

ABOUT TIMES-7

We are a high-tech company specializing in the design and manufacture of RAIN (UHF) RFID antennas.

Our journey began in 2006, when Times-7 was founded. Since then, we have developed the largest portfolio of fixed RAIN RFID reader antennas, which are famous for their quality and performance.

We are based in Lower Hutt, New Zealand, but our reach extends worldwide as we export our products through our authorized partner network.

In addition to our world-class products and in-depth expertise, our customers appreciate Times-7's customer service and technical support.

We are responsive in supporting a large global customer base and ensuring the success of our customer's implementations.

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Patent Info: www.times-7.com/patents



A5020NF Near-Field Antenna

The A5020NF Near-Field antenna is part of our versatile and high-performing A5020 family. These antennas are known for their robustness and compact design, making them some of our best-selling solutions for various applications.

The A5020NF is designed to operate in 'tap and go' environments where only objects that come into close contact with the antenna will be tracked. This prevents stray reads and is ideal for situations where accuracy is paramount, like access control and point-of-sale. It is specifically tuned to read only in the near-field zone of 100mm (3.94").

The A5020 range is built to Times-7's high standard for quality and ruggedness. Being rated IP68, the A5020NF can also be used for permanent outdoor applications. As well as being durable, its pleasing and timeless design blends beautifully with most interiors and makes the A5020NF suitable for customer-facing environments.

Ordering Information

Note: Please quote product code, band, cable type & part number

Antenna Product Code	Band	Part Number
A5020NF	865-928 MHz / Wide Band	72057
Cable Accessories Product Code	Cable Type	Part Number
Cable 2m, SMA to RPTNC	T7 195 / 240 / 400	71436 / 71782 / 72042
Cable 4m, SMA to RPTNC	T7 240 / 400	71784 / 72043
Cable 6m, SMA to RPTNC	T7 240 / 400	71904 / 72044
Cable 8m, SMA to RPTNC	T7 240 / 400	71788 / 72045
Other Accessories	Compatibility	Part Number
A5020 Connector Protection Backplate	A5020 LX / CP / MR / NF	72394

For additional information such as RoHS, CE, Reach, please contact us at sales@times-7.com. View the Times-7 Cable Accessory datasheet [here](#)

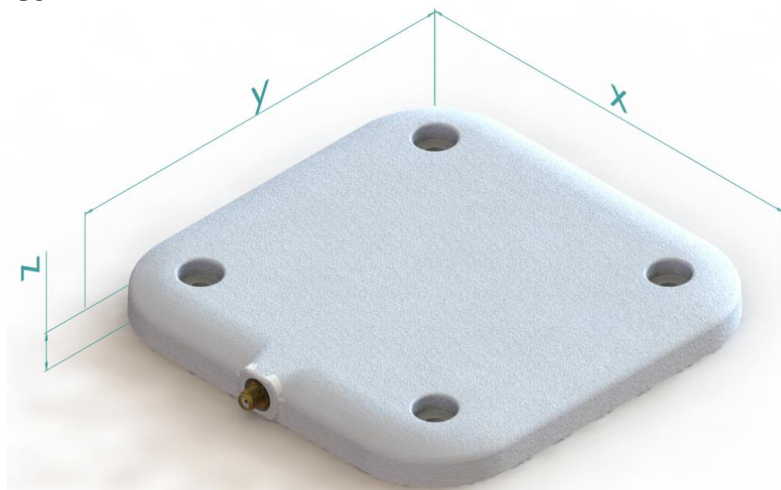
Physical / Environmental Specifications

Unboxed Dimensions: *Length (x) x Width (y) x Depth (z):	150.7 x 149.4 x 14.5mm 5.93 x 5.88 x 0.57"
Boxed Unit Dimensions: (L x W x D)	180 x 155 x 25mm 7.09 x 6.10 x 0.98"
Weight:	Net: 0.18kg / 0.38lbs. Gross: 0.23kg / 0.5lbs.
Radome Material and Color:	Flame retardant and UV resistant white ABS
Environmental Rating:	IP68
Operating and Storage Temperature:	-30° to +65°C / -22° to +149°F
Mounting:	Flush or 100 x 100mm VESA mount using the four mounting holes
Connector Type	SMA female (Jack) side connector
A5020 Flush Screws	30mm 8g Phillips, white wood screws

Electrical Specifications

Frequency Range:	865-928 MHz (ETSI & FCC)
Polarization:	Near-Field
Far-Field Gain:	Equivalent to -30dBi
Far-Field 3dB Beamwidth:	Not Applicable
VSWR:	1.4 typical
Front-To-Back Ratio:	Not Applicable
Axial Ratio:	Not Applicable
Nominal Impedance:	50Ω
Anti-Static Protection:	Yes, DC Grounded
Antenna Detection:	100Ω resistance
Maximum Input Power:	3W

*Azimuth Planes



Applications

Direct Contact Reads

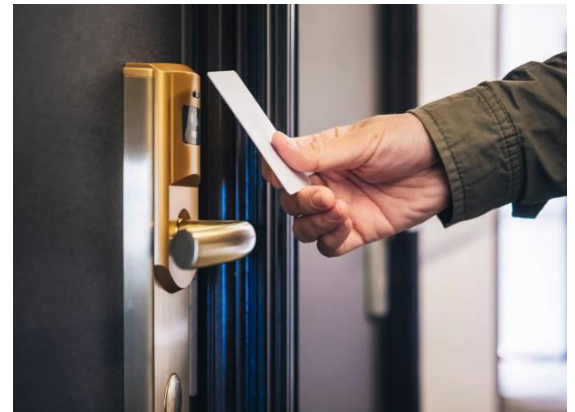
The A5020NF antenna excels where there is a need to read data from objects in close proximity to the antenna.

To record the usage of a high-value precision instrument or tools it would need to be scanned before the lock can be released. Only an antenna with a proximity read is suitable for these applications.



Access Control

With the increasing prevalence of UHF RFID technology being deployed, many opt for a unified RFID system to streamline functions such as inventory management, asset tracking, people tracking, access control, and anti-theft measures. When it comes to 'Tap and Authenticate' enabled doors, the A5020NF stands out as the perfect choice, as it fully aligns with RFID technology standards. This antenna's precision ensures that it exclusively only reads designated tags, preventing any unintended detection, such as someone merely passing through the door.



Tap 'n' Go Payment

The A5020NF antenna impresses with an extremely close read range of $\leq 100\text{mm}$ (3.94") from the antenna's surface, suitable for purchase and payment applications.

Although the A5020NF cannot read credit/debit cards, which are equipped with HF RFID, it is widely used to scan proprietary UHF badges for purchase of goods. For example, employees can scan their badges to pay for food bought from their cafeteria.



Mounting Information

The A5020NF features recessed corner mounting holes compatible with 100 x 100mm VESA spaced mounting brackets, as illustrated in the accompanying image.

The A5020NF's innovative slim design, in conjunction with its SMA connector, provides a distinctive advantage by allowing for flush mounting, which can be easily achieved through the utilization of the corner holes.

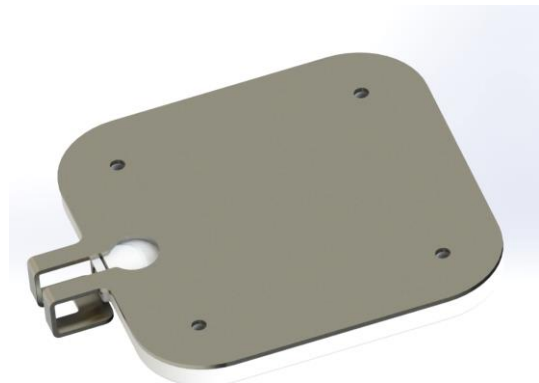


In situations where stress may impact the antenna's connector or cable, we recommend using our Connector Protection Backplate. This backplate safeguards the connector, especially when the antenna is mounted on a bracket in free space. It is compatible with both right-angled and straight cables.

Please note the following precautions:

- Ensure that only finger tightness is used for the SMA connector.
- Use of tools to tighten the connector will apply excessive force and will damage the connector.
- Avoid any load or bending force from the cable on the connector.

For further information, please refer to the drawings below.

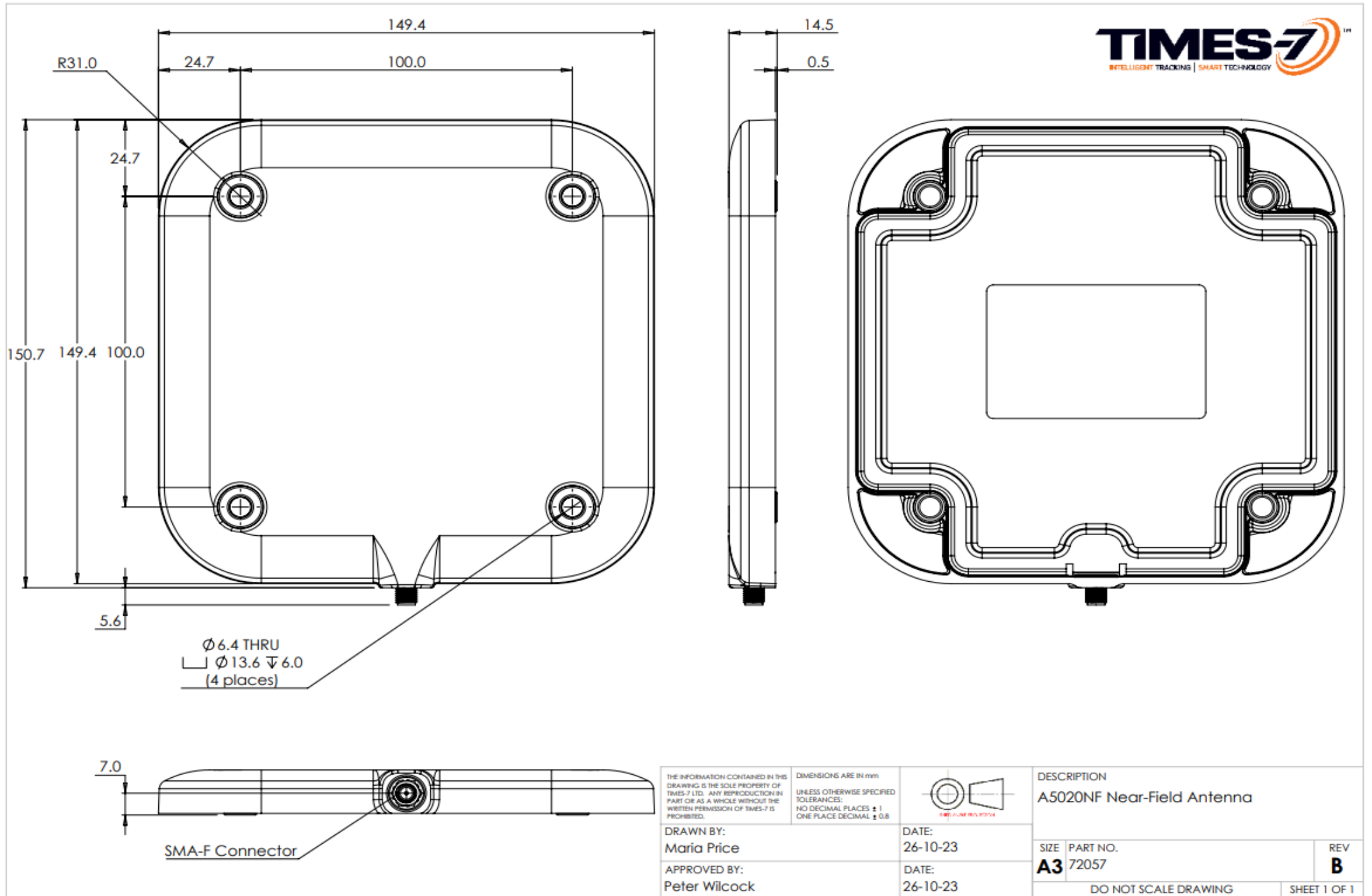


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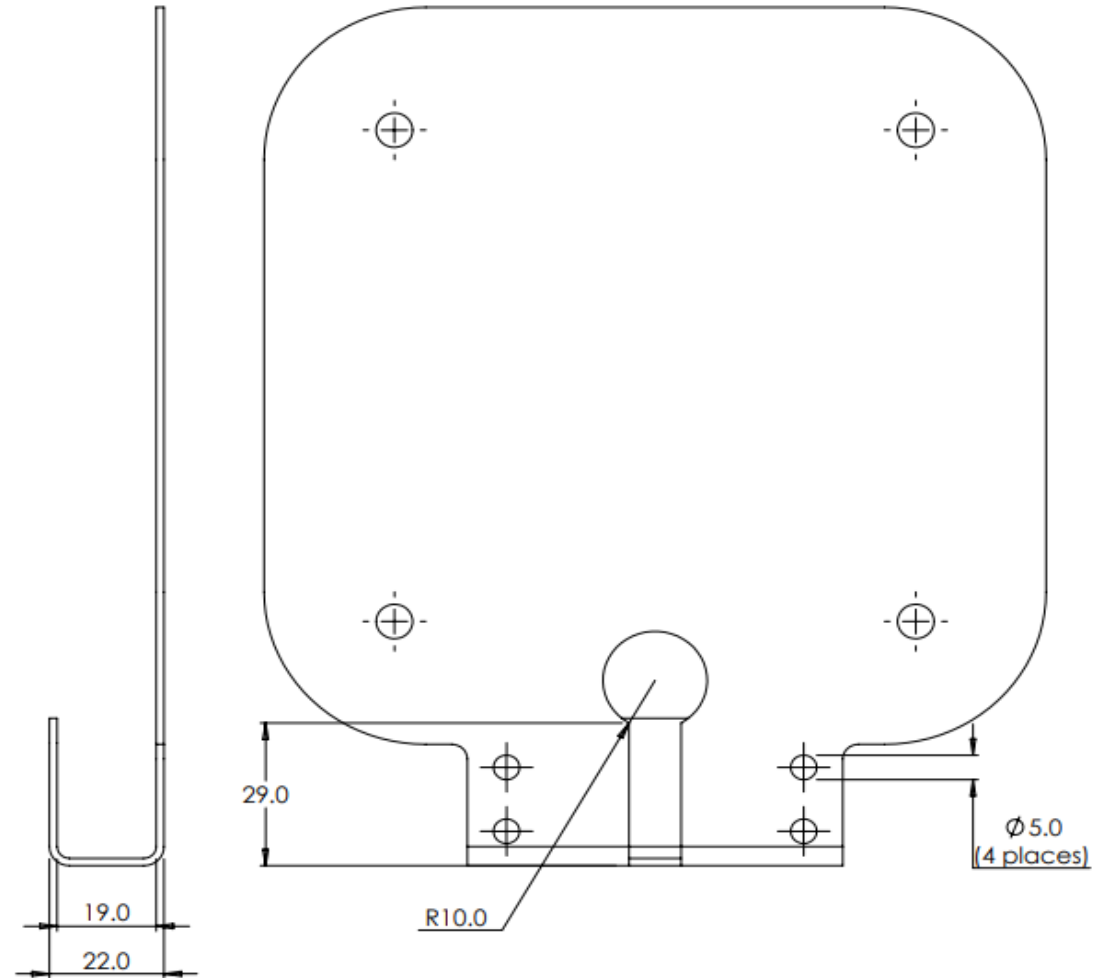
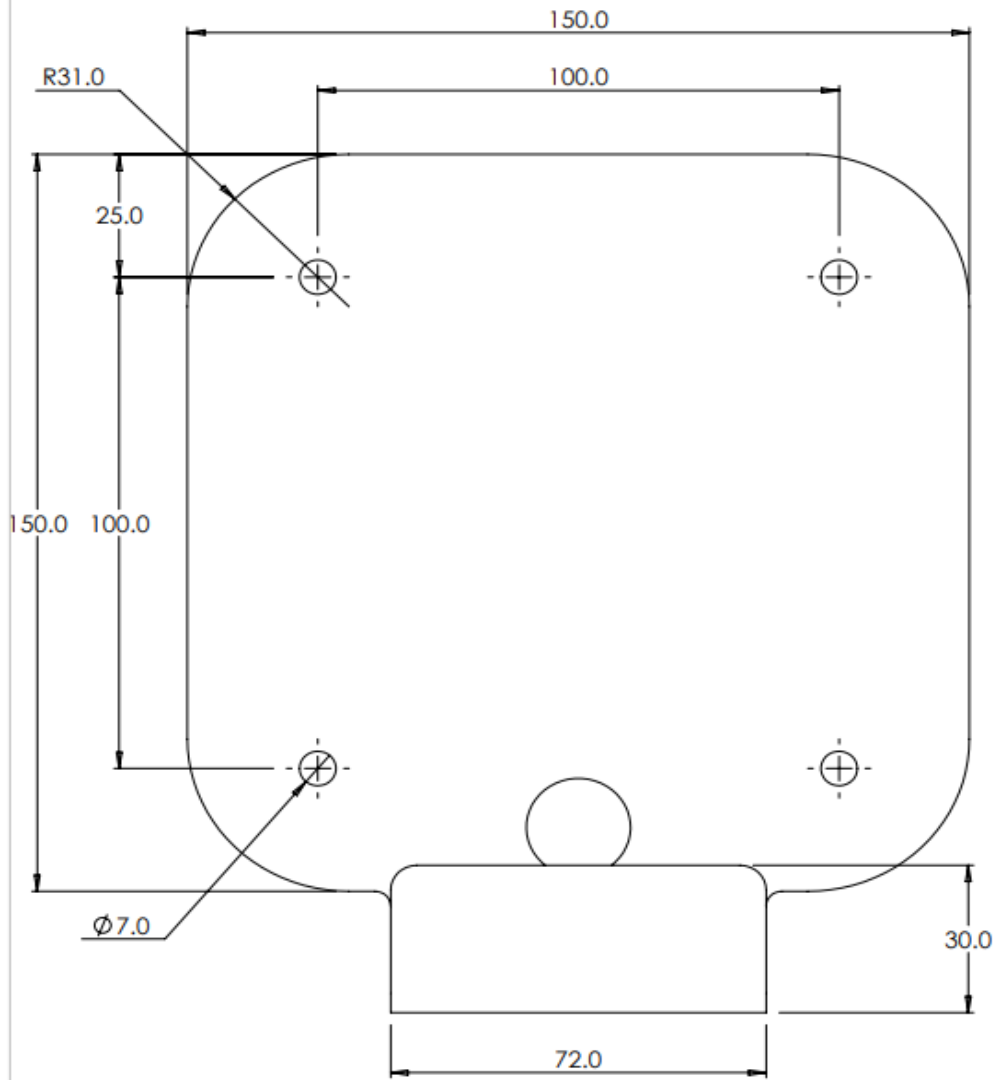
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Mechanical Drawing for the A5020NF Near-Field Antenna



Mechanical Drawing for the Connector Protection Backplate



<p>THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF TIMES-7 LTD. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF TIMES-7 IS PROHIBITED.</p>	<p>DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED TOLERANCES: NO DECIMAL PLACES ± 1 ONE PLACE DECIMAL ± 0.8</p>		DESCRIPTION		
			A5020 Connector Protection Backplate		
<p>DRAWN BY: Maria Price</p>	<p>DATE: 26-10-23</p>	<p>SIZE A3</p>	<p>PART NO. 72308</p>	<p>REV B</p>	
<p>APPROVED BY: Peter Wilcock</p>	<p>DATE: 26-10-23</p>	DO NOT SCALE DRAWING			SHEET 1 OF 1