

Orbit 1, 2 & I/O UNIVERSAL INTERFACE

Prepared for the future

There are numerous kinds of access readers, and just as many communication protocols. New scanners are introduced in quick succession. In order to enable our customers to use the latest access scanners, Keyprocessor offers Orbit (1, 2 and I/O). This universal scanner interface forms the link between the access scanner and the Stellar substation. Orbit supports a diversity of reader technologies.

- Transmitting data between the scanner and the Stellar substation.

Orbit-1 and Orbit-2

The access scanner is connected directly to Orbit. Orbit processes the bits and bytes generated by the scanner into a recognizable code, which it then transmits to Stellar. Orbit can be installed up to twenty metres away from the scanner.

Orbit I/O

The Orbit-I/O can be used when more digital I/Os need to be linked to the system. The Orbit I/O has twelve in/out points that are freely programmable. The Orbit I/O is being used when a diversity of I/O alarms and targeting have to be arranged through the central management system.

Orbit and I/O connection

Many installations have digital I/Os connected to them, which can carry out a variety of functions, such as monitoring of door status. This kind of equipment can be linked directly to Orbit. Four inputs have been provided for this purpose. Only limited cabling is needed thanks to the fact that Orbit can be installed near a door or barrier. This means that Orbit can be used to manage the entire door area.

Orbit and data exchange

Orbit communicates with Stellar via the Profibus protocol. This makes it possible to install Orbit at a considerable distance from the Stellar (a maximum of 1,200 metres). Communications can occur via standard UTP or STP building cable networks or via especially installed cables.






Functions of Orbit reader interface

Orbit fulfils the following functions within an access control system:

- Decoding the code on the access card or key.
- Providing digital I/Os.

In many instances it is convenient to place two scanners in close proximity to each other. In such cases, Orbit-2 provides the solution. This scanner interface has double connections so that sixteen scanners can be connected to a single Stellar.

TECHNICAL SPECIFICATIONS

	Orbit-1	Orbit-2	Orbit I/O
			
Casing			
Version	Aluminium extrusion profile. electronic components cased in PUR synthetic resin.	Aluminium extrusion profile. electronic components cased in PUR synthetic resin.	Aluminium extrusion profile. electronic components cased in PUR synthetic resin.
Dimensions (L x W x H)	140 x 90 x 30 mm	240 x 90 x 30 mm	140 x 90 x 30 mm
Installation	Click to 35 mm rail, according to NEN-EN 50022.	Click to 35 mm rail, according to NEN-EN 50022.	Click to 35 mm rail, according to NEN-EN 50022.
Power supply			
Cabling	UTP Cat 5, unshielded twisted pair.	UTP Cat 5, unshielded twisted pair.	UTP Cat 5, unshielded twisted pair.
Voltage	8 to 24 Volt DC (can be supplied by end power supply).	8 to 24 Volt DC (can be supplied by end power supply).	8 to 24 Volt DC (can be supplied by end power supply).
Consumption at 12 Volt	Max. 250 mA, includes reader consumption of 200 mA at 5.1 Volt.	Max. 500 mA, includes reader consumption of 200 mA at 5.1 Volt.	200 mA maximaal.
Consumption at 24 Volt	Max. 130 mA, includes reader consumption of 200 mA at 5.1 Volt.	Max. 260 mA, includes reader consumption of 200 mA at 5.1 Volt.	110 mA maximaal.
Environment			
Temperature	-20 °C to +60 °C	-20 °C to +60 °C	-20 °C to +60 °C
Humidity	0–90 % (non-condensing)	0–90 % (non-condensing)	0–90 % (non-condensing)
Readers			
Reader types	<ul style="list-style-type: none"> • Mifare® • SL4 • Magnetic card • PX007B (Hitag™) • PX007A (EM4102) 	<ul style="list-style-type: none"> • Mifare® • SL4 • Magnetic card • PX007B (Hitag™) • PX007A (EM4102) 	n.v.t.
Number of readers	Max. 1 scanner per Orbit	Max. 2 scanners per Orbit	n.a.
Distance reader - Orbit	Max. 20 meters	Max. 20 meters	Max. 20 meters
Distance Orbit - Stellar	Max. 1,200 meters	Max. 1,200 meters	Max. 1,200 meters
Data Exchange			
Readers	1 Digital reader input with reader LED driver.	2 Digital reader inputs with reader LED driver.	n.a.
Inputs	4 inputs	8 inputs	12 freely programmable in/outputs.
Outputs	2 outputs	4 outputs	12 freely programmable in/outputs.
LEDs	2 LEDs for data exchange detection, 6 LEDs for I/O status.	2 LEDs for data exchange detection, 12 LEDs for I/O status.	2 LEDs for data exchange detection, 12 LEDs for I/O status.

Subject to changes.

Ref.: 03-000426.



Electro Mechanical Systems Limited
 Eros House, Calleva Park, Aldermaston, Reading RG7 8LN
www.ems-access.co.uk
 info@ems-ltd.com
 Tel 0118 981 7391
 Fax 0118 981 7613