Information requirements for air-to-air air conditioners

Model(s):	Outdoor Unit	U-140PZH3E8
	Indoor Unit	S-1014PU3E
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	$P_{rated,c}$	14.0	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	285.6	%
Refrigeration load	$P_{design,c}$	14.0	kW				
Declared cooling capacity for part load at given outdoor temperatures Tj 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 Tj			
Tj= + 35 °C	P_{dc}	14.0	kW	Tj = + 35 °C	EER_d or $GUE_{c,bin}$ / $AEF_{c,bin}$	3.4	%
Tj = + 30 °C		10.3	kW	Tj = + 30 °C		5.0	%
Tj = + 25 °C		6.6	kW	Tj = + 25 °C		8.9	%
Tj = + 20 °C		4.1	kW	Tj = + 20 °C		14	%
Degradation co- efficient for air conditioners**	C_{dc}	0.25	-				
Power consumption in modes other than 'active mode'							
Off mode	P_{OFF}	0.017	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermostat-off mode	P_{TO}	0.020	kW	Standby mode	P_{SB}	0.017	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.

Information requirements for heat pumps

Model(s):	Outdoor Unit	U-140PZH3E8
	Indoor Unit	S-1014PU3E
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	$P_{rated,h}$	16.0	kW	Seasonal space heating energy efficiency	$\eta_{s,h}$	181.1	%
Refrigeration load	$P_{design,h}$	10.6	kW				
Declared heating capacity for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj			
Tj = - 7 °C	P_{dh}	9.3	kW	Tj = - 7 °C	COP_d or $GUE_{h,bin}$ / $AEF_{h,bin}$	3.1	%
Tj = + 2 °C		5.7	kW	Tj = + 2 °C		4.4	%
Tj = + 7 °C		3.6	kW	Tj = + 7 °C		6.1	%
Tj = + 12 °C		3.9	kW	Tj = + 12 °C		7.4	%
T_{biv} = bivalent temperature		10.6	kW	T_{biv} = bivalent temperature		2.7	%
T_{OL} = operation limit		7.2	kW	T_{OL} = operation limit		2.0	%
For air-to-water heat pumps: Tj = - 15 °C (if T_{OL} < - 20 °C)		-	kW	For water-to-air heat pumps: T_j = - 15 °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}	0.017	kW	back-up heating capacity *	elbu	0.0	kW
Thermostat-off mode	P_{TO}	0.030	kW	Type of energy input			
Crankcase heater mode	P_{CK}	0.000	kW	Standby mode	P_{SB}	0.017	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.