

**Fig 3** Installation distance



## XPander Loop Interface Installation Guide

### General

Do not install any XPander equipment until a full site survey has been completed using the XPander site survey tool. A maximum of 5 interfaces are permitted for each site. For sites that require more than 5 interfaces please contact Apollo. All installation engineers must have had certified XPander training.

The XPander Loop Interface part number XPA-IN-14007-APO incorporates an integral loop isolator and is polarity sensitive. It is supplied with a small aerial that fixes to the enclosure. An outdoor and directional aerial is available.

The installation must conform to BS5839-1:2008 or applicable local codes. The loop interface is suitable for indoor use only.

### Installation of XPander Loop Interface

Ensure that the Loop Interface is sited in accordance with the survey and design requirements. The recommended minimum distance between the loop interface antenna and any metal object or equipment is 400mm. The recommended minimum distance to any electrical equipment is 2 metres (radius three dimensionally). See **fig 3** for details.

It is recommended that the interface be mounted such that the aerial is vertical.

Remove the four front plate retaining screws. Remove the front plate and disconnect the earth strap. Retain these for re-assembly.

Remove the cable entry knockouts as required making sure not to damage the electronic circuit boards. **DO NOT REMOVE THE ELECTRONIC CIRCUIT BOARDS.**

Remove the two white thumb-wheel screws from the base of the aerial. Lift the anti-tamper housing up and attach the aerial to the interface. This must be fitted over the aerial screw connection point first. Secure the anti-tamper housing to the interface enclosure using the two thumb-wheel screws. This must be tight enough so the rubber washer is compressed. See **fig 2** for details.

Secure the interface to the mounting surface, using the mounting holes shown in **fig 2**.

After commissioning, replace the earth strap and front cover with the four retaining screws.

### Loop Design

The loop interface is powered from the loop and draws 15mA. A maximum of five loop interfaces per system are permitted. The loop design should be confirmed by means of a loop calculation.

### Logging on and Addressing

Ensure you follow the given instructions for the selection of the frequencies which is printed on the inside lid of the unit. For details of logging on devices and the addressing of these devices, refer to the XPander Commissioning Guide, PP2286.

### Address Setting

It is recommended that the loop address is set prior to the loop power being applied. The address is set using the first seven segments (1-7) of the 8-way DIL switch. The switch is set to '0' or '1' in accordance with the table below. The eighth segment, although not used, should always be set to '0'.

DIL switch setting		DIL switch setting		DIL switch setting		DIL switch setting		DIL switch setting	
addr	1234567	addr	1234567	addr	1234567	addr	1234567	addr	1234567
1	1000000	11	1101000	21	1010100	31	1111100	41	1001010
2	0100000	12	0011000	22	0110100	32	0000010	42	0101010
3	1100000	13	1011000	23	1110100	33	1000010	43	1101010
4	0010000	14	0111000	24	0001100	34	0100010	44	0011010
5	1010000	15	1111000	25	1001100	35	1100010	45	1011010
6	0110000	16	0000100	26	0101100	36	0010010	46	0111010
7	1110000	17	1000100	27	1101100	37	1010010	47	1111010
8	0001000	18	0100100	28	0011100	38	0110010	48	0000110
9	1001000	19	1100100	29	1011100	39	1110010	49	1000110
10	0101000	20	0010100	30	0111100	40	0001010	50	0100110
51	1100110	61	1011110	71	1110001	81	1000101	91	1101101
52	0010110	62	0111110	72	0001001	82	0100101	92	0011101
53	1010110	63	1111110	73	1001001	83	1100101	93	1011101
54	0110110	64	0000001	74	0101001	84	0010101	94	0111101
55	1110110	65	1000001	75	1101001	85	1010101	95	1111101
56	0001110	66	0100001	76	0011001	86	0110101	96	0000011
57	1001110	67	1100001	77	1011001	87	1110101	97	1000011
58	0101110	68	0010001	78	0111001	88	0001101	98	0100011
59	1101110	69	1010001	79	1111001	89	1001101	99	1100011
60	0011110	70	0110001	80	0001010	90	0101101	100	0010011
101	1010011	106	0101011	111	1111011	116	0010111	121	1001111
102	0110011	107	1101011	112	0000111	117	1010111	122	0101111
103	1110011	108	0011011	113	1000111	118	0110111	123	1101111
104	0001011	109	1011011	114	0100111	119	1110111	124	0011111
105	1001011	110	0111011	115	1100111	120	0001111	125	1011111
								126	0111111

### Wiring

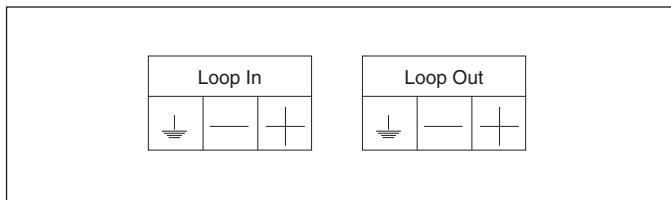


Fig 1 Wiring details

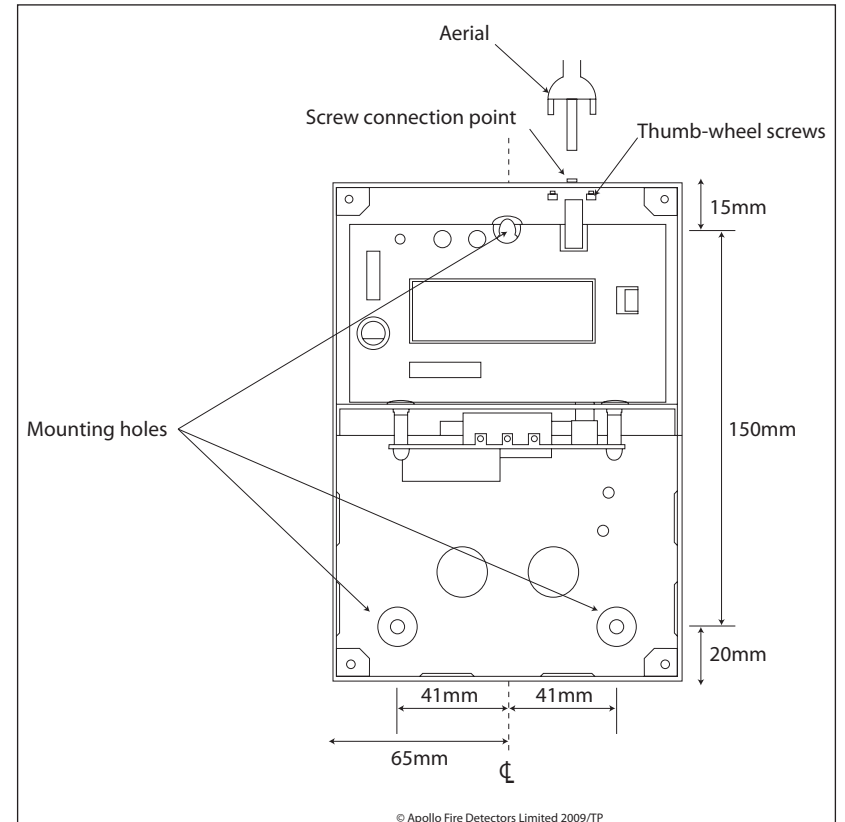


Fig 2 Loop Interface

Connection to the loop is made via two removable terminal blocks. A position is available for functional earth/screen. **Do not connect** the interface case to this terminal. If earth bonding is required, the case should be suitably bonded to building earth.

### Functional Testing

The interface and associated devices should be commissioned according to the commissioning guide; PP2286.

#### Status

Status	Analogue Value
Aerial tamper	4
Quiescent	16
Background noise level too high	5
Background noise level medium	14
Background noise level high	13

#### Technical Data

Operating voltage	17-28VDC
Operating temperature	-10°C to +50°C
Maximum loop current	15mA
Maximum loop impedance	50Ω

For isolator operation information see document PP2090, available on request.