Cable Types

PAVA Systems (VIGIL3)

Connection	Fire Rating[1]	Cable Type
Fire Alarm Inputs	Enhanced	1.0 or 1.5mm 2 core per Zone for Evac or Alert (can be sounder circuits or input/output device). Input output device should be installed within VA rack enclosure
Fire Alarm Inputs	Enhanced	1.0 or 1.5mm 2 core for "RESET" (can be sounder circuits or input/output device). Input output device should be installed within VA rack enclosure
Fire Alarm Outputs	Enhanced	1.0 or 1.5mm 2 core for "General Fault" of the Voice Alarm
Fire Microphone[2]	Enhanced	2 x 1.5mm 4 core
Touchscreen Microphone[2]	Enhanced	Standard Configuration: 2x 1.5mm 4 core Refer to user manual if hard wired bypass required and for wall plate connection options (2m CAT6 Screened supplied for Microphone -> BMS8)
BDM Microphone[2]	N/A	2 x 1.5mm 4 core (screened)
Graphics Package (via BVRDTSM)	Enhanced	Standard Configuration: 2x 1.5mm 4 core Refer to user manual if hard wired bypass required and for wall plate connection options
Network	Enhanced	Copper Network: 4 Pair Draka FT Data (PN: 910245) or CAT5/6 equivalent (Fire Rated Enhanced) (64 Channels) – 100m *Note: Baldwin Boxall systems only require 2 pairs however BS5839-8:2013 27.3 mandates a minimum of 4 pairs* Fibre Network Multimode (64 Channels)) 2 cores required wired as a loop (SC Termination): OM1 (62.5/125) - 3km OM2 (50/125) - 2km OM3 (50/125) - 2km Fibre Network Singlemode (64 Channels) 2 cores required wired as a loop (SC Termination): OS1 (9/125) – 2km OS2 (9/125) – 4km
Ambient Noise Sensor	N/A	1.5mm 4 core
BGM inputs	N/A	Any screened 2 core cable

Analogue Volume Controls	N/A	Any screened 2 core cable
RPVS Digital Volume Controls	N/A	2 pair twisted cable or CAT5
RPAIV Music Select Panels	N/A	Any screened 4 core cable
Speaker lines	Standard	1.5mm 2 core Note: Screen continuity required for BEL1 monitoring
Monitor Speaker	N/A	1.5mm 2 core cable Note: if connected to live zone speaker output and physically separated from rack 2 core standard Fire Rated should be used.
Annunciator Panel[*2]	Enhanced	2 x 4 core 1.5mm
BVRDTSMMON (BVRDTSM - Monitor)	N/A	HDMI & USB, Native maximum 1.8m using cables supplied. Max distance dependant on using 3rd party extenders

Connection	Fire Rating[1]	Cable Type
Fire Alarm Inputs	Enhanced	1.0 or 1.5mm 2 core per Zone for Evac or Alert (can be sounder circuits or input/output device). Input output device should be installed within VA rack enclosure
Fire Alarm Inputs	Enhanced	1.0 or 1.5mm 2 core for "RESET" (can be sounder circuits or input/output device). Input output device should be installed within VA rack enclosure
Fire Alarm Outputs	Enhanced	1.0 or 1.5mm 2 core for "General Fault" of the Voice Alarm
Fire Microphone[2]	Enhanced	2 x 1.5mm 4 core
BVRD Control Microphone[2]	Enhanced	2 x 1.5mm 4 core
Touchscreen Microphone[2]	Enhanced	Standard Configuration: 2x 1.5mm 4 core Refer to user manual if hard wired bypass required and for wall plate connection options (2m CAT6 Screened supplied for Microphone -> BMS8)
BDM Paging Microphone[2]	N/A	2 x 1.5mm 4 core (screened) or 2 x 4 Core Fire Rated Enhanced Note: Where possible do not connect Paging microphones to the same physical RS485 port as Emergency Microphones. If unavoidable connect via Enhanced Fire Rated cable.
PC/Graphics Package Interface	Enhanced	3 x 1.5mm 4 core (Fire Rated Enhanced)
Network	Enhanced	Copper Network: 1.5mm 4 core (Fire Rated Enhanced) wired as a loop. Distance parameters for Copper (min 3 meters): max 300 meters 6 channel (slow). 200 meters 14 channel (fast) Fibre Network Multimode (6 or 14 channel) 2 cores required wired as a loop (ST Termination): OM1 (62.5/125) - 3km OM2 (50/125) - 2km OM3 (50/125) - 2km Fibre Network Singlemode (6 or 14 channel) 2 cores required wired as a loop (ST Termination): OS1 (9/125) – 2km OS2 (9/125) – 4km

Ambient Noise Sensor	N/A	1.5mm 4 core
BGM inputs	N/A	Any screened 2 core cable
Analogue Volume Controls	N/A	Any screened 2 core cable
RPVS Digital Volume Controls	N/A	2 pair twisted cable or CAT5 or 4 Core Fire Rated Enhanced Note: Where possible do not connect RPVS Volume Controls to the same physical RS485 port as Emergency Microphones. If unavoidable connect via Enhanced Fire Rated cable.
RPAIV Music Select Panels	N/A	Any screened 4 core cable
Speaker lines	Standard	1.5mm 2 core Note: Screen continuity required for BEL1 monitoring
Monitor Speaker	N/A	1.5mm 2 core cable Note: if connected to live zone speaker output and physically separated from rack 2 core standard Fire Rated should be used.
Annunciator Panel*2	Enhanced	4 x 1.5mm 4 core Note: 2 x (2 x 1.5mm 4 Core) wired via diverse routes
BVRDTSMMON (BVRDTSM - Monitor)	N/A	HDMI & USB, Native maximum 1.8m using cables supplied. Max distance dependant on using 3rd party extenders

PA Systems

Connection	Fire Rating[1]	Cable Type
Speaker Cables	N/A	2 core flex (suitably sized for speaker load) Note: Screen or 3rd core required for BEL1 monitoring
BDM or BVRD Microphone[2]	N/A	Cat 5 or 2 x 4 core screened cables
Touchscreen Mic[2][3]	N/A	2 x 1.5mm 4 core screened cables (2m CAT6 Screened supplied for Microphone -> BMS8)
Fire alarm mute	Standard	2 core (Fire Rated)
Audio inputs for BGM, CD Players or MP3	N/A	Any 2-core screened cable.
Analogue Volume Controls	N/A	Any screened 2 core cable
RPVS Digital Volume Controls	N/A	2 pair twisted cable or CAT5 or 4 Core Screened
RPAIV Music Select Panels	N/A	Any screened 4 core cable
BT5 & BT8 Telephone Interfaces	N/A	Audio: Any screened 2 core cable Zone Access & Busy: Any single / multi core flex

Note[1]: Baldwin Boxall recommends that Enhanced Fire Rated cable should be used where possible for system reliability however please see BS5839-8 Clause 27 for more information regarding Standard or Enhanced Fire Rated Cabling.

Note[2]: Audio and RS485 Data should not be run in the same cable.

Note[3] Voltage drop should be considered for long runs to touchscreen microphone via CAT5 cable.

The version of this document stored in Q-Pulse is the latest version. Documents from other sources are uncontrolled.
It is the responsibility of the individual to ensure that the correct version is being used.

Page 5 of 8

EVC Systems.

OmniCare (standard)	Fire Rating[4]	Cable Type
OmniCare Loop (containing DRS, BVOCRIF, BVFREPEM)	Standard	4 core FP run as a loop – (Size dependant on cable length, see manual) Note: Max 200m between nodes
OmniCare Loop (containing Fire Telephones)	Enhanced	4 core FP run as a loop – (Size dependant on cable length, see manual) Note: Max 200m between nodes
Annunciator Panel	Enhanced	3 x 1.5mm 4 Core Note: Install no more than 20m from Omnicare Console, connect audio signals in separate cable.
PC/Graphics Package Interface	Enhanced	3 x 1.5mm 4 Core Note: Install no more than 20m from Omnicare Console, connect audio signals in separate cable.
Fire Panel Link	Standard	2 Core Volt Free Contact or 2 Core Sounder Circuit Note: not available with Annunciator or Graphics Package
DTAKIT - BVOCRIF to DTAODL	N/A	2 Core 1.5mm screened or 2 Core 1.5mm screened Fire Rated e.g. FP200 (max distance see below)
DTAKIT Internal (DTAODL > DTARP > DTACP)	N/A	2 Core security cable (single connection per span). This is included in the maximum total resistance below
		Max Distance: 500m (or 40R max total line resistance) from BVOCRIF > DTACP for a Single DTAKIT Max Distance: 250m (or 20R max total line resistance) from BVOCRIF > DTACP for a Dual DTAKIT

The version of this document stored in Q-Pulse is the latest version. Documents from other sources are uncontrolled.
It is the responsibility of the individual to ensure that the correct version is being used.

Page 6 of 8

OmniCarePLUS	Fire Rating[4]	Cable Type
Control Panels & Hub Network	Enhanced	Copper Network: 1.5mm 4 core wired as a loop - 200m max (min 3 meters) Fibre Network Multimode 2 cores required wired as a loop (ST Termination): OM1 (62.5/125) - 3km OM2 (50/125) - 2km OM3 (50/125) - 2km Fibre Network Singlemode 2 cores required wired as a loop: OS1 (9/125) – 2km OS2 (9/125) – 4km
OmniCare Loop (DRS, BVOCRIF, BVFREPEM)	Standard	4 core FP run as a loop – (Size dependant on cable length, see Omnicare manual) Note: Max 200m between nodes
OmniCare Loop (containing Fire Telephones)	Enhanced	4 core FP run as a loop – (Size dependant on cable length, see Omnicare manual) Note: Max 200m between nodes
PC/Graphics Package Interface	Enhanced	2 x CAT5/6 Fire Rated Note: Install no more than 20m from Network Hub, ensure audio and data connected in separate cables.
DTAKIT - BVOCRIF to DTAODL	N/A	2 Core 1.5mm screened or 2 Core 1.5mm screened Fire Rated e.g. FP200 (max distance see below)
DTAKIT Internal (DTAODL > DTARP > DTACP)	N/A	2 Core security cable (single connection per span). This is included in the maximum total resistance below
		Max Distance: 500m (or 40R max total line resistance) from BVOCRIF > DTACP for a Single DTAKIT Max Distance: 250m (or 20R max total line resistance) from BVOCRIF > DTACP for a Dual DTAKIT

CARE2	Fire Rating[4]	Cable Type
CARE2 Network between Panels or NEPs	Enhanced	2 x 2 core Fire Rated Enhanced configured as a loop Note: Max distance from any outstation to Master Console: 5km Note: Max connection length between consoles: 500m
CARE2 > DRS	Standard	2 core 1.5mm Max Distance: 500m or 40R (Total resistance)
CARE2 >DTAKIT (DTAODL)	N/A	2 Core 1.5mm screened or 2 Core 1.5mm screened Fire Rated e.g. FP200 (max distance see below)
DTAKIT Internal (DTAODL > DTARP > DTACP)	N/A	2 Core security cable (single connection per span). This is included in the maximum total resistance below
		Max Distance: 500m (or 40R max total line resistance) from CARE2 > DTACP for a Single DTAKIT Max Distance: 250m (or 20R max total line resistance) from CARE2 > DTACP for a Dual DTAKIT
CARE2 > Fire Telephone and Jack Socket	Enhanced	2 core 1.5mm Max Distance to furthest Jack Socket: 500m Max Distance to Fire Telephone: 500m
Fire Panel Link	Standard	2 Core Volt Free Contact or 2 Core Sounder Circuit
Remote Beacon	N/A	Any 2 core cable

Note[4]: Baldwin Boxall recommends that Enhanced Fire Rated cable should be used where possible for system reliability however please see BS5839-9 Clause 14 for more information regarding Standard or Enhanced Fire Rated Cabling.

Cable Types Key

Cable Type	Notes
N/A	Does not require a Fire Rated Cable as this is classed as non-critical. As such a PVC type Flex cable would be adequate
Standard	Fire Rated "Standard" Cable
Enhanced	Fire rated "Enhanced" cable

The version of this document stored in Q-Pulse is the latest version. Documents from other sources are uncontrolled.
It is the responsibility of the individual to ensure that the correct version is being used.

Page 8 of 8