



Pushbuttons and Stack Lights I/O Modules

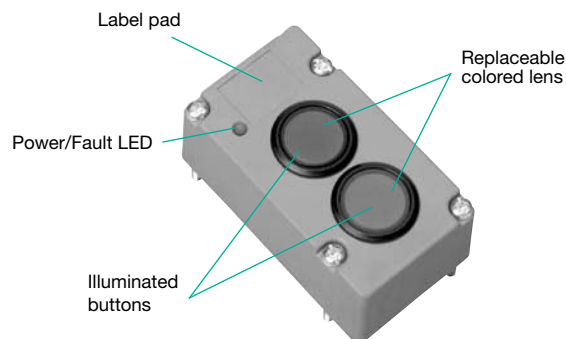
- User configurable housing for pushbutton, selector switches, and LEDs
- Up to 62 LT2 pushbutton stations on one network
- Red, yellow, blue, green, and clear stack light options
- 85 and 105 dBA audible alarms

Pushbutton and Stack Lights Overview

Illuminated pushbutton modules attach easily to AS-Interface without diminishing the simplicity of the system, providing a link between the maintenance personnel and AS-Interface. Pepperl+Fuchs offers I/O pushbutton modules for AS-Interface in two styles:

The VBA-LT2-G1 module features two LEDs that are integrated in the buttons. The LEDs are white with green and red lens covers.

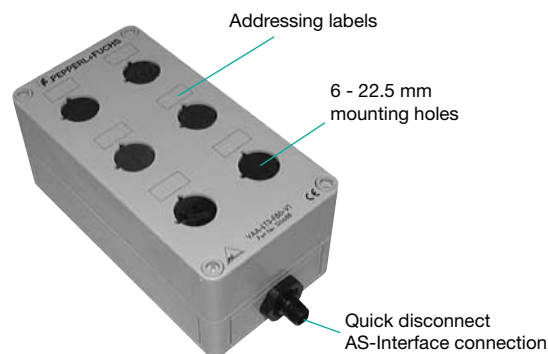
The module has an IP67 protection class and is especially suitable for use in the field. Use the U-G1FFA base to connect to the AS-Interface flat cable, or use the U-G1PP base to connect to the round cable. The VBA-LT2-G1 is fully powered from AS-Interface. The AS-Interface standardized base U-G1FFA includes an integrated addressing jack that allows easy connection to the hand-held addressing device.



The VAA-LT3-F86-V1 module is a user configurable pushbutton station for AS-Interface. The internal AS-Interface I/O module is ideally suited for integrating customer-specific electronics. Six 22.5 mm diameter holes can be used for any combination of pushbuttons, rotary selectors, key switches, and LED clusters that are typically used at operator call stations.

The inputs and outputs are protected against short circuits and overload. The connection to the AS-Interface is implemented by means of a micro (M12 x 1) quick disconnect.







Output overloads are relayed to the AS-Interface gateway/scanner via the “peripheral fault” function. Communication via the AS-Interface remains intact. The pushbutton module can be expanded to a total of 8 inputs/8 outputs by means of an additional printed circuit board module VAA-4E4A-CB1-Z/E2.








The stack light is a fully configurable system utilizing a 4-output AS-i node and up to four light/audible alarm modules. Lights can be used in any combination (including the same color multiple times) while each stack light can have only one audible alarm, which must be the last module. Power to the lights/alarm is switch selectable (internal from AS-Interface or external from AUX power). Status LEDs on the base output node provide detailed diagnostics information. The node is addressed using a standard cinch connector.



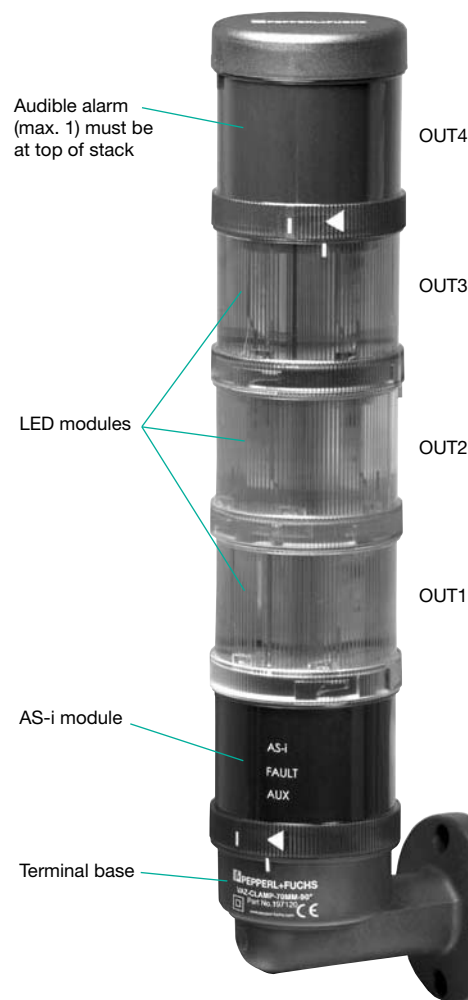


Specifications		2-in (pushbuttons)/2-out (LEDs)	6 knockouts for 4-in/4-out
INPUTS/OUTPUTS		2-in (pushbuttons)/2-out (LEDs)	6 knockouts for 4-in/4-out
MODEL NUMBER(S)		VBA-LT2-G1 ⚡	VAA-LT3-F86-V1
BASES		U-G1FFA, U-G1PP	–
EXTENDED ADDRESSING (62 NODES)		Yes	No
REQUIRED MASTER SPEC.		M3, M4	–
OPERATING VOLTAGE AS-i		26.5-31.6 V	26.5-31.6 V
OPERATING VOLTAGE V_{AUX}		–	–
AS-i OPERATING CURRENT		≤ 50 mA	30-180 mA
INPUTS		PNP, AS-i powered	PNP, AS-i powered
TYPE		Pushbuttons	2-, 3-wire
SUPPLY VOLTAGE		21-31 V from AS-i	21-31 V from AS-i
MAXIMUM CURRENT		–	Limited by operating current of module
SWITCH POINT		–	OFF ≤ 1.5 mA, ON ≥ 4 mA
LOAD CURRENT		–	≤ 8 mA
OUTPUTS		PNP, AS-i powered	PNP, AS-i powered
SUPPLY VOLTAGE		21-31 V from AS-i	21-31 V from AS-i
CURRENT PER OUTPUT		–	100 mA
CURRENT PER MODULE		–	140 mA
DATA BITS			
	D0	LED 2 red	IN1/OUT1
	D1	LED 1 green	IN2/OUT2
	D2	Button 2 red	IN3/OUT3
	D3	Button 1 green	IN4/OUT4
PARAMETER BITS			
	P0	–	–
	P1	–	–
	P2	–	–
PERIPHERAL FAULT BIT		–	–
PROFILE S-10.ID.ID1.ID2		S-B.A.F.E	S-7.0.F.E
PROTECTION (IEC)		IP67	IP65 (when knockouts are covered)
TEMPERATURE RANGE Working		32 °F to +158 °F (-25 °C to +60 °C)	32 °F to +104 °F (-25 °C to +40 °C)
Storage		-40 °F to +185 °F (-40 °C to +85 °C)	-40 °F to +185 °F (-40 °C to +85 °C)
HOUSING MATERIAL		–	Polycarbonate
WEIGHT		110 g (3.9 oz)	80 g (5.3 oz)
APPROVALS		 	 
AS-INTERFACE CONNECTION		 Flat yellow or round cable	 M12 quick disconnect
AUXILIARY POWER CONNECTION		–	–
I/O CONNECTION		–	 Terminals

⚡ Stocked item
Consult factory for all other models

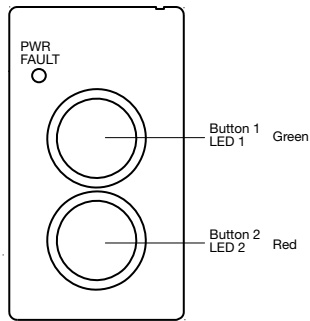
Specifications		
INPUTS/OUTPUTS		4-out
MODEL NUMBER(S)		
<i>AS-i Module (optional)</i>		VAA-4A-70MM ⚡
	<i>Red</i>	VAZ-LED-70MM-RD ⚡
<i>LEDs and Audible Alarm (choose up to 4 with AS-i, 5 without AS-i)</i>	<i>Red (flashing)</i>	VAZ-FLASH-70MM-RD
	<i>Yellow</i>	VAZ-LED-70MM-YE ⚡
	<i>Yellow (flashing)</i>	VAZ-FLASH-70MM-YE
	<i>Green</i>	VAZ-LED-70MM-GN ⚡
	<i>Blue</i>	VAZ-LED-70MM-BU
	<i>Clear</i>	VAZ-LED-70MM-CL
	<i>Alarm (85 dBA)</i>	VAZ-HORN-70MM-85DBA ⚡
	<i>Alarm (105 dBA)</i>	VAZ-HORN-70MM-105DBA
<i>Terminal base, mount and cover (choose 1 set)</i>	<i>Tube mount (order both)</i>	VAZ-CLAMP-70MM ⚡
		VAZ-MH 100-70MM ⚡
	<i>90° mount (order both)</i>	VAZ-CLAMP-70MM-90° ⚡
		VAZ-MH 90°-70MM ⚡
EXTENDED ADDRESSING (62 NODES)		No
REQUIRED MASTER SPEC.		-
OPERATING VOLTAGE AS-i		26.5-31.6 V
OPERATING VOLTAGE V_{AUX}		21.4-27.6 VDC
AS-i OPERATING CURRENT		21-210 mA
AUXILIARY CURRENT LIMIT		≤ 300 mA
OUTPUTS		
<i>SUPPLY VOLTAGE</i>		From AS-i or AUX switchable
<i>CURRENT PER OUTPUT</i>		25 mA - green, blue, clear, 85 dBA alarm 30 mA - red, yellow 35 mA - red, yellow (flashing) 150 mA - 105 dBA alarm
DATA BITS		
	<i>D0</i>	OUT1
	<i>D1</i>	OUT2
	<i>D2</i>	OUT3
	<i>D3</i>	OUT4
PARAMETER BITS		
	<i>P0</i>	Watchdog on*/off
	<i>P1</i>	-
	<i>P2</i>	-
PERIPHERAL FAULT BIT		-
PROFILE <i>S-IQ.ID.ID1.ID2</i>		S-8.F.F.F
PROTECTION (IEC)		IP65, IP40 (using 105 dBA alarm)
TEMPERATURE RANGE		
	<i>Working</i>	-4 °F to +122 °F (-20 °C to +50 °C)
	<i>Storage</i>	-4 °F to +122 °F (-20 °C to +50 °C)
HOUSING MATERIAL		Polycarbonate
APPROVALS		  
AS-INTERFACE CONNECTION		 Terminals
AUXILIARY POWER CONNECTION		 Terminals (optional)

* Default setting

⚡ Stocked item
Consult factory for all other models

Wiring Diagrams

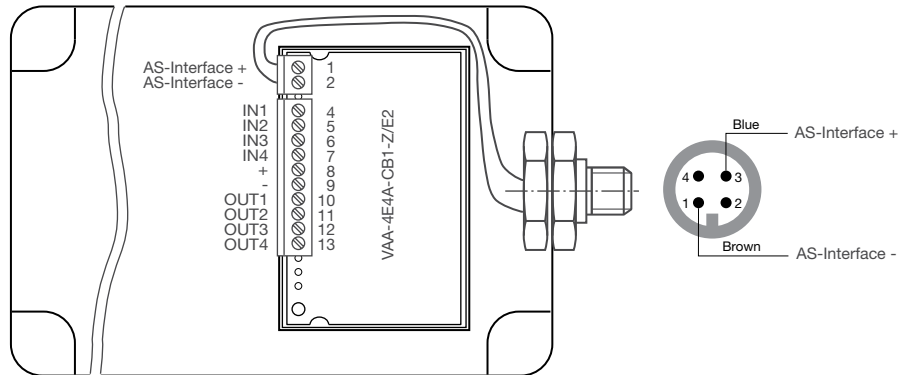
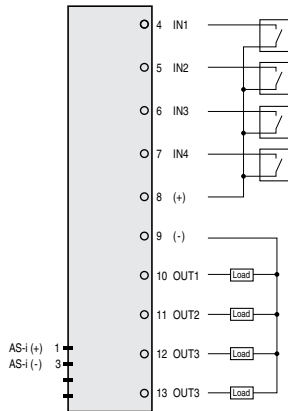
VBA-LT2-G1



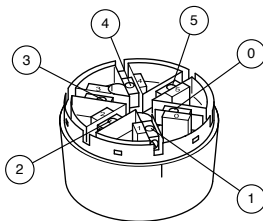
LED Indicators

PWR/FAULT: Green: AS-Interface powered
Red (solid): Address 0 or no communication

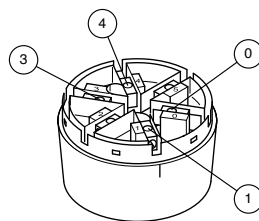
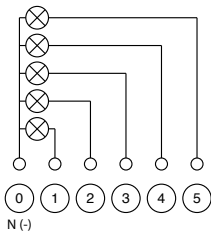
VAA-LT3-F86-V1



Stack lights

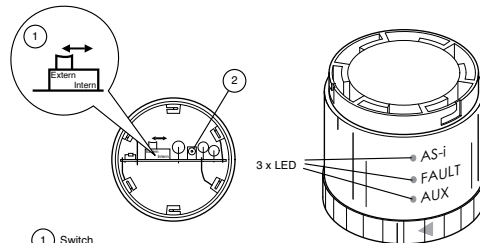


Without AS-Interface Module



With AS-Interface Module

- 0 - AS-Interface
- 1 + AS-Interface
- optional supply from V_{AUX}
- 3 - V_{AUX}
- 4 + V_{AUX}

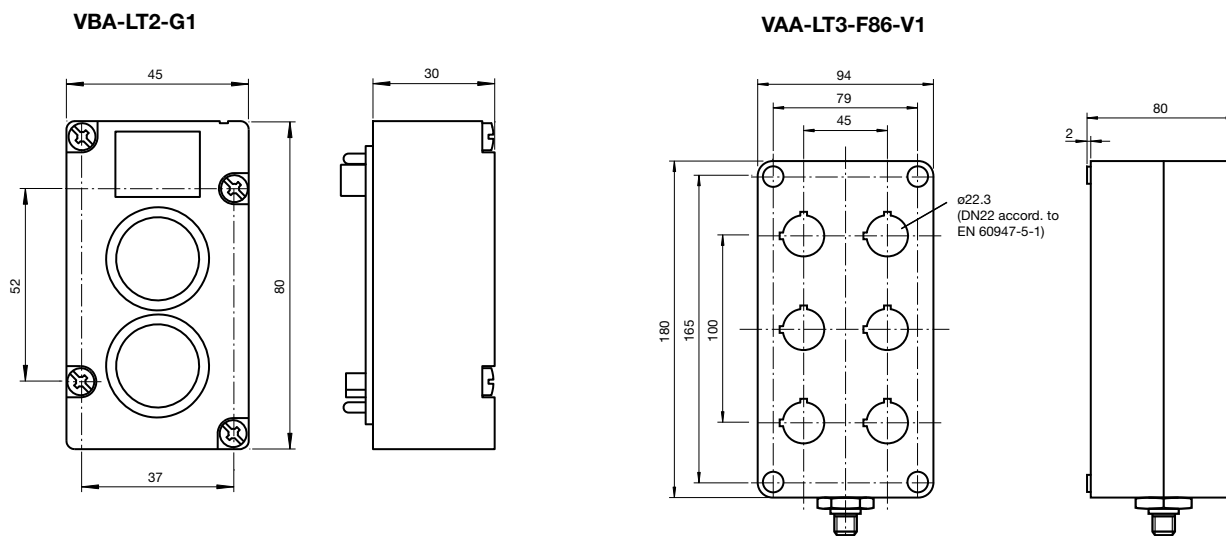


- 1 Switch
- 2 Addressing socket

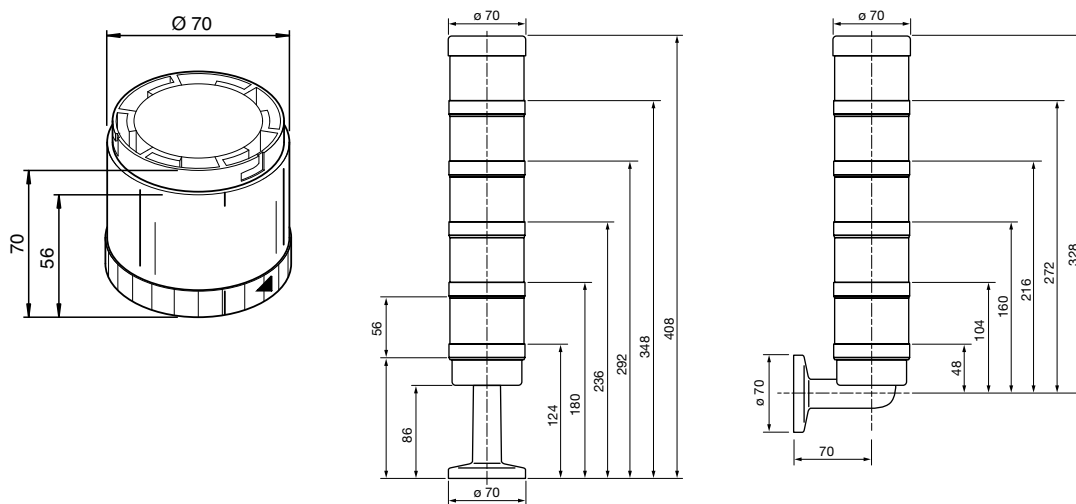
LED Indicators

AS-i: Green: AS-Interface powered
FAULT: Red (solid): Address 0 or no communication
AUX: Green: Auxiliary powered

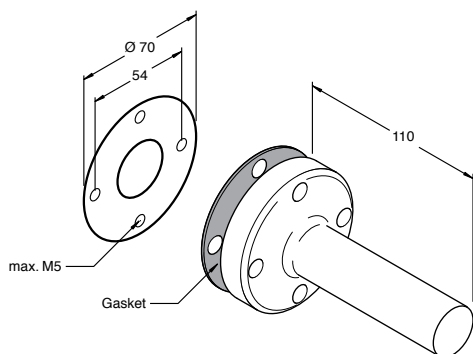
Dimensions (mm)



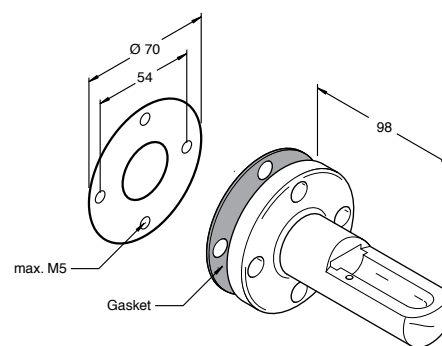
Stack lights



VAZ-MH 100-70MM



VAZ-MH 90°-70MM



I/O Modules Pushbuttons and Stack Lights

Subject to modifications without notice

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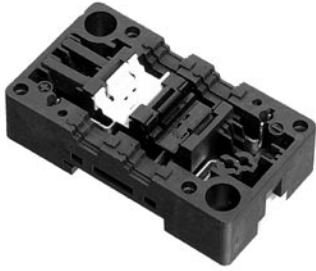
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SENSING YOUR NEEDS

Accessories

Pushbutton Module Accessories

U-G1FFA

Flat cable mounting base for black and yellow cables with addressing jack

**U-G1PP**

Round cable base with external power terminals

**PG11 CORD GRIP**

PG11 cord grip, includes nut and round cable grommet

**PG11-1/2NPT**

PG11 male to 1/2" NPT female conduit adapter



Stack Light Accessories

VAZ-MH-1/2"Conduit-70MM

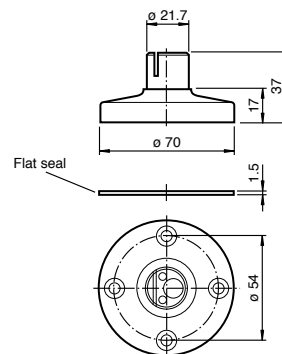
Connects tube mount base VAZ-CLAMP-70MM to 1/2" NPT conduit.

**VAZ-TUBE400-70MM**

A 400 mm long tube. Connects to tube mount base VAZ-CLAMP-70MM.

**VAZ-TUBE-BASE-70MM**

Mounting base for VAZ-TUBE400-70MM



See pages 201-216 for complete AS-Interface accessory listing.