

Summary

Site Name: Max Gate, Dorchester
Control Panel: MX 4100 (*Advanced Electronics Ltd.*)

Loop	Devices	Quiescent	Alarm	Design
1	77	21 mA	108 mA	Loop Satisfactory

Calculations include the following assumptions:

Even distribution of devices along cable beyond 1st device.

As many devices are in alarm as possible.

There is an open circuit on cable at worst position.

Loop 1

Addressable Devices	Quantity	Quiescent	Alarm
Integrated Base Sounder 55-91dB (with Isolator)	14	2800 μ A	70 mA
XP95 Heat Detector	5	1250 μ A	11 mA
XP95 Manual Call Point (with Isolator)	12	1200 μ A	25 mA
XP95 Optical Smoke Detector	46	16 mA	200 mA
Total	77	21 mA	108 mA

Calculate maximum cable run

Cable	1.5 mm ²	12.10 ohms/km/core
Total cable run	3000 m	
Cable run to first device	100 m	
Volt Drop	4.6 V	

49955 Max Gate, Dorchester - Hard Wired System

Project:	Max Gate
Street:	Alington Avenue
City:	Dorchester
Region:	Dorset

DRAWING REF:		DATE:	9th September 2014
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	Quiescent Load			Alarm Load		
Equipment	I(A)	x	TOTAL	I(A)	x	TOTAL
Mx-4100	0.12	1.00	0.12	0.23	1.00	0.23
Auxiliary Supply Output		1.00			1.00	
Sensor/Loop Current	0.02	1.25	0.03	0.11	1.25	0.14
Sounder Output A					1.00	
Sounder Output B					1.00	

TOTAL	Quiescent Load	0.14	Alarm Load	0.36
Standby Capacity (Hrs)	24	3.39	x0.5hrs	0.18

TOTAL LOAD (Quiescent + Alarm) A/Hrs	3.57
x1.2 (Battery Derating Factor) A/Hrs	4.28