SecuriFire

BX-IM4

Input module for SecuriLine eXtended

from edition 20-2100003-01-02[1]

The BX-IM4 input module has four inputs for monitored and unmonitored polling of potential-free contacts.

It meets the specifications of SecuriLine eXtended for operation on the ring circuit of the SecuriFire fire detection system.

Fig. 1 BX-IM4

Description

The BX-IM4 can be connected to the SecuriLine eXtended ring circuit of the SecuriFire fire detection systems.

The BX-IM4 has four primary inputs for polling potential-free contacts. These inputs monitor the lines for creeping wire breakage and short-circuit.
The "monitored" or "not monitored" operation mode is separately planned for each input; further, each input can also be programmed inverted.
Addressing and assigning BX-IM4 parameters are performed with PC software via the fire alarm control panel.

The BX-IM4 includes a short-circuit isolator. In the event of wire breakage or short-circuit, this functionality ensures that the fault is localised and that operation of the ring circuit remains fully functional.

Interfaces

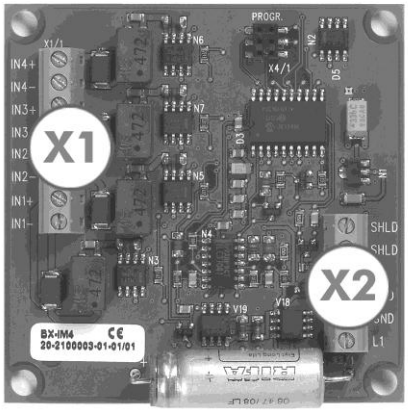

Fig. 2 BX-IM4 interfaces

Inputs (X1)

Terminal	Designation	Description
1	IN4+	Input 4+
2	IN4-	Input 4-
3	IN3+	Input 3+
4	IN3-	Input 3-
5	IN2+	Input 2+
6	IN2-	Input 2-
7	IN1+	Input 1+
8	IN1-	Input 1-

SecuriLine eXtended (X2)

Terminal	Designation	Description
1	L1	Data A
2	GND	GND A
3	GND	GND B
4	L2-	Data B
5	SHLD	Screen
6	SHLD	Screen

Application areas

Information and states of external devices as logical inputs can be sent to the SecuriFire FACP via the BX-IM4. By means of customer-specific planning with SecuriFire Studio and the "external" element type it is possible to display messages (e.g. from fire alarm control panels of third-party manufacturers as well as alarm, access climate and ventilation control panels) as "FAULT EXTERN" or "ALARM EXTERN" on the SecuriFire FACP. In addition, automatic sequences can be programmed using boolean functions in order to actuate fire incident controls, sirens, flashing lights and other controls.

Important notice for service and maintenance work
If fire incident controls are actuated with an FACP, it is necessary to implement electrical, mechanical and optical precautions when service and maintenance work is carried out in order to prevent controls from being unintentionally triggered. After completion of the service and maintenance tasks, the safety precautions must be removed.

Planning

The BX-IM4 can be planned as either monitored (with standby and alarm resistances) or unmonitored (for direct connection to contacts). Assigning the function (monitored or unmonitored) is performed as with addressing/parameterisation using SecuriFire Studio (loop configuration) during commissioning. The mode can be inverted (activation of the input when a contact is opened) for each single input using the software. During planning, later use must be taken into account and an appropriate input planned.

Power requirement

For mixed operation of detectors and modules on the ring circuit, it is important to know that the BX-IM4 has the power consumption of about 4 detectors. This reduces the number of connectable detectors by 4 for each BX-IM4 in use. A maximum of 32 BX-IM4s are permitted per ring circuit.

A tool is available for calculating the maximum possible ring length and the maximum number of participants.

Dimensioned drawing

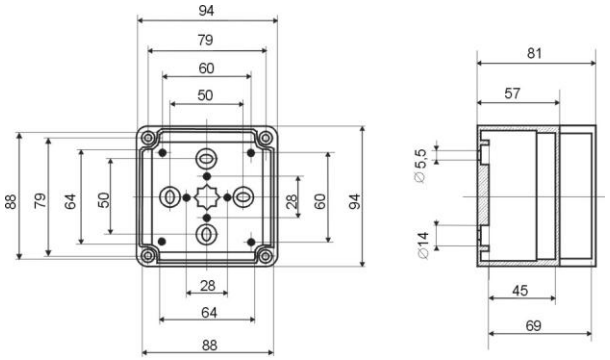

Fig. 3 Dimensioned drawing

Connection examples

Monitored inputs

Polling potential-free contacts, “monitored” mode

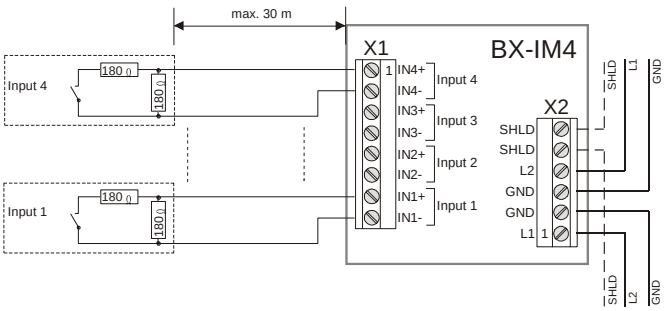

Fig. 4 Monitored inputs

Unmonitored inputs

Polling potential-free contacts, “not monitored” mode.

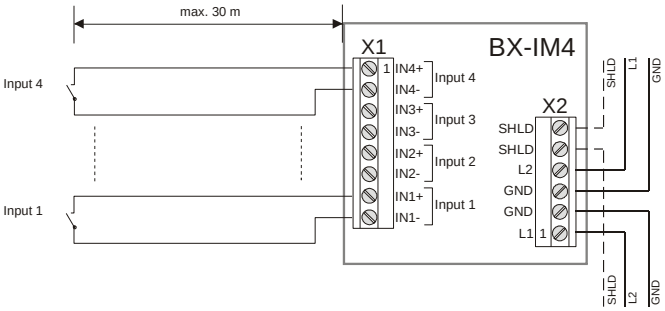

Fig. 5 Not monitored inputs

Article numbers / spare parts

Short designation		Art. number, CH	Art. number
BX-IM4	Input module	115.249 771	20-2100003-01-03
GEH MOD IP66	IP66 housing for BX-IM4	403.239 917	FG020234
MM SM M20	M20 step nipple	428.242 578	MM000181
MM ANB M16	M16 mounting screw union	--	MM000185
MM GM M16	M16 counternut	--	MM000186

Technical data

Type	BX-IM4	
Operating voltage	12 to 30	VDC
Current consumption	0.45	mA
Signal transmission	Serial data transmission, 2-conductor technology	
Protection type	66 with housing	IP
Ambient temperature	-20 to +60	°C
Dimensions (H x W x D)	67 x 67 x 20	mm
Connection	Plug-in screw terminals, max. 1.5	mm^2
VdS approval	G 210131	
EU certificate of conformity (EN 54-17/18)	0786-CPD-21009	

Monitored / unmonitored inputs

Connection	potential-free contacts	
Termination resistance		
for monitored input	180	Ω
for unmonitored input	not applicable	
Alarm resistance		
for monitored input	180	Ω
for unmonitored input	< 1	Ω
Polling voltage	3–6	V
Line resistance	max. 30	Ω
Line length	max. 30	m

Changes to index e: new article number

[1] Reference document: B-HB-035DE_X-LINE-HB - V 1.2 (SRK)

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