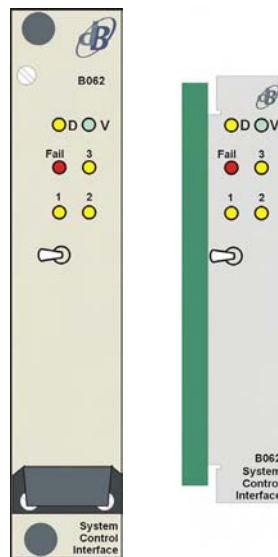# B062

SYSTEM CONTROL INTERFACE

Handbook Version 1.0

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Contents

Introduction

The B062 System Control Interface is fully compatible with the Hawkeye range of modules and provides enhanced control as an interface or as a stand-alone controller. It is pin compatible with the B061 controller and comprises 16 opto-coupled inputs and 8 relay outputs. It may be fitted with an expansion board and a second rear connector to increase the number of opto-coupled inputs to 24 and outputs to 32 (8 relay and 24 open collector).
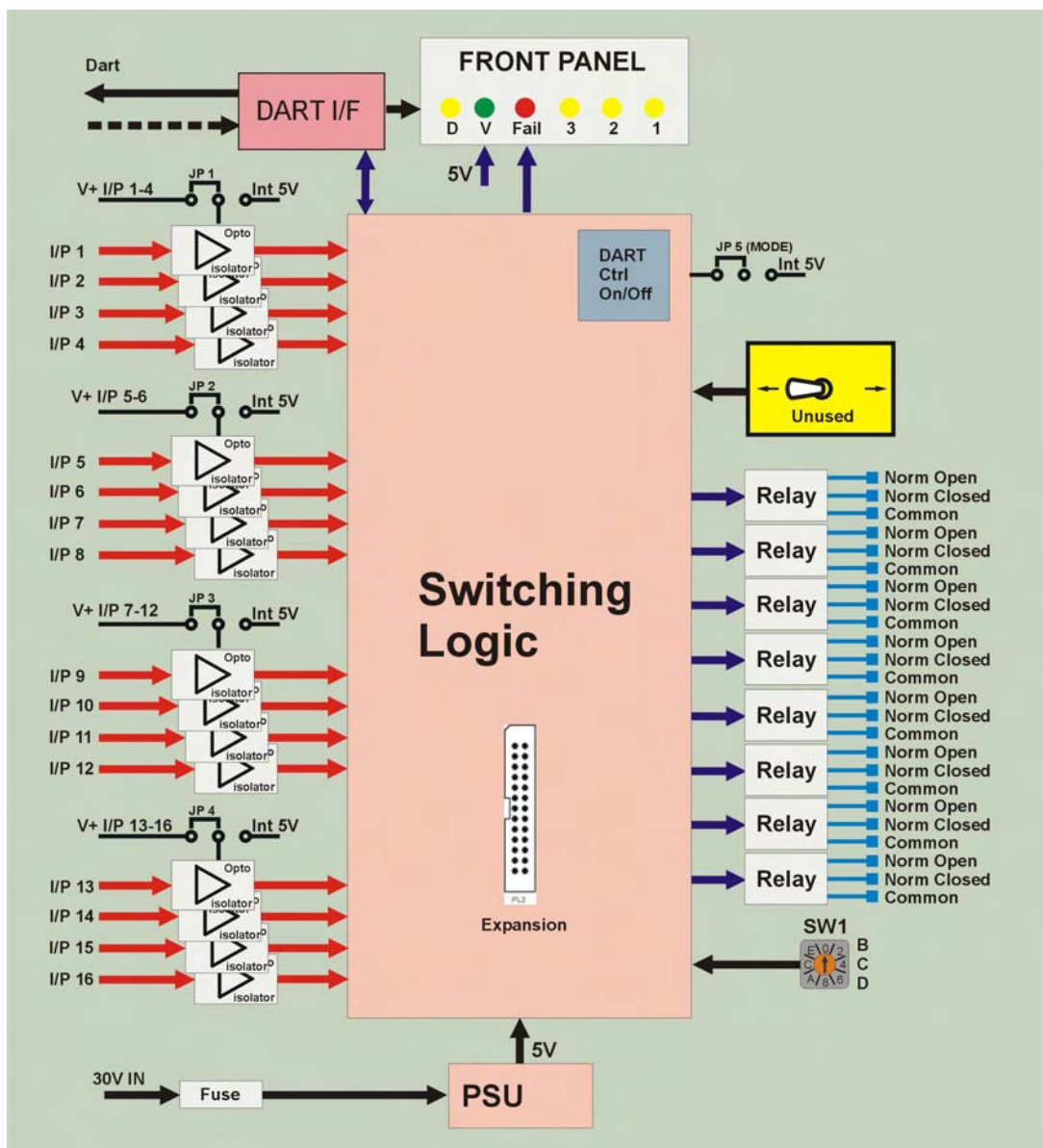
The B062 System Control Interface

This module is normally fitted with customer specified software, but typically selected conditions on the input are used to determine the state of the relay or open collector outputs.

It fits in either 1U or 3U Avitel or Vistek frames and all power is derived from the frame PSU. A passive rear connector is required for all signal interconnections (see Installation chapter).

It is provided with good to fail input timers, and input-to-output logic mapping. This means that certain conditions on the input can determine the state of the output relays. Some outputs (software programmable) may be controlled remotely via DART, by active inputs or by using a 16 position BCD switch on the module.

A front panel switch is available for a customer specified purpose such as local/remote, auto/manual or other application and there are 6 LEDs of which three are used to show Power, DART and System status. The others (labelled 1 and 2) are available for custom applications.

The B062 has a DART* interface for interrogation and control. This provides a simple way of obtaining information from equipment with GPI outputs and feeding it into the DARTnet system, used by Vistek.

The presence (or absence) of the B061 can be monitored via DARTnet using Vistek's ViewFind and/or a Vistek V1605 control panel.
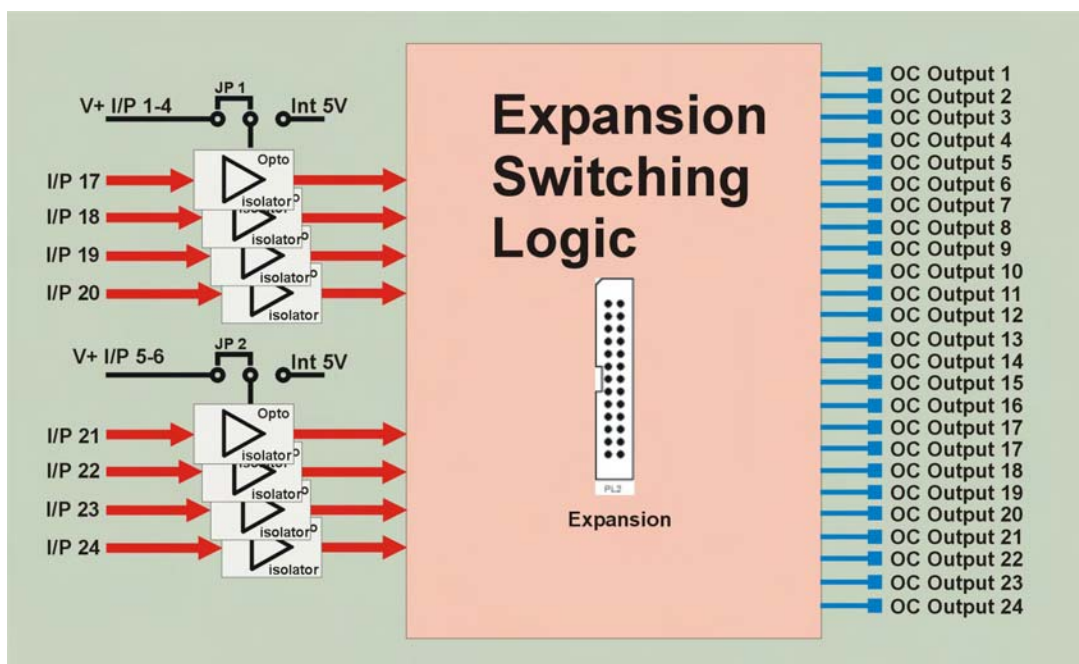
The B062 Expansion Module

The B062 Expansion Module is a half card that is inserted next to the main B062 module to which it is connected to via an expansion cable. A second rear connector is then fitted to the expansion module to provide the extra outputs.

dB Broadcast also offers the option of customised software for the B062 to match a customer's particular application.

Main features

- System control interface for Vistek frames and Avitel frames

- 16 opto isolated inputs and 8 relay outputs - expandable to 24 opto isolated inputs and 32 outputs (8 relay and 24 open collector)

- Options for internal or external opto-isolator pull up voltage

- DART module presence/absence monitoring and optional remote control

- Front panel LED's show Dart status, PSU status and system fault – two LEDs available for custom functions

- Front panel toggle switch available (currently unassigned)

Typical applications and custom features

- Interface between manual control panel and switch module (such as B043)

- Three-way control system switching for computer monitoring with customer specified priorities and revertives.

- Customer specified failover hysteresis – (control switching delay after alarm trigger and after alarm clear down)

- BCD switch coding to expand available inputs or outputs – requires compatible controlled device(s)

Installation

Selecting rear connectors

The available rear connectors and the frames/signal I/O used are as follows:

Type	Frame	Connectors	Signal types
AMC 3339K	1U/3U Avitel	DIN41614	
VB120	1U(F010)/3U Vistek	2 X 25 way 'D' types	

3U Avitel style chassis AMC 3339K

1U/3U Vistek style chassis VB120
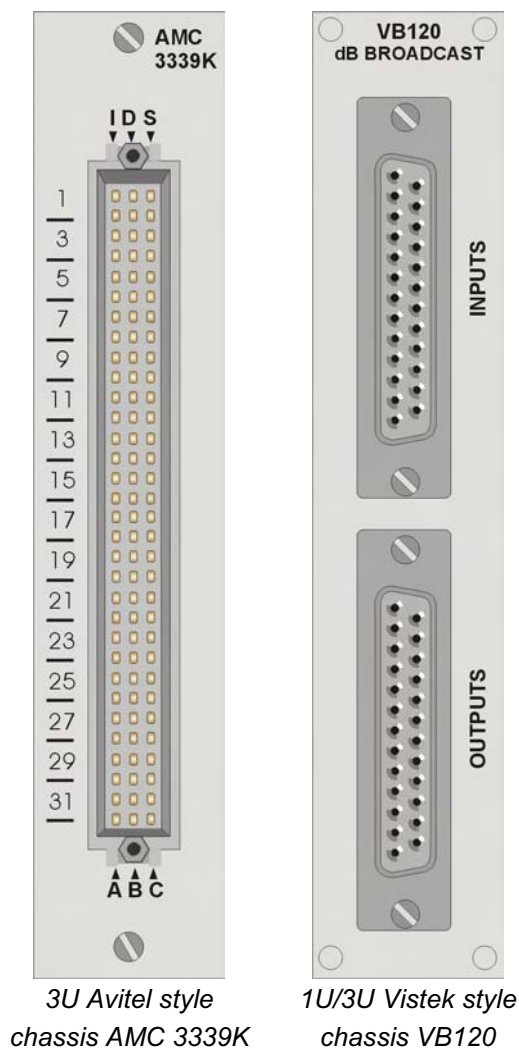
Note: Two rear connectors are required for the full I/O range of expanded systems.

Rear panel connections (Main module AMC3339K - DIN41614)

Pin No	A	B	C
1	0V Screen	Not connected	Not connected
2	0V Screen	Not connected	Not connected
3	0V Screen	Input-01	Input-02
4	0V Screen	Input-03	Input-04
5	0V Screen	V+ Inputs 1-4	V+ Inputs 5-8
6	0V Screen	Input-05	Input-06
7	0V Screen	Input-07	Input-08
8	0V Screen	Input-09	Input-10
9	0V Screen	Input-11	Input-12
10	0V Screen	V+ Inputs 9-12	V+ Inputs 13-16
11	0V Screen	Input-13	Input-14
12	0V Screen	Input-15	Input-16
13	0V Screen	0V	0V
14	0V Screen	Not connected	Not connected
15	0V Screen	0V	OUT-8 NO
16	0V Screen	0V	OUT-8 NC
17	0V Screen	Not connected	Not connected
18	0V Screen	Not connected	Not connected
19	0V Screen	Not connected	Not connected
20	0V Screen	Out-7 NO	Out-8 Com
21	0V Screen	Out-7 Com	Out-7 NC
22	0V Screen	Out-6 NC	Out-6 NO
23	0V Screen	Out-5 NO	Out-6 Com
24	0V Screen	Out-5 Com	Out-5 NC
25	0V Screen	Out-4 NC	Out-4 NO
26	0V Screen	Out-3 NO	Out-4 Com
27	0V Screen	Out-3 Com	Out-3 NC
28	0V Screen	Out-2 NC	Out-2 NO
29	0V Screen	Out-1 NO	Out-2 Com
30	0V Screen	Out-1 Com	Out-1 NC
31	0V Screen	Not connected	Not connected
32	0V Screen	Not connected	Not connected

Note: NO = normally open, NC = normally closed and Com = common

Rear panel connections (Main module VB120 – 2 x 25 way 'D' types)

OUTPUTS - 25 way D type		INPUTS - 25 way D type	
PIN	**OUTPUTS 1-8**	**PIN**	**INPUTS 1-8 / RS232**
1	Out-8 NO	1	Input-01
2	Out-8 Com	2	Input-03
3	Out-7 NC	3	0V Ground
4	Out-6 NO	4	0V Ground
5	Out-6 Com	5	Input-05
6	Out-5 NC	6	Input-07
7	Out-4 NO	7	Input-09
8	Out-4 Com	8	Input-11
9	Out-3 NC	9	0V Ground
10	Out-2 NO	10	0V Ground
11	Out-2 Com	11	Input-13
12	Out-1 NC	12	Input-15
13	+Ve Vistek Supply	13	+Ve Vistek Supply
14	Out-8 NC	14	Input-02
15	Out-7 NO	15	Input-04
16	Out-7 Com	16	V+ Inputs 1-4
17	Out-6 NC	17	V+ Inputs 5-8
18	Out-5 NO	18	Input-06
19	Out-5 Com	19	Input-08
20	Out-4 NC	20	Input-10
21	Out-3 NO	21	Input-12
22	Out-3 Com	22	V+ Inputs 9-12
23	Out-2 NC	23	V+ Inputs 13-16
24	Out-1 NO	24	Input-14
25	Out-1 Com	25	Input-16

Note: NO = normally open, NC = normally closed and Com = common

Rear panel connections (Exp module AMC3339K - DIN41614)

| Pin No	A	B	C
1	PWR 0V	-	-
2	0V	-	-
3	0V	INPUT-17	INPUT-18
4	0V	INPUT-19	INPUT-20
5	0V	V+INP 17-20	V+INP 21-24
6	0V	INPUT-21	INPUT-22
7	0V	INPUT-23	INPUT-24
8	+V Supply	+V Supply	+V Supply
9	0V Supply	0V Supply	0V Supply
10	<-V>	<-V>	<-V>
11	0V		
12	0V		
13	0V		
14	0V		
15	0V		
16	0V	0V	0V
17	<A1>	0V	OUT-32
18	SEL	SDA	SCL
19	<A2>	0V	OUT-31
20	0V	OUT-29	OUT-30
21	0V	OUT-27	OUT-28
22	0V	OUT-25	OUT-26
23	0V	OUT-23	OUT-24
24	0V	OUT-21	OUT-22
25	0V	OUT-19	OUT-20
26	0V	OUT-17	OUT-18
27	0V	OUT-15	OUT-16
28	0V	OUT-13	OUT-14
29	0V	OUT-11	OUT-12
30	0V	OUT-9	OUT-10
31	0V	-	-
32	PWR 0V	-	-

Note: <> Indicates pins which not connected on the module but which are reserved signals.

Rear panel connections (Exp module VB120 – 2 x 25 way 'D' types)

OUTPUTS - 25 way D type		INPUTS - 25 way D type	
PIN	**OUTPUTS 1-8**	**PIN**	**INPUTS 1-8 / RS232**
1	OUT-32	1	INPUT-17
2	OUT-30	2	INPUT-19
3	OUT-28	3	0V Ground
4	OUT-26	4	0V Ground
5	OUT-24	5	INPUT-21
6	OUT-22	6	INPUT-23
7	OUT-20	7	
8	OUT-18	8	
9	OUT-16	9	0V Ground
10	OUT-14	10	0V Ground
11	OUT-12	11	
12	OUT-10	12	
13	+Ve Vistek Supply	13	+Ve Vistek Supply
14	OUT-31	14	INPUT-18
15	OUT-29	15	INPUT-20
16	OUT-27	16	V+ INP 17-20
17	OUT-25	17	V+ INP 21-24
18	OUT-23	18	INPUT-22
19	OUT-21	19	INPUT-24
20	OUT-19	20	
21	OUT-17	21	
22	OUT-15	22	
23	OUT-13	23	
24	OUT-11	24	
25	OUT-9	25	

Configuration and operation

Front panel control

Avitel   *Vistek*
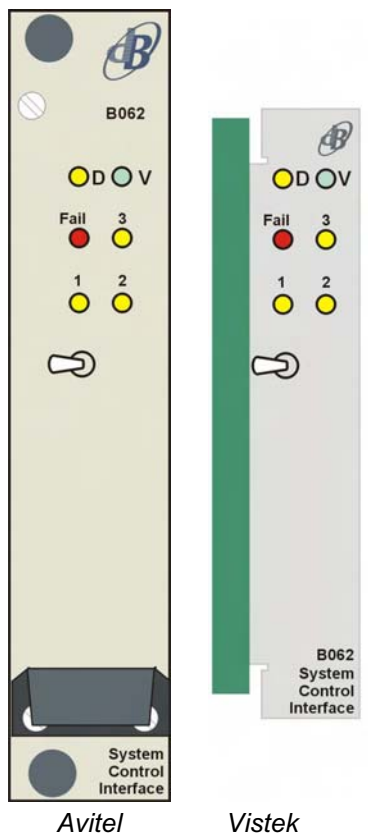
LED Indicators:

D Yellow – Flashing indicates DART monitoring/control is active

V Green – Indicates DC power present & OK

Fail   Red – System Fault

3   Yellow – Not assigned

1   Yellow – Not assigned

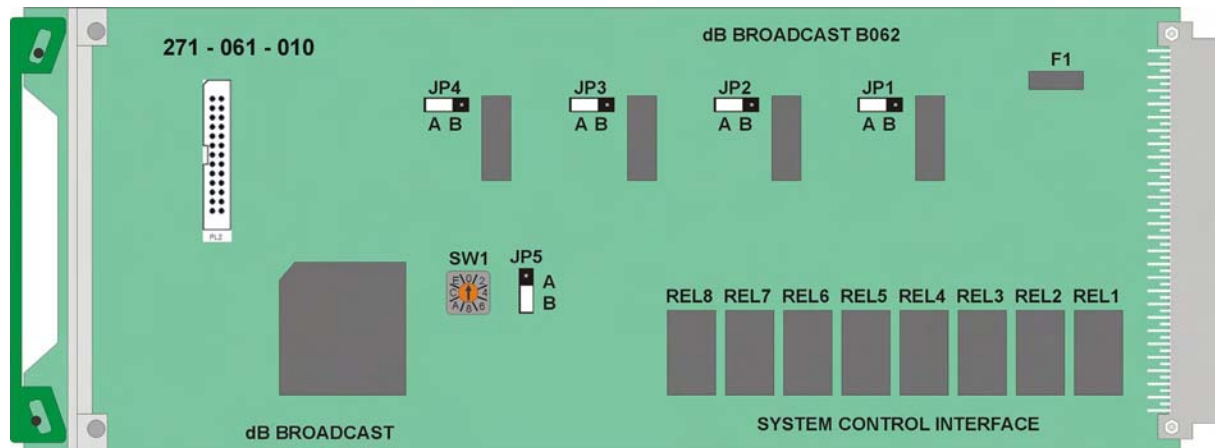**2**   Yellow – Not assigned

Toggle Switches (3 position):

Not assigned

Note: The switch is not fitted to all versions.

The operation of the 3 yellow LEDs and switch are customer application specific; in most applications they are unassigned.
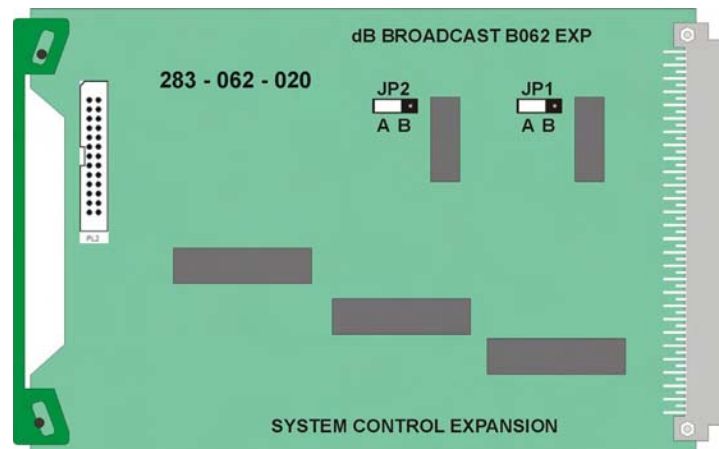
Configuration

The B062 System Control Interface showing jumper links

Link and switch functions

Jumper No	Jumpers
JP1	Position A: Inputs 1-4 external pull-up
	Position B: Inputs 1-4 internal pull-up to 5V
JP2	Position A: Inputs 5-8 external pull-up
	Position B: Inputs 5-8 internal pull-up to 5V
JP3	Position A: Inputs 9-12 external pull-up
	Position B: Inputs 9-12 internal pull-up to 5V
JP4	Position A: Inputs 13-16 external pull-up
	Position B: Inputs 13-16 internal pull-up to 5V
JP5	Position A: DART control disabled
	Position B: DART control enabled
	(DART status monitoring is always enabled)
SW1	Optional BCD switch fitted as an alternative to using external inputs. (For specific customer software option)

Configuring the expansion module

The B062 Expansion module showing jumper links

Link functions

Jumper No	Jumpers
JP1	Position A: Inputs 17-20 external pull-up
	Position B: Inputs 17-20 internal pull-up to 5V
JP2	Position A: Inputs 21-24 external pull-up
	Position B: Inputs 21-24 internal pull-up to 5V

Note: An expansion module should be connected to the main B062 using the ribbon cable provided.

Sample problems and their solutions

The unit does not appear to operate correctly

Check that the green 'V' LED is illuminated and that the module is seated correctly in the frame.

Check that the appropriate rear connector has been wired correctly.

Check that any required external operating voltages are present and that jumpers JP1 to JP4 are set appropriately on the main module.

Check that jumpers JP1 to JP2 are set appropriately on the expansion module.

Check that a ribbon cable connects the expansion ports of the main module and any expansion module.

There is no DART presence/absence monitoring

Ensure that the frame has been fitted with the DART control module. In the Vistek 3RU frame this is the V606 module.

Ordering information

B062 types

Different frames require different mechanical fittings. All module functionality is identical.

B062	Version for Avitel Chassis
B062/V	Version for Vistek Chassis

3U Avitel configuration

ERF 3390K–P1	3U Chassis, 14 Module slots, 1 PSU slot, (no PSUs included)
ERF 3390K–P2	3U Chassis, 12 Module slots, 2 PSU slots, (no PSUs included)
MPS 3392L	PSU for above chassis
AMC 3339K	DIN41614 Rear connector module

1U Avitel configuration

ERF 1131K	1U Chassis, 3 Module slots, PSU mounted externally, (no PSUs included)
MPS 0330	PSU for above chassis (requires mounting holsters)
ECA 0331	Mounting holsters for PSU MPS 0330
AMC 3339K	DIN41614 Rear connector module

3U Vistek configuration

V1606-dB-2PSU	3U Chassis, 14 Module slots, 2 PSU slots (2 PSUs included)
V1606-dB-48V	3U Chassis, 14 Module slots, 2 48V PSU slots (2 48V PSUs included)
VB120	2 x 25 way 'D' type rear connector module

1U Vistek configuration (dual PSU)

F010	1U Chassis, 2 Module slots, 2 PSUs (PSUs included)
VB120	2 x 25 way 'D' type rear connector module

Note: Two rear connectors are required for the full I/O range of expanded systems.