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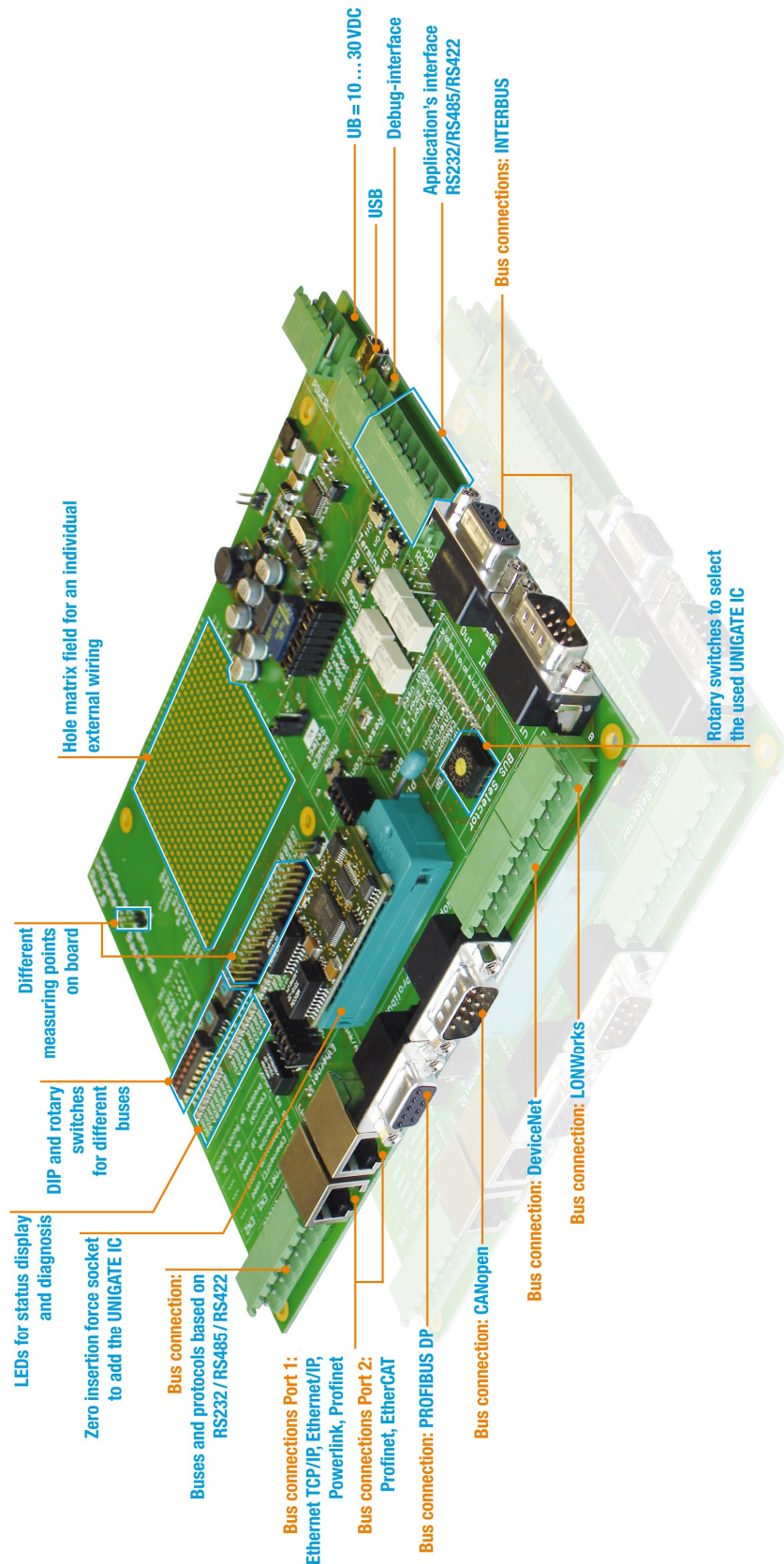
Description Developerkit UNIGATE® IC – AB



Art. no.: V3720E

Deuschmann Automation GmbH & Co. KG ● Carl-Zeiss-Str. 8 ● D-65520 Bad Camberg
Phone +49 (0) 6434 9433 0 ● Hotline +49 (0) 6434 9433 33 ● Fax +49 (0) 6434 9433 40
www.deuschmann.de

This description is valid for Developerboards from hardware-rev. D on (starting with S/N: 37180048).



These instructions will help you to easily and quickly start up your Developerkit UNIGATE® IC-AB.



PLEASE OBSERVE THE FOLLOWING WITHOUT FAIL BEFORE EACH START-UP:

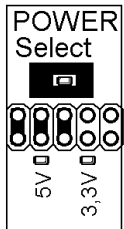


Image 1

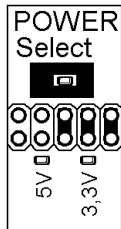


Image 2

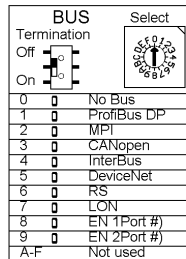


Image 3

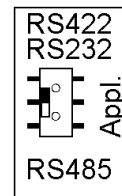


Image 4

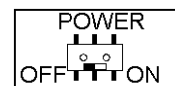


Image 5

- POWER Select must be jumpered at 5V (Image 1) or 3.3V (Image 2) in accordance with the respectively applied UNIGATE® IC!
ATTENTION: The operation of a 3.3V IC with a 5V supply can result in a destruction of the UNIGATE® IC!!!
- BUS Select (Image 3) must be set in accordance with the respectively applied UNIGATE® IC!

Examples:

UNIGATE® IC-PBDPV1-5V: POWER Select = Image 1 and BUS Select at "1"

UNIGATE® IC-PN-3.3V: POWER Select = Image 2 and BUS Select at "8"

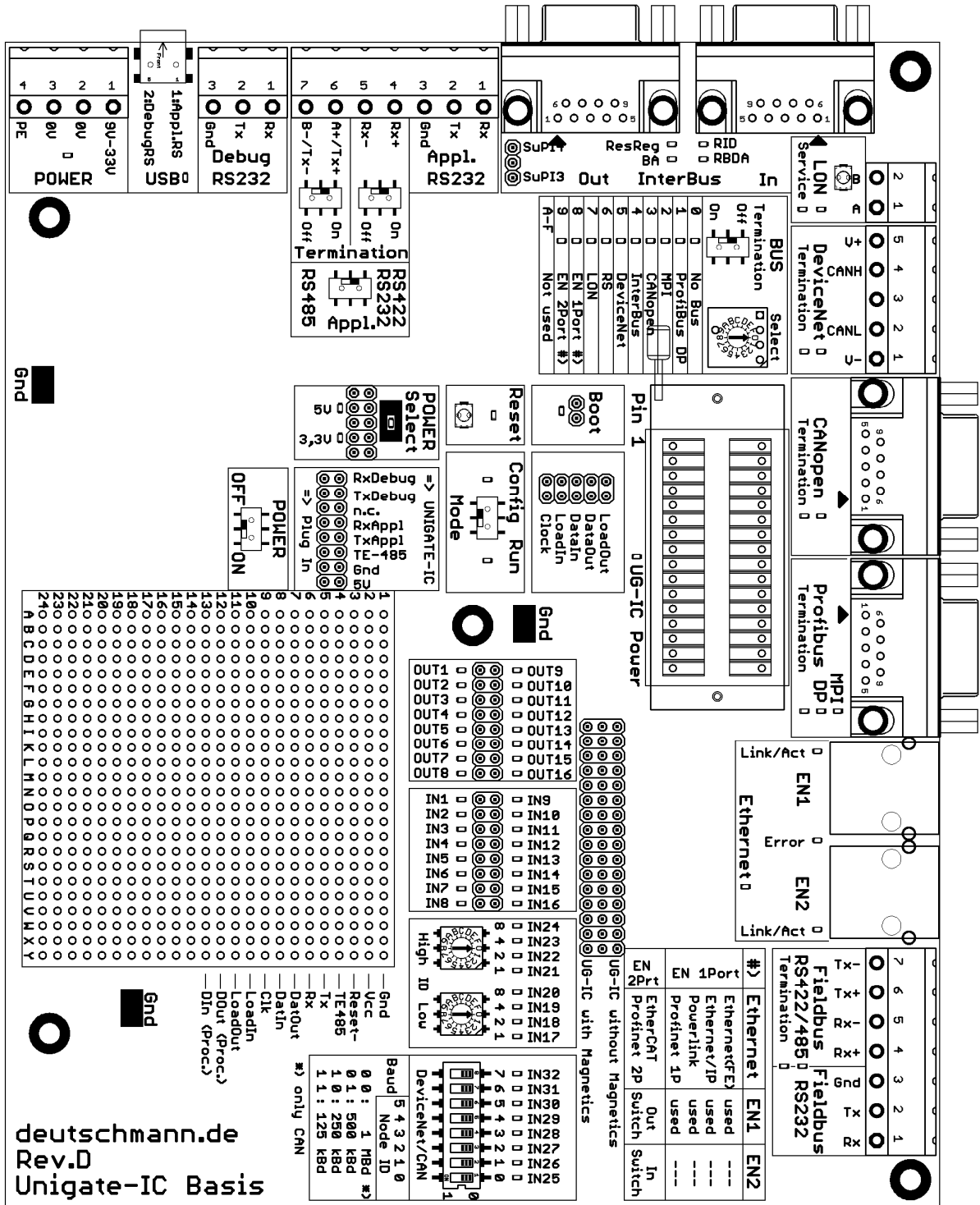
- NOTE: When using the application interface RS232, the sliding switch "Appl." (Image 4) must be set at RS422/RS232.
- Insert the UNIGATE® IC only now (observe Pin 1!) and switch on the power supply - POWER = ON (Image 5).

ATTENTION: The IC must never be inserted the wrong way round in the socket!

→ see chapter 5 for more detailed function description!

1. The Developerkit contains :

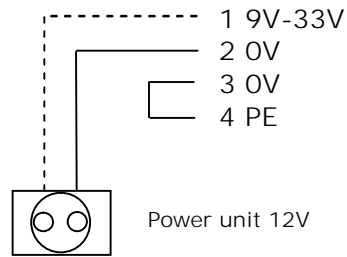
- 1 x V3718 Developerboard UNIGATE® IC-AB



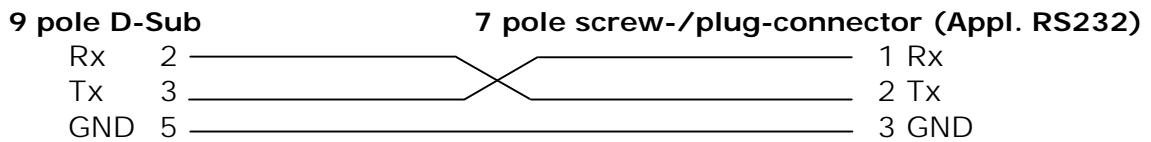
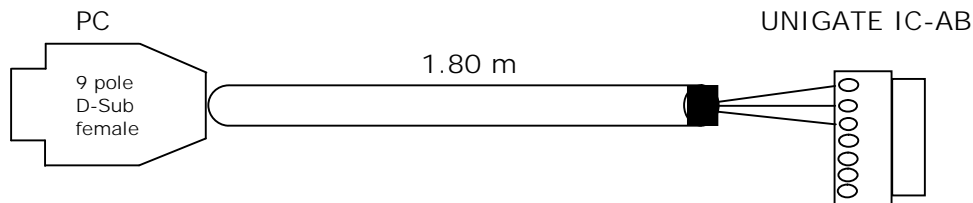
- 1 x V3719 Developerkit IC-AB power supply unit

4 pole screw-/plug-connector (POWER)

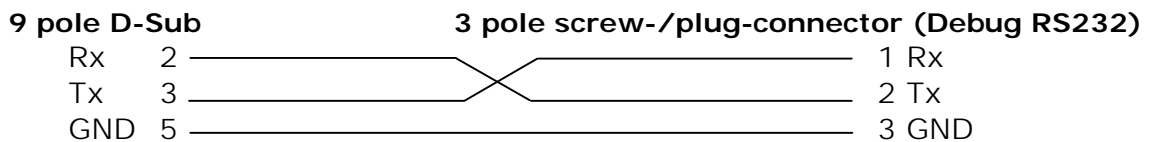
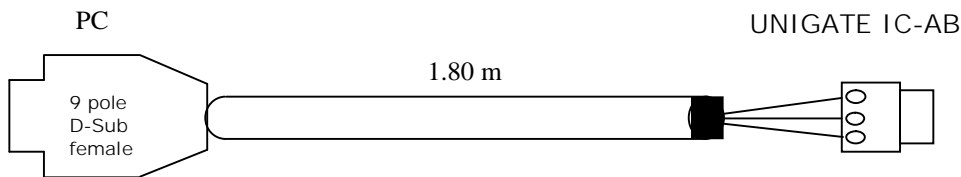
Colour	Signal	4 pole screw-/plug-connector
White	+UB	1
Black	GND	2
Blue	GND	3
Blue	PE	4



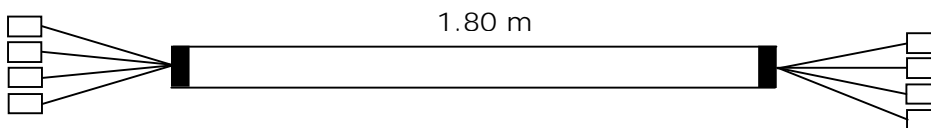
- 1 x V3719-A Developerkit IC-AB serial cable (connection cable COM <-> Developerboard UNIGATE® IC-AB)



- 1 x V3719-B Developerkit IC-AB debug cable (connection cable COM <-> Developerboard UNIGATE® IC-AB debug)



- 1 x V3719-C Developerkit IC-AB application cable (connection cable application RS422/485 <-> Developerboard UNIGATE® IC-AB)



When using the RS422 or RS485 interface, please connect one end of the cable V3719-C with your application and the other end via the 7 pole screw-/plug-connector of the serial cable (V3719-A) with the Developerboard UNIGATE® IC-AB.

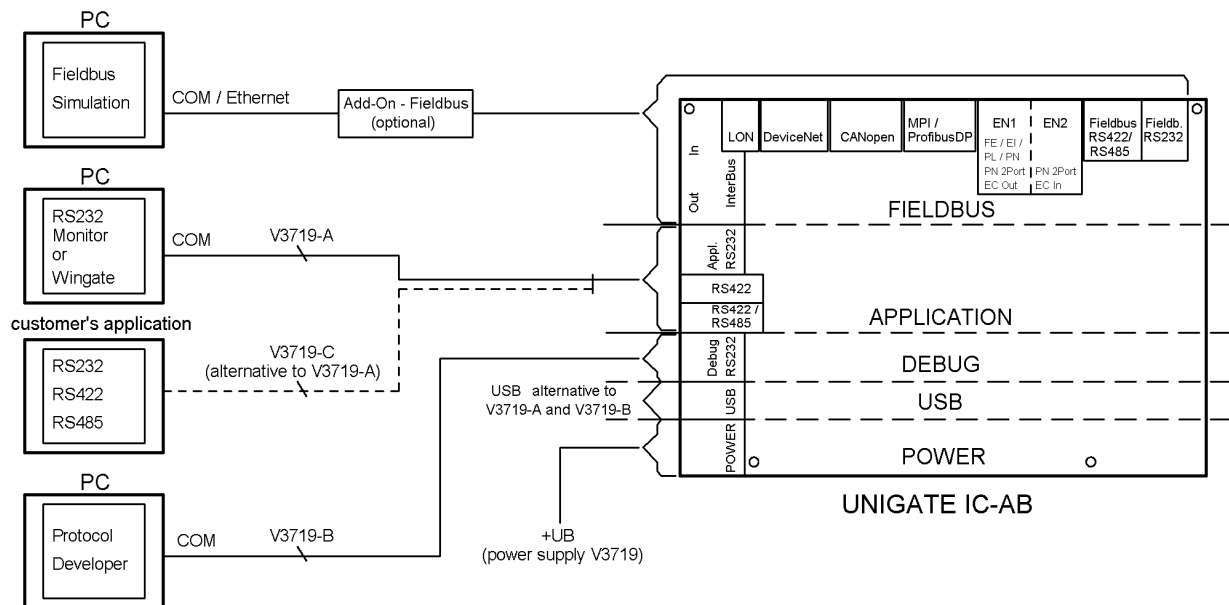
Attention: Please always use one of the 3 application interfaces only!

- 1 x V5001 USB cable 1 m
The USB cable connects the Developerboard with the PC (1st Appl. RS and 2nd Debug RS).
Alternative of V3719-A (Appl. RS232) and V3719-B (Debug RS232)!
ATTENTION: the external supply (e. g. power supply unit V3719) is imperative if a 5V-UNIGATE IC is used. Supply via USB is insufficient. In case 3.3V-ICs are used the supply via the USB alone is also possible.
- as well as documentation, a screwdriver and a Support CD, that contains all required software, such as the RS232 monitor or the Protocol Developer, for simple creation of a Script for UNIGATE® IC.

2. Accessories:

You can obtain a Master simulation of the Fieldbus side as an Add-on for the Developerkit (separately for each Fieldbus). In addition to the appropriate Fieldbus adapter, you can also receive the required connecting cable. PC software for the presentation of Fieldbus data, as well as documentation.

3. Quick start:

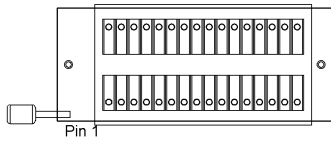


✘ Only one Fieldbus or Ethernet/Industrial Ethernet connector is allowed to be plugged on at one time!

4. Software:

- Installation Starterkit Software [Support CD]: Software\Starterkit\SetupStarterkit2.exe
After completion of installation, the Help file "starterkithelp.chm" for the next steps can be found in the folder "Starterkit".
- Installation Protocol Developer [Support CD]: Software\ProtocolDeveloper\ SetupPD.exe
After completion of installation, the Help file "ProtocolDeveloper.chm" for the next steps can be found in the folder "Protocol Developer".

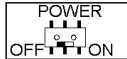
5. Overview Developerboard UNIGATE® IC-AB:



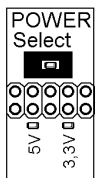
Slot UNIGATE® IC (ZIF - zero insertion force socket):

PIN 1 of the IC is on the ZIF socket lever.

ATTENTION: The UNIGATE® IC must never be inserted the wrong way round in the socket!

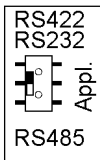


Sliding switch POWER ON/OFF.



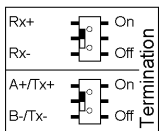
POWER Select must be jumpered at 5V or 3.3V in accordance with the respectively applied UNIGATE® IC (see page 3)! The red LED lights up as long as no jumper is set, the red LED is extinguished and the LED for selected voltage lights up after jumper setting!

ATTENTION: The operation of a 3.3V IC with a 5V supply can result in a destruction of the UNIGATE® IC!!!



Sliding switch Appl. RS422, RS232/RS485:

This switch is required for setting the serial (application) interface. The switch can be used to switch between a RS422 and a RS485 interface. This is the interface upon which the customer equipment is connected.



Sliding switch termination Appl. RS422/RS485:

Both of these switches are only relevant when the application interface is an RS422 or RS485. Then the termination of the RS422 (both switches) or the RS485 Bus (lower switch) can be connected via these switches.

USB pin-and-socket connector:

The board is connected to the PC via this plug-in connector. Thus, access is provided to the 2 series interfaces (Appl. RS232 and Debug RS232) via 2 virtual COM interfaces. A status LED indicates the USB connection.



Installation USB Driver [Support CD]: \Support\USB\Driver:

Two additional COM ports are available on your PC after installation. One port is connected with the application interface, the other with the board's debug interface.

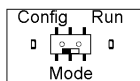
NOTE: the external supply (e.g. power supply unit V3719) is imperative if a 5V-UNIGATE IC is used. Supply via USB is insufficient. In case 3.3V-ICs are used the supply via the USB alone is also possible.

Sliding switch mode Config/Run:

The UNIGATE® IC starts in configuration mode when set in "Config" position during the PowerUp or Reset.

The "Run" position is the normal operating mode in which the UNIGATE® IC runs the imported Script. An LED indicates the respectively set mode.

NOTE: In order to be able to use the configuration mode with the software tools from Deutschmann, the PC must be connected with the interface "Appl.RS232".

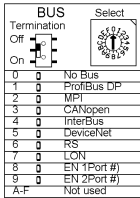




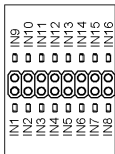
Reset key:
A UNIGATE® IC reset is activated by pressing the reset key.
The red reset LED lights up each time the key is pressed.



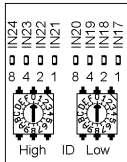
Boot jumper (without jumper):
The UNIGATE® IC can be put in the firmware update mode via this jumper. In order to do this, the jumper must be set during the PowerUp or Reset – the red boot LED lights up.
NOTE: In order to be able to use the firmware update mode, the PC must be connected with the interface “Appl.RS232”.



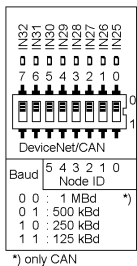
Rotary switch BUS Select and sliding switch BUS Termination:
BUS Select must be set in accordance with the respectively applied UNIGATE® IC. A Status LED indicates the set Bus.
The Bus Termination can be connected via the sliding switch. A respective LED on the BUS connector indicates whether or not the Termination is activated (only for DeviceNet, CANopen, ProfibusDP, MPI and Fieldbus RS422/485).



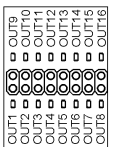
Multi-pin connector IN1 – IN16:
Input shift register. The first 16 digital inputs of the shift register are available here, each provided with an LED.



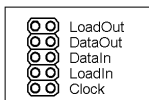
Rotary switch IN17 – IN24:
Input shift register. 8 digital inputs (17-24) of the shift register are available here via rotary code switches (i. e. the “High” and “Low” switches can be read in via the shift register), each provided with an LED.



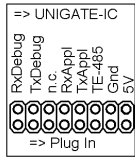
DIP-switch IN25 – IN32:
Input shift register. 8 digital inputs (25-32) of the shift register are available here via a DIP switch (i.e. the switch can be read in via the shift register), each provided with an LED.



Multi-pin connector OUT1 – OUT16:
The first 16 digital outputs of the shift register are available here, each provided with an LED.



Multi-pin connector (with jumper) SR signals:
The shift register signals are applied on this jumper strip and can be disconnected here.



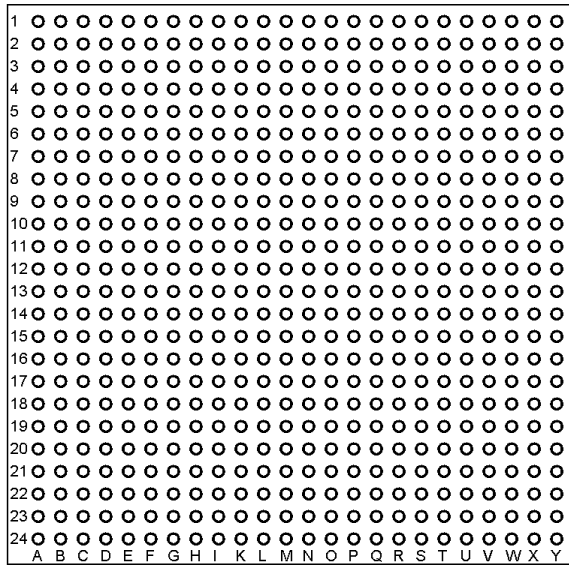
Multi-pin connector (with jumper) signals series connection:
 The signals of the series connection between IC and RS drivers are applied on this jumper strip. I. e. you can disconnect the lines here and also directly tap the signals of the series interface.



Multi-pin connector (with jumper) SUPI3/SUPI4:
 ONLY FOR Interbus!
 A selection is made via this multi-pin connector of whether the UNIGATE® IC Interbus is equipped with a SUPI3 or SUPI4 Interbus processor. Default = SUPI3.

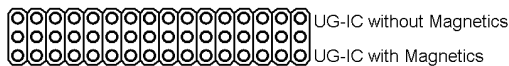


GND multi-pin connectors (3x):
 These 3 contacts serve as GND potential for measuring purposes.



- Gnd
- Vcc
- Reset-
- TE485
- Tx
- Rx
- DatOut
- DatIn
- Clk
- LoadIn
- LoadOut
- DOut (Proc.)
- DIn (Proc.)

Hole matrix:
 The hole matrix with the most important signals allows a customised hardware extension, e. g. in order to connect a D/A converter.



Multi-pin (with Jumper) UG-IC with or without Magnetics:
 This multi-pin connector is used to select whether the used UNIGATE IC (FE, PN, PL, EI, EC) has a transformer available or not ("without transformer").

Default = UG-IC with Magnetics.

NOTE: Please set the jumper on "UG-IC without Magnetics" only if a UG IC without Magnetics/transformer is used. Otherwise the jumper must always be set on "UG IC with Magnetics" since otherwise disturbances on the Fieldbus side may occur.

Mounting holes:
 5 holes are provided for (optional) mounting. In order to be able to use these, the rubber feet must first be removed.

The respective Bus connections or Bus connector is/are provided on the Bus side in accordance with the norm or market standard. The respective Bus status LEDs are additionally provided

→ Function, please see the respective UNIGATE® IC manual.

Should you have any further queries, the respective manuals are provided along with the Developerkit or you can take a look at our homepage

www.deutschmann.de

There you will also find the most up to date versions of software, manuals etc. and via [Support](#) you will find an [FAQ section](#).

If you have any problems with the installation, please contact our [Technical Hotline](#) at the number

[+49-\(0\)6434-9433-33](tel:+49-06434-9433-33)

