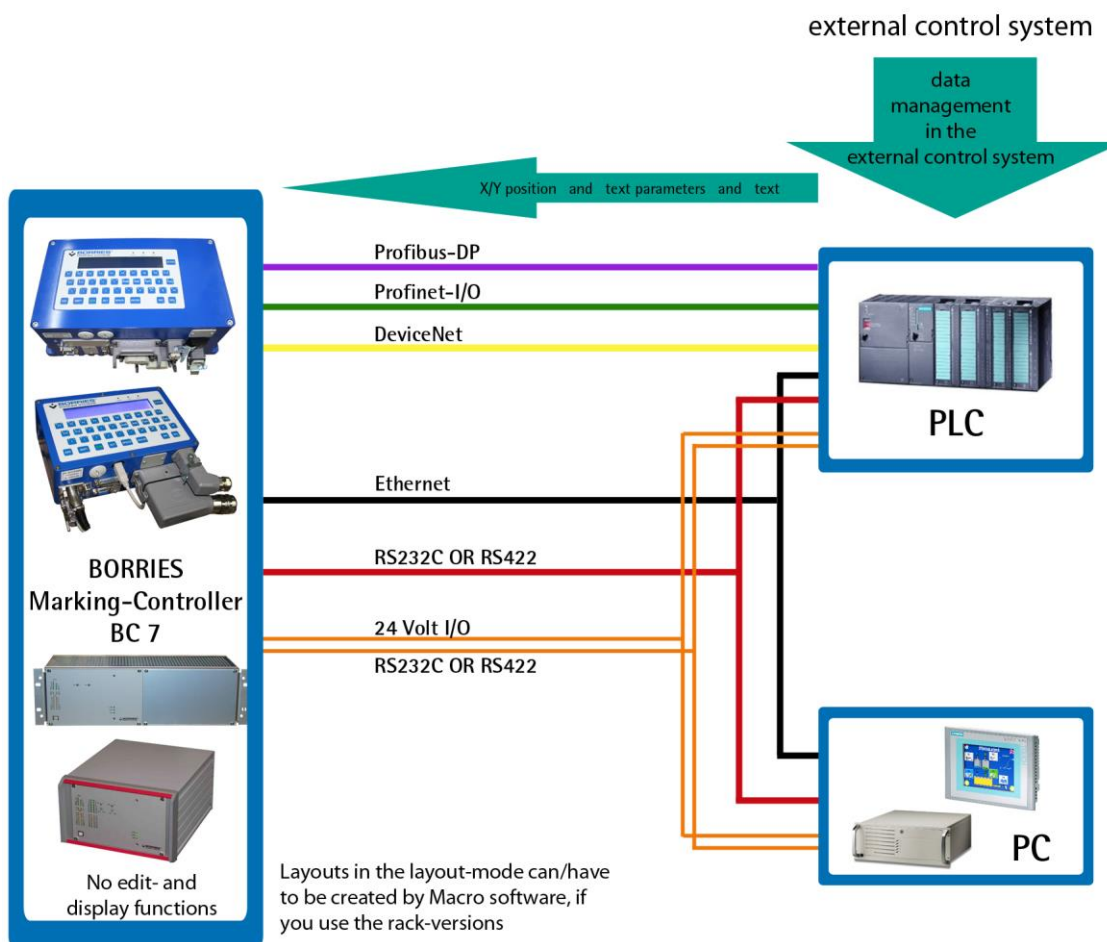


Marking software LDM-MACRO

Technical data sheet

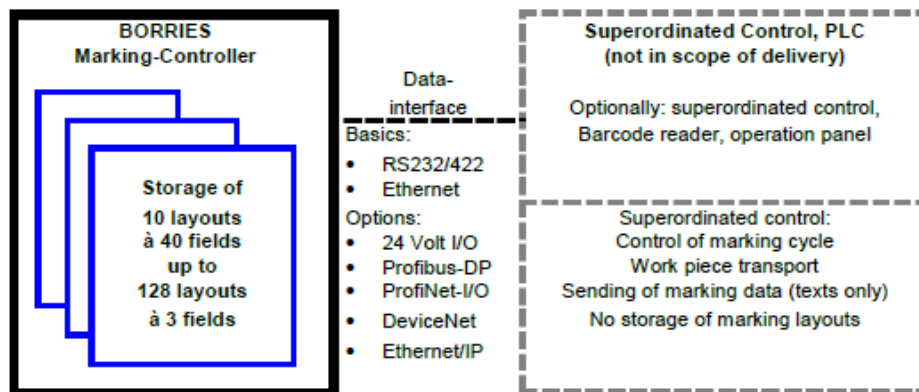
- Internally managed time functions
- Indication of system status via the display with four lines and 40 columns per line (only EK- and EG-Box)
- Return information of marking data from the marking-controller possible
- Standard interface: RS232C/ RS422/ Ethernet switchable
- Optional interfaces (only to use as an alternative): 24 Volt I/O, Profibus-DP, Profinet-I/O or DeviceNet, Ethernet/IP

Possible options of the interfaces



Operation in layout mode

- The marking unit can work as a self-sustained working unit.
- Management of up to 10 marking layouts (marking pictures) with 40 fields up to 128 marking layouts with 3 fields with up to 80 characters per field
- Internally managed fixed text, counter and time functions
- Receipt of external marking data: (1) only marking text, (2) layout number and marking text, (3) layout name and marking text
- Functions of the membrane keyboard: entry and management of the marking layouts, control of the marking cycle
- The marking cycle can also be controlled by an external control system (PLC). In the basic controller version the marking cycle can be controlled via the built in serial interface.
- Option: connection of a barcode scanner, Operation of the marking controller over an external control cabinet



Functions of the Marking Controller

- Administration/Storage of layouts (Positions, parameters and marking texts) within the Marking Controller.
- Creation of marking layout at the Marking Controller via the membrane keyboard.
- Fix texts, date, time, shift codes, week of year, counters and much more options may be managed within the Marking Controller.
- Texts may be received via the serial interface. But: only the marking texts, no positions, no other parameters.
- Management from 10 layouts with 40 fields thru 128 layouts with 3 fields. 80 characters per field.
- Possibility to connect a barcode reader to the serial interface directly.
- Membrane keyboard functions: Layout management, manual mode, setup and control of marking cycle.

Tasks of the superordinated control:

- Conveyer control
- Work piece fixing and transport
- Optionally: Data transfer to the marking controller (texts only, no parameters)
- Optionally: Selecting one of the layouts that are stored in the Marking Controller via digital index bits or serial transmission.

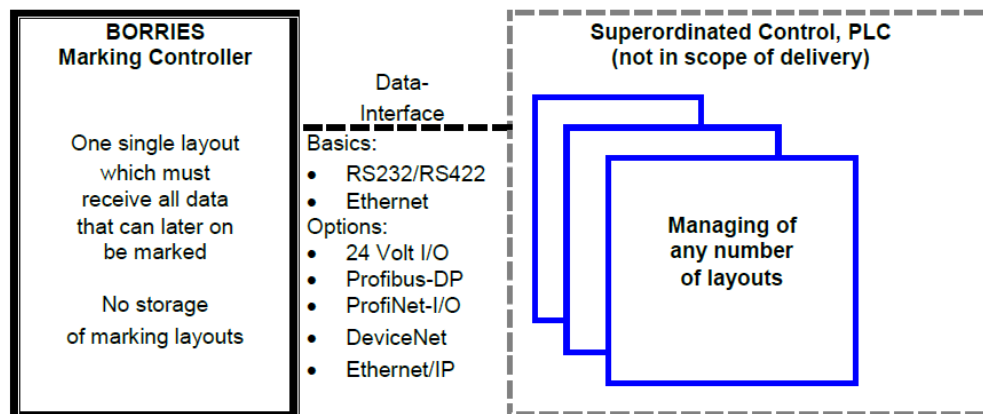
Operation in printer mode

- With the marking software Standard Macro the Borries marking controller receives one marking layout from an external PLC and marks the layout.
- No storage or management of marking layouts within the marking controller. The data have to be received from the superordinated control.
- Flexible marking possibilities to be controlled by the external PLC
- Up to 400 fields can be sent to the marking-controller and marked in one cycle.
- Functions of the membrane keyboard: setup and function operation (only EK- and EG-Box)
- The marking cycle must be controlled by an external control system (PLC).
- Data structure:

Standard: X,Y-Position, font height, angle of the font (0-365°), marking text
(informations in 1/10 mm or in degree)

Optional:

- Font width (to derogate or to widen the characters)
- Additional distance between the characters
- Proportional- and fixed font width
- Alignment (left-justified, center-justified, right-justified)
- Number of the font
- Grip size of the DataMatrix
- Radius of the arc



Functions of the Marking Controller:

- Operation like a printer:
Via the data interface marking positions, font parameters and marking texts are to be received.
- Membrane keyboard functions:
Manual mode and setup functions.

Aufgaben der übergeordneten Steuerung:

- Conveyer control
- Work piece fixing and transport
- Administration and storage of marking layouts.
- Transmission of marking positions, font parameters and marking texts to the Marking Controller.

Standard parameters for layout and printer mode:

- RS232C / RS422 / Ethernet:
STX/ETX
Bit Rate: 9600 Baud
Parameter: 8 data bits / EVEN Parity / 1 Stop bit
- Profibus-DP (optional):
Automatic recognition of the bit rate: 9,6 Kbit – 12 Mbit/Sek.
Number of receiving bytes (from the perspective of the marking-controller): 128
Number of send bytes (from the perspective of the marking-controller): 32
Bus address: 3
- Profinet-IO (optional):
Bit rate: 100 Mbit/Sek.
Number of receiving bytes (from the perspective of the marking-controller): 128
Number of send bytes (from the perspective of the marking-controller): 32
IP-address: 192.168.2.1
Controller's name: Marker1.Borries
- DeviceNet (optional):
Bit rate: 500.000 kBit/Sek.
Number of receiving bytes (from the perspective of the marking-controller): 128
Number of send bytes (from the perspective of the marking-controller): 32
MAC-ID: 3
- Ethernet/IP (optional):
Bit rate: 10/100 MBit/Sek.
Number of receiving bytes (from the perspective of the marking-controller): 128
Number of send bytes (from the perspective of the marking-controller): 32
IP-address: 192.168.2.1
Modbus/TCP class 0, class 1 and partially class 2 slave-functionality

Details are subject to change.