Subtype Samsung EHS TDM Plus R410A 12 kW & 16 kW (wall-mounted hydro unit)

Certificate Holder	Samsung Electronics Air Conditioner Europe B.V.
Address	Evert van de Beekstraat 310
ZIP	1118 CX
City	Schiphol
Country	NL
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	Samsung EHS TDM Plus R410A 12 kW & 16 kW (wall-mounted hydro unit)
Registration number	011-1W0379
Heat Pump Type	Outdoor Air/Water
Refrigerant	R410A
Mass of Refrigerant	3.5 kg
Certification Date	29.07.2020
Testing basis	European KEYMARK Scheme for Heat Pumps Rev. 7

Model AE120MXTPEH/EU & AE160MNYDEH/EU	
Model name	AE120MXTPEH/EU & AE160MNYDEH/EU
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water	
EN 14511-4 | Heating	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	55 dB(A)	55 dB(A)
Sound power level outdoor	70 dB(A)	70 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	183 %	114 %
Prated	10.00 kW	8.00 kW
SCOP	4.65	2.92
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.80 kW	7.10 kW
COP Tj = -7°C	2.72	1.94
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.40 kW	4.30 kW
COP Tj = +2°C	4.69	2.86
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.50 kW	2.80 kW
COP Tj = +7°C	5.92	3.43
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.40 kW	5.00 kW
COP Tj = 12°C	7.85	5.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.00 kW	8.00 kW

COP Tj = Tbiv	2.41	1.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.00 kW	8.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.41	1.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4516 kWh	5799 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	55 dB(A)	55 dB(A)
Sound power level outdoor	70 dB(A)	70 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	234 %	140 %
Prated	10.00 kW	8.00 kW
SCOP	5.93	3.57
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.00 kW	8.70 kW
COP Tj = +2°C	3.19	2.03
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	6.70 kW	5.20 kW
COP Tj = +7°C	5.45	3.18
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.20 kW	3.50 kW
COP Tj = 12°C	7.24	4.41
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.00 kW	8.70 kW
COP Tj = Tbiv	3.19	2.03
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.00 kW	8.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.19	2.03
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C

Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2284 kWh	3054 kWh

Model AE120MXTPGH/EU & AE160MNYDGH/EU	
Model name	AE120MXTPGH/EU & AE160MNYDGH/EU
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	55 dB(A)	55 dB(A)
Sound power level outdoor	70 dB(A)	70 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	183 %	114 %
Prated	10.00 kW	8.00 kW
SCOP	4.65	2.92
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.80 kW	7.10 kW
COP Tj = -7°C	2.72	1.94
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.40 kW	4.30 kW
COP Tj = +2°C	4.69	2.86
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.50 kW	2.80 kW
COP Tj = +7°C	5.92	3.43
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.40 kW	5.00 kW
COP Tj = 12°C	7.85	5.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.00 kW	8.00 kW

COP Tj = Tbiv	2.41	1.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.00 kW	8.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.41	1.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4516 kWh	5799 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	55 dB(A)	55 dB(A)
Sound power level outdoor	70 dB(A)	70 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	234 %	140 %
Prated	10.00 kW	8.00 kW
SCOP	5.93	3.57
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.00 kW	8.70 kW
COP Tj = +2°C	3.19	2.03
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	6.70 kW	5.20 kW
COP Tj = +7°C	5.45	3.18
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.20 kW	3.50 kW
COP Tj = 12°C	7.24	4.41
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.00 kW	8.70 kW
COP Tj = Tbiv	3.19	2.03
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.00 kW	8.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.19	2.03
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C

Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2284 kWh	3054 kWh

Model AE160MXTPEH/EU & AE160MNYDEH/EU	
Model name	AE160MXTPEH/EU & AE160MNYDEH/EU
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water	
EN 14511-4 | Heating	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	55 dB(A)	55 dB(A)
Sound power level outdoor	73 dB(A)	73 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	182 %	119 %
Prated	11.00 kW	9.00 kW
SCOP	4.63	3.06
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.90 kW	7.80 kW
COP Tj = -7°C	2.65	2.01
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	6.00 kW	4.70 kW
COP Tj = +2°C	4.62	2.97
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.90 kW	3.50 kW
COP Tj = +7°C	6.12	3.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.40 kW	5.00 kW
COP Tj = 12°C	7.85	5.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.20 kW	8.80 kW

COP Tj = Tbiv	2.33	1.83
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.20 kW	8.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.33	1.83
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	5086 kWh	6111 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	55 dB(A)	55 dB(A)
Sound power level outdoor	73 dB(A)	73 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	240 %	143 %
Prated	11.00 kW	9.00 kW
SCOP	6.07	3.65
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.80 kW	9.00 kW
COP Tj = +2°C	3.10	2.13
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.40 kW	5.90 kW
COP Tj = +7°C	5.45	3.21
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.40 kW	3.50 kW
COP Tj = 12°C	7.62	4.53
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.80 kW	9.00 kW
COP Tj = Tbiv	3.10	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.80 kW	9.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.10	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C

Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2494 kWh	3289 kWh

Model AE160MXTPGH/EU & AE160MNYDGH/EU	
Model name	AE160MXTPGH/EU & AE160MNYDGH/EU
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	55 dB(A)	55 dB(A)
Sound power level outdoor	73 dB(A)	73 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	182 %	119 %
Prated	11.00 kW	9.00 kW
SCOP	4.63	3.06
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.90 kW	7.80 kW
COP Tj = -7°C	2.65	2.01
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	6.00 kW	4.70 kW
COP Tj = +2°C	4.62	2.97
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.90 kW	3.50 kW
COP Tj = +7°C	6.12	3.73
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.40 kW	5.00 kW
COP Tj = 12°C	7.85	5.52
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.20 kW	8.80 kW

COP Tj = Tbiv	2.33	1.83
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.20 kW	8.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.33	1.83
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	5086 kWh	6111 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	55 dB(A)	55 dB(A)
Sound power level outdoor	73 dB(A)	73 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	240 %	143 %
Prated	11.00 kW	9.00 kW
SCOP	6.07	3.65
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.80 kW	9.00 kW
COP Tj = +2°C	3.10	2.13
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.40 kW	5.90 kW
COP Tj = +7°C	5.45	3.21
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.40 kW	3.50 kW
COP Tj = 12°C	7.62	4.53
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.80 kW	9.00 kW
COP Tj = Tbiv	3.10	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.80 kW	9.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.10	2.13
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C

Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2494 kWh	3289 kWh