

RS485 OUTPUT PORT PROTOCOL

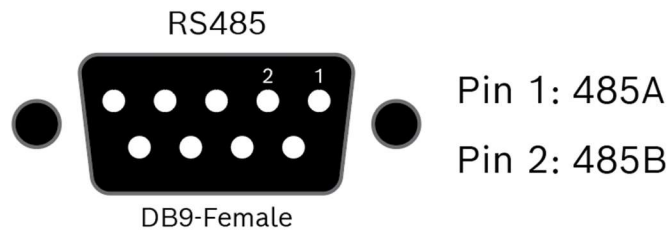
On the ISN-24 G, when the RS485 port is set to **output mode** (with dip switch #2 turned on), it can be connected to a **5-digit RS485 display** to show the process status.

1. Connection

On the RS485 port:

Pin 1 must be connected to RS485 A









































Pin 2 must be connected to RS485 B



2. Output protocol

When connecting to an RS485 display, ensure that the display uses **the HEX codes specified below** to render the letters and numbers correctly.

14 segment LED Display	7 segment LED Display	Meaning	HEX code	14 segment LED Display	7 segment LED Display	Meaning	HEX code
		0	0x3F			I	0x10
		1	0x06			J	0x0E

		2	0x5B			K	0x7A
		3	0x4F			L	0x38
		4	0x66			M	0x55
		5	0x6D			N	0x54
		6	0x7D			O	0x5C
		7	0x07			P	0x73
		8	0x7F			Q	0x67
		9	0x6F			R	0x50
		A	0x77			S	0x64
		B	0x7C			T	0x78

	C	0x39		U	0x3E
	D	0x5E		V	0x62
	E	0x79		W	0x6A
	F	0x71		X	0x36
	G	0x3D		Y	0x6E
	H	0x76		Z	0x49

3. Output content

The output data represents the current **process status** of the device.

Process Status	Display Content	Explanation
Device startup	INIT	ISN-24 G is initiating
Ready	READY	ISN-24 G is ready to start a process
Pairing mode	PAIR	ISN-24 G is waiting to pair with a tool
Job assigned or reset successfully	00 - XX	The number XX after “-” is the number of screws needs to be tightened in one cycle. Example: “00 - 05” means 5 screws needs to be tightened in one cycle.
Job completed	XX - XX	XX of screws has been tightened in the last cycle, where XX before “-” is actual number of screws tightened and XX

		<p>after “-” is the required number of screws.</p> <p>If the process type is “repeat”, the display will stay 2 seconds and then reset to “00 - XX”.</p> <p>If the process type is “by command”, the display will not change until a new job is assigned, or the tool leaves the reader.</p>
Job not completed	YY - XX	<p>YY is less than XX, where YY before “-” is the actual number of screws tightened and XX after “-” is the required number of screws.</p> <p>Example: “02 - 05” means only 2 screws are tightened and 5 screws need to be tightened in this cycle.</p>
Job over time	TIMEOUT	The tool is not returned to the reader within the specified tightening job duration.
Wrong tool detected	WRONG TOOL	An unpaired tool is placed to the reader.
Job assignment to tool failed	WRITE FAIL	The controller has failed to assign job to the tool
Controller disabled	DISABLE	ISN-24 G is disabled, either by an input signal or completing a “by command” mode tightening job