

AirMaster Fire Alarm Connections V8

Sites may wish to connect the AirMaster units to the fire alarm system in order to shut down all ventilation units in the event of a fire. This has the effect of reducing incoming oxygen to the building, which helps prevent the fire from spreading.

If units are fully integrated into a BMS system using factory-installed AirMaster BMS modules, the BMS system should be programmed to shut down all units if a fire is detected.

If the units are not integrated into a BMS system, the method for turning off units during a fire alarm is outlined below.

At the end of this document are wiring diagrams for all units and control boxes found in the AirMaster range, all of which will be referred to below. These wiring diagrams can also be found in the “Connections, Communication, Commissioning” Installation manual from pages 22 to 27.

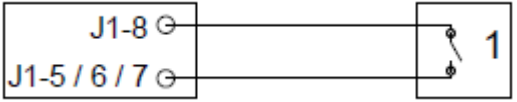
If you do not have this document, it can be downloaded from any the following links:

[AM 150 – AM 800](#) [AM 900 – AM 1200](#) [AM 1000](#)

Installers should connect wiring to the terminal with the description including “External Emergency Stop” on the control box of every unit installed.

For all units, the SAV Systems engineer must change setting Settings > I/O Config > Analog Inputs > AI 3 for ACQ-L control boxes and DI 3 for ACQ-P control boxes to **External Emergency Stop**, as pictured below.

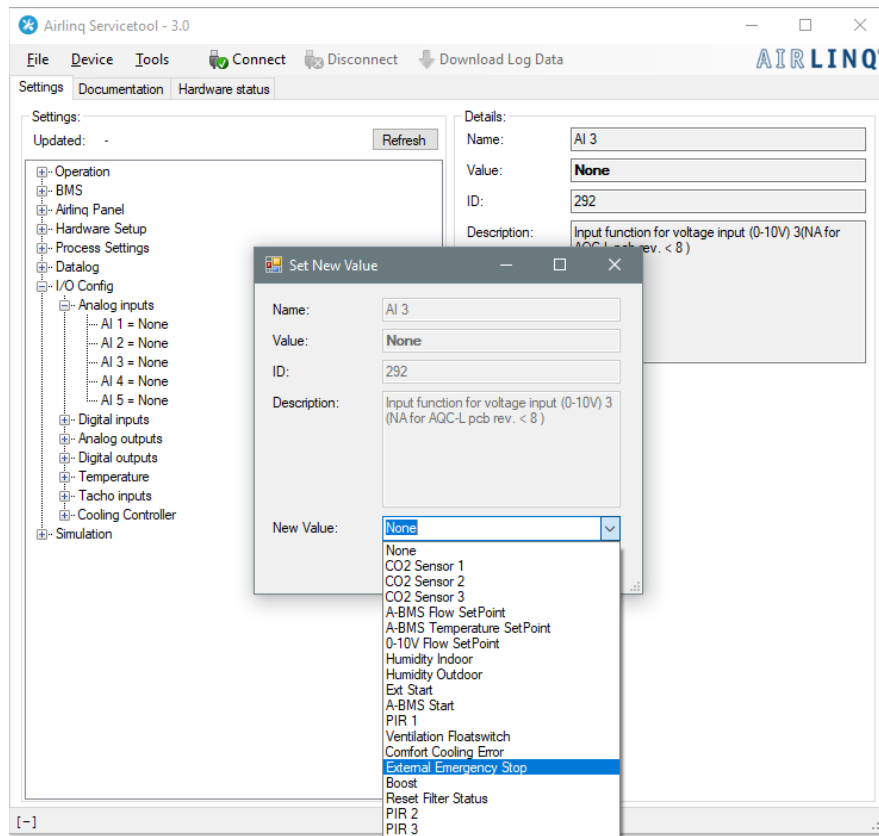
External Emergency Stop Terminals

AM 150	Black control box	
AM 300		
AML 500		
AML 800		
AMP 500	Grey Control Box	
AMP 800		
AM 900		
AM 1000		
AM 1200		

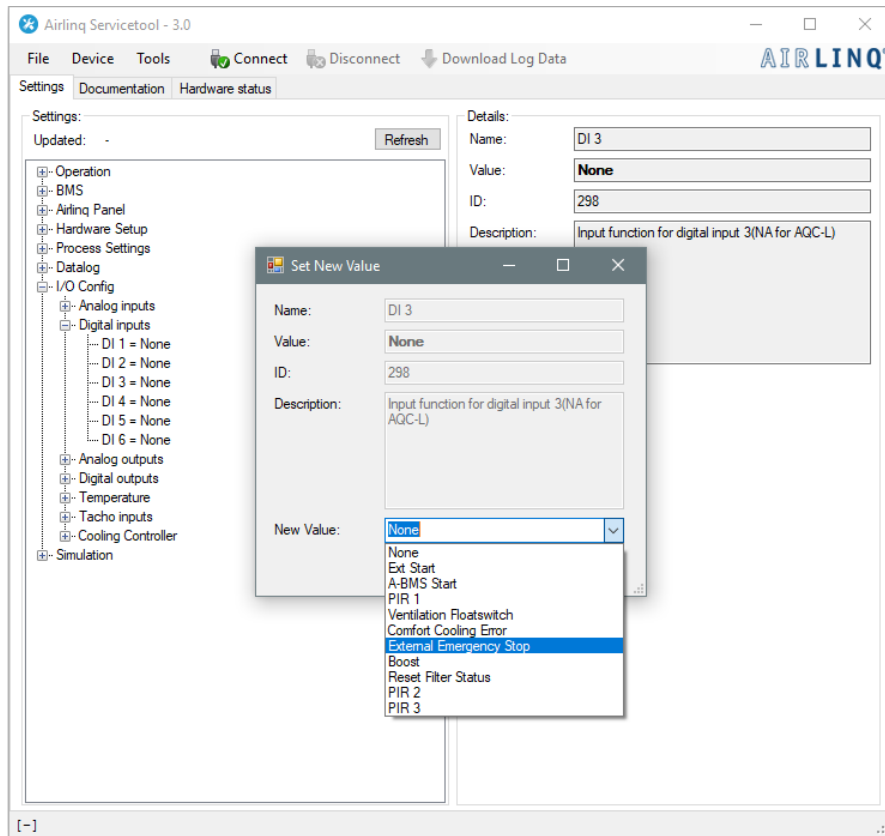
If this terminal is in use, please contact SAV Systems on 01483 771 910 for further advice. Please also refer to page 11 of the *Connections, Communications, Commissioning* manual.

Note: the fire alarm connections are **Normally Closed**

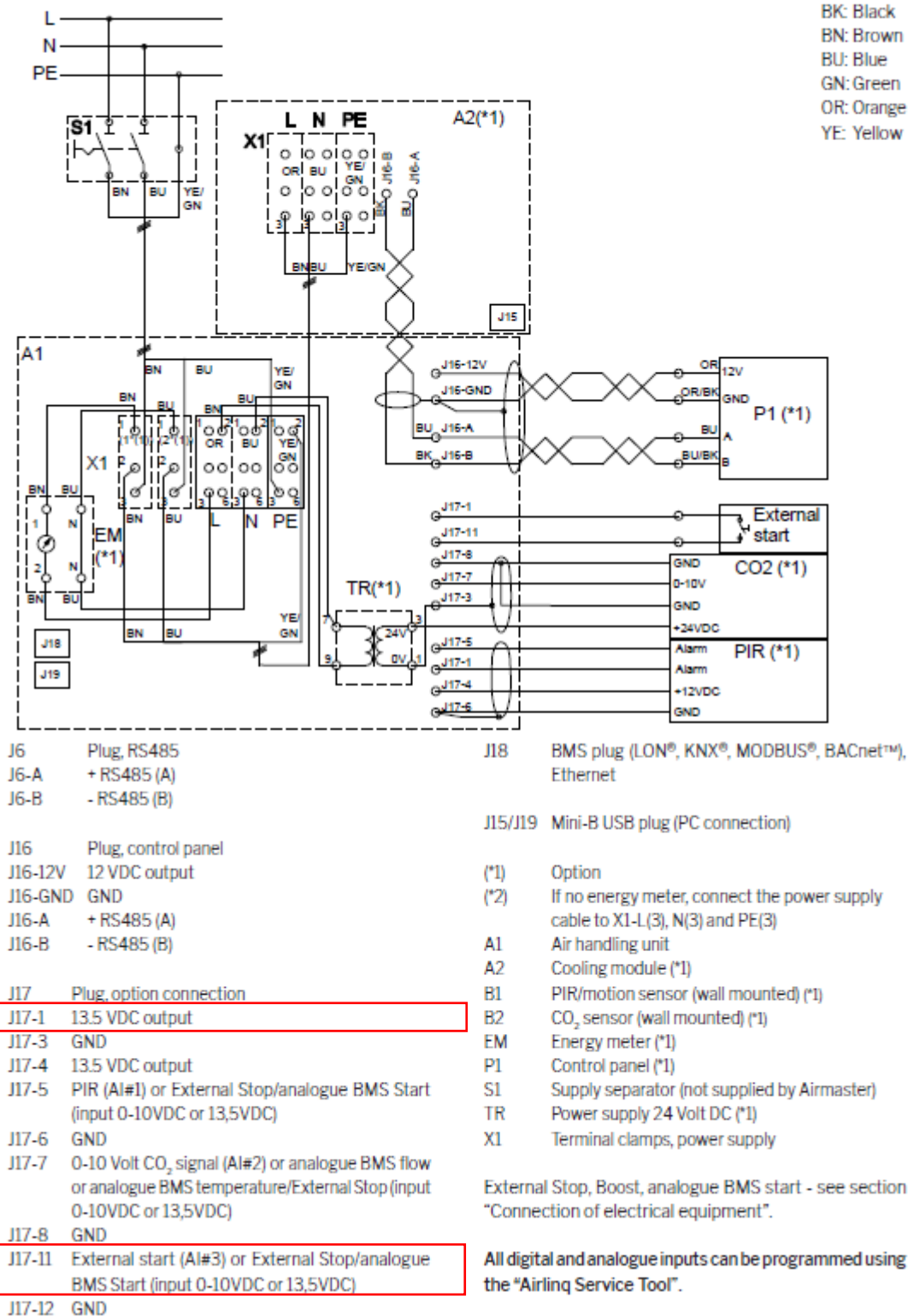
ACQ-L control box:



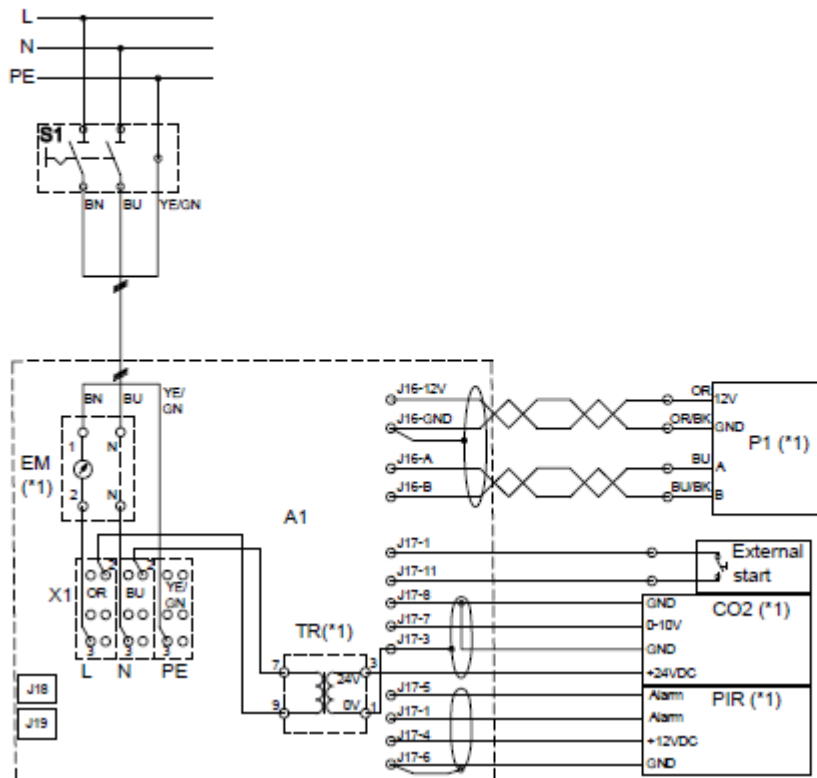
ACQ-P control box:



Standard Connections AM 150 with AQC-L (Black Control Box)



Standard Connections AM 300 with AQC-L (Black Control Box)



BK: Black
 BN: Brown
 BU: Blue
 GN: Green
 OR: Orange
 YE: Yellow

J6 Plug, RS485
 J6-A + RS485 (A)
 J6-B - RS485 (B)

J16 Plug, control panel
 J16-12V 12 VDC output
 J16-GND GND
 J16-A + RS485 (A)
 J16-B - RS485 (B)

J17 Plug, option connection
 J17-1 13.5 VDC output
 J17-3 GND

J17-4 13.5 VDC output
 J17-5 PIR (AI#1) or External Stop/analogue BMS Start (input 0-10VDC or 13,5VDC)

J17-6 GND
 J17-7 0-10 Volt CO₂ signal (AI#2) or analogue BMS flow or analogue BMS temperature/External Stop (input 0-10VDC or 13,5VDC)

J17-8 GND
 J17-11 External start (AI#3) or External Stop/analogue BMS Start (input 0-10VDC or 13,5VDC)

J17-12 GND

J18 BMS plug (LON®, KNX®, MODBUS®, BACnet™), Ethernet

J15/J19 Mini-B USB plug (PC connection)

(*1) Option

A1 Air handling unit

B1 PIR/motion sensor (wall mounted) (*1)

B2 CO₂ sensor (wall mounted) (*1)

EM Energy meter (*1)

P1 Control panel (*1)

S1 Supply separator (not supplied by Airmaster)

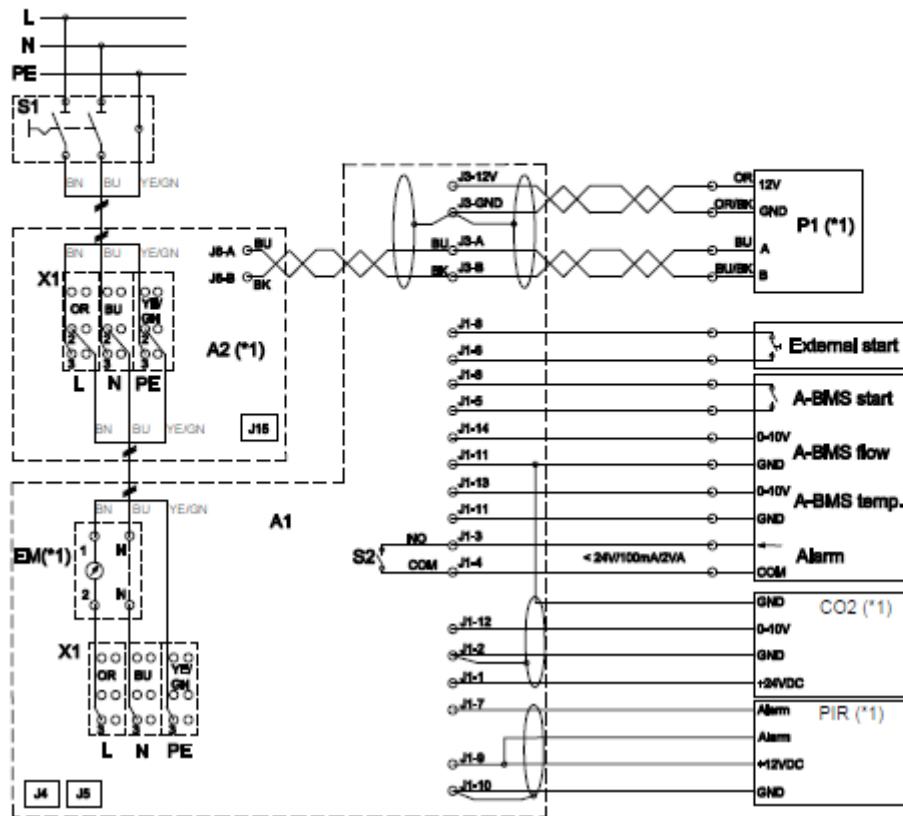
TR Power supply 24 Volt DC (*1)

X1 Terminal clamps, power supply

External Stop, Boost, analogue BMS start - see section "Connection of electrical equipment".

All digital and analogue inputs can be programmed using the "Airlinq Service Tool".

Standard Connections AM 500 and 800 with AQC-L (Black Control Box)



BK: Black
 BN: Brown
 BU: Blue
 GN: Green
 OR: Orange
 YE: Yellow

J6 Plug, RS485
 J6-A + RS485 (A)
 J6-B - RS485 (B)

J16 Plug, control panel
 J16-12V 12 VDC output
 J16-GND GND
 J16-A + RS485 (A)
 J16-B - RS485 (B)

J17 Plug, option connection

J17-1 13.5 VDC output

J17-3 GND

J17-4 13.5 VDC output

J17-5 PIR (AI#1) or External Stop/analogue BMS Start (input 0-10VDC or 13,5VDC)

J17-6 GND

J17-7 0-10 Volt CO₂ signal (AI#2) or analogue BMS flow or analogue BMS temperature/External Stop (input 0-10VDC or 13,5VDC)

J17-8 GND

J17-11 External start (AI#3) or External Stop/analogue BMS Start (input 0-10VDC or 13,5VDC)

J17-12 GND

J18 BMS plug (LON®, KNX®, MODBUS®, BACnet™), Ethernet

J15/J19 Mini-B USB plug (PC connection)

(*1) Option

A1 Air handling unit

A2 Cooling module (*1)

B1 PIR/motion sensor (wall mounted) (*1)

B2 CO₂ sensor (wall mounted) (*1)

EM Energy meter (*1)

P1 Control panel (*1)

S1 Supply separator (not supplied by Airmaster)

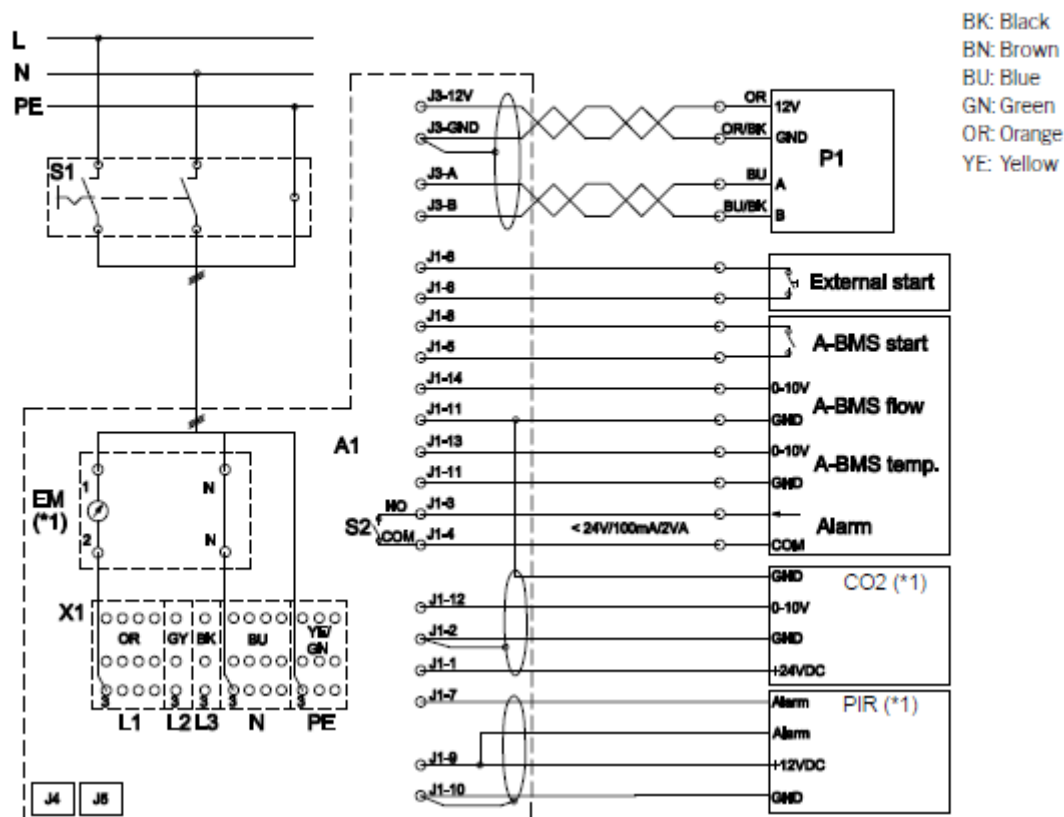
TR Power supply 24 Volt DC (*1)

X1 Terminal clamps, power supply

External Stop, Boost, analogue BMS start - see section "Connection of electrical equipment".

All digital and analogue inputs can be programmed using the "Airlinq Service Tool".

Standard Connections AM 500, 800 and 900 with AQC-P (Grey Control Box)



J1 Plug, option connection
 J1-1 24 V (DC) output, one sensor
 J1-2 GND (24 V)
 J1-3 Alarm terminal clamp 1 (NO)
 J1-4 Alarm terminal clamp 2

J1-5 Analogue BMS Start/External Stop, digital input (DI#3)

J1-6 External start, digital input (DI#2)

J1-7 PIR signal, digital input (DI#1)

J1-8 12 V (DC) output

J1-9 12 V (DC) output

J1-10 GND PIR

J1-11 GND (CO₂ signal, analogue BMS flow signal, analogue BMS temperature signal)

J1-12 0-10 Volt CO₂ signal input (AI#3)

J1-13 0-10 Volt analogue BMS temperature signal input (AI#2)

J1-14 0-10 Volt analogue BMS flow signal input (linear) (AI#1)

J3 Plug, control panel

J3-12V 12 V (DC) output

J3-GND GND (12 V)

J3-A + RS485 (A)

J3-B - RS485 (B)

J4/J15 Mini-B USB plug (PC connection)

J5 BMS plug (LON®, KNX®, MODBUS®, BACnet™), Ethernet

J6 Plug, RS485

J6-A + RS485 (A)

J6-B - RS485 (B)

(*1) Option

A1 Air handling unit

A2 Cooling module (*1; AM 500 and 800)

B1 PIR/motion sensor (wall mounted) (*1)

B2 CO₂ sensor (wall mounted) (*1)

EM Energy meter (*1)

P1 Control panel (*1)

S1 Supply separator (not supplied by Airmaster)

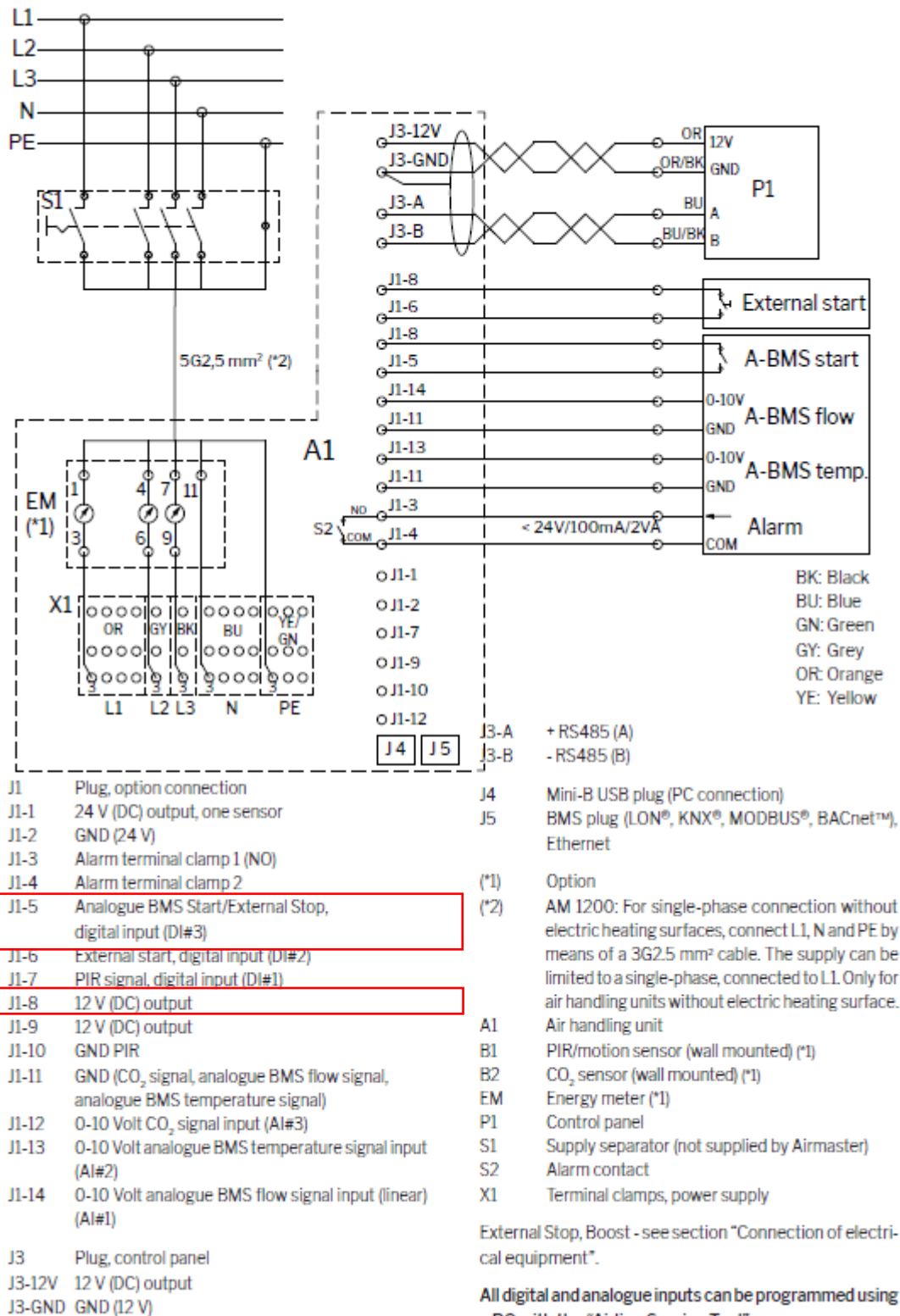
S2 Alarm contact

X1 Terminal clamps, power supply

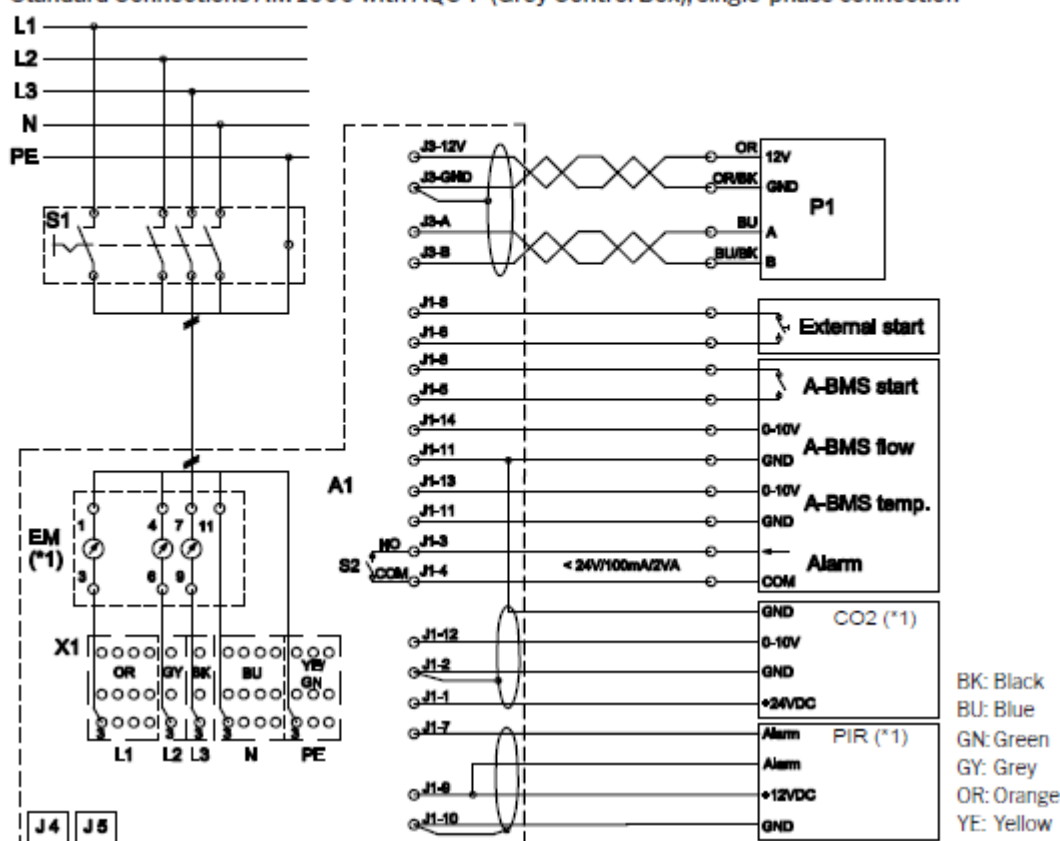
External Stop, Boost - see section "Connection of electrical equipment".

All digital and analogue inputs can be programmed using a PC with the "Airlinq Service Tool".

Standard Connections AM 1000 and 1200 with AQC-P (Grey Control Box)



Standard Connections AM1000 with AQC-P (Grey Control Box), single-phase connection



- | | | | |
|--------|---|------|--|
| J1 | Plug, option connection | J4 | Mini-B USB plug (PC connection) |
| J1-1 | 24 V (DC) output, one sensor | J5 | BMS plug (LON [®] , KNX [®] , MODBUS [®] , BACnet [™] , Ethernet |
| J1-2 | GND (24 V) | | |
| J1-3 | Alarm terminal clamp 1 (NO) | | |
| J1-4 | Alarm terminal clamp 2 | (*1) | Option |
| J1-5 | Analogue BMS Start/External Stop, digital input (DI#3) | A1 | Air handling unit |
| J1-6 | External start, digital input (DI#2) | B1 | PIR/motion sensor (wall mounted) (*1) |
| J1-7 | PIR signal, digital input (DI#1) | B2 | CO ₂ sensor (wall mounted) (*1) |
| J1-8 | 12 V (DC) output | EM | Energy meter (*1) |
| J1-9 | 12 V (DC) output | P1 | Control panel |
| J1-10 | GND PIR | S1 | Supply separator (not supplied by Airmaster) |
| J1-11 | GND (CO ₂ signal, analogue BMS flow signal, analogue BMS temperature signal) | S2 | Alarm contact |
| J1-12 | 0-10 Volt CO ₂ signal input (AI#3) | X1 | Terminal clamps, power supply |
| J1-13 | 0-10 Volt analogue BMS temperature signal input (AI#2) | | External Stop, Boost - see section "Connection of electrical equipment". |
| J1-14 | 0-10 Volt analogue BMS flow signal input (linear) (AI#1) | | All digital and analogue inputs can be programmed using a PC with the "Airlinq Service Tool". |
| J3 | Plug, control panel | | |
| J3-12V | 12 V (DC) output | | |
| J3-GND | GND (12 V) | | |
| J3-A | + RS485 (A) | | |
| J3-B | - RS485 (B) | | |

External Stop, Boost - see section "Connection of electrical equipment".

All digital and analogue inputs can be programmed using a PC with the "Airling Service Tool".