

AYC-X64 – Product Description

General Description

This document describes the main features of a family of programmable Wiegand and Clock & Data proximity card and keypad readers with back light, where X stands for AYC-G64, AYC-F64, AYC-Q64.

AYC-X64 proximity and keypad reader provides a high level of compatibility with most host access controllers.

While detection a presence of proximity card or entering PIN (Personal Identification Number) code, the AYC-X64 sends the data over the Wiegand communication lines, change LED to Green for 1 second and sounds short beep.

Advanced features

Two Wiegand communication outputs

Build in optical tamper output

Green LED control input.

The transceiver section consists of an antenna coil, demodulator, filters, amplifiers, and microcontroller.

In the communication protocol, a '0' and a '1' are represented by Manchester modulation.

The demodulation is accomplished by detecting the envelope of the carrier signal. A half-wave capacitor-filtered rectifier circuit is used for the demodulation process. A diode detects the peak voltage of the backscattering signal. The voltage is then fed into an RC charging/discharging circuit.

The demodulated signal must then pass through a filter and signal shaping circuit before it is fed to the microcontroller.

The microcontroller performs data decoding and communicates with the host computer through a SIA Wiegand 26 bit serial interface protocols.

AYC-F64

Mechanical dimensions: 69.5 x 46mm

Wire thickness: D=0.15mm

Number of wraps: W/98T

Induction: 1.38mH at 120Hz, Q factor 0.049

Resistance: 20.4 OHM

AYC-G64

Mechanical dimensions: 85.4 x 25.4mm

Wire thickness: D=0.15mm

Number of wraps: W/110T

Induction: 1.4mH at 120Hz, Q factor 0.048

Resistance: 22.2 OHM

AYC-Q64

Mechanical dimensions: 98.0 x 66.0mm

Wire thickness: D=0.15mm

Number of wraps: W/120T

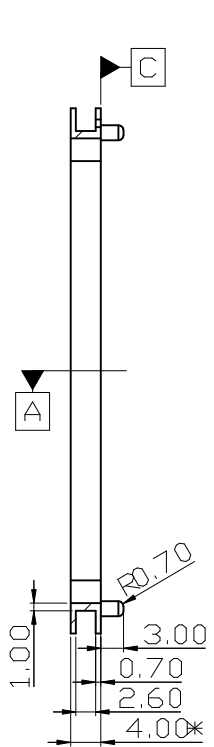
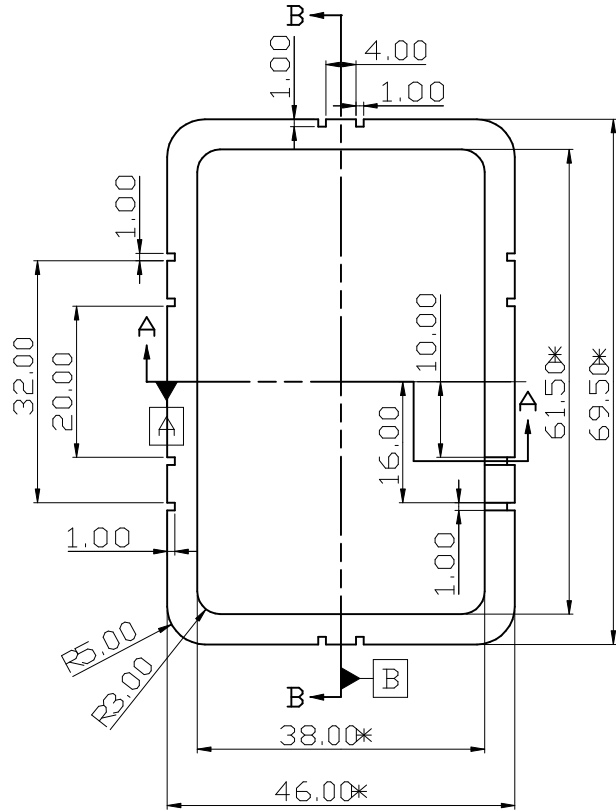
Induction: 3.01mH at 120Hz, Q factor 0.068

Resistance: 33.8 OHM

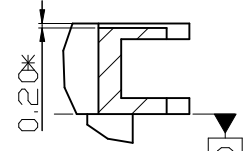
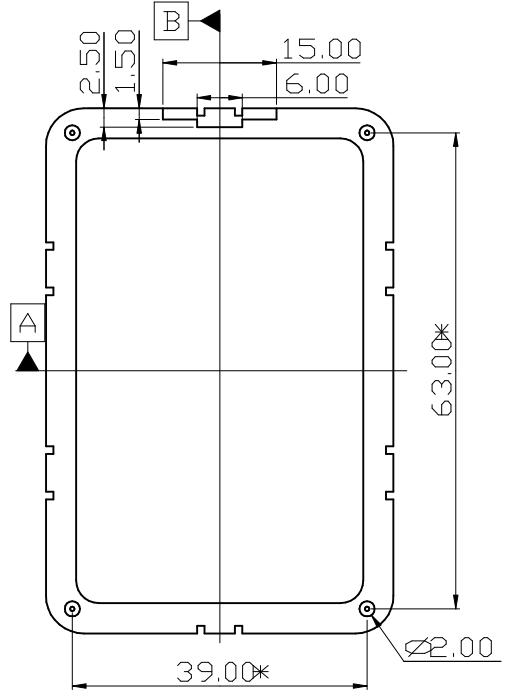
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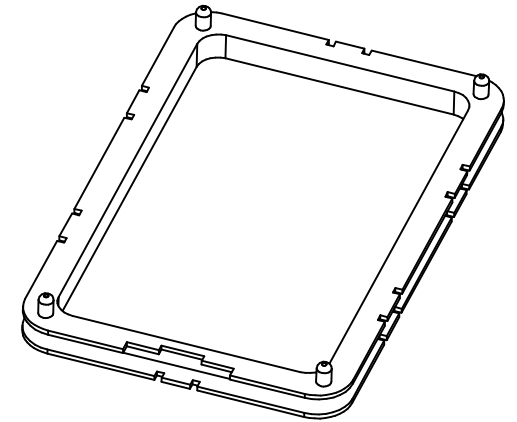
REV.	DETAIL	PLACE	NAME	DATE	APPROVAL	DATE
A0	FIRST ISSUE	ALL	Larkin	May 13,04		



SECTION B-B

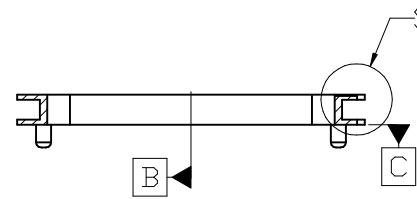


DETAIL D
SCALE 3.000



NOTES:

1. GENERAL PLASTIC WALL THK TO BE 1.00MM UNLESS OTHERWISE SPECIFIED.
2. ALL UNSPECIFIED CORNERS TO BE RADIUS MAX 0.50.
3. DRAFT ANGLES TO BE 0.5° UNLESS OTHERWISE SPECIFIED.
4. ALL ADD * DIMENSION FOR IMPORTANT DIMENSION AND QC CONTROL.



SECTION A-A

UNLESS OTHERWISE SPECIFIED

OPTION	DECIMAL	±1.00	±0.50	±0.10
XX	✓			
XX.X		±0.30	±0.10	±0.05
XX.XX		±0.10	±0.02	±0.01
XX.XXX		±0.01	±0.005	±0.002

RADIUS	CHAMFERS	ANGLE
R05 = 0.050	C01 = 0.10 X 45°	±0°-30°
R1 = 0.100	C02 = 0.20 X 45°	EDM<✓>DI
R2 = 0.20	C05 = 0.50 X 45°	27 - 30
R5 = 0.50	C1 = 1.00 X 45°	
XR = R MAX.	S = STONE	

SURFACE: ▽ ▽ ▽ ▽ ▽	⊕	⊖
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PROJECT	ACCESS CONTROL	
MODEL	ACF/AYF	
DESCRIPTION	FRAME	
PART NO.	0410-0602278-01 6P-2278-B	MATERIAL PC+ABS
FINISH	POLISH	QUANTITY 1/SET

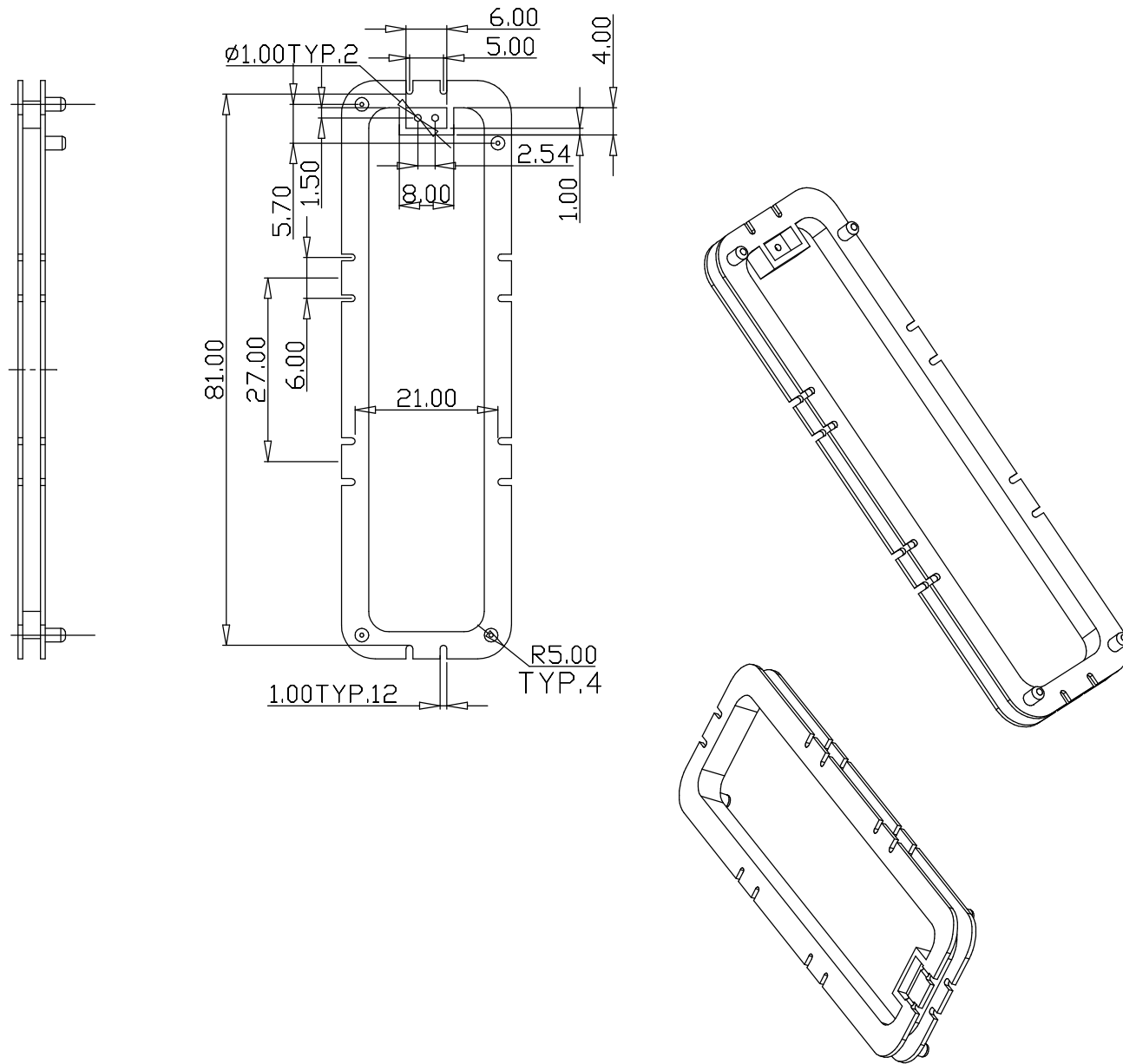
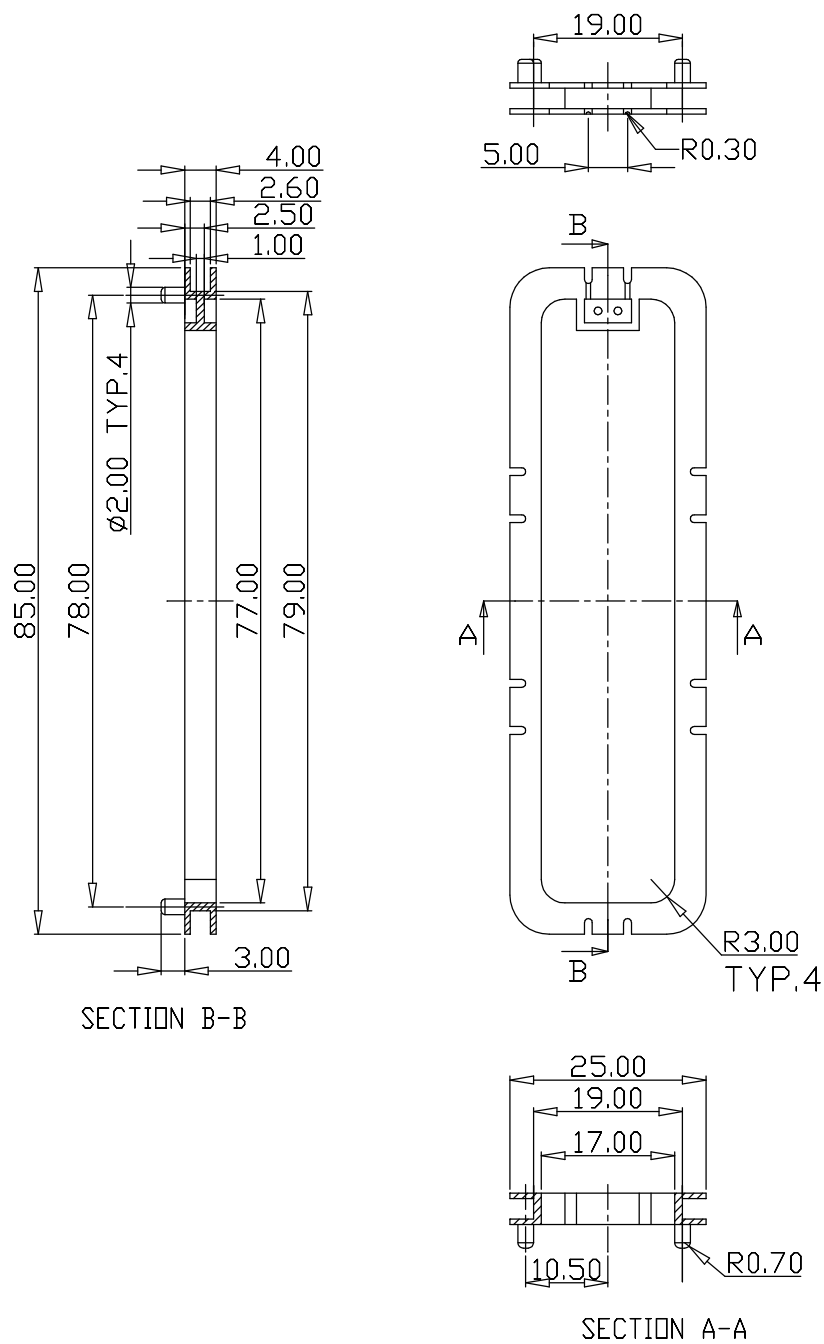
DRAWN	Larkin	DATE	Sep 25,2003
CHECKED		DATE	
APPR'D		DATE	
SCALE	1:1	UNIT	mm
CAD FILE	ACF/AYF_FARME.DWG	DWG.SIZE	A4
DWG.NO.	51338	SHEET 1 OF 1	

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A0	FIRST ISSUE	ALL	LEO	JUL31/03		



NOTES:

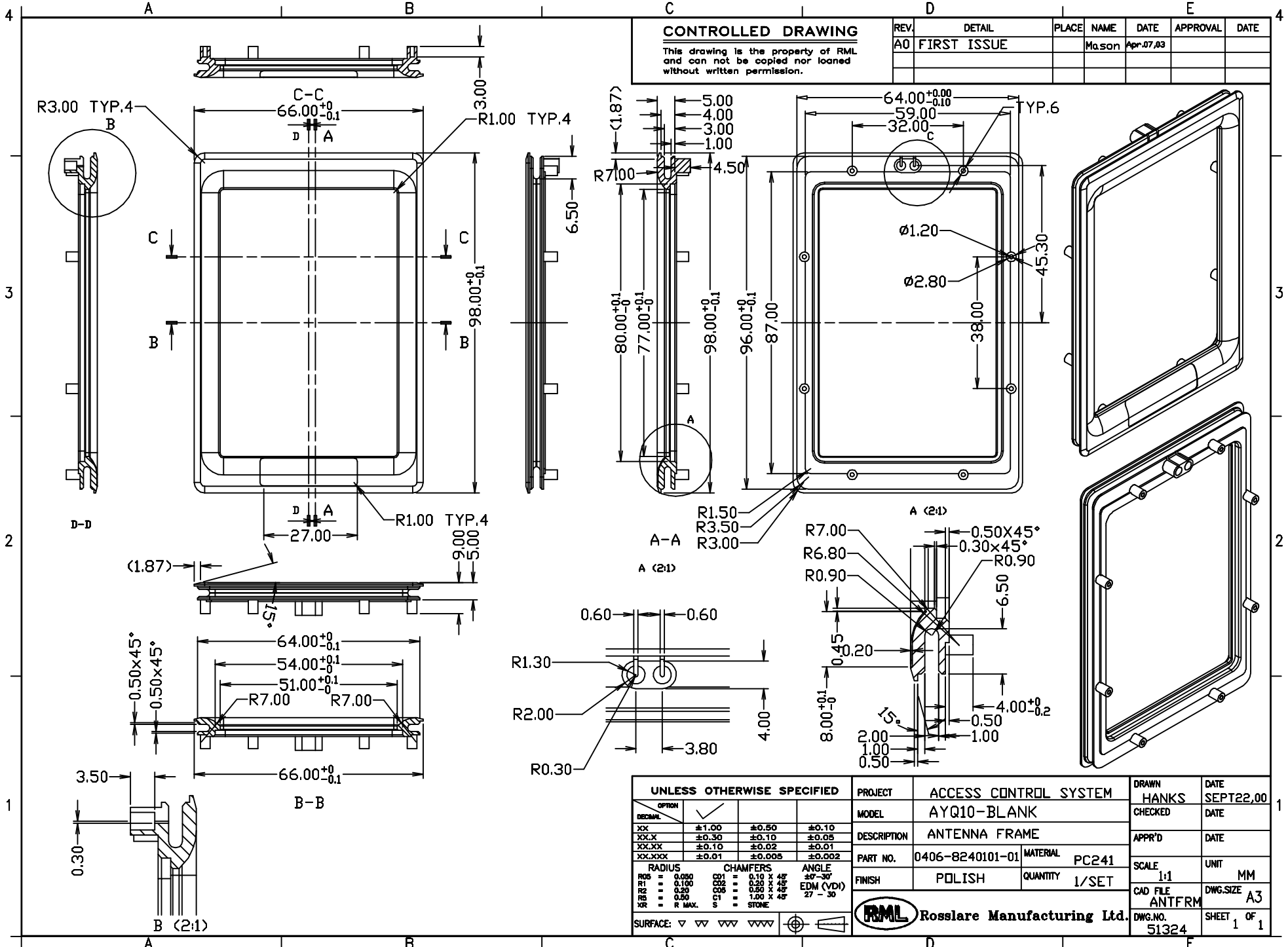
- PART MUST BE FREE OF FLASH, SINK MARK, WAR PAGE AND OTHER MOULDING IMERFECTION.
- THE POSITION OF GATE AND CAVITY NUMBER TO BE APPROVED BY ENGINEERING DEPARTMENT.
- MAX DRAFT ANGLE TO BE 1.0° UNLESS OTHER SPECIFIED.
- ALL SHARP EDGES TO BE MAXIMUM 0.3mm RADIUS UNLESS OTHERWIE SPECIFIED.
- GENERAL WALL THICKNESS TO BE 0.70mm UNLESS OTHERWIES SPECIFIED.

UNLESS OTHERWISE SPECIFIED				PROJECT	ACCESS CONTROL		DRAWN	DATE	
OPTION	✓			MODEL	ACG/AYG		Mason	Jan.07.03	
DECIMAL				DESCRIPTION	FRAME		CHECKED	DATE	
XX	±1.00	±0.50	±0.10	PART NO.	0410-0202123-01	MATERIAL	PC/ABS	APPR'D	DATE
XX.X	±0.30	±0.10	±0.05	FINISH	6P-2123-B	QUANTITY	1/SET	SCALE	UNIT
XX.XX	±0.10	±0.02	±0.01					1:1	mm
XX.XXX	±0.01	±0.005	±0.002					CAD FILE	DWG.SIZE
								ACG/AYG64-FRAME	A3
RADIUS		CHAMFERS	ANGLE	RML Rosslare Manufacturing Ltd.		DWG.NO.	51266	SHEET	1 OF 1
R05 = 0.050		C01 = 0.10 X 45°	±0°-30°						
R1 = 0.100		C02 = 0.20 X 45°	EDM (VDI)						
R2 = 0.20		C05 = 0.50 X 45°	27 - 30						
R5 = 0.50		C1 = 1.00 X 45°							
XR = R MAX.		S = STONE							
SURFACE: ▽ ▽ ▽ ▽ ▽									

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REV.	DETAIL	PLACE	NAME	DATE	APPROVAL	DATE
A0	FIRST ISSUE		Mason	Apr.07,03		



UNLESS OTHERWISE SPECIFIED		PROJECT	ACCESS CONTROL SYSTEM	DRAWN	HANKS	DATE	SEPT22,00
DECIMAL	✓	MODEL	AYQ10-BLANK	CHECKED		DATE	
XX	±1.00	DESCRIPTION	ANTENNA FRAME	APPR'D		DATE	
XX.X	±0.30	PART NO.	0406-8240101-01	MATERIAL	PC241	SCALE	1:1
XX.XX	±0.10	FINISH	POLISH	QUANTITY	1/SET	UNIT	MM
XX.XXX	±0.01			CAD FILE	ANTFRM	DWG.SIZE	A3
XX.XXX	±0.005			DWG.NO.	51324	SHEET	1 OF 1
XX.XXX	±0.002						

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