

Information requirements for air-to-air air conditioners

Model(s):	Outdoor Unit	U-140PZH3E8
	Indoor Unit	S-1014PF3Ex1
Outdoor side heat exchanger of air conditioner:	air	
Indoor side heat exchanger of air conditioner:	air	
Type: compressor driven vapour compression or sorption process	vapour compression	
if applicable: driver of compressor: [electric motor or fuel driven, gaseous or liquid fuel, internal or external combustion engine]	electric motor	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	13.4	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	275.2	%
Refrigeration load	$P_{design,c}$	13.4	kW				
Declared cooling capacity for part load at given outdoor temperatures T_j and indoor 27°/19°C (dry/wet bulb)				Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures T_j			
$T_j = +35\text{ °C}$	Pdc	13.4	kW	$T_j = +35\text{ °C}$	EER _d or GUE _{c,bin} / AEF _{c,bin}	3.4	%
$T_j = +30\text{ °C}$		9.9	kW	$T_j = +30\text{ °C}$		5.1	%
$T_j = +25\text{ °C}$		6.3	kW	$T_j = +25\text{ °C}$		7.8	%
$T_j = +20\text{ °C}$		3.3	kW	$T_j = +20\text{ °C}$		13.9	%
Degradation co- efficient for air conditioners**	C _{dc}	0.25	-				
Power consumption in modes other than 'active mode'							
Off mode	P _{OFF}	0.016	kW	Crankcase heater mode	P _{CK}	0.000	kW
Thermostat-off mode	P _{TO}	0.019	kW	Standby mode	P _{SB}	0.016	kW
Other items							
Capacity control		variable		For air-to-air air conditioner: air flow rate, outdoor		7740	m³/h
Sound power level, outdoor	L _{WA}	71.0	dB				
Sound power level, indoor	L _{WA}	62.0	dB	if engine driven: Emissions of nitrogen oxides	NO _x ***	-	mg/kWh fuel input GCV
				GWP of the refrigerant		675	kg CO ₂ eq (100 years)
Contact details Panasonic Testing Centre, Panasonic Marketing Europe GmbH Winsbergring 15, 22525 Hamburg, Germany							
** If C _{dc} is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. *** from 26 September 2018. Where information relates to multi-split air conditioners, the test result and performance data may be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. **** Refer to Information requirements for UnitList							

Information requirements for heat pumps

Model(s):	Outdoor Unit	U-140PZH3E8
	Indoor Unit	S-1014PF3Ex1
Outdoor side heat exchanger of heat pump:	air	
Indoor side heat exchanger of heat pump:	air	
Indication if the heater is equipped with a supplementary heater:	no	
if applicable: driver of compressor: [electric motor or fuel driven, gaseous or liquid fuel, internal or external combustion engine]	electric motor	

Parameters shall be declared for the average heating season, parameters for the warmer and colder heating seasons are optional.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heating capacity	$P_{rated,h}$	15.5	kW	Seasonal space heating energy efficiency	$\eta_{s,h}$	170.9	%
Refrigeration load	$P_{design,h}$	9.5	kW				
Declared heating capacity for part load at indoor temperature 20 °C and outdoor temperature T_j				Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures T_j			
$T_j = -7\text{ °C}$	P _{dh}	8.4	kW	$T_j = -7\text{ °C}$	COP _d or GUE _{h,bin} / AEF _{h,bin}	2.8	%
$T_j = +2\text{ °C}$		5.1	kW	$T_j = +2\text{ °C}$		4.2	%
$T_j = +7\text{ °C}$		3.2	kW	$T_j = +7\text{ °C}$		5.8	%
$T_j = +12\text{ °C}$		3.8	kW	$T_j = +12\text{ °C}$		7.3	%
T _{biv} = bivalent temperature		9.5	kW	T _{biv} = bivalent temperature		2.5	%
T _{OL} = operation limit		9.4	kW	T _{OL} = operation limit		2.2	%
For air-to-water heat pumps: $T_j = -15\text{ °C}$ (if T _{OL} < -20 °C)	-	kW	For water-to-air heat pumps: $T_j = -15\text{ °C}$ (if T _{OL} < -20 °C)	-	%		
Bivalent temperature	T _{biv}	-10	°C	For water-to-air heat pumps: Operation limit temperature	T _{OL}	-20	°C
Degradation co- efficient heat pumps**	C _{dh}	0.25	-				
Power consumption in modes other than 'active mode'				Supplementary heater			
Off mode	P _{OFF}	0.016	kW	back-up heating capacity *	elbu	0.0	kW
Thermostat-off mode	P _{TO}	0.035	kW	Type of energy input			
Crankcase heater mode	P _{CK}	0.000	kW	Standby mode	P _{SB}	0.016	kW
Other items							
Capacity control		variable		For air-to-air heat pumps: air flow rate,outdoor		6960	m³/h
Sound power level, outdoor	L _{WA}	71.0	dB	For water-/brine-to-air heat pumps: Rated brine or water flow rate, outdoor side heat exchanger		-	m³/h
Sound power level, indoor	L _{WA}	62.0	dB	Emissions of nitrogen oxides (if applicable)	NO _x ***	-	mg/kWh fuel input GCV
				GWP of the refrigerant		675	kg CO ₂ eq (100 years)
Contact details Panasonic Testing Centre, Panasonic Marketing Europe GmbH Winsbergring 15, 22525 Hamburg, Germany							
** If C _{dh} is not determined by measurement then the default degradation coefficient of heat pumps shall be 0,25. *** from 26 September 2018. Where information relates to multi-split heat pumps, the test result and performance data may be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. **** Refer to Information requirements for UnitList							