



Communication signals between screwdriver control (eControl3051) and higher order control (MMI)

Digital I/O



8 Description of the controller

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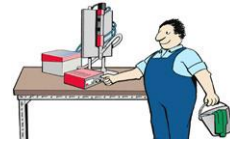
Gewerbering am Brand 1, 82549 Königsdorf, Germany

Tel: +49 8179 / 99 767-0

Fax: +49 8179 / 99 767-50

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STÖGER AUTOMATION GmbH points out that this interface description is not binding and may differ depending on the individual application.



1. Input signals to eControl

1.1. Start

	Function	Format
Start	eStart	0/1

Starts the screwing sequence.

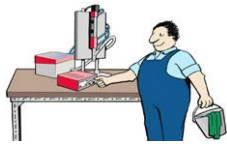
The screwing sequence can be started when:

- automatic mode is selected
- no faults are active
- a valid screwing program was selected with the program selection
- the screwdriver is loaded or unloaded in accordance with the selected screwing program.

1.2. Program selection

	Function	Format	
Program selection Bit 0	eProgBit0	0/1	PG-No. +1
Program selection Bit 1	eProgBit1	0/1	PG-No. +2
Program selection Bit 2	eProgBit2	0/1	PG-No. +4

eProgBit0 ... eProgBit3 preselects the screwing program for the next screwing cycle in binary form. A program number < 1 or > 7 is invalid.



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2. Output signals from eControl

2.1. Fault

	Function	Format
Fault	aStoer	0/1

“aStoer” is switched on if there is a fault on the unit. As soon as the fault has been resolved, the output is switched off.

2.2. Homeposition

	Function	Format
Homeposition	aGst	0/1

“aGst” is switched on when the stroke of the spindle has reached the predetermined position in which it can be moved transversely to the workpiece (robot, positioning system) or the workpiece transversely to the screwdriver (production line with workpiece carriers). Otherwise collisions might happen!

2.3. Ready

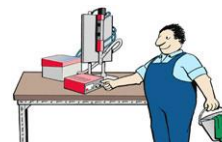
	Function	Format
Ready	aSb	0/1

“aSb” is switched on when the spindle can be started by switching on the customer input “eStart”.

2.4. OK

	Function	Format
OK	aIO	0/1

“aIO” is switched off as soon as a cycle is started and is switched on again when the cycle is finished and the screw connection is OK.



2.5. NOK

	Function	Format
NOK	aNIO	0/1

“aNIO” is switched off as soon as a cycle is started and is switched on again when the cycle has ended and the screw connection is NOT OK.

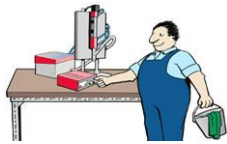
3. I/O - connection

Communication with digital customer I/O

3.1. Customerplug (14-Pin): XS19

Signal	Function	Signal-direction	Power supply				Plug	Pin	Description
			Internal 24V	Internal 0V	External 24V	External 0V			
+24V	Supply +		┐				XS19/	1	
0V	Gnd.			┐			XS19/	2	
Potential free +24V	Supply. Cust.				┐		XS19/	3	Control voltage from customer
0V	Gnd. Cust.					┐		4	
Start	iStart	I	┐	┐	┐	┐	XS19/	5	s. ref.: 1.1
Program selection Bit 0	iProgBit0	I	┐	┐	┐	┐	XS19/	6	s. ref.: 1.2
Program selection Bit 1	iProgBit1	I	┐	┐	┐	┐	XS19/	7	s. ref.: 1.2
Program selection Bit 2	iProgBit2	I	┐	┐	┐	┐	XS19/	8	s. ref.: 1.2
Fault	oStoer	O	┐		┐		XS19/	9	s. ref.: 2.1
Home position	oGst	O	┐		┐		XS19/	10	s. ref.: 2.2
Ready	oSb	O	┐		┐		XS19/	11	s. ref.: 2.3
OK	oIO	O	┐		┐		XS19/	12	s. ref.: 2.4
NOK	oNIO	O	┐		┐		XS19/	13	s. ref.: 2.5
Spare	oRes1	O	┐		┐		XS19/	14	

Table 1 I/O's of eControl, digital, XS19



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Table directory

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