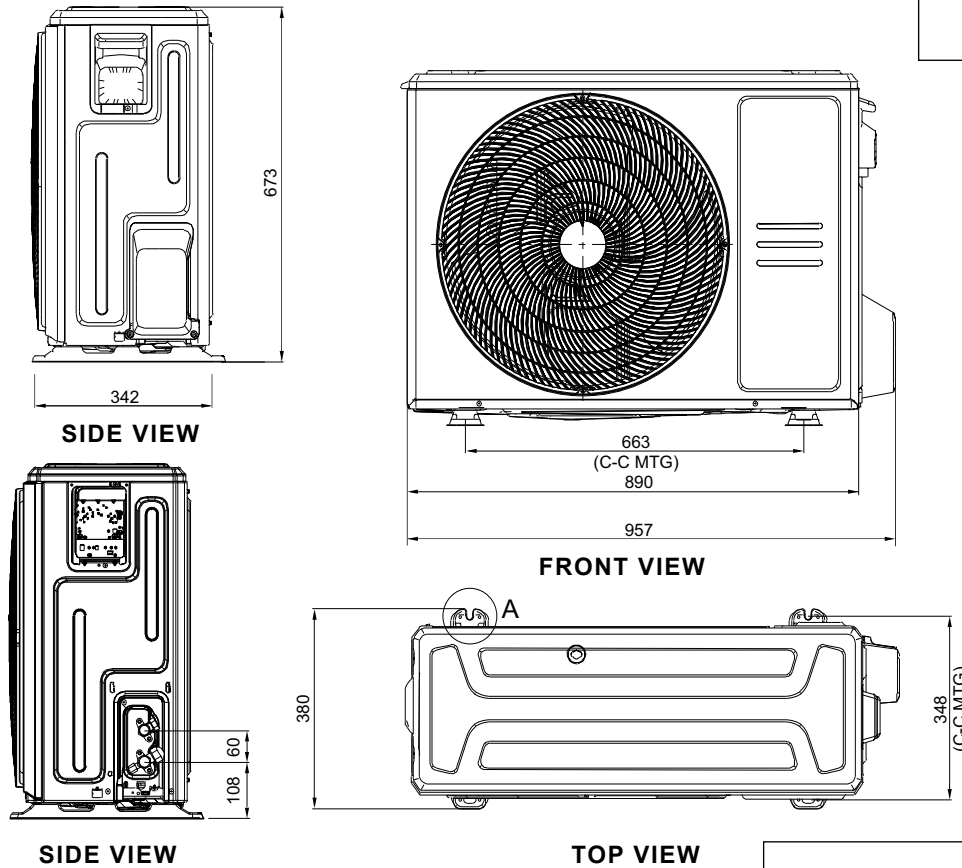
8.50 kW
1 Phase 1 Stage

UNIT DIMENSIONS

WRC-085CS / WRE-085CS

C OUTDOOR UNIT: WRC-085CS

NOMINAL DIMENSION (H x W x D)
= 673 x 890 x 342



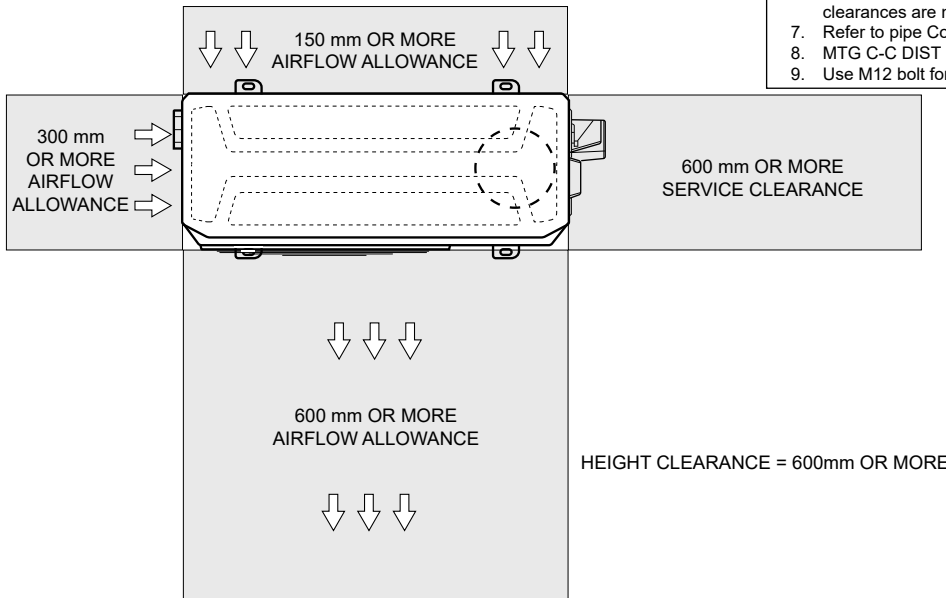
1 Phase
1 Stage
8.50 kW

THIRD ANGLE PROJECTION

NOTES:

- Do not scale drawing. All dimensions are in mm unless specified. Refer to corresponding unit dimensional drawing for mounting hole details.
- Service Access Areas and Spaces for Airflow Clearances given above are suggested minimum based on the condition that the spaces around the units are free from any obstructions and a walkway passage of 1000 mm between the units or between the unit and the outside perimeter is available.
- Minimum service access areas and spaces for airflow clearances are responsibilities of the installer, ActronAir will not be held liable for any extra charges incurred due to lack of access and space for airflow.
- Under all circumstances, condenser air must not recirculate back onto condenser coil. Keep all clearance free of any obstructions.
- Maximum External Static of Outdoor Fans is 5 Pa.
- STACKING OF UNITS: Ensure that minimum airflow and clearances are met.
- Refer to pipe Connection Details on Specifications Sheet.
- MTG C-C DIST = Mounting Centre to Centre Distance.
- Use M12 bolt for feet mounting.

SERVICE ACCESS AREAS & AIRFLOW ALLOWANCES

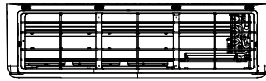


UNIT DIMENSIONS

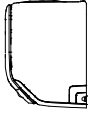
WRC-085CS / WRE-085CS

E INDOOR UNIT: WRE-085CS

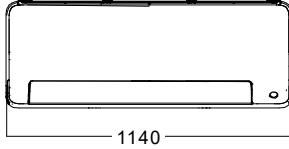
NOMINAL DIMENSION (H x W x D)
= 370 x 1140 x 297



TOP VIEW



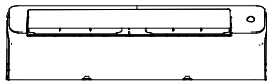
LHS VIEW



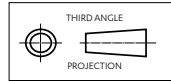
FRONT VIEW



RHS VIEW



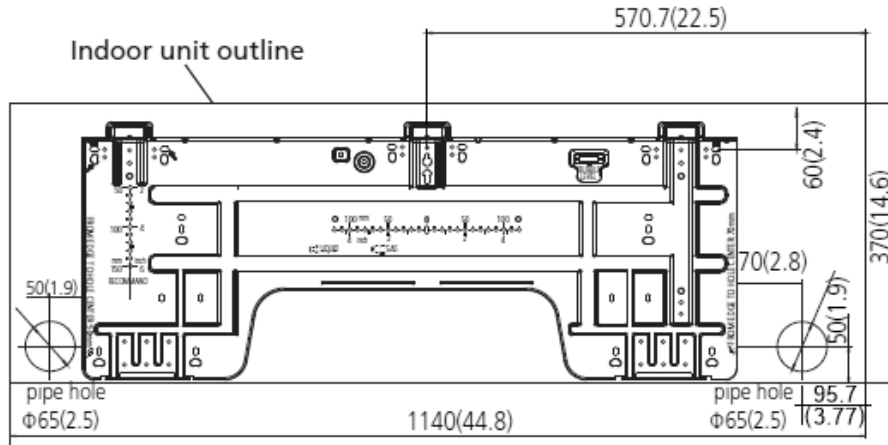
BOTTOM VIEW



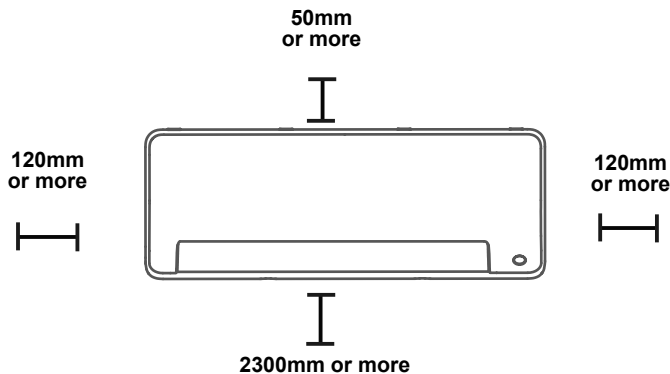
NOTES:

1. Do not scale drawing. All dimensions are in mm unless specified. Refer to corresponding unit dimensional drawing for mounting hole details.
2. Service Access Areas and Spaces for Airflow Clearances given are suggested minimum based on the condition that the spaces around the units are free from any obstructions and a walkway passage of 1000 mm between the units or between the unit and the outside perimeter is available.
3. Minimum Service Access Areas and Spaces for Airflow Clearances are responsibilities of the installer, ActronAir will not be held liable for any extra charges incurred due to lack of access and space for airflow.

MOUNTING DETAILS



MOUNTING CLEARANCES



8.50 kW
1 Phase 1 Stage

SPECIFICATIONS

WRC-085CS / WRE-085CS

UNIT DIMENSIONS

OUTDOOR DIMENSIONS	Depth	342 mm
	Height	673 mm
	Width	890 mm
INDOOR DIMENSIONS	Depth	297 mm
	Height	370 mm
	Width	1140 mm

ELECTRICAL

POWER SUPPLY		220 - 240 Volts / 1 Ph + N / 50Hz
FULL LOAD AMPS*	Total	17.5
	Indoor	0.40
RATED LOAD AMPS**	Cooling	10.5
	Heating	11.3
IP RATING	Outdoor	IP24
	Indoor	IPX0

IMPORTANT - The local electricity authority may require limits on starting current and voltage drop, please check prior to purchase.

*Full Load Amps are based on Compressor and Fan Motor's maximum expected current.

**Rated Load Amps are measured and tested in accordance with AS/NZS3823.1.1.

CIRCUIT BREAKER SIZE

Circuit Breaker Size	20.0 Amps
----------------------	-----------

Refer to AS/NZS 3000 "Australian/New Zealand Wiring Rules" or AS/NZS 3008 "Electrical Installations-Selection of Cables" for cable size to be used.

OUTDOOR COIL

TUBE TYPE	Copper Ø7mm, inner groove tube
FIN TYPE	Hydrophylic Aluminium
FACE AREA	0.55 m ²
FIN SPACING	1.3 mm

OUTDOOR FAN

NUMBER OF FANS x TYPE	1 x Axial
INPUT (W)	340
FAN SPEED (rpm) - Hi/ Lo	800 / 550
AIRFLOW (l/s)	970

INDOOR COIL

TUBE TYPE	Copper Ø7mm, inner groove tube
FIN TYPE	Hydrophylic Aluminium
FACE AREA	0.33 m ²
FIN SPACING	1.3 mm

INDOOR FAN

NUMBER OF FANS x TYPE	1 x Cross- flow fan
INPUT (W)	58
AIRFLOW - Boost/High/Med/Low	370/320/230/190(l/s)

AIR FILTERS

Air filters are supplied standard and pre-fitted.

COMPRESSOR

NUMBER PER UNIT x TYPE	1 x Rotary Compressor
STARTING METHOD	DC Inverter Starter
INPUT (W)	2045
REFRIGERANT OIL (TYPE / CHARGE)	ESTER OIL VG74 / 620ml
PROTECTION	External Thermal Cut-Out

REFRIGERATION SYSTEM

REFRIGERANT TYPE	R-32
FACTORY CHARGE	1500 g
PRE-CHARGE LENGTH	15 m
MINIMUM ROOM AREA (@ 2.3 INSTALLED HEIGHT)	1.303 m ²
ADD'L. REFRIGERANT CHARGE	24 g / m
DESIGN PRESSURE (High/Low)	4.3 / 1.7 MPa

INTERCONNECTING PIPE RUN

MAXIMUM PIPE LENGTH	50 m	
MAXIMUM CHARGE	2340 g	
MINIMUM ROOM AREA (@ 2.3 INSTALLED HEIGHT)	3.171 m ²	
MINIMUM PIPE LENGTH	3 m	
MAX. VERTICAL LENGTH	25 m (Included in Max. Pipe Length)	
FIELD PIPE SIZES		
Liquid Pipe	9.52 mm (3/8")	
Gas Pipe	15.9 mm (5/8")	
PIPE CONNECTIONS		
Indoor	Liquid Pipe	9.52 mm (3/8")
	Gas Pipe	15.9 mm (5/8")
Outdoor	Liquid Pipe	9.52 mm (3/8")
	Gas Pipe	15.9 mm (5/8")
CONNECTION TYPE	Flare Nut	

ELECTRIC CONTROLS

DEFROST METHOD	Reverse Cycle
WALL CONTROLLER CABLE (INCLUDED FOR WIRED CONTROLLER OPTION)	4 Core (0.75mm ²) Shielded Data Cable

OPERATING RANGE

It is essential that the unit is correctly sized for the application and operates within its recommended range of operating conditions as shown below.

MODE	RANGE	INDOOR OPERATING TEMPERATURE	OUTDOOR AIR INTAKE TEMPERATURE
COOLING	Max.	32°C DB	60°C DB
	Min.	17°C DB	-15°C DB
HEATING	Max.	30°C DB	30°C DB
	Min.	0°C DB	-25°C DB

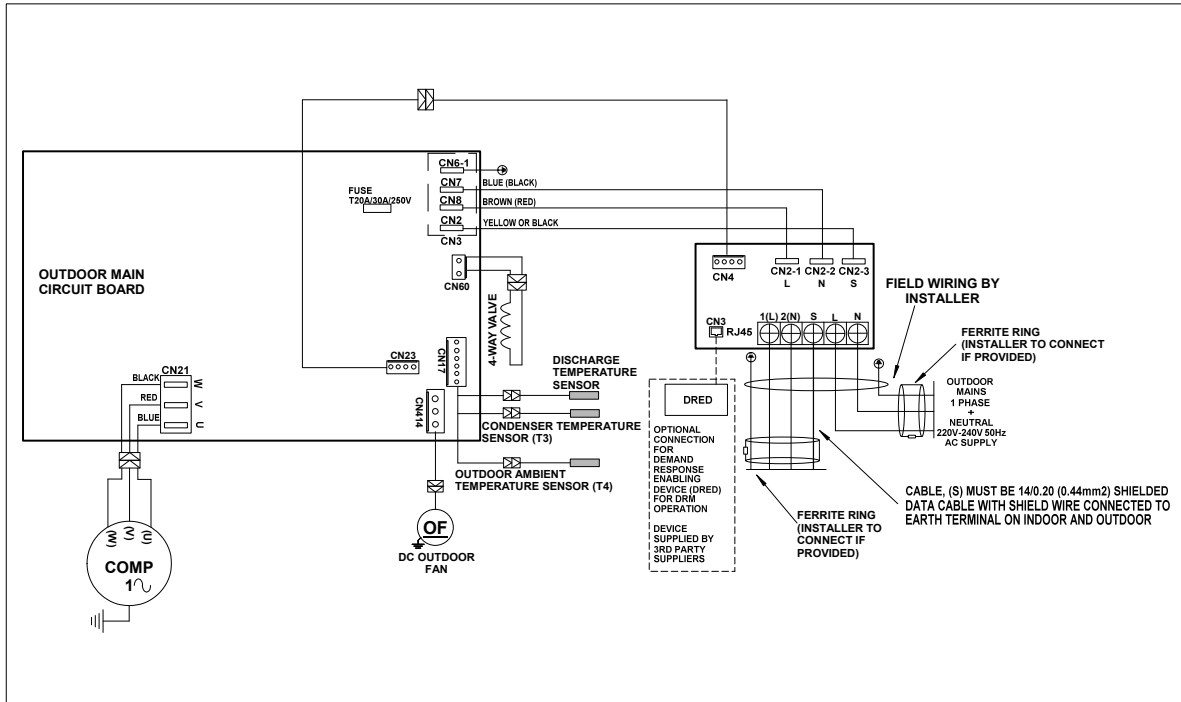
1 Phase
1 Stage

8.50 kW

WIRING DIAGRAM

WRC-085CS / WRE-085CS

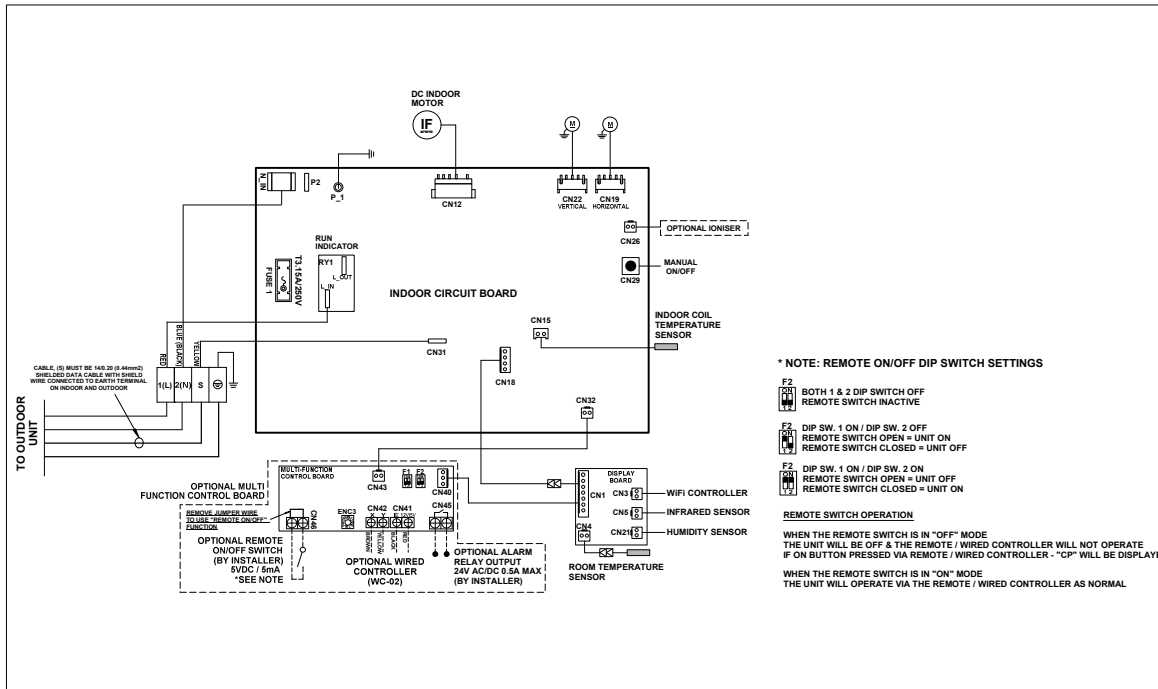
WRC-085CS (OUTDOOR)



8.50 kW
1 Phase 1 Stage

				ActronAir		Base Model No: WRC-050/072/085CS	Variation Code:	Variation: STANDARD
						Description: OUTDOOR WIRING DIAGRAM - SERENE 2		
Rev.	Description	PCR	By	Date	This drawing remains the intellectual property of Actron Engineering Pty Ltd. Reproduction, modification and/or distribution are prohibited without written consent.	Drawn: RL	Date: 05-08-2020	Drawing No: WD3019
A	ORIGINAL					Approved: JL	Date: 24-08-2020	Revision: A
								Size: A4

WRE-085CS (INDOOR)



				ActronAir		Base Model No: WRE-026/035/050/072/085CS	Variation Code:	Variation: STANDARD
						Description: INDOOR WIRING DIAGRAM - SERENE 2		
Rev.	Description	PCR	By	Date	This drawing remains the intellectual property of Actron Engineering Pty Ltd. Reproduction, modification and/or distribution are prohibited without written consent.	Drawn: RL	Date: 28-07-2020	Drawing No: WD3017
A	ORIGINAL					Approved: JL	Date: 30-10-2020	Revision: B
								Size: A4

