Test Unit
Type GTU8

Dupline®
Fieldbus | *Installationbus*

- **Portable test unit**
- **Monitoring of Dupline® channel status**
- **LCD-display**
- **12-key tactile keyboard**
- **Supplied by Dupline®**
- **Transmission latch**
- **Dual-group reading**
- **Analog BCD reading**
- **Split I/O channel reading**

Product Description

Test unit for Dupline® modules and networks. Monitoring/control unit with LCD-display.

Highly recommended for Dupline® system start-up, troubleshooting and maintenance.

Ordering Key

GTU8

Type: Dupline®
Type no.

Type Selection

Supply	Ordering no. Test unit
Supplied by Dupline®	**GTU8**

Supply Specifications

Power supply	Supplied by Dupline®
Reverse-polarity protection	Yes
Rated operational current	< 4.0 mA

Product Specifications

Output	
Connection	Dupline 3 mm Jack socket
Display	2 x 16 characters
Type	LCD
Height of dots	5 mm
Keyboard	Tactile keys
No. of keys	12
Channel keys	1-8
Command keys	« ↑ » « ↓ » (scroll up/down) « MODE », « ENTER »
Cable 1	GTU8 to Dupline®
GTU8 connector	3 mm Jack plug
Dupline® connector	2 mini grips
Signal	Red
Common	Black
Cable 2	GTU8 to ASIC module
GTU8 connector	3 mm Jack plug
Dupline® connector	1 6/6 modular plug

General Specifications

Environment	
Degree of protection	IP 40
Pollution degree	3 (IEC 60664)
Operating temperature	0° to +50°C (+32° to +122°F)
Storage temperature	-20° to +60°C (-4° to +140°F)
Humidity (non-condensing)	20 to 80%
Mechanical resistance	
Shock	15 G (11 ms)
Vibration	2 G (6 to 55 Hz)
Dimensions (l x w x d)	145 x 90 x 28 mm
Material	ABS, grey
Weight	250 g

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Mode of Operation

128-channel portable transmitter/receiver unit supplied by Dupline®. The GTU8 can be used anywhere along the two wires to monitor and control the status of Dupline® channels. This unit is highly recommended for start-up and maintenance work on Dupline® systems.

The GTU8 can operate in 5 different modes:
   Digital 1 group
   Digital 2 groups
   Edit Tx-latch
   Analog BCD
   Split I/O

The start-up mode is "Digital 1 group".

To change mode:
   1. Press « Mode »
   2. Shift between mode options by pressing either « ↑ » or « ↓ ».
   3. Select mode by pressing « Enter ».

Digital 1 group
Once connected to the Dupline®, the display shows the status of channel group A. Active channels are indicated by their numbers. Pressing «1», «2» ... «8» will activate the corresponding Dupline channel in the selected channel group.
Pressing « ↑ » or « ↓ » changes the channel group shown in the display.

Digital 2 groups
When the mode "Digital 2 groups" is selected, the user may select an additional channel group for permanent monitoring on the bottom line of the display. The channel status of the two selected groups can now be monitored, but changing the channel status through the keys «1» ... «8» only affects the channels displayed in the upper row of the display. Even so, pressing the « ↑ » or « ↓ » key only changes the channel group in the upper row of the display.

Edit Tx-latch
In this mode it is possible to "latch" the activation of one or more channels. This means that the GTU8 will continue transmitting on the channel(s) even though the corresponding transmission button is released.

To cancel the transmission on a channel, press the corresponding transmission button again.
The latched transmission will continue even if the channel group or mode is changed. In order to change the status of a latched transmission, it is necessary to re-enter the "Edit Tx-latch" mode.

All the latched channels are reset to normal Dupline® operation whenever the GTU8 becomes disconnected from the Dupline®.

Analog BCD
In this mode it is possible to monitor values from analog transmitters that use the multiplexed 3 1/2-digit BCD format. The analog values are shown as BCD numbers within the range of -1999 to 1999.

By pressing « ↑ » or « ↓ » the group addresses can be changed. By keeping « Enter » pressed while activating « ↑ » or « ↓ », the multiplex address will change instead.

The display will show "Wait" until the selected multiplex address has been present on channels A1-A4.

If no analog value is transmitted on the selected address, the display will show: "None".

If the analog value on the selected address is not valid, the display will show: "Error".
If the multiplex address "OFF" is selected, the display will show the analog value transmitted on the selected channel groups disregarding the multiplex address.

"OFF" should be selected when the analog transmitters are used in non-multiplexed mode.

If a specific analog transmitter is to be tested, it is possible to set up its multiplex address in "Tx-latch" mode and then go back to the "Analog BCD" mode to monitor the value.

Split I/O
In this mode it is possible to see the status of split I/O channels.
The upper row in the display shows the output from the master generator.
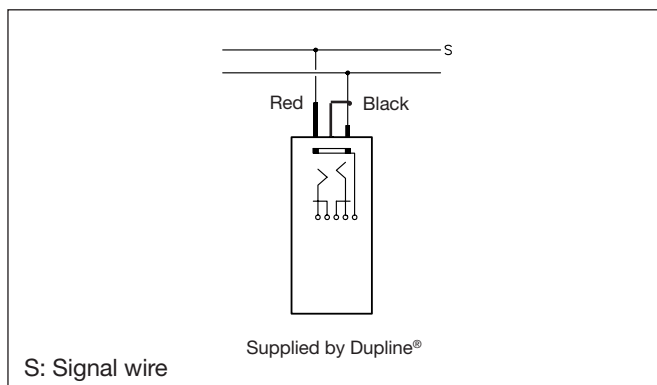The lower row in the display shows inputs from Dupline units to the master generator.

By pressing « ↑ » or « ↓ » the group addresses can be changed.

Pressing «1», «2» ... «8» will activate the corresponding Dupline channel in the selected channel group.

Warning: Do not plug or unplug the Jack connector when the GTU8 is connected to Dupline®. This will cause a short-circuit of the two wires.

Note: If the Dupline® carrier is missing, the display will not turn on.

Wiring Diagram

S: Signal wire

Additional Information

Scope of supply
   1 x Test unit   GTU8
   1 x Cable 1 (mini grips)   GTU8 - GRIP - CAB
   1 x Cable 2   GTU8 - ASIC - CAB