DIAP Partner

i2r A/S

www.i2r.dk

GUIDE

DIAP OEE
PLC Data Block Configuration

Version 1.0

Table of contents

1 Introduction

This guide describes how to correctly set up the data block in your PLC for use with the DIAP OEE application.

1.1 PLC data block configuration

Location	Type	Name	Description
0	INT16	State	Contains the state of the machine. See section 1.1.1 for further explanation.
2.0	BIT	Running	Indicates if the machine is running or stopped. This only used if the State tag is not used.
4	String (20)	Order no.	Contains the order number for the order running on the machine.
26	String (20)	Product no.	Contains the product number for the product running on the machine.
48	INT32	Total counter	Contains the sum of total items produced. This can be reset to 0.
52	INT32	Good counter	Contains the sum of good items produced. This can be reset to 0.
56	INT32	Bad counter 0	Contains the sum of Bad items registered for reason 1. This can be reset to 0.
60	INT32	Bad counter 1	Contains the sum of Bad items registered for reason 2. This can be reset to 0.
64	INT32	Bad counter 2	Contains the sum of Bad items registered for reason 3. This can be reset to 0.
68	INT32	Bad counter 3	Contains the sum of Bad items registered for reason 4. This can be reset to 0.
72	INT32	Bad counter 4	Contains the sum of Bad items registered for reason 5. This can be reset to 0.
76	INT32	Bad counter 5	Contains the sum of Bad items registered for reason 6. This can be reset to 0.
80	INT32	Bad counter 6	Contains the sum of Bad items registered for reason 7. This can be reset to 0.
84	INT32	Bad counter 7	Contains the sum of Bad items registered for reason 8. This can be reset to 0.
88	INT32	Bad counter 8	Contains the sum of Bad items registered for reason 9. This can be reset to 0.
92	INT32	Bad counter 9	Contains the sum of Bad items registered for reason 10. This can be reset to 0.
96	INT32	Bad counter 10	Contains the sum of Bad items registered for reason 11. This can be reset to 0.
100	INT32	Bad counter 11	Contains the sum of Bad items registered for reason 12. This can be reset to 0.
104	INT32	Bad counter 12	Contains the sum of Bad items registered for reason 13. This can be reset to 0.
108	INT32	Bad counter 13	Contains the sum of Bad items registered for reason 14. This can be reset to 0.
112	INT32	Bad counter 14	Contains the sum of Bad items registered for reason 15. This can be reset to 0.
116	INT32	Bad counter 15	Contains the sum of Bad items registered for reason 16. This can be reset to 0.
120	INT32	Bad counter 16	Contains the sum of Bad items registered for reason 17. This can be reset to 0.

124	INT32	Bad counter 17	Contains the sum of Bad items registered for reason 18. This can be reset to 0.
128	INT32	Bad counter 18	Contains the sum of Bad items registered for reason 19. This can be reset to 0.
132	INT32	Bad counter 19	Contains the sum of Bad items registered for reason 20. This can be reset to 0.

1.1.1 State

State has the following predefined values.

- 1 - Running
- 10 - Stopped (unknown reason)
- 100 - No production

To indicate a specific reason for the stop, State codes above 100 can be used. For example, the State code 200 can mean "Missing materials".

If a new State code is sent, and the OEE system does not have any reason connected to it, a new reason is created and connected to the State code.

1.1.2 Production registration

To register OEE correctly, two production values are needed. The following combinations can be used for DIAP OEE.

- Total and Bad
- Good and Bad

There are multiple Bad counters. These are used to indicate different reasons for why the item is defined as Bad. If there is no known reason, the first counter is used.

If no Bad items can be registered by the machine, the Bad value must always be 0.

1.1.3 Order and product

If the PLC knows the current active Order/Product on the machine, this must be inserted on the specified locations. If only Product is known, this must be inserted.

The product number is used to identify the ICT (Ideal Cycle Time) used for the product registration.