Daikin Altherma low temperature split Technical Data ERLA11-14DV3 / ERLA-DV37

EEDEN23

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ERLA11-14DV3 / ERLA-DV37

1 Features

1 - 1 ERLA11-14DV3

› Outdoor unit extracts heat from the outdoor air, even at -25°C
› Combining with R-32 Bluevolution technology, reduces environmental impact with 68% compared to R-410A, leads directly to lower energy consumption thanks to its high energy efficiency and has up to lower 16% refrigerant charge
› W-LAN Adapter and cartridge connection (optional)
› Black grille hiding the fan from view

Guaranteed operation down to -25°C

Onecta app (optional)

Voice control

2 Specifications

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Technical specifications				EBVH16SU23D6V + ERLA11DV3	EBVH16SU23D6V + ERLA14DV3
Heating capacity	Nom.		kW	10.6 (1) / 9.82 (2)	12.0 (1) / 12.5 (2)
Power input	Heating	Nom.	kW	2.18 (1) / 2.68 (2)	2.46 (1) / 3.42 (2)
	Domestic hot water from 10°C to 50°C	Nom.	kWh	3.41	
Heat up time from 10°C to 50°C			hr	1h07min at 7°C ambient temperature	
COP				4.83 (1) / 3.66 (2)	4.87 (1) / 3.64 (2)
Water side Heat exchanger	Water flow rate	Heating Nom.	l/min	46.1 (3) / 46.1 (4)	
General	Supplier/ Manufacturer details	Name and address		Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium	
		Name or trademark		Daikin Europe N.V.	
	Product description	Air-to-water heat pump		Yes	
		Brine-to-water heat pump		No	
		Heat pump combination heater		Yes	
		Low-temperature heat pump		No	
		Supplementary heater integrated		Yes	
		Water-to-water heat pump		No	
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	44.0 (5)	
LW(A) Sound power level (according to EN14825)	Outdoor		dB(A)	62.0	
Sound condition Ecodesign and energy label				Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825	
Space heating general	Air to water unit	Rated airflow (outdoor)	m^3/h	3,350	4,220
	Other	Capacity control		Inverter	
		Pck (Crankcase heater mode)	kW	0.000	
		Poff (Off mode)	kW	0.023	
		Psb (Standby mode)	kW	0.023	
		Pto (Thermostat off)	kW	0.023	
Domestic hot water heating	General	Declared load profile		XL	
		Function to fix water heating during off peak hours		No	
Space heating general	Integrated supplementary heater	Psup	kW	6.0	
		Type of energy input		Electrical	
Domestic hot water heating	Average climate	AEC (Annual electricity consumption)	kWh	1,542	
		COPdhw		2.63	
		Heat up time		1h 11min	
		Mixed water at 40°C	l	295.0	
		ηwh (water heating efficiency)	%	109	
		Qelec (Daily electricity consumption)	kWh	7.260	
		Reference hot water temperature	°C	51.5	
		Stand-by power input	W	43.2	
		Water heating energy efficiency class		A	
Domestic hot water heating	Cold climate	AEC (Annual electricity consumption)	kWh	1,963	
		COPdhw		2.08	
		ηwh (water heating efficiency)	%	85	
		Qelec (Daily electricity consumption)	kWh	9.180	
		Stand-by power input	W	43.1	
	Warm climate	AEC (Annual electricity consumption)	kWh	1,349	
		COPdhw		3.00	
		Heat up time		1h 10min	
		Mixed water at 40°C	l	295.0	
		ηwh (water heating efficiency)	%	124	
		Qelec (Daily electricity consumption)	kWh	6.350	
		Reference hot water temperature	°C	51.5	
		Stand-by power input	W	37.6	

2 Specifications

2 - 1 Specifications

Technical specifications					EBVH16SU23D6V + ERLA11DV3	EBVH16SU23D6V + ERLA14DV3
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	6,405	7,047
			ηs (Seasonal space heating efficiency)	%	131	126
			Prated at -10°C	kW	10	11
			Qhe Annual energy consumption (GCV)	Gj	23	25
			SCOP		3.23	3.22
			Seasonal space heating eff. class		A++	
		A Condition (-7°CD-B/-8°CWB)	Cdh (Degradation heating)		1.0	
			COPd		1.89	1.80
			Pdh	kW	7.9	8.5
			PERd	%	75.6	72.0
		B Condition (2°CD-B/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		3.25	3.28
			Pdh	kW	5.4	6.2
			PERd	%	130.0	131.2
		C Condition (7°CD-B/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.79	4.88
			Pdh	kW	4.4	
			PERd	%	191.6	195.2
		D Condition (12°CD-B/11°CWB)	Cdh (Degradation heating)		1.0	
			COPd		6.38	6.58
			Pdh	kW	5.3	
			PERd	%	255.2	263.2
		Tol (temperature operating limit)	COPd		1.68	1.76
			Pdh	kW	6.9	7.0

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Technical specifications					EBVH16SU23D6V + ERLA11DV3	EBVH16SU23D6V + ERLA14DV3
Space heating	Average climate water outlet 55°C	Tol (temperature operating limit)	PERd	%	67.2	70.4
			TOL	°C	-10	
			WTOL	°C	55	
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	3.2	4.0
		Tbiv (bivalent temperature)	COPd		1.96	1.87
			Pdh	kW	8.2	8.9
			PERd	%	78.4	74.8
			Tbiv	°C	-5	
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	8,440	9,024
			ηs (Seasonal space heating efficiency)	%	114	117
			Prated at -22°C	kW	10	11
			Qhe Annual energy consumption (GCV)	Gj	30	32
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	3,262	3,818
			ηs (Seasonal space heating efficiency)	%	161	166
			Prated at 2°C	kW	10.0	12.1
			Qhe Annual energy consumption (GCV)	Gj	12	14
		B Condition (2°CD-B/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		2.23	2.20
			Pdh	kW	9.0	10.1
			PERd	%	89.2	88.0
		C Condition (7°CD-B/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		3.74	3.83
			Pdh	kW	6.2	7.6
			PERd	%	149.6	153.2
		D Condition (12°CD-B/11°CWB)	Cdh (Degradation heating)		1.0	
			COPd		5.67	5.69
			Pdh	kW	5.0	
			PERd	%	226.8	227.6
		Tbiv (bivalent temperature)	COPd		2.40	2.65
			Pdh	kW	8.5	11.1
			PERd	%	96.0	106.0
			Tbiv	°C	4	
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	4,479	4,935
			ηs (Seasonal space heating efficiency)	%	182	181
			Prated at -10°C	kW	10	11
			Qhe Annual energy consumption (GCV)	Gj	16	18
			SCOP		4.61	4.60

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Technical specifications					EBVH16SU23D6V + ERLA11DV3	EBVH16SU23D6V + ERLA14DV3
Space heating	Average climate water outlet 35°C	General	Seasonal space heating eff. class		A+++	
		A Condition (-7°CD-B/-8°CWB)	COPd		3.03	2.99
			Pdh	kW	9.2	9.8
			PERd	%	121.2	119.6
		B Condition (2°CD-B/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.35	
			Pdh	kW	5.5	6.1
			PERd	%	174.0	
		C Condition (7°CD-B/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		6.69	6.70
			Pdh	kW	4.6	
			PERd	%	267.6	268.0
		D Condition (12°CD-B/11°CWB)	Cdh (Degradation heating)		1.0	
			COPd		8.47	8.65
			Pdh	kW	5.4	
			PERd	%	338.8	346.0
		Tol (temperature operating limit)	COPd		2.72	2.71
			Pdh	kW	8.4	9.1
			PERd	%	108.8	108.4
			TOL	°C	-10	
			WTOL	°C	35	
		Tbiv (bivalent temperature)	COPd		3.01	2.99
			Pdh	kW	9.2	9.8
			PERd	%	120.4	119.6
			Tbiv	°C	-8	-7
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.6	1.9
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,964	6,439
			ηs (Seasonal space heating efficiency)	%	162	165
			Prated at -22°C	kW	12	11
			Qhe Annual energy consumption (GCV)	Gj	21	23
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	2,228	2,431
			ηs (Seasonal space heating efficiency)	%	237	239
			Prated at 2°C	kW	10	11
			Qhe Annual energy consumption (GCV)	Gj	8	9
		B Condition (2°CD-B/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		3.80	3.51
			Pdh	kW	9.2	11.0
Space heating	Warm climate water outlet 35°C	B Condition (2°CD-B/1°CWB)	PERd	%	152.0	140.4
		C Condition (7°CD-B/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		5.70	5.77
			Pdh	kW	6.7	7.4
			PERd	%	228.0	230.8
		Tbiv (bivalent temperature)	COPd		3.80	3.51
			Pdh	kW	9.2	11.0
			PERd	%	152.0	140.4
			Tbiv	°C	3	2
		D Condition (12°CD-B/11°CWB)	Cdh (Degradation heating)		1.0	
			COPd		7.87	7.73
			Pdh	kW	5.2	
			PERd	%	314.8	309.2

(1)Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(2)Condition: Ta DB/WB 7°C/6°C - LWC 45°C (Dt=5°C) |
(3)Condition 1: cooling Ta 35°C - LWE 18°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(4)Condition 2: cooling Ta 35°C - LWE 7°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 45°C (DT = 5°C) |
(5)Measured with a pressure drop of 10 kPa in the heating system at an operating condition of leaving water 47-55°C in a room with an ambient of 20°C. DB/WB 7°C/6°. |
Cooling: EW 12°C; LW 7°C; ambient conditions: 35°CDB |
Cooling: EW 23°C; LW 18°C; ambient conditions: 35°CDB |
According to EN14825

Technical specifications			EBVH16SU23D6V + ERLA16DV37
Heating capacity	Nom.	kW	16.0 (1) / 16.0 (2)

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Technical specifications				EBVH16SU23D6V + ERLA16DV37
Power input	Heating	Nom.	kW	3.53 (1) / 4.56 (2)
	Domestic hot water from 10°C to 50°C	Nom.	kWh	3.41
Heat up time from 10°C to 50°C			hr	1h07min at 7°C ambient temperature
COP				4.53 (1) / 3.51 (2)
General	Supplier/ Manufacturer details	Name and address		Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium
		Name or trademark		Daikin Europe N.V.
	Product description	Air-to-water heat pump		Yes
		Brine-to-water heat pump		No
		Heat pump combination heater		Yes
		Low-temperature heat pump		No
		Supplementary heater integrated		Yes
		Water-to-water heat pump		No
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	44.0 (3)
LW(A) Sound power level (according to EN14825)	Outdoor		dB(A)	62.0
Sound condition Ecodesign and energy label				Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825
Space heating general	Air to water unit	Rated airflow (outdoor)	m^3/h	5,100
	Other	Capacity control		Inverter
		Pck (Crankcase heater mode)	kW	0.000
		Poff (Off mode)	kW	0.023
		Psb (Standby mode)	kW	0.023
		Pto (Thermostat off)	kW	0.023
Domestic hot water heating	General	Declared load profile		XL
		Function to fix water heating during off peak hours		No
Space heating general	Integrated supplementary heater	Psup	kW	6.0
		Type of energy input		Electrical
Domestic hot water heating	Average climate	AEC (Annual electricity consumption)	kWh	1,542
		COPdhw		2.63
		Heat up time		1h 11min
		Mixed water at 40°C	l	295.0
		ηwh (water heating efficiency)	%	109
		Qelec (Daily electricity consumption)	kWh	7.260
		Reference hot water temperature	°C	51.5
		Stand-by power input	W	43.2
		Water heating energy efficiency class		A
	Cold climate	AEC (Annual electricity consumption)	kWh	1,963
Domestic hot water heating	Cold climate	COPdhw		2.08
		ηwh (water heating efficiency)	%	85
		Qelec (Daily electricity consumption)	kWh	9.180
		Stand-by power input	W	43.1
	Warm climate	AEC (Annual electricity consumption)	kWh	1,349
		COPdhw		3.00
		Heat up time		1h 10min
		Mixed water at 40°C	l	295.0
		ηwh (water heating efficiency)	%	124
		Qelec (Daily electricity consumption)	kWh	6.350
		Reference hot water temperature	°C	51.5
		Stand-by power input	W	37.6

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Technical specifications					EBVH16SU23D6V + ERLA16DV37
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	7,477
			ηs (Seasonal space heating efficiency)	%	130
			Prated at -10°C	kW	12
			Qhe Annual energy consumption (GCV)	Gj	27
			SCOP		3.32
			Seasonal space heating eff. class		A++
		A Condition (-7°CD-B/-8°CWB)	Cdh (Degradation heating)		1.0
			COPd		1.95
			Pdh	kW	9.4
			PERd	%	78.0
		B Condition (2°CD-B/1°CWB)	Cdh (Degradation heating)		1.0
			COPd		3.27
			Pdh	kW	6.9
			PERd	%	130.8
		C Condition (7°CD-B/6°CWB)	Cdh (Degradation heating)		1.0
			COPd		4.93
			Pdh	kW	4.4
			PERd	%	197.2
		D Condition (12°CD-B/11°CWB)	Cdh (Degradation heating)		1.0
			COPd		6.60
			Pdh	kW	5.3
			PERd	%	264.0
		Tol (temperature operating limit)	COPd		1.50
			Pdh	kW	6.0
			PERd	%	60.0

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Technical specifications					EBVH16SU23D6V + ERLA16DV37
Space heating	Average climate water outlet 55°C	Tol (temperature operating limit)	TOL	°C	-10
			WTOL	°C	55
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	6.1
		Tbiv (bivalent temperature)	COPd		2.13
			Pdh	kW	10.1
			PERd	%	85.2
			Tbiv	°C	-5
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	9,650
			ηs (Seasonal space heating efficiency)	%	120
			Prated at -22°C	kW	12
			Qhe Annual energy consumption (GCV)	Gj	35
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	4,576
			ηs (Seasonal space heating efficiency)	%	162
			Prated at 2°C	kW	14.1
			Qhe Annual energy consumption (GCV)	Gj	16
		B Condition (2°CD-B/1°CWB)	Cdh (Degradation heating)		1.0
			COPd		2.17
			Pdh	kW	9.8
			PERd	%	86.8
		C Condition (7°CD-B/6°CWB)	Cdh (Degradation heating)		1.0
			COPd		3.70
			Pdh	kW	9.1
			PERd	%	148.0
		D Condition (12°CD-B/11°CWB)	Cdh (Degradation heating)		1.0
			COPd		5.69
			Pdh	kW	5.0
			PERd	%	227.6
		Tbiv (bivalent temperature)	COPd		2.91
			Pdh	kW	11.1
			PERd	%	116.4
			Tbiv	°C	5
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	5,377
			ηs (Seasonal space heating efficiency)	%	181
			Prated at -10°C	kW	12
			Qhe Annual energy consumption (GCV)	Gj	19
			SCOP		4.61
			Seasonal space heating eff. class		A+++

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Technical specifications					EBVH16SU23D6V + ERLA16DV37
Space heating	Average climate water outlet 35°C	A Condition (-7°CD-B/-8°CWB)	COPd		2.87
			Pdh	kW	11.2
			PERd	%	114.8
		B Condition (2°CD-B/1°CWB)	Cdh (Degradation heating)		1.0
			COPd		4.33
			Pdh	kW	6.7
			PERd	%	173.2
		C Condition (7°CD-B/6°CWB)	Cdh (Degradation heating)		1.0
			COPd		6.83
			Pdh	kW	4.7
			PERd	%	273.2
		D Condition (12°CD-B/11°CWB)	Cdh (Degradation heating)		1.0
			COPd		8.82
			Pdh	kW	5.5
			PERd	%	352.8
		Tol (temperature operating limit)	COPd		2.52
			Pdh	kW	10.6
			PERd	%	100.8
			TOL	°C	-10
			WTOL	°C	35
		Tbiv (bivalent temperature)	COPd		2.72
			Pdh	kW	11.4
			PERd	%	108.8
			Tbiv	°C	-8
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	7,257
			ηs (Seasonal space heating efficiency)	%	160
			Prated at -22°C	kW	12
			Qhe Annual energy consumption (GCV)	Gj	26
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	2,675
			ηs (Seasonal space heating efficiency)	%	237
			Prated at 2°C	kW	12
			Qhe Annual energy consumption (GCV)	Gj	10
		B Condition (2°CD-B/1°CWB)	Cdh (Degradation heating)		1.0
			COPd		3.30
			Pdh	kW	11.9
			PERd	%	132.0
Space heating	Warm climate water outlet 35°C	C Condition (7°CD-B/6°CWB)	Cdh (Degradation heating)		1.0
			COPd		5.64
			Pdh	kW	8.1
			PERd	%	225.6
		Tbiv (bivalent temperature)	COPd		3.30
			Pdh	kW	11.9
			PERd	%	132.0
			Tbiv	°C	2
		D Condition (12°CD-B/11°CWB)	Cdh (Degradation heating)		1.0
			COPd		7.73
			Pdh	kW	5.2
			PERd	%	309.2

(1)Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(2)Condition: Ta DB/WB 7°C/6°C - LWC 45°C (Dt=5°C) |
(3)Measured with a pressure drop of 10 kPa in the heating system at an operating condition of leaving water 47-55°C in a room with an ambient of 20°C. DB/WB 7°C/6°. |
Cooling: EW 12°C; LW 7°C; ambient conditions: 35°CDB |
Cooling: EW 23°C; LW 18°C; ambient conditions: 35°CDB |
According to EN14825 |
Condition 1: cooling Ta 35°C - LWE 18°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
Condition 2: cooling Ta 35°C - LWE 7°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 45°C (DT = 5°C)

Technical Specifications		ERLA11DV3	ERLA14DV3
Casing	Colour	Ivory white	
	Material	Polyester painted galvanised steel plate	

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Technical Specifications					ERLA11DV3	ERLA14DV3
Dimensions	Unit	Height		mm	870	
		Width		mm	1,100	
		Depth		mm	460	
	Packed unit	Height		mm	1,118	
		Width		mm	1,207	
		Depth		mm	682	
Weight	Unit			kg	101	
	Packed unit			kg	120	
Packing	Material				Carton + Wood + EPS	
	Weight			kg	18	
Heat exchanger	Length			mm	1,195	
	Rows	Quantity			3	
	Fin pitch			mm	1.40	
	Passes	Quantity			14	
	Face area			m^2	0.950 /0.970 /1.00	
	Stages	Quantity			38	
	Empty tubeplate hole	Quantity			0	
	Tube type				ø7 Hi-XSL	
	Fin	Type			WF fin	
		Treatment			Anti-corrosion treatment (PE)	
Fan	Type				Propeller fan	
	Quantity				1	
	Air flow rate	Heating	High	m^3/min	55.8	70.4
		Cooling	High	m^3/min	70.4	85.0
	Discharge direction				Horizontal	
Fan motor	Quantity				1	
	Model				Brushless DC motor	
	Output			W	183	
	Drive				Direct drive	
	Speed	Steps			8	
		Heating	Nom.	rpm	450	550
		Cooling	Nom.	rpm	650	
Compressor	Quantity				1	
	Model				2Y350BPAX1P#C	
Compressor	Type				Hermetically sealed swing inverter compressor	
	Starting method				Inverter driven	
PED	Category				Category II	
Operation range	Heating	Min.		°CDB	-25.0	
		Max.		°CDB	25 (1) / 35 (1)	
	Cooling	Min.		°CDB	10	
		Max.		°CDB	43	
	Domestic hot water	Max.		°CDB	25 (1) / 35 (1)	
		Min.		°CDB	-25	
PED	Most critical part	Name			Accumulator	
		Ps*V		Bar*l	159	
Sound power level	Heating	Nom.		dBA	62.0 (2)	
Sound pressure level	Heating	Nom.		dBA	48.0 (2)	
Refrigerant	Type				R-32	
	GWP				675.0	
	Charge			kg	3.80	
	Control				Electronic expansion valve	
	Circuits	Quantity			1	
Refrigerant oil	Type				FW68DA	
	Charged volume			l	1.4	

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Technical Specifications					ERLA11DV3	ERLA14DV3
Piping connections	Liquid	Quantity			1	
		Type			Flare connection	
		OD		mm	9.50	
	Gas	Quantity			1	
		Type			Flare connection	
		OD		mm	15.9	
	Drain	Quantity			8	
		Type			Hole	
		OD		mm	26	
	Piping length	OU - IU	Min.	m	3	
			Max.	m	50	
		System	Chargeless	m	10	
	High pressure side	Design pressure		bar	42	
	Additional refrigerant charge			kg/m	0.05 (for piping length exceeding 10m)	
	Level difference	IU - OU	Max.	m	30.0	
	Heat insulation				Both liquid and gas pipes	
Defrost method					Reversed cycle	
Defrost control					Sensor for outdoor heat exchanger temperature	
Capacity control	Method				Variable (inverter)	
Safety devices	Item	01			High pressure switch	
		02			Low pressure switch	
		03			Fan driver overload protector	
		04			Fuse	
		05			Compressor motor thermal protector	

Electrical Specifications				ERLA11DV3	ERLA14DV3
Power supply	Name			V3	
	Phase			1~	
	Frequency		Hz	50	
	Voltage		V	230	
	Voltage range	Min.	%	-10	
		Max.	%	10	
Current	Maximum running current	Heating	A	30.8	
		Cooling	A	30.8	
	Recommended fuses		A	32	
	Inverter modulation	Min.	%	39	37
Wiring connections	For power supply	Quantity		3	
		Remark		Select diameter and type according to national and local regulations	
	For connection with indoor	Quantity		4	
		Remark		1,5mm²	
IP class	IP			IPX4	

(1)For more details, see operation range drawing |
(2)Measured with a pressure drop of 10 kPa in the heating system at an operating condition of leaving water 47-55°C in a room with an ambient of 20°C. DB/WB 7°C/6°.

Technical Specifications				ERLA16DV37
Casing	Colour			Ivory white
	Material			Polyester painted galvanised steel plate
Dimensions	Unit	Height	mm	870
		Width	mm	1,100
		Depth	mm	460
	Packed unit	Height	mm	1,118
		Width	mm	1,207
		Depth	mm	682
Weight	Unit		kg	101
	Packed unit		kg	120
Packing	Material			Carton + Wood + EPS
	Weight		kg	18

2 Specifications

2 - 1 Specifications

Technical Specifications					ERLA16DV37
Heat exchanger	Length			mm	1,195
	Rows	Quantity			3
	Fin pitch			mm	1.40
	Passes	Quantity			14
	Face area			m^2	0.950 /0.970 /1.00
	Stages	Quantity			38
	Empty tubeplate hole	Quantity			0
	Tube type				ø7 Hi-XSL
	Fin	Type			WF fin
		Treatment			Anti-corrosion treatment (PE)
Fan	Type				Propeller fan
	Quantity				1
	Air flow rate	Heating	High	m^3/min	85.0
		Cooling	High	m^3/min	85.0
	Discharge direction				Horizontal
Fan motor	Quantity				1
	Model				Brushless DC motor
	Output			W	183
	Drive				Direct drive
	Speed	Steps			8
		Heating	Nom.	rpm	650
		Cooling	Nom.	rpm	650
Compressor	Quantity				1
	Model				2Y350BPAX1P#C
Compressor	Type				Hermetically sealed swing inverter compressor
	Starting method				Inverter driven
PED	Category				Category II
Operation range	Heating	Min.		°CDB	-25.0
		Max.		°CDB	25 (1) / 35 (1)
	Cooling	Min.		°CDB	10
		Max.		°CDB	43
	Domestic hot water	Max.		°CDB	25 (1) / 35 (1)
		Min.		°CDB	-25
PED	Most critical part	Name			Accumulator
		Ps*V		Bar*l	159
Sound power level	Heating	Nom.		dBA	62.0 (2)
Sound pressure level	Heating	Nom.		dBA	48.0 (2)
Refrigerant	Type				R-32
	GWP				675.0
	Charge			kg	3.80
	Control				Electronic expansion valve
	Circuits	Quantity			1
Refrigerant oil	Type				FW68DA
	Charged volume			l	1.4
Piping connections	Liquid	Quantity			1
		Type			Flare connection
		OD		mm	9.50
	Gas	Quantity			1
		Type			Flare connection
		OD		mm	15.9
	Drain	Quantity			8
		Type			Hole
		OD		mm	26
	Piping length	OU - IU	Min.	m	3
			Max.	m	50
		System	Chargeless	m	10
	High pressure side	Design pressure		bar	42
	Additional refrigerant charge			kg/m	0.05 (for piping length exceeding 10m)
	Level difference	IU - OU	Max.	m	30.0
	Heat insulation				Both liquid and gas pipes
Defrost method					Reversed cycle
Defrost control					Sensor for outdoor heat exchanger temperature
Capacity control	Method				Variable (inverter)
Safety devices	Item	01			High pressure switch
		02			Low pressure switch
		03			Fan driver overload protector
		04			Fuse
		05			Compressor motor thermal protector

2 Specifications

2 - 1 Specifications

Electrical Specifications				ERLA16DV37
Power supply	Name			V3
	Phase			1~
	Frequency		Hz	50
	Voltage		V	230
	Voltage range	Min.	%	-10
		Max.	%	10
Current	Maximum running current	Heating	A	30.8
		Cooling	A	30.8
	Recommended fuses		A	32
	Inverter modulation	Min.	%	34
Wiring connections	For power supply	Quantity		3
		Remark		Select diameter and type according to national and local regulations
	For connection with indoor	Quantity		4
		Remark		1,5mm²
IP class	IP			IPX4

(1)For more details, see operation range drawing |
(2)Measured with a pressure drop of 10 kPa in the heating system at an operating condition of leaving water 47-55°C in a room with an ambient of 20°C. DB/WB 7°C/6°.

3 Combination table

3 - 1 Combination Table

ERLA11-14DV3
ERLA11-14DW1
ERLA-DV37
ERLA-DW17

Combination table

Description		ERLA11D(A/2)V3	ERLA14D(A/2)V3	ERLA16D(A/2)V37	ERLA11D(A/2)W1	ERLA14D(A/2)W1	ERLA16D(A/2)W17
EBBH11DF*	Heating only indoor unit	o	---	---	o	---	---
EBBX11DF*	Reversible indoor unit	o	---	---	o	---	---
EBBH16DF*	Heating only indoor unit	---	o	o	---	o	o
EBBX16DF*	Reversible indoor unit	---	o	o	---	o	o

Description		ERLA11D(A/2)(V3/W1)	ERLA14D(A/2)(V3/W1)	ERLA16D(A/2)(V37)/(W17)
EBVH11S(18/23)DJ*	Heating only indoor unit	o	-	-
EBVX11S(18/23)DJ*	Reversible indoor unit	o	-	-
EBVH16S(18/23)DJ*	Heating only indoor unit	-	o	o
EBVX16S(18/23)DJ*	Reversible indoor unit	-	o	o
EBVZ16S(18/23)DJ*	(Integrated Bizone)	o	o	o
EBVH16SU(18/23)DJ6V	Heating only indoor unit for the UK	o	o	o
EBSH(-/B)11*	Heating only indoor unit	o	-	-
EBSX(-/B)11*	Reversible indoor unit	o	-	-
EBSH(-/B)16*	Heating only indoor unit	-	o	o
EBSX(-/B)16*	Reversible indoor unit	-	o	o

Remark

Other combinations than mentioned in this combina

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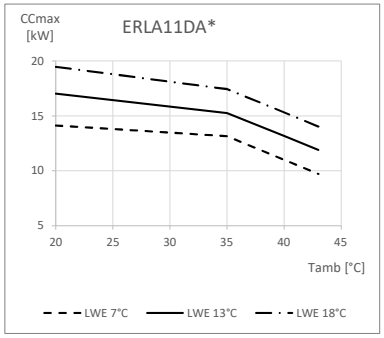
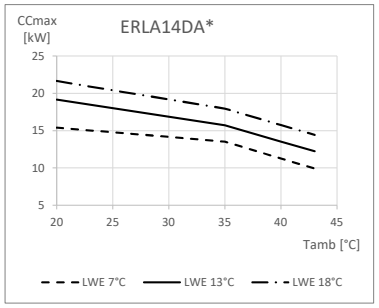
4 Capacity graphs

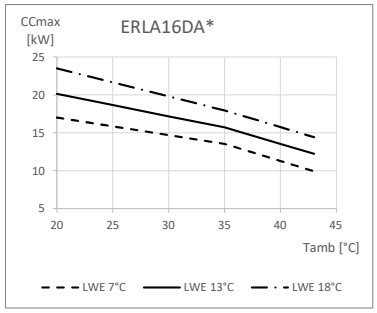
4 - 1 Cooling Capacity Graphs

ERLA11-14DV3 / ERLA11-14DW1 / ERLA-DV37 / ERLA-DW17

Maximum cooling capacity







Symbols

CC_{max} Cooling capacity at maximum operating frequency, measured according to EN 14511.

LWE Leaving water evaporator temperature [°C]
Tamb Ambient temperature [°C DB]

Conditions

Cooling capacity

Capacity according to standard EN 14511 and valid for chilled water range ΔT = 3~8°C.

Notes

The capacity and power input is valid for ·V3· models at ·230·V and for for ·W1· models at ·400·V.

The capacity and the power input are at maximum operation.

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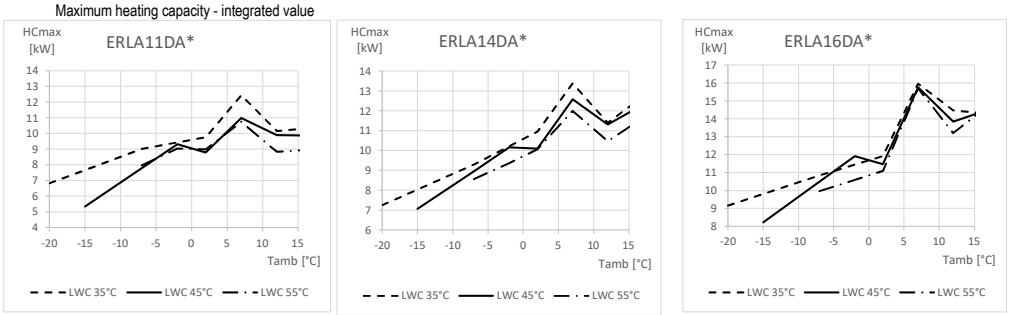
4 Capacity graphs

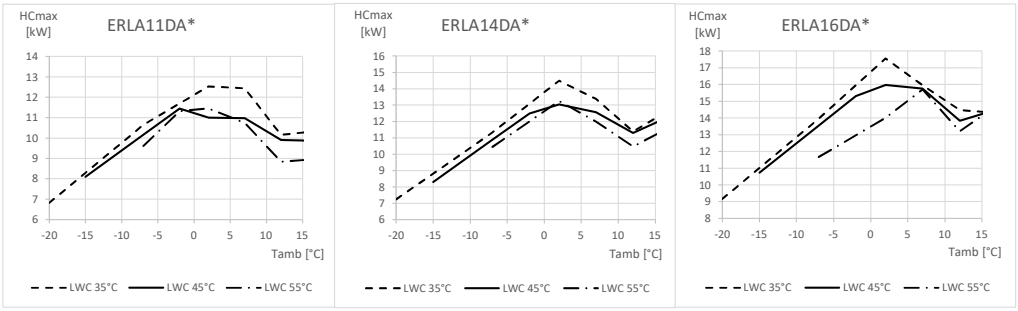
4 - 2 Heating Capacity Graphs

ERLA11-14DV3 / ERLA11-14DW1 / ERLA-DV37 / ERLA-DW17

Maximum heating capacity - integrated value



Maximum heating capacity - peak values



Symbols

HC_{max} Heating capacity for maximum load, measured according to EN 14511
LWC Leaving water condensor temperature [°C]
Tamb Ambient temperature [°C DB]

Conditions

Heating capacity

Capacity according to standard EN 14511 and valid for heated water range ΔT = 3~8°C.

Notes

The capacity and power input is valid for ·V3· models at ·230·V and for for ·W1· models at ·400·V.
The capacity and the power input are at maximum operation.

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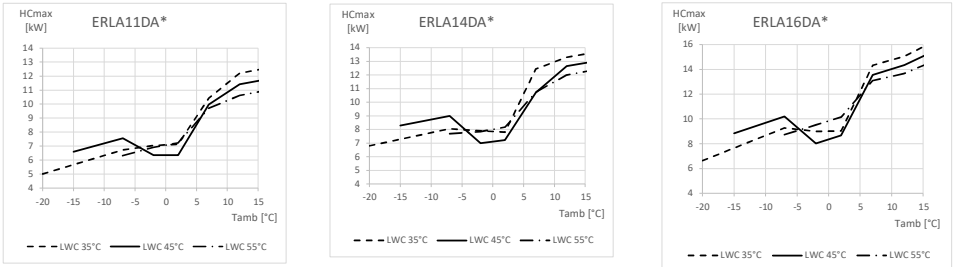
4 Capacity graphs

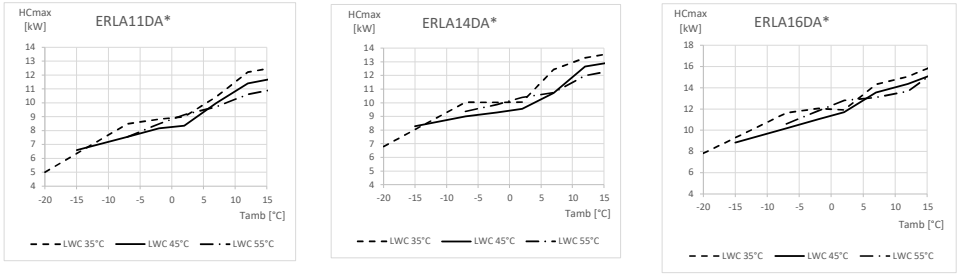
4 - 3 Heating Capacity Graphs - quiet mode

ERLA11-14DV3 / ERLA11-14DW1 / ERLA-DV37 / ERLA-DW17

Maximum heating capacity - integrated value



Maximum heating capacity - peak values



Symbols

HC_{max} Heating capacity for maximum load, measured according to EN 14511

LWC Leaving water condensor temperature [°C]

Tamb Ambient temperature [°C DB]

Conditions

Heating capacity

Capacity according to standard EN 14511 and valid for heated water range ΔT = 3~8°C.

Notes

The capacity and power input is valid for ·V3· models at ·230·V and for for ·W1· models at ·400·V.

The capacity and the power input are at maximum operation.

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5 Capacity tables

5 - 1 Certification Programs

ERLA11DAV3 /ERLA14DAV3 / ERLA16DAV37 / ERLA11DAW1 / ERLA14DAW1 / ERLA16DAW17

Rated data for certification programmes - heating mode

Tamb	EWC	LWC	ERLA11DAV3 HC	ERLA11DAV3 COP	ERLA14DAV3 HC	ERLA14DAV3 COP	ERLA16DAV3(7) HC	ERLA16DAV3(7) COP	ERLA11DAW1 HC	ERLA11DAW1 COP	ERLA14DAW1 HC	ERLA14DAW1 COP	ERLA16DAW1(7) HC	ERLA16DAW1(7) COP	Used for:
[°C]	[°C]	[°C]	[kW]	[-]	[kW]	[-]	[kW]	[-]	[kW]	[-]	[kW]	[-]	[kW]	[-]	
10/9	30	35	9,20	5,32	9,20	5,32	9,20	5,32	9,20	5,32	9,20	5,32	9,20	5,32	BAFA
7/6	30	35	10,56	4,83	12,00	4,87	16,00	4,53	10,56	4,83	12,00	4,87	16,00	4,53	Keymark, EHPA, BAFA, GET
2/1	(30)	35	9,00	3,65	10,80	3,50	12,00	3,30	9,00	3,65	10,80	3,50	12,00	3,30	EHPA, GET
2/1	(30)	35	6,29	4,01	6,29	4,01	6,29	4,01	6,29	4,01	6,29	4,01	6,29	4,01	BAFA
-7/-8	(30)	35	8,75	2,92	9,30	2,86	10,60	2,70	8,75	2,92	10,50	3,00	12,30	2,87	EHPA, BAFA, GET
7/6	40	45	9,82	3,66	12,45	3,64	16,00	3,51	9,82	3,66	12,45	3,64	16,00	3,51	EHPA
-2/-3	(40)	45	9,32	2,57	10,15	2,58	11,91	2,42	9,32	2,57	10,15	2,58	11,91	2,42	MCS
-7/-8	(40)	45	8,72	2,35	8,98	2,29	10,49	2,10	8,72	2,35	8,98	2,29	10,49	2,10	EHPA
7/6	47	55	10,64	2,94	11,87	2,89	15,63	2,75	10,64	2,94	11,87	2,89	15,63	2,75	Keymark, EHPA, GET
-7/-8	47	55	7,89	1,82	8,47	1,82	8,87	1,78	7,89	1,82	8,47	1,82	8,87	1,78	GET, EHPA

Rated data for certification programmes - cooling mode

Nominal cooling capacity

Tamb	EWE	LWE	ERLA11DA(V3/W1) CC	ERLA11DA(V3/W1) EER	ERLA14DA(V3/W1) CC	ERLA14DA(V3/W1) EER	ERLA16DA(V3/W1)(7) CC	ERLA16DA(V3/W1)(7) EER	Used for:	
[°C]	[°C]	[°C]	[kW]	[-]	[kW]	[-]	[kW]	[-]		
35	23	18	11,85	4,7	13,18	4,61	15,72	4,11	General	DACI
35	12	7	11,18	3,22	12,92	2,98	13,63	2,91	Keymark	DAPT

Seasonal data - cooling — LWE 7°C — Low temperature Application

		ERLA11DA(V3/W1)	ERLA14DA(V3/W1)	ERLA16DA(V3/W1)(7)
Pdes	[kW]	11	12,9	13,600
SEER	[-]	5,92	5,86	5,76
$\eta_{s,c}$	[-]	234	231	227
Q_{CE}	[kWh/annum]	1116	1322	1417

Symbols

HC	Heating capacity measured according to EN 14511
CC	Cooling capacity, measured according to ·EN 14511·.
COP/EER	Coefficient of Performance/Energy efficiency ratio according to EN 14511.
EWC	Entering water condenser temperature [°C]
LWC	Leaving water condensor temperature [°C]
EWE	Entering water evaporator temperature [°C]
LWE	Leaving water evaporator temperature [°C]
Tamb	Ambient temperature [°C DB/WB]
Pdes	Nominal capacity value at design temperature [kW]
SEER	Seasonal energy efficiency ratio according to ·EN14825·
$\eta_{s,c}$	Seasonal space cooling energy efficiency according to ·EN14825·
Q_{CE}	Annual energy consumption for cooling according to ·EN14825·

Rated data for certification programmes - standby power consumption

		ERLA(11/14/16)DA(V3/W1)(7)	Used for:
Standby power input	[W]	23	Taux

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ERLA11DAV3 /ERLA14DAV3 / ERLA16DAV37 / ERLA11DAW1 / ERLA14DAW1 / ERLA16DAW17

Rated data for certification programmes - heating mode

Measured according to ·UNI/TS 11300·

Condition	Tamb	LWC	PLR	ERLA11DA(V3/W1) HC	ERLA11DA(V3/W1) COP	ERLA14DA(V3/W1) HC	ERLA14DA(V3/W1) COP	ERLA16DA(V3/W1)(7) HC	ERLA16DA(V3/W1)(7) COP
	[°C]	[°C]	[%]	[kW]		[kW]		[kW]	
A	-7/-8	34	100	6,87	3,01	8,20	2,92	9,44	2,98
B	2/1	30	100	7,01	3,83	7,75	3,78	9,11	3,80
C	7/6	27	100	8,13	5,10	10,44	5,19	13,79	5,18
D	12/11	24	100	11,15	9,33	12,71	9,35	15,46	8,63
A	-7/-8	52	100	6,68	2,00	8,08	1,98	9,17	1,94
B	2/1	42	100	6,58	2,79	7,39	2,79	8,78	2,81
C	7/6	36	100	10,38	4,69	12,27	4,71	14,24	4,41
D	12/11	30	100	12,44	6,04	13,19	6,60	15,34	6,04

Rated data for certification programmes - cooling mode

Measured according to ·UNI/TS 11300·

Condition	Tamb	LWE	PLR	ERLA11DA(V3/W1) CC	ERLA11DA(V3/W1) COP	ERLA14DA(V3/W1) CC	ERLA14DA(V3/W1) EER	ERLA16DA(V3/W1)(7) CC	ERLA16DA(V3/W1)(7) EER
	[°C]	[°C]	[%]	[kW]		[kW]		[kW]	
A	35	18	100	17,44	3,68	17,95	3,91	17,95	3,91
B	30	18	75	14,55	5,49	15,96	4,98	16,84	4,80
C	25	18	50	10,64	8,87	11,72	8,55	11,72	8,55
D	20	18	25	7,69	12,65	7,69	12,65	7,69	12,65
A	35	7	100	13,15	2,67	13,53	2,84	13,53	2,84
B	30	7	75	10,31	3,85	11,75	3,73	12,10	3,65
C	25	7	50	7,41	5,79	8,10	5,59	8,10	5,59
D	20	7	25	5,30	7,25	5,30	7,25	5,30	7,25

Rated data for certification programmes - domestic hot water performance

Outdoor unit		ERLA(11/14/16)DAV3(7)			ERLA(11/14/16)DAW1(7)		
Domestic hot water tank		EBV(H/X/Z)(11/16)S18DJ(6V/9W)	EBV(H/X/Z)(11/16)S(U)23DJ(6V/9W)		EBV(H/X/Z)(11/16)S18DJ(6V/9W)	EBV(H/X/Z)(11/16)S(U)23DJ(6V/9W)	
Tapping pattern		L	L	XL	L	L	XL
Application		Average climate (design temperature: -7°C)					
COP_{DHW}	[]	2,73	2,80	2,63	2,77	2,84	2,64
η_{wh}	[%]	115,6%	119,3%	108,7%	116,4%	119,9%	109,0%
AEC	[kWh]	886	858	1542	879	854	1537
Application		Colder climate (design temperature: -2°C)					
COP_{DHW}	[]	2,24	2,31	2,08	2,26	2,33	2,09
η_{wh}	[%]	94,2%	97,3%	85,3%	94,6%	97,7%	85,5%
AEC	[kWh]	1087	1053	1963	1082	1048	1959
Application		Warmer climate (design temperature: -14°C)					
COP_{DHW}	[]	3,26	3,46	3,00	3,32	3,51	3,02
η_{wh}	[%]	138,8%	147,8%	124,1%	139,8%	148,9%	124,5%
AEC	[kWh]	737	692	1349	732	688	1345

Indoor Unit		EBS(X/H)(B/-)(11/16)P30DF		EBS(X/H)(B/-)(11/16)P50DF	
Outdoor Unit		ERLA(11/14/16)DAV3(7)	ERLA(11/14/16)DAW1(7)	ERLA(11/14/16)DAV3(7)	ERLA(11/14/16)DAW1(7)
Tapping pattern		L		XL	
Application		Average climate (design temperature: -7°C)			
COP_{DHW}	[]	2,73	2,75	3,05	3,1
η_{wh}	[%]	115%	116%	126%	128%
AEC	[kWh]	890	887	1329	1313
Application		Colder climate (design temperature: -2°C)			
COP_{DHW}	[]	2,32	2,33	2,63	2,67
η_{wh}	[%]	97%	98%	109%	110%
AEC	[kWh]	1053	1051	1542	1526
Application		Warmer climate (design temperature: -14°C)			
COP_{DHW}	[]	3,2	3,24	3,68	3,76
η_{wh}	[%]	136%	137%	153%	155%
AEC	[kWh]	753	750	1094	1078

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5 Capacity tables

5 - 1 Certification Programs

ERLA11D2V3 / ERLA11D2W1 / ERLA14D2V3 / ERLA14D2W1 / ERLA16D2V37 / ERLA16D2W17

Rated data for certification programmes - heating mode

Tamb	EWC	LWC	ERLA11D2V3		ERLA14D2V3		ERLA16D2V37		ERLA11D2W1		ERLA14D2W1		ERLA16D2W17		Used for:
			HC	COP	HC	COP	HC	COP	HC	COP	HC	COP	HC	COP	
[°C]	[°C]	[°C]	[kW]	[-]	[kW]	[-]	[kW]	[-]	[kW]	[-]	[kW]	[-]	[kW]	[-]	
10/9	30	35	9,20	5,32	9,20	5,32	9,20	5,32	9,20	5,32	9,20	5,32	9,20	5,32	BAFA
7/6	30	35	10,56	4,83	12,00	4,87	16,00	4,53	10,56	4,83	12,00	4,87	16,00	4,53	Keymark, EHPA, BAFA, GET
2/1	(30)	35	9,00	3,65	10,80	3,50	12,00	3,30	9,00	3,65	10,80	3,50	12,00	3,30	EHPA, GET
2/1	(30)	35	6,29	4,01	6,29	4,01	6,29	4,01	6,29	4,01	6,29	4,01	6,29	4,01	BAFA
-7/-8	(30)	35	8,75	2,92	9,30	2,86	10,60	2,70	8,75	2,92	10,50	3,00	12,30	2,87	EHPA, BAFA, GET
7/6	40	45	9,82	3,66	12,45	3,64	16,00	3,51	9,82	3,66	12,45	3,64	16,00	3,51	EHPA
-2/-3	(40)	45	9,32	2,57	10,15	2,58	11,91	2,42	9,32	2,57	10,15	2,58	11,91	2,42	MCS
-7/-8	(40)	45	8,72	2,35	8,98	2,29	10,49	2,10	8,72	2,35	8,98	2,29	10,49	2,10	EHPA
7/6	47	55	10,64	2,94	11,87	2,89	15,63	2,75	10,64	2,94	11,87	2,89	15,63	2,75	Keymark, EHPA, GET
-7/-8	47	55	7,89	1,82	8,47	1,82	8,87	1,78	7,89	1,82	8,47	1,82	8,87	1,78	GET, EHPA

Rated data for certification programmes - cooling mode

Nominal cooling capacity

Tamb	EWE	LWE	ERLA11D2(V3/W1)		ERLA14D2(V3/W1)		ERLA16D2(V3/W1)7		Used for:	
			CC	EER	CC	EER	CC	EER		
[°C]	[°C]	[°C]	[kW]	[-]	[kW]	[-]	[kW]	[-]		
35	23	18	11,85	4,7	13,18	4,61	15,72	4,11	General	D2CI
35	12	7	11,18	3,22	12,92	2,98	13,63	2,91	Keymark	D2PT

Seasonal D2ta - cooling LWE 7°C Low temperature Application

		ERLA11D2(V3/W1)	ERLA14D2(V3/W1)	ERLA16D2(V3/W1)7
Pdes	[kW]	11	12,9	13,600
SEER	[-]	5,92	5,86	5,76
$\eta_{s,c}$	[-]	234	231	227
Q_{CE}	[kWh/annum]	1116	1322	1417

Rated data for certification programmes - standby power consumption

		ERLA(11/14/16)D2(V3/W1)7	Used for:
Standby power input	[W]	23	Taux

Symbols

HC	Heating capacity measured according to EN 14511
CC	Cooling capacity, measured according to ·EN 14511·.
COP/EER	Coefficient of Performance/Energy efficiency ratio according to EN 14511.
EWC	Entering water condenser temperature [°C]
LWC	Leaving water condensor temperature [°C]
EWE	Entering water evaporator temperature [°C]
LWE	Leaving water evaporator temperature [°C]
Tamb	Ambient temperature [°C DB/WB]
Pdes	Nominal capacity value at design temperature [kW]
SEER	Seasonal energy efficiency ratio according to ·EN14825·
$\eta_{s,c}$	Seasonal space cooling energy efficiency according to ·EN14825·
Q_{CE}	Annual energy consumption for cooling according to ·EN14825·

3D145302

5 Capacity tables

5 - 1 Certification Programs

ERLA11D2V3
ERLA11D2W1
ERLA14D2V3
ERLA14D2W1
ERLA16D2V37
ERLA16D2W17

Rated data for certification programmes - heating mode
Measured according to ·UNI/TS 11300·

Condition · ·	Tamb [°C]	LWC [°C]	PLR [%]	ERLA11D2(V3/W1) HC [kW]	ERLA11D2(V3/W1) COP	ERLA14D2(V3/W1) HC [kW]	ERLA14D2(V3/W1) COP	ERLA16D2(V3/W1)7 HC [kW]	ERLA16D2(V3/W1)7 COP
A	-7/-8	34	100	6,87	3,01	8,20	2,92	9,44	2,98
B	2/1	30	100	7,01	3,83	7,75	3,78	9,11	3,80
C	7/6	27	100	8,13	5,10	10,44	5,19	13,79	5,18
D	12/11	24	100	11,15	9,33	12,71	9,35	15,46	8,63
A	-7/-8	52	100	6,68	2,00	8,08	1,98	9,17	1,94
B	2/1	42	100	6,58	2,79	7,39	2,79	8,78	2,81
C	7/6	36	100	10,38	4,69	12,27	4,71	14,24	4,41
D	12/11	30	100	12,44	6,04	13,19	6,60	15,34	6,04

Rated data for certification programmes - cooling mode
Measured according to ·UNI/TS 11300·

Condition · ·	Tamb [°C]	LWE [°C]	PLR [%]	ERLA11D2(V3/W1) CC [kW]	ERLA11D2(V3/W1) COP	ERLA14D2(V3/W1) CC [kW]	ERLA14D2(V3/W1) EER	ERLA16D2(V3/W1)7 CC [kW]	ERLA16D2(V3/W1)7 EER
A	35	18	100	17,44	3,68	17,95	3,91	17,95	3,91
B	30	18	75	14,55	5,49	15,96	4,98	16,84	4,80
C	25	18	50	10,64	8,87	11,72	8,55	11,72	8,55
D	20	18	25	7,69	12,65	7,69	12,65	7,69	12,65
A	35	7	100	13,15	2,67	13,53	2,84	13,53	2,84
B	30	7	75	10,31	3,85	11,75	3,73	12,10	3,65
C	25	7	50	7,41	5,79	8,10	5,59	8,10	5,59
D	20	7	25	5,30	7,25	5,30	7,25	5,30	7,25

Outdoor unit		**ERLA(11/14/16)D2V3(7)**			**ERLA(11/14/16)D2W1(7)**		
Domestic hot water tank		**EBV(H/X/Z)(11/16)S18DJ(6V/9W)**	**EBV(H/X/Z)(11/16)S(U)23DJ(6V/9W)**		**EBV(H/X/Z)(11/16)S18DJ(6V/9W)**	**EBV(H/X/Z)(11/16)S(U)23DJ(6V/9W)**	
Tapping pattern		**L**	**L**	**XL**	**L**	**L**	**XL**
Application		Average climate (design temperature: ·7·°C)					
COP_{DHW}	**[]**	2,73	2,80	2,63	2,77	2,84	2,64
η_{wh}	**[%]**	115,6%	119,3%	108,7%	116,4%	119,9%	109,0%
AEC	**[kWh]**	886	858	1542	879	854	1537
Application		Colder climate (design temperature: ·2·°C)					
COP_{DHW}	**[]**	2,24	2,31	2,08	2,26	2,33	2,09
η_{wh}	**[%]**	94,2%	97,3%	85,3%	94,6%	97,7%	85,5%
AEC	**[kWh]**	1087	1053	1963	1082	1048	1959
Application		Warmer climate (design temperature: ·14·°C)					
COP_{DHW}	**[]**	3,26	3,46	3,00	3,32	3,51	3,02
η_{wh}	**[%]**	138,8%	147,8%	124,1%	139,8%	148,9%	124,5%
AEC	**[kWh]**	737	692	1349	732	688	1345

Indoor Unit		**EBS(X/H)(B/-)(11/16)P30DF**		**EBS(X/H)(B/-)(11/16)P50DF**	
Outdoor Unit		**ERLA(11/14/16)D2V3(7)**	**ERLA(11/14/16)D2W1(7)**	**ERLA(11/14/16)D2V3(7)**	**ERLA(11/14/16)D2W1(7)**
Tapping pattern		**L**		**XL**	
Application		Average climate (design temperature: ·7·°C)			
COP_{DHW}	**[]**	2,73	2,75	3,05	3,1
η_{wh}	**[%]**	115%	116%	126%	128%
AEC	**[kWh]**	890	887	1329	1313
Application		Colder climate (design temperature: ·2·°C)			
COP_{DHW}	**[]**	2,32	2,33	2,63	2,67
η_{wh}	**[%]**	97%	98%	109%	110%
AEC	**[kWh]**	1053	1051	1542	1526
Application		Warmer climate (design temperature: ·14·°C)			
COP_{DHW}	**[]**	3,2	3,24	3,68	3,76
η_{wh}	**[%]**	136%	137%	153%	155%
AEC	**[kWh]**	753	750	1094	1078

3D145302

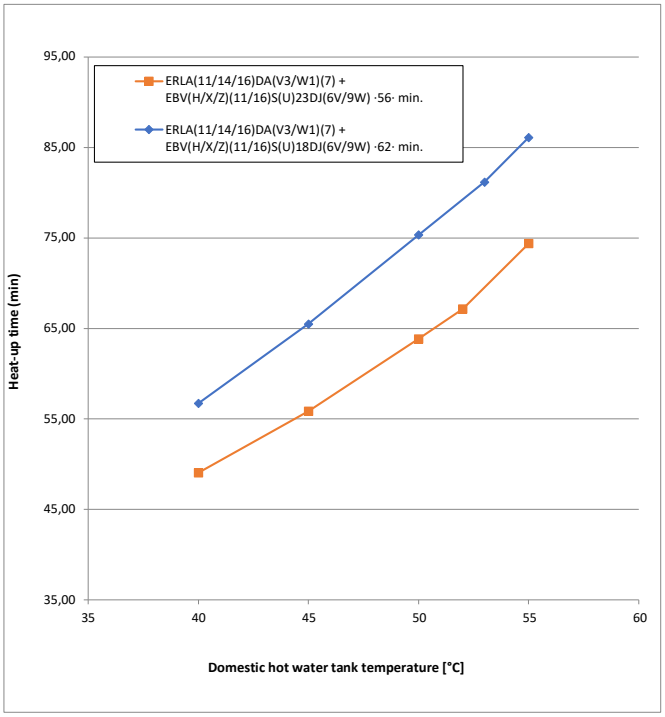
5 Capacity tables

5 - 2 Domestic Hot Water performance

ERLA11DAV3 /ERLA14DAV3 / ERLA16DAV37 / ERLA11DAW1 / ERLA14DAW1 / ERLA16DAW17

5

Heat-up times



Model name	Heat-up time domestic hot water tank until 45°C
ERLA(11/14/16)DA(V3/W1)(7) + EBV(H/X/Z)(11/16)S(U)18DJ(6V/9W)	·62· min.
ERLA(11/14/16)DA(V3/W1)(7) + EBV(H/X/Z)(11/16)S(U)23DJ(6V/9W)	·56· min.

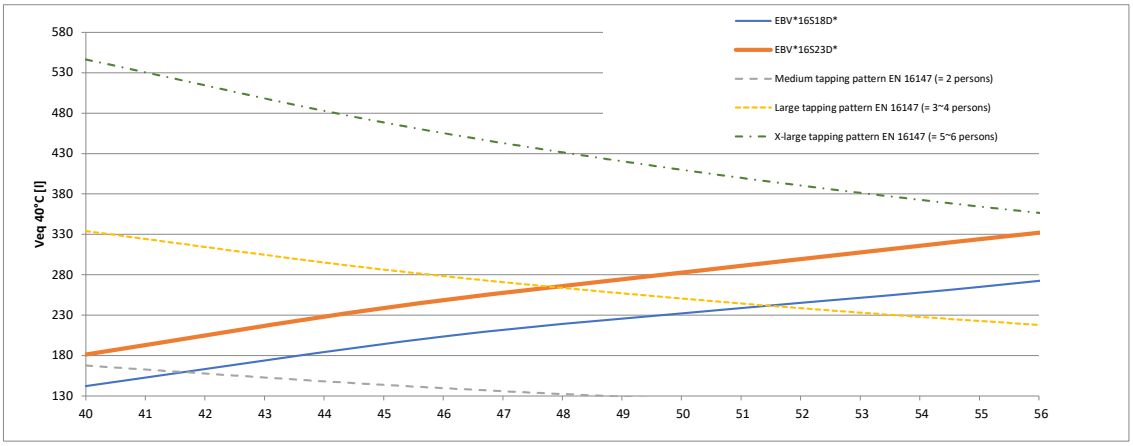
Notes

1. Time the indoor unit (**heat pump only operation**) requires to heat up the domestic hot water tank from 10°C to the indicated temperature.

   See the operation range for maximum domestic hot water tank temperature during heat pump only operation.

Selection guide for the domestic hot water tank volume (1)

Veq 40°C = the amount of water with a temperature of 40°C that can be tapped when the domestic hot water tank is heated to a certain temperature, and the temperature of the cold inlet water is 10°C.



If a higher daily Veq 40°C is required, then additional heat-up cycles are required within 24 hours.
See the operation manual for more information.

According to EN16147.

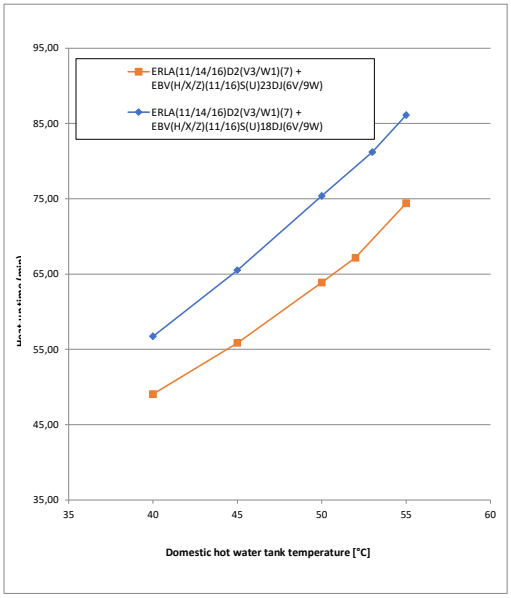
4D136698A

5 Capacity tables

5 - 2 Domestic Hot Water performance

ERLA11D2V3
ERLA11D2W1
ERLA14D2V3
ERLA14D2W1
ERLA16D2V37
ERLA16D2W17

Heat-up times



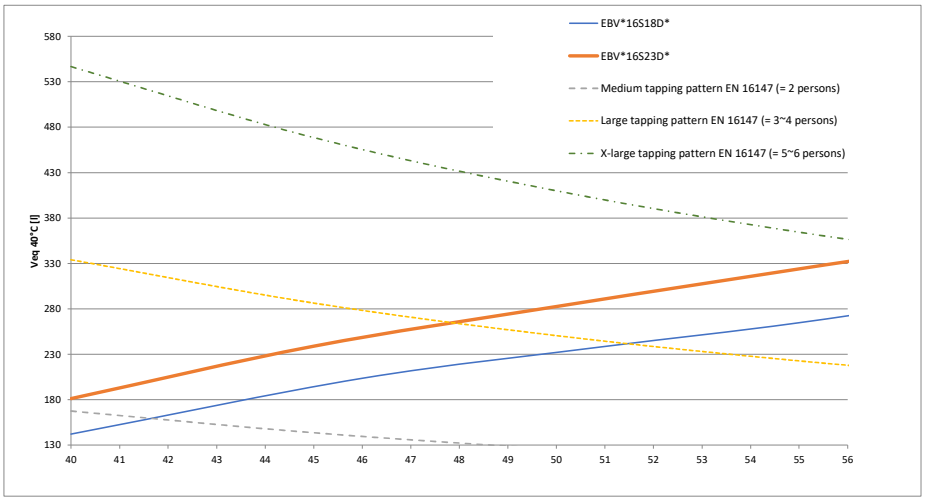
Model name	Heat-up time domestic hot water tank until 45°C
ERLA(11/14/16)D2(V3/W1)(7) + EBV(H/X/Z)(11/16)S(U)18DJ(6V/9W)	·62· min.
ERLA(11/14/16)D2(V3/W1)(7) + EBV(H/X/Z)(11/16)S(U)23DJ(6V/9W)	·56· min.

Notes

1. Time the indoor unit (**heat pump only operation**) requires to heat up the domestic hot water tank from 10°C to the indicated temperature. See the operation range for maximum domestic hot water tank temperature during heat pump only operation.

Selection guide for the domestic hot water tank volume
(1)

Veq 40°C = the amount of water with a temperature of 40°C that can be tapped when the domestic hot water tank is heated to a certain temperature, and the temperature of the cold inlet water is 10°C.



If a higher daily Veq 40°C is required, then additional heat-up cycles are required within 24 hours.
See the operation manual for more information.

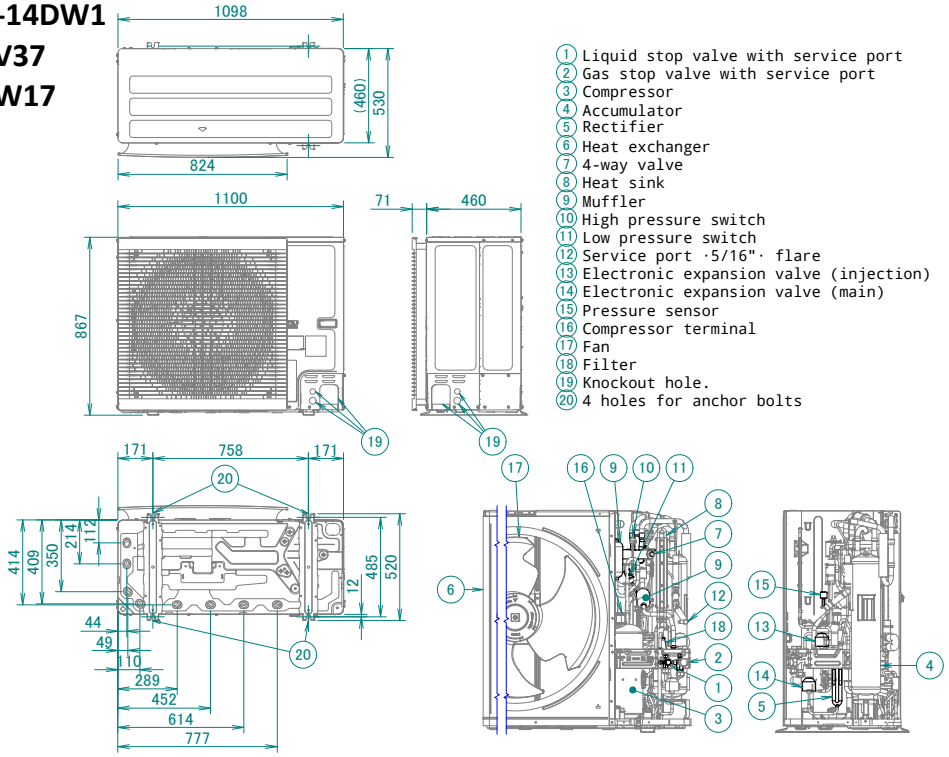
Notes
(1) According to EN16147.

4D145289

6 Dimensional drawings

6 - 1 Dimensional Drawings

ERLA11-14DV3
ERLA11-14DW1
ERLA-DV37
ERLA-DW17



1 Liquid stop valve with service port
2 Gas stop valve with service port
3 Compressor
4 Accumulator
5 Rectifier
6 Heat exchanger
7 4-way valve
8 Heat sink
9 Muffler
10 High pressure switch
11 Low pressure switch
12 Service port ·5/16"· flare
13 Electronic expansion valve (injection)
14 Electronic expansion valve (main)
15 Pressure sensor
16 Compressor terminal
17 Fan
18 Filter
19 Knockout hole.
20 4 holes for anchor bolts

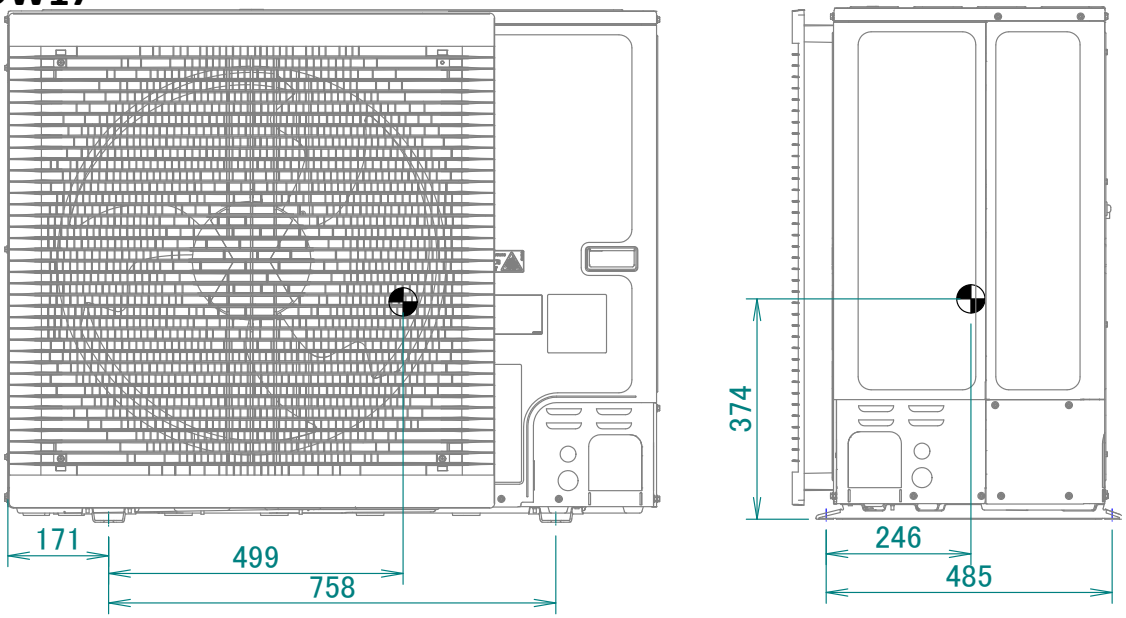
3D136425

7 Centre of gravity

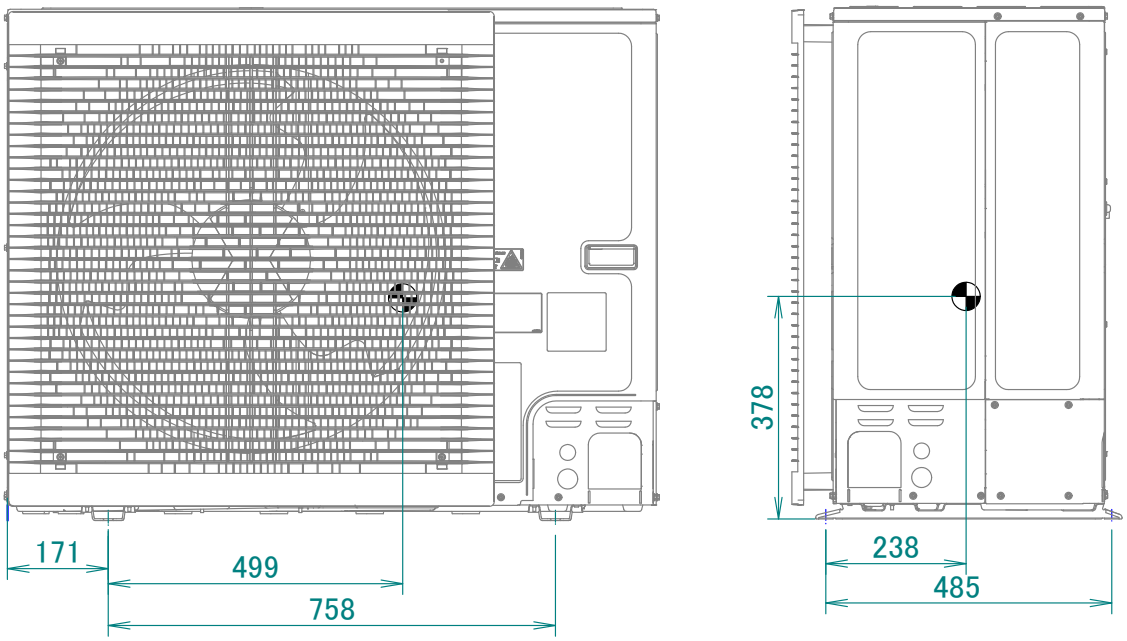
7 - 1 Centre of Gravity

ERLA11-14DV3
ERLA11-14DW1
ERLA-DV37
ERLA-DW17

3~



1~



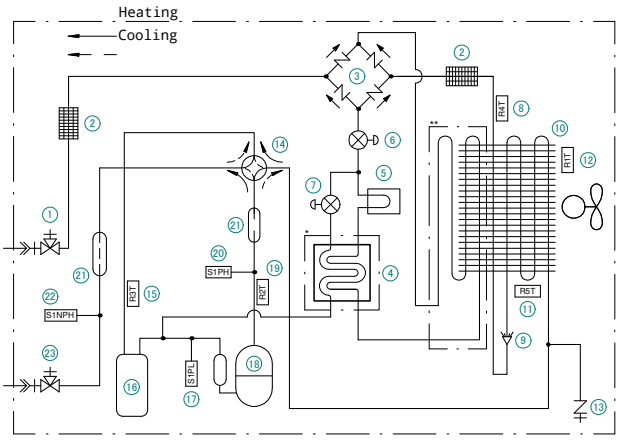
4D136430

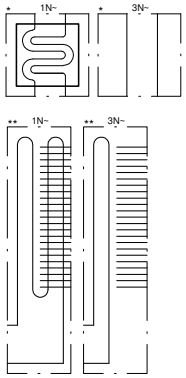
8 Piping diagrams

8 - 1 Piping Diagrams

ERLA11-14DV3
ERLA11-14DW1
ERLA-DV37
ERLA-DW17

Brazed connection
Flare connection





1. Liquid stop valve with service port
2. Filter
3. Rectifier
4. Economiser
5. Heat sink
6. Electronic expansion valve (main)
7. Electronic expansion valve (injection)
8. R4T - Thermistor (heat exchanger)
9. Distributor
10. Heat exchanger
11. R5T - Thermistor (heat exchanger middle)
12. R1T - Outdoor air
13. Service port ·5/16"· flare
14. 4-way valve
15. R3T - Thermistor (suction)
16. Accumulator
17. Low pressure switch
18. Compressor
19. R2T - Thermistor (discharge)
20. High pressure switch
21. Muffler
22. Pressure sensor
23. Gas stop valve with service port

3D131968

9 Wiring diagrams

9 - 1 Notes & Legend

ERLA11-14DV3 / ERLA11-14DW1 / ERLA-DV37 / ERLA-DW17

NOTES to go through before starting the unit

X1M : Main terminal

: Earth wiring

: Field supply

(1) : Several wiring possibilities

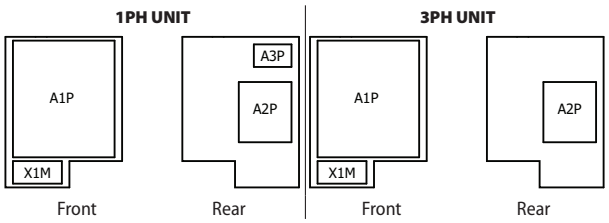
: Option

: Wiring depending on model

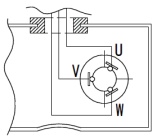
: Not mounted in switch box

: PCB

POSITION IN SWITCH BOX



Position of compressor terminal



NOTES

1. Refer to the wiring diagram sticker (on the back of the front plate) for how to use the BS1~BS4 and DS1 switches.
2. When operating, do not short-circuit protection device Q1, S1PH and S1PL.
3. Refer to the combination table and the option manual for how to connect the wiring to X6A, X41A and X77A.
4. Colours: BLK:black; RED:red; BLU:blue; WHT:white; GRN:green; BRN:brown; YLW:yellow; ORG:orange
5. Confirm the method of setting the selector switches (DS1) by service manual. Factory setting of all switches: OFF

LEGEND

1PH UNIT

Part n°		Description
A1P		Printed circuit board (main)
A2P		Printed circuit board (noise filter)
A3P		Printed circuit board (flash)
C* (A*P)		Capacitor
BS* (A1P)		Push-button switch
DS1 (A1P)		Dipswitch
F1U, F3U~F4U (A2P)		Fuse T 6,3 A 250 V
F2U (A2P)		Fuse T 56 A 250 V
F6U (A1P)		Fuse T 5 A 250 V
H1~7P (A1P)		Indication light emitting diode (service monitor is orange)
HAP (A1P)		Light emitting diode (service monitor is green)
K1R (A1P)		Magnetic relay (Y1S)
K10~13R (A1P)		Magnetic relay
K11M (A1P)		Magnetic relay (Main)
K14~15R (A2P)		Magnetic relay
L*R (A1P)		Reactor
M1C		Compressor motor
M1F		Fan motor
PS (A1P)		Switching power supply
Q1		Thermal overcurrent protector
Q1DI	#	Earth leakage circuit breaker (30mA)
R533~R807 (A*P)		Resistor
R1T		Thermistor (air)
R2T		Thermistor (discharge)
R3T		Thermistor (suction)
R4T		Thermistor (distribution pipe)
R5T		Thermistor (heat exchanger middle)
R11T (A1P)		Thermistor (fin)
RC (A2P)		Signal receiver circuit
S1NPH		Pressure sensor
S1PH		High pressure switch
S1PL		Low pressure switch
TC (A2P)		Signal transmission circuit
V*D (A1P)		Diode
V1R (A1P)		Power module
V2R (A1P)		Diode module
V*T (A1P)		IGBT
X1M		Terminal strip
X*A, X*Y (A*P)		Connector
Y1E, Y3E		Electronic expansion valve
Y1S		Solenoid valve (4-way valve)
Z*C		Noise filter (ferrite core)
Z*F (A*P)		Noise filter

3PH UNIT

Part n°		Description
A1P		Printed circuit board (main)
A2P		Printed circuit board (noise filter)
C* (A1P)		Capacitor
BS* (A1P)		Push-button switch
DS1 (A1P)		Dipswitch
F1U, F3U (A2P)		Fuse T 6,3 A 250 V
F4U, F5U (A2P)		Fuse T 30 A 500 V
F7U (A1P)		Fuse T 5 A 250 V
HAP (A1P)		Light emitting diode (service monitor is green)
K1R (A1P)		Magnetic relay (Y1S)
K10~84R (A1P)		Magnetic relay
K*M (A1P)		Magnetic relay (Main)
L*R (A*P)		Reactor
M1C		Compressor motor
M1F		Fan motor
PS (A1P)		Switching power supply
Q1		Thermal overcurrent protector
Q1DI	#	Earth leakage circuit breaker (30mA)
R2~R807 (A1P)		Resistor
R1T		Thermistor (air)
R2T		Thermistor (discharge)
R3T		Thermistor (suction)
R4T		Thermistor (distribution pipe)
R5T		Thermistor (heat exchanger middle)
R11T (A1P)		Thermistor (fin)
RC (A1P)		Signal receiver circuit
S1NPH		Pressure sensor
S1PH		High pressure switch
S1PL		Low pressure switch
SEG* (A1P)		7-segment display
TC (A1P)		Signal transmission circuit
V*D (A1P)		Diode
V1~2R (A1P)		Diode module
V3~5R (A1P)		Power module
X1M		Terminal strip
X*A, X*Y (A*P)		Connector
Y1E, Y3E		Electronic expansion valve
Y1S		Solenoid valve (4-way valve)
Z*C		Noise filter (ferrite core)
Z*F (A*P)		Noise filter

* : optional #: field supply

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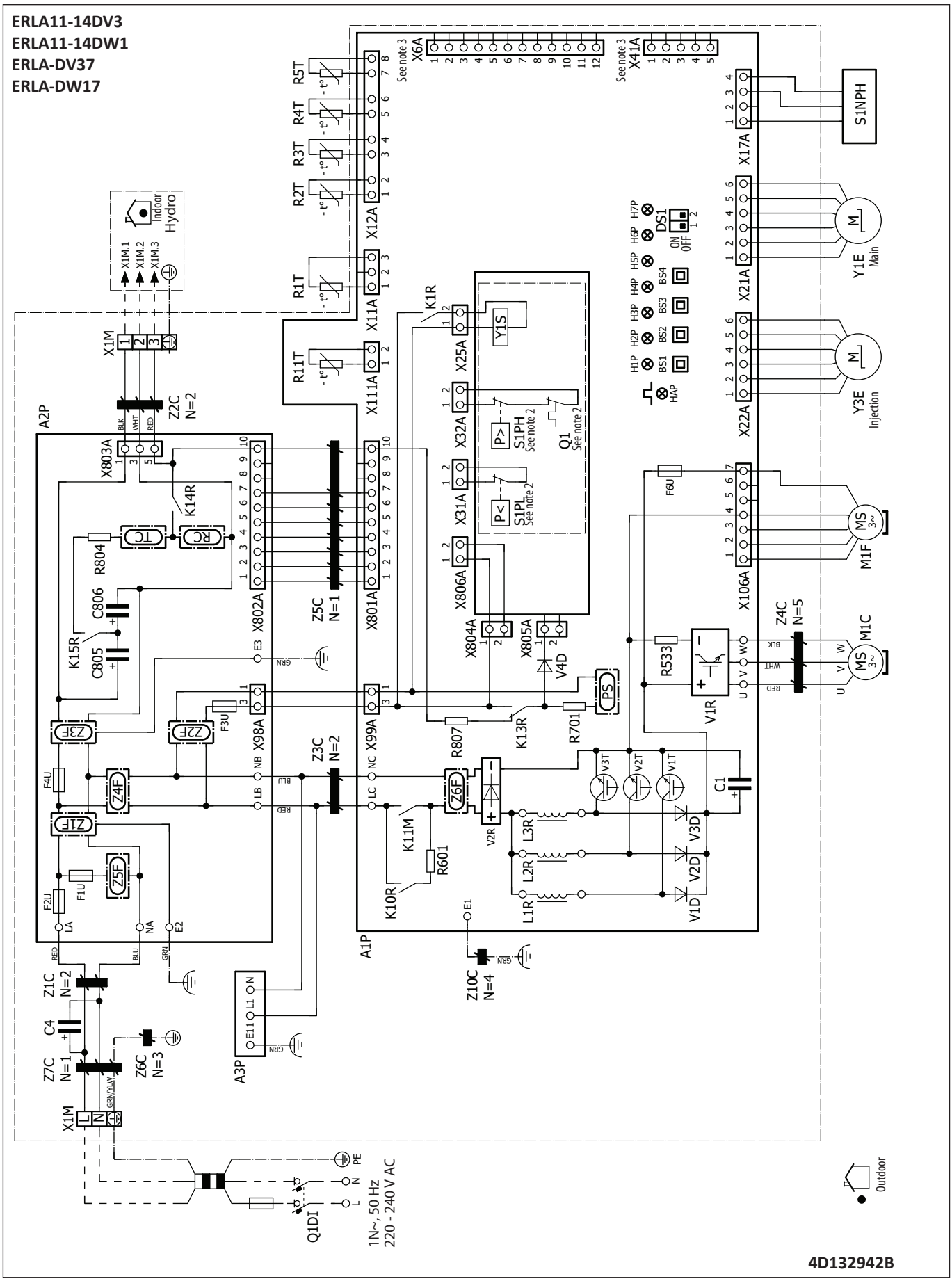
9 Wiring diagrams

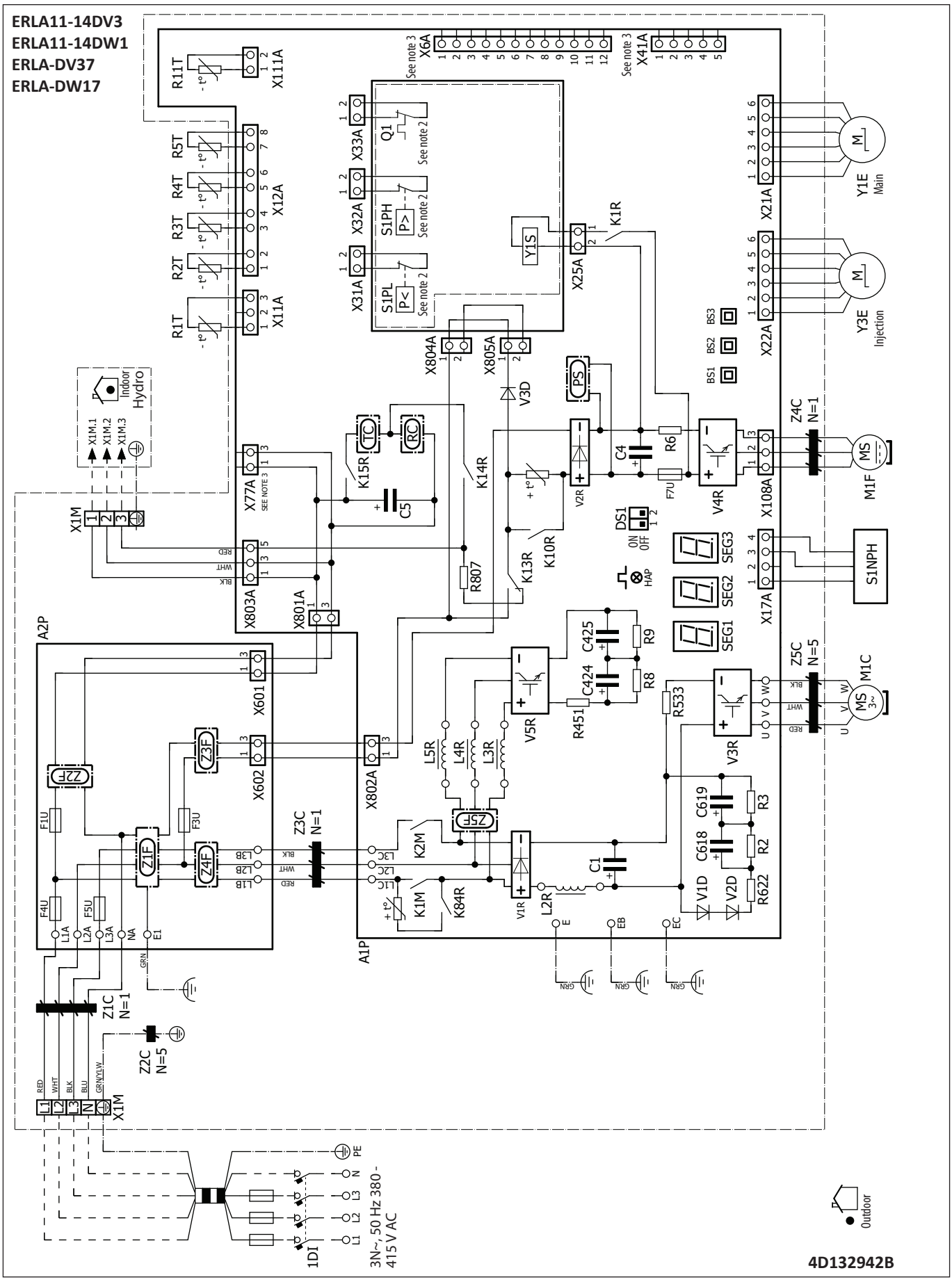
9 - 2 Compressor - Single phase

ERLA11-14DV3
ERLA11-14DW1
ERLA-DV37
ERLA-DW17



9 Wiring diagrams

9 - 3 Compressor - Three phase



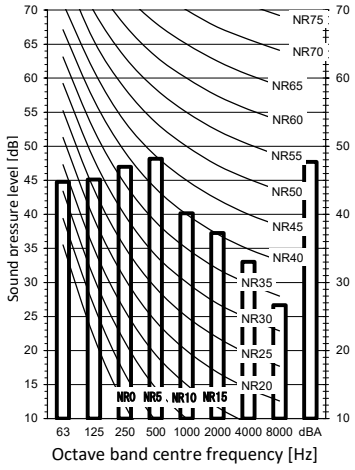
10 Sound data

10 - 1 Sound Pressure Spectrum - Cooling

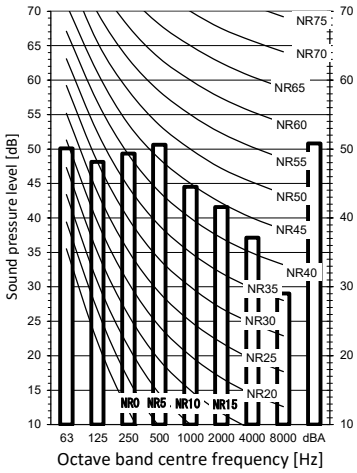
ERLA11-14DV3 / ERLA11-14DW1
ERLA-DV37 / ERLA-DW17

Cooling Sound

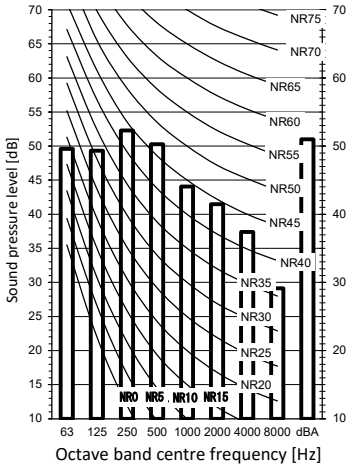
ERLA11*



ERLA14*

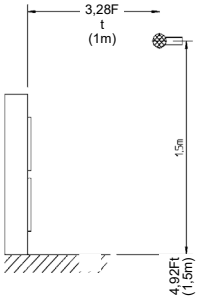


ERLA16*



Notes

1. Data is valid at free field condition.
   Measured in a semi-anechoic chamber
2. Data is valid at nominal operation condition.
3. dBA = A-weighted sound pressure level (A scale according to IEC).
4. Reference acoustic pressure 0 dB = 20 µPa
5. If the sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.



Measuring location
(discharge side)

4D672154

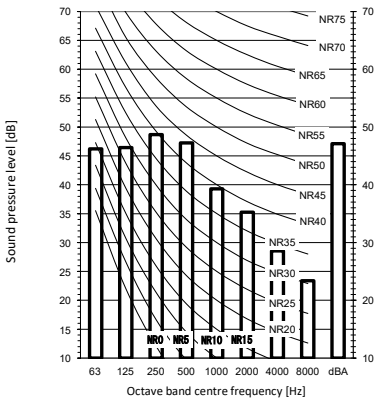
10 Sound data

10 - 2 Sound Pressure Spectrum - Heating

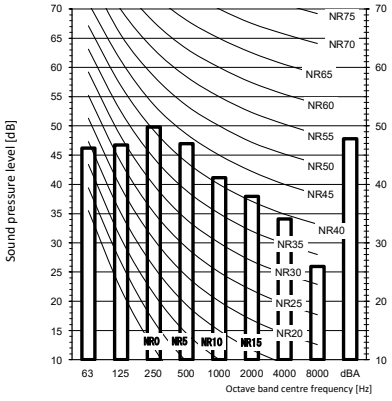
ERLA11-14DV3 / ERLA11-14DW1
ERLA-DV37 / ERLA-DW17

Heating Sound

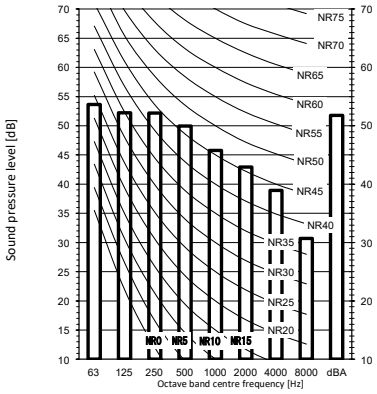
ERLA11*



ERLA14*

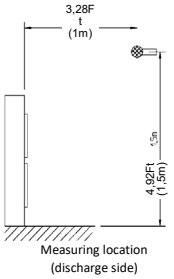


ERLA16*



Notes

1. Data is valid at free field condition.
2. Data is valid at nominal operation condition.
3. dBA = A-weighted sound pressure level (A scale according to IEC).
4. Reference acoustic pressure 0 dB = 20 µPa
5. If the sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.



		Maximum sound day			Maximum sound night		
		Sound Power Level [dBA]			Sound Power Level [dBA]		
Maximum sound day	Maximum sound night	ERLA11*	ERLA14*	ERLA16*	ERLA11*	ERLA14*	ERLA16*
Default : Low noise level ·1·	Low noise level ·2·	68	69	73	62	62	62
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)							

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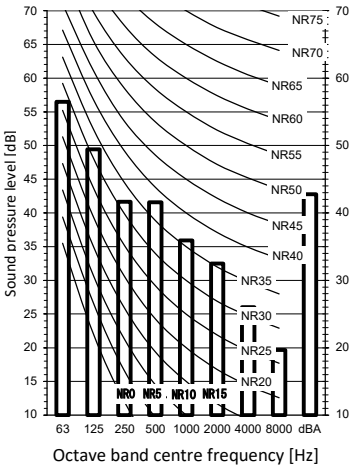
10 Sound data

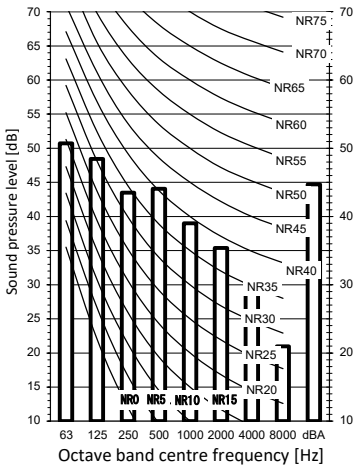
10 - 3 Sound Pressure Spectrum Quiet Mode

ERLA11-14DV3 / ERLA11-14DW1 / ERLA-DV37 / ERLA-DW17 Cooling : Quiet mode

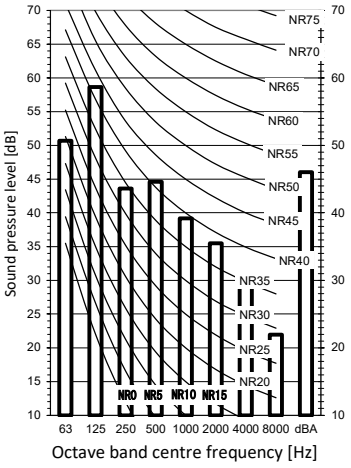
ERLA11*



ERLA14*



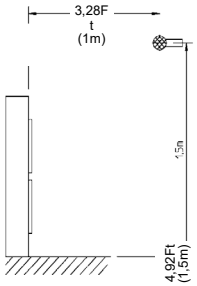
ERLA16*



Notes

1. Data is valid at free field condition.

   Measured in a semi-anechoic chamber
2. Data is valid at nominal operation condition.
3. dBA = A-weighted sound pressure level (A scale according to IEC).
4. Reference acoustic pressure 0 dB = 20 µPa
5. If the sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.



Measuring location
(discharge side)

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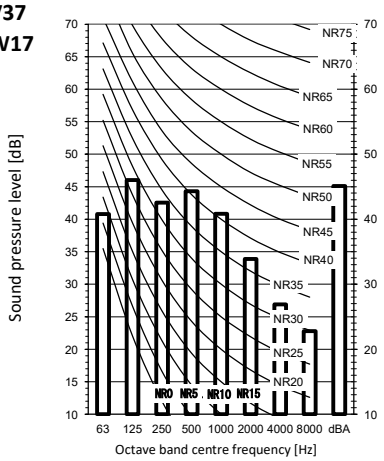
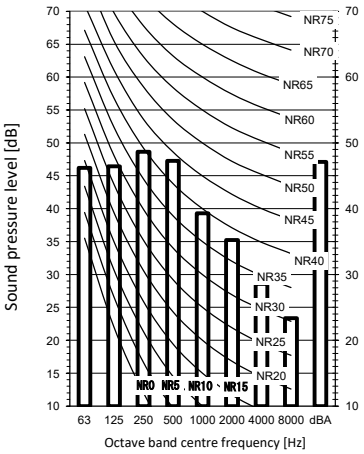
ERLA11-14DV3
ERLA11-14DW1
ERLA-DV37
ERLA-DW17

Heating : Quiet mode

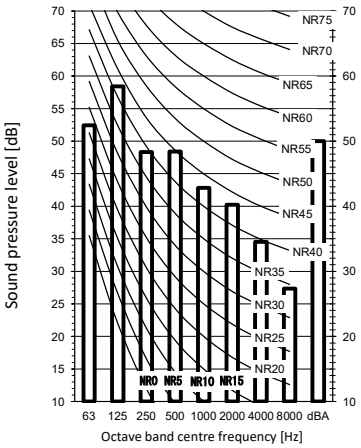
ERLA11*



ERLA14*



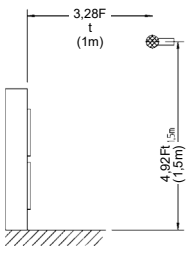
ERLA16*



Notes

1. Data is valid at free field condition.
2. Data is valid at nominal operation condition.
3. dBA = A-weighted sound pressure level (A scale according to IEC).
4. Reference acoustic pressure 0 dB = 20 µPa
5. If the sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.

		Maximum sound day			Maximum sound night		
		Sound Power Level [dBA]			Sound Power Level [dBA]		
Maximum sound day	Maximum sound night	ERLA11*	ERLA14*	ERLA16*	ERLA11*	ERLA14*	ERLA16*
Default : Low noise level ·1·	Low noise level ·2·	65	66	68	62	62	62
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)							



Measuring location
(discharge side)

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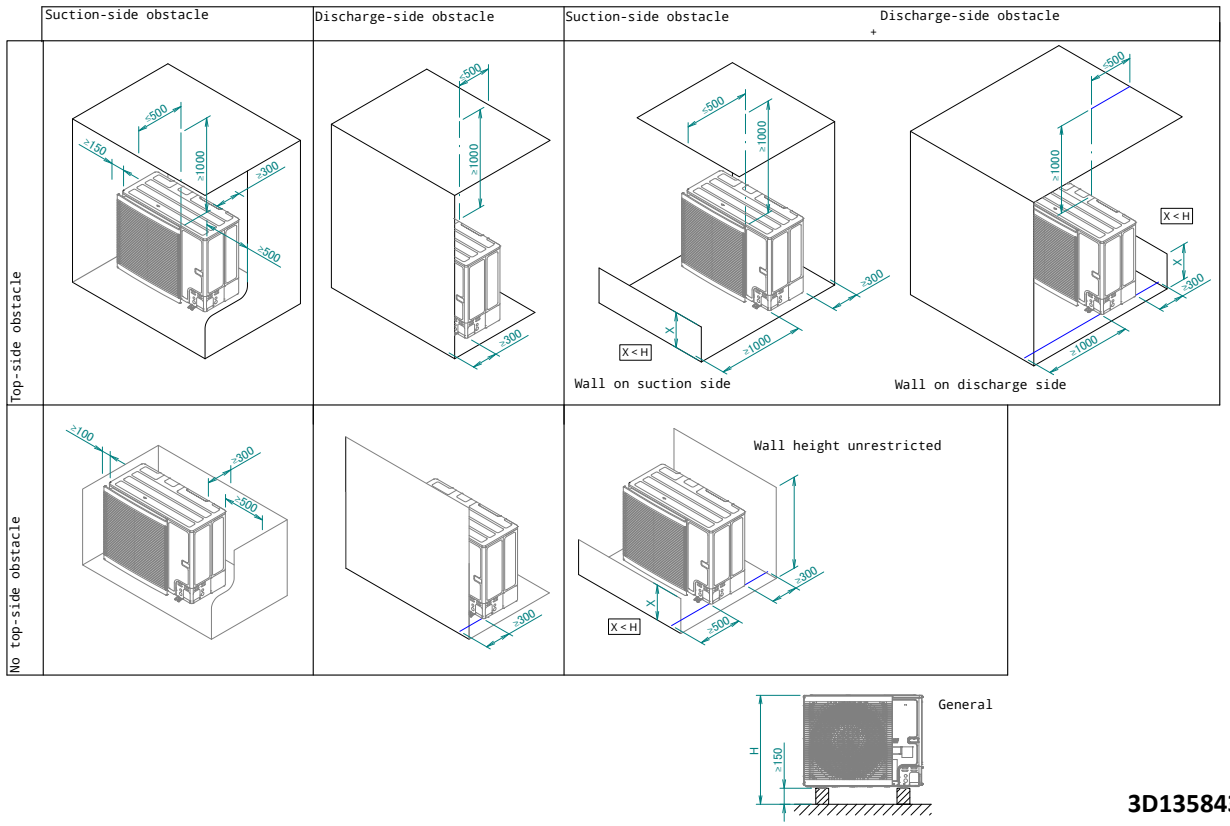
11 Installation

11 - 1 Installation Method

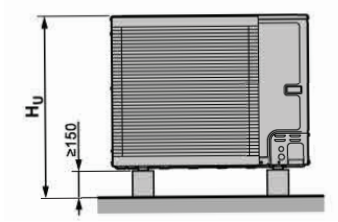
ERLA11-14DV3 / ERLA11-14DW1 / ERLA-DV37 / ERLA-DW17

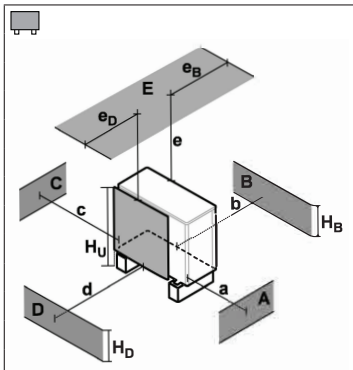
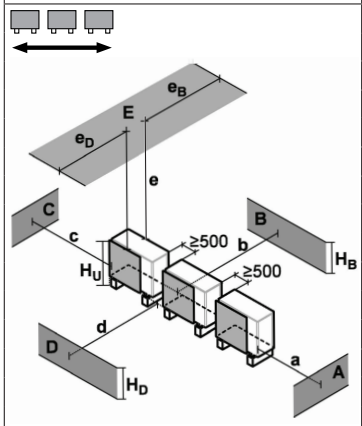
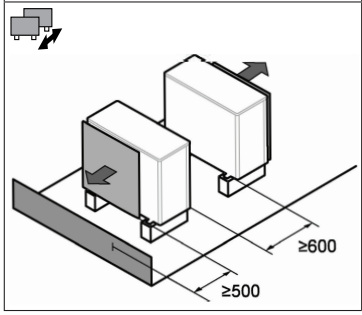
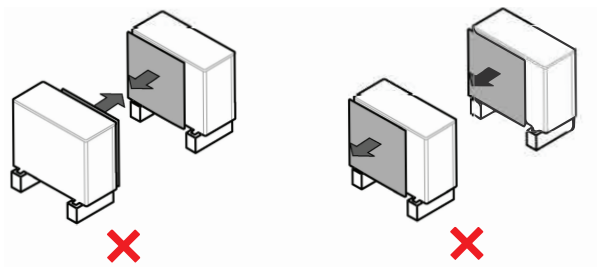


11 Installation

11 - 2 Installation Method in cascade applications

ERLA11-14DV3
ERLA11-14DW1
ERLA-DV37
ERLA-DW17



A~E	$H_B H_D H_U$		(mm) a	b	c	d	e	eB	eD
	B	-		≥300					
	A, B, C	-	≥500	≥300	≥100				
	B, E	-		≥300			≥1000		≤500
	A, B, C, E	-	≥500	≥300	≥150		≥1000		≤500
	D	-				≥500			
	D, E	-				≥500	≥1000	≤500	
	A, C	-	≥500		≥100				
	B, D	(H_B or H_D) ≤ H_U		≥300		≥500			
		(H_B and H_D) > H_U	✕						
	B, D, E	(H_B or H_D) ≤ H_U $H_B > H_D$		≥300		≥1000	≥1000		≤500
		$H_B < H_D$		≥300		≥1000	≥1000	≥500	
		(H_B and H_D) > H_U	✕						
	A, C, D, E	-	≥500		≥150	≥500	≥1000	≤500	
	A, B, C, D, E	(H_B or H_D) ≤ H_U $H_B > H_D$	≥500	≥300	≥150	≥1000	≥1000		≤500
		$H_B < H_D$	≥500	≥300	≥150	≥1000	≥1000	≤500	
		(H_B and H_D) > H_U	✕						
	B	-		≥300					
	A, B, C	-	≥500	≥300	≥500				
	B, E	-		≥300			≥1000		≤500
	A, B, C, E	-	≥500	≥300	≥500		≥1000		≤500
	D	-				≥500			
	D, E	-				≥1000	≥1000	≤500	
	A, C	-	≥500		≥500				
	B, D	(H_B or H_D) ≤ H_U		≥300		≥500			
		(H_B and H_D) > H_U	✕						
	B, D, E	(H_B or H_D) ≤ H_U $H_B > H_D$		≥300		≥1000	≥1000		≤500
		$H_B < H_D$		≥300		≥1000	≥1000	≤500	
		(H_B and H_D) > H_U	✕						
	A, C, D, E	-	≥500		≥500	≥1000	≥1000	≤500	
	A, B, C, D, E	(H_B or H_D) ≤ H_U $H_B > H_D$	≥500	≥300	≥500	≥1000	≥1000		≤500
		$H_B < H_D$	≥500	≥300	≥500	≥1000	≥1000	≤500	
		(H_B and H_D) > H_U	✕						
									

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11 Installation

11 - 2 Installation Method in cascade applications

ERLA11-14DV3
ERLA11-14DW1
ERLA-DV37
ERLA-DW17

Installation requirements for ·ERLA*DA*· units

Cascading outdoor units.

The installation layouts with multiple outdoor units shown in ·(1)· (side to side) and ·(2)· (front to back/back to front) are only allowed in combination with wall-mounted indoor units, NOT in combination with floor-standing indoor units.

Legend	Symbols
A, C	Obstacles (walls/baffle plates)
B	Obstacles on the suction side
D	Obstacles on the discharge side
E	Obstacle (roof)
a, b, c, d, e	Minimum service space between the unit and obstacles A, B, C, D and E
e_B	Maximum distance between the unit and the edge of obstacle E, in the direction of obstacle B
e_D	Maximum distance between the unit and the edge of obstacle E, in the direction of obstacle D
Hu	Height of the unit
Hb,Hd	Height of obstacles B and D
✕	Not allowed


(1)


(2)

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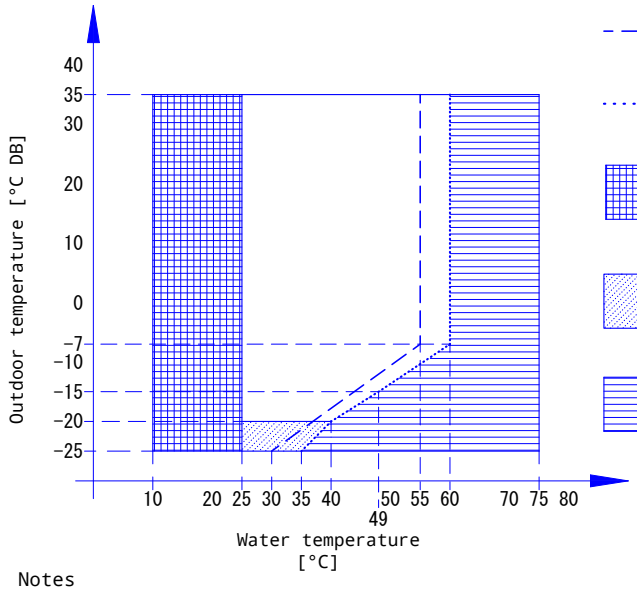
12 Operation range

12 - 1 Operation Range

ERLA11-14DV3 / ERLA11-14DW1
ERLA-DV37 / ERLA-DW17



Legend

- Setpoint [°C] Domestic hot water
- Leaving water temperature [°C]
- Pull-up area
- Operation of outdoor unit possible, but with possible capacity reduction.
- Booster heater only operation (if a booster heater is part of the system)

Notes

1. In restricted power supply mode (·EKHW*· only), the outdoor unit, booster heater and backup heater can only operate separately.
2. Third-party with identical specifications as ·EKHWS*·
   Coil surface >·1.05·m² and <·3.7·m²
   Tank thermistor and booster heater above heat pump coil.
3. If negative ambient temperatures are expected, both in operation or at standstill, take adequate countermeasures against freezing.

   For more information, refer to the installation manual.

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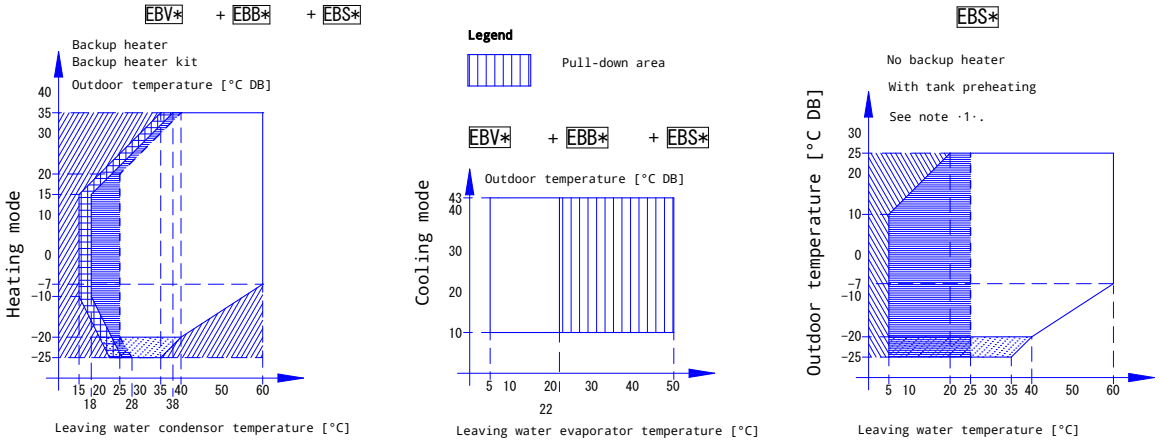
ERLA11-14DV3 / ERLA11-14DW1 / ERLA-DV37 / ERLA-DW17



Legend

- Backup heater only operation
  No outdoor unit operation
- Heat pump + backup heater operation
  Pull-up area
- Outdoor unit operation if controller setpoint is regulated to minimal leaving water temperature request.
  See dashed lines
- Operation of outdoor unit possible, but with possible capacity reduction.
- Circulation pump operation only

Notes

1. Tank preheating
   For details, see the installer reference guide.
2. In restricted power supply mode, the outdoor unit and backup heater can only operate separately.

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EEDEN23 02/2023