

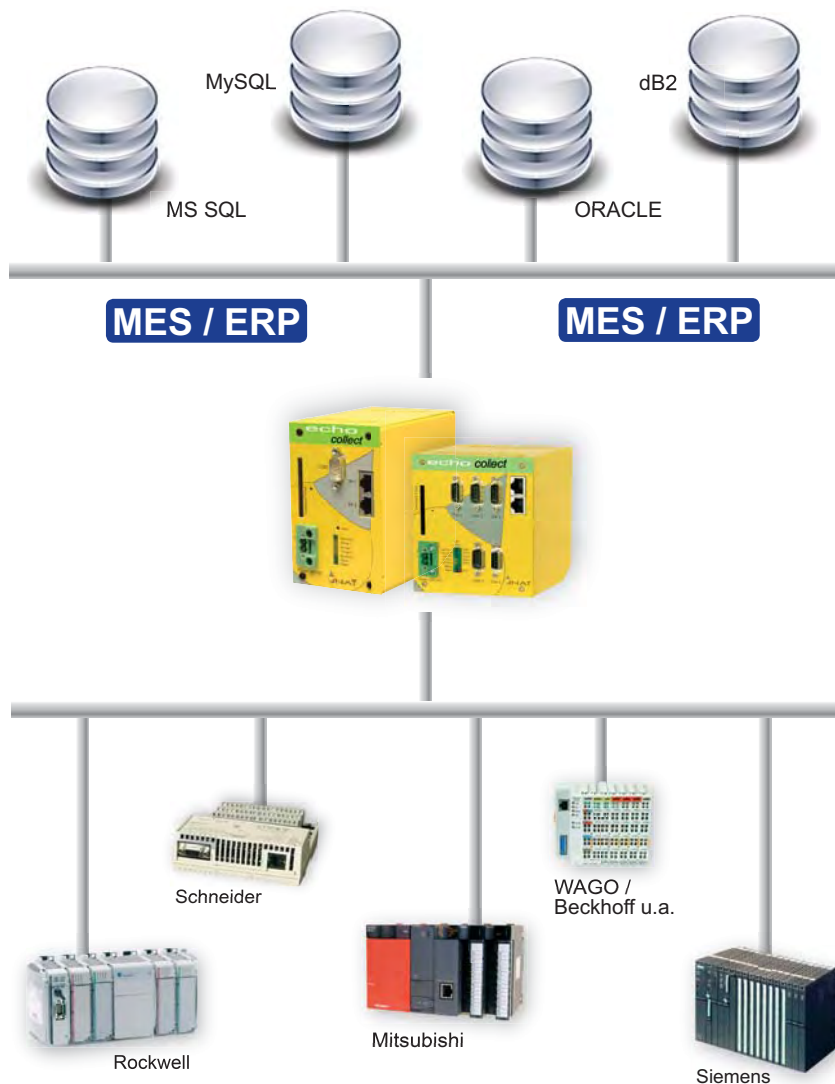
Chapter 5

Process Data Acquisition

► **echocollect**

echocollect

provides process data to superordinate systems



Store information, without changing the PLC

- ▶ Condition monitoring
- ▶ OEE compliant*
- ▶ Reliable traceability
- ▶ TPM**

*Overall equipment effectiveness: is a hierarchy of metrics which focus on how effectively a manufacturing operation is utilized.

**Total Productive Maintenance

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Applications:



Communication with following PLCs:

- Siemens (AS511, 3964R, H1, MPI, RFC1006)
- Rockwell (CIP, EtherNet/IP, CSP)
- Schneider (Modbus RTU, Modbus on TCP)
- Beckhoff, Phoenix (Modbus on TCP)
- Mitsubishi (Melsec-Q)

Data capture without changing PLC programs:

- ▶ plant errors, operating conditions, downtimes
- ▶ capturing of characteristics
- ▶ calculation of stocks, rejects, weak spots
- ▶ utilization of capacity
- ▶ IO- / NIO parts, quantities
- ▶ order maintenance and recipe handling
- ▶ total currency of engines
- ▶ traceability, revaluation

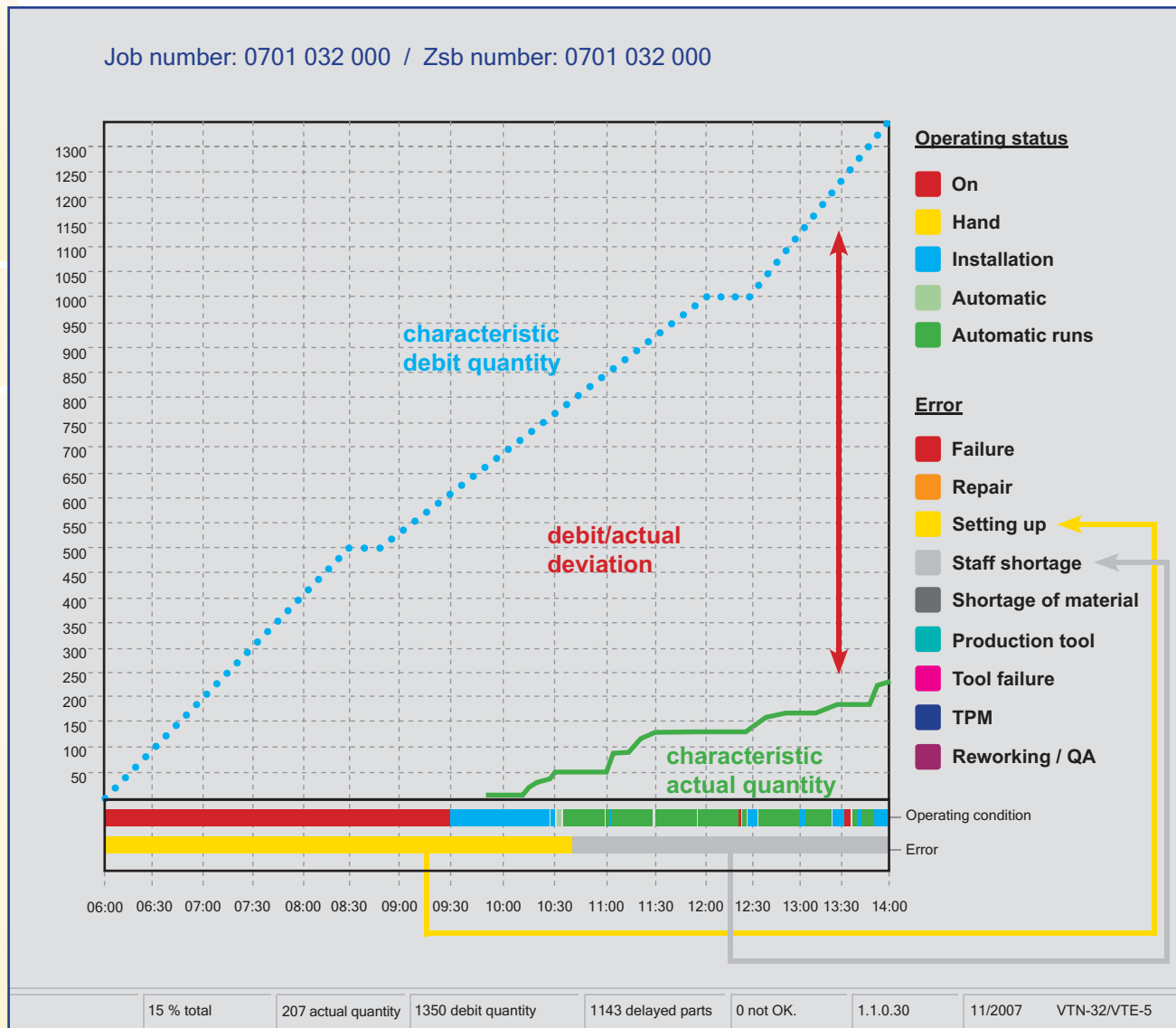


Figure: Quantity graph

Order data:



echocollect e (Ethernet) *
Order No.: 200-7000-01

echocollect r (Rockwell) *
Order No.: 200-7200-01

Note:

- ▶ only connection of Ethernet components possible
- ▶ no expansion of interfaces possible



echocollect se (Serial and Ethernet) *
Order No.: 200-7100-01

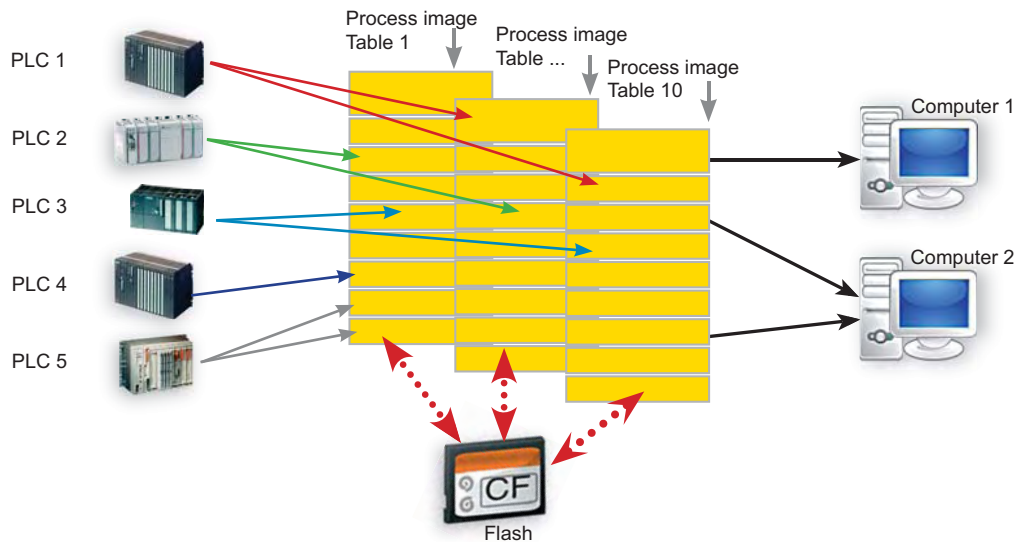
echocollect rs (Rockwell and serial) *
Order No.: 200-7300-01

Note:

- ▶ up to 5 serial interfaces

*Standard: incl. MySQL database access, incl. 1 GB CF Card (Industrial grade), max. 5 PLCs, 10 tables, 50 items per 1 table, max. length of the SQL command 1024 Byte per 1 table

MULTIPLE IMAGES, MULTIPLE HOST COMPUTERS



Options:

| | |
|---|------------------------|
| Oracle database access | Order No.: 200-7910-02 |
| dB2 database access | Order No.: 200-7910-04 |
| MS-SQL database access incl. Sybase database access | Order No.: 200-7910-05 |
| PLC visualization and program access | Order No.: 200-7900-01 |
| S5 PLC backup | Order No.: 200-7920-01 |

| | |
|--|------------------------|
| Upgrade table size (100 tables, max. 100 items) (100 tables, max. 100 items, max. length of the SQL command 1024 Byte per 1 table) | Order No.: 200-7930-01 |
| Upgrade table size (200 tables, max. 200 items, max. length of the SQL command 1024 Byte per 1 table) | Order No.: 200-7930-02 |
| Upgrade Flash, Logger incl. 8 GB CF Card (IG) | Order No.: 200-7930-03 |
| Protocol license (Protocols: H1, CIP, COMLI, NITP, PSG, K-Sequence) | Order No.: 200-7950-01 |
| Connector Power Pack, Euro | Order No.: 700-5596-01 |
| 3-day Initial start-up package | Order No.: 120-1050-01 |

Expansion for echocollect:

| | | | |
|-----------------------|------------------------|-------------------------------|------------------------|
| 1 x TTY (20mA) | Order No.: 200-7110-01 | MPI | Order No.: 200-7120-01 |
| 2 x TTY (20mA) | Order No.: 200-7110-02 | 1 x RS485 non-floating | Order No.: 200-7140-01 |
| 3 x TTY (20mA) | Order No.: 200-7110-03 | 2 x RS485 non-floating | Order No.: 200-7140-02 |
| 4 x TTY (20mA) | Order No.: 200-7110-04 | 3 x RS485 non-floating | Order No.: 200-7140-03 |
| 5 x TTY (20mA) | Order No.: 200-7110-05 | 4 x RS485 non-floating | Order No.: 200-7140-04 |
| 1 x RS232 | Order No.: 200-7130-01 | 1 x RS422 non-floating | Order No.: 200-7150-01 |
| 2 x RS232 | Order No.: 200-7130-02 | 2 x RS422 non-floating | Order No.: 200-7150-02 |
| 3 x RS232 | Order No.: 200-7130-03 | 3 x RS422 non-floating | Order No.: 200-7150-03 |
| 4 x RS232 | Order No.: 200-7130-04 | 4 x RS422 non-floating | Order No.: 200-7150-04 |
| 5 x RS232 | Order No.: 200-7130-05 | | |

Note:

- ▶ Up to two MPI interfaces are possible
- ▶ With RS422-/RS485-/TTY interfaces up to two RS232 interfaces can be added
- ▶ Up to four RS485 interfaces are possible
- ▶ Combinations incl. RS422-, RS485- und TTY interfaces are not possible