





**Application Note 3021:
Wire Length Limitations**

Table 1. MHK1-PAR21 Comparison

		P-Series		M-Series		
Remote Controller						
		MHK1	PAR-21MAAU	MHK1	PAR-21MAAU	
OPERATION / MONITORING	No. OF UNITS CONTROLLABLE (GROUPS (G) / INDOOR UNITS (IU))	1 G / 1 IU	1 G / 16 IU	1 G / 1 IU	1 G / 16 IU ^{*15}	
	ON / OFF	✓	✓	✓	✓	
	MODE OPERATION	✓	✓	✓	✓	
	TEMPERATURE SETTING	✓	✓	✓	✓	
	DUAL TEMPERATURE SETTING	✓		✓		
	SET TEMPERATURE RANGE ^{*1}	COOL 50 - 99 °F		COOL 67 - 87 °F	COOL 50 - 99 °F	COOL 61 - 88 °F
		HEAT 40 - 90 °F		HEAT 63 - 83 °F	HEAT 40 - 90 °F	HEAT 61 - 88 °F
		AUTO 50 - 90 °F ^{*6}		AUTO 67 - 83 °F	AUTO 50 - 90 °F ^{*6}	AUTO 61 - 88 °F
	LOCAL PERMIT / PROHIBIT	✓ ^{*2 *3}	✓ ^{*2 *3}			
	FUNCTION LOCKOUT	✓ ^{*5}	✓ ^{*4}	✓ ^{*5}	✓ ^{*4}	
	CHANGE FUNCTION SETTING DATA	✓ ^{*7}	✓ ^{*7}	✓ ^{*7}		
	MONITOR OPERATION DATA		✓			
	FAN SPEED	✓	✓	✓	✓	
	AIR FLOW DIRECTION	✓	✓	✓	✓	
	SPACE TEMPERATURE	✓	✓	✓	✓	
	SPACE TEMPERATURE OFFSET	✓		✓		
	DAY/TIME DISPLAY	✓	✓	✓	✓	
	FILTER SIGN DISPLAY	✓	✓	✓	✓	
	LEAD/LAG ROTATION		✓			
	ERROR RECORD	✓	✓	✓		
ERROR FLASHING	✓	✓	✓	✓		
ERROR CODE	✓	✓	✓	✓		
SCHEDULE	SCHEDULE MODE	✓ ^{*8}		✓ ^{*8}		
	DAILY					
	WEEKLY	✓ ^{*9}		✓ ^{*9}		
	ANNUAL (DAY / MONTH)					
	RESIDENTIAL SCHEDULE	✓		✓		
COMMERCIAL SCHEDULE	✓		✓			
TIMERS	SET TIMES ON / OFF DAILY	4	8	4	8	
	SET TIMES ON / OFF WEEKLY	4 x 7	8 x 7	4 x 7	8 x 7	
	MIN. SETTING UNITS (MINUTES)	15	1	15	1	
	AUTO OFF TIMER	✓ ^{*11}	✓ ^{*10}	✓ ^{*11}	✓ ^{*10}	
	SIMPLE TIMER		✓ ^{*12}		✓ ^{*12}	
INITIAL SETTINGS	SET TEMP RANGE LIMIT	✓	✓	✓	✓	
	DISPLAY °F or °C	✓	✓	✓	✓	
	AUTO LOCK DISPLAY	✓	✓	✓	✓	
	LANGUAGE SETTING		✓		✓	
	GROUP SETTING		✓ ^{*13}		✓ ^{*13}	
	BLOCK SETTING					
	LOSSNAY GROUP SETTINGS					
LOSSNAY INTERLOCK SETTINGS		✓		✓		
ADDITIONAL FUNCTIONS	OPTIMAL START	✓		✓		
	ADJUSTABLE AUTO DEADBAND	✓		✓		
	SPACE TEMP OFFSET ADJUSTMENT	✓		✓		
	DISPLAY OUTSIDE TEMPERATURE	✓ ^{*14}		✓ ^{*14}		
	DISPLAY OUTSIDE HUMIDITY	✓ ^{*14}		✓ ^{*14}		
	HOLD FUNCTION	✓		✓		
	TEMPORARY SCHEDULE OVERRIDE	✓		✓		
	RESET TO FACTORY DEFAULT	✓		✓		
LOSSNAY	LOSSNAY GROUP ON / OFF					
	INTERLOCK ON / OFF		✓		✓	
	LOSSNAY GROUP FAN SPEED					
	INTERLOCK FAN SPEED		✓			
	LOSSNAY MODE					

- *1: Set temperature ranges are subject to installed mechanical equipment.
- *2: Prohibited from Centralized Controllers. (on/off, mode change, set temp and reset filter)
- *3: Must use adapter PAC-SF81MA to be linked to the Centralized Controller (M-NET) per system.
- *4: Lock out all buttons or all buttons except ON/OFF.
- *5: Lock out all buttons, Clock/Time Setting, Mode, Fan, & Setpoint.
- *6: Dual setpoint AUTO utilizes min/max limits for HEAT/COOL based on active mode..
- *7: Change unit configuration/function settings. See equipment manual for details.
- *8: Separate HEAT/COOL schedules. AUTO mode switches between HEAT/COOL schedules.
- *9: 5-2 and 5-1-1 weekly schedules
- *10: Auto off timer can be set from 30 minutes to 4 hours in 30 minute increments.
- *11: Auto off timer can be set for indoor unit to turn off at scheduled time for up to 24 hours in advance.
- *12: Can only be set (on and off) once in 72 hour period and in 1 hour intervals.
- *13: Cross-over wiring is required between indoor units for group operation.
- *14: Requires optional MOS1.
- *15: Requires MAC-397IF-E adaptor.

Table 1 displays the MHK1-PAR21 Comparison for wire length limitations.