

Dupline® Modbus interface module Type GTI50



- Modbus-RTU slave.
- Originally designed for Dupline® Displays.
- RS 485 port for interfacing to control system.
- 128 Digital I/O's incl. 128 AnaLink outputs.
- 25p Sub-D converter housing.
- Supplied by RS485 com-port

Product Description

GTI50 is originally designed as an interface solution for Dupline® GTD50 display, but can be used by all other Modbus-RTU masters. The GTI50 supports Modbus-RTU function code "3" (read registers) and function code

"16" (write registers), and can read/write all 128 Dupline® I/O's (incl. AnaLink). The maximum numbers of registers that are allowed in 1 query are limited to 8 read registers or 8 write registers at a time.

Ordering Key

GTI50

Type: Dupline®
Text Interface
Type

Type Selection

Supply	Ordering no.
By RS-485 Com-port	GTI50

Input/Output Specifications

Modbus-RTU	RS485 25-pole male SUB-D
Pin assignment	Pin 7: GND Pin 16: + 5 VDC Pin 10: TxRx- Pin 22: TxRx+
Baudrate	9600/19200
Parity	None
Databits/Stopbit	8/1
Current load typ.	45ma
Dielectric voltage RS485-Dupline®	> 2 kVAC (rms)
Dupline® Pin assignment	Pin 1: Dupline® Pin 2: GND
Adjustments DIP-switch 1 DIP-switch 2 DIP-switch 3 DIP-switch 4	Device address Baudrate Dupline® transmission Not used

General Specifications

Power ON delay	< 2.0 s until start of Dupline® carrier < 40 s until correct reading of AnaLink values
Indication for Communication Dupline fault	2/132 ms flash 1/4 sec flash
Environment Pollution degree Operating temperature Storage temperature	2 (IEC 60664) -20 to 60°C -50 to +85°C
Humidity (non condensing) Mechanical resistance Shock Vibration	20 to 80% 15 G (11 ms) 2 G (6 to 55 Hz)
Dimensions	55 x 70 x 15 mm
Weight	50 g

Mode of Operation

The Dupline® GT150 Module is a Modbus-RTU slave interface module. 128 Dupline® I/O's can be read/controlled by a Master Control board master. More Dupline® GT150 can be connected to the same network and operate together in parallel with other modules

using the same protocol. When the Dupline® GT150 Interface Module has received a telegram with Dupline® output-information to Dupline® Receivers, it will automatically respond with a telegram with Dupline® input-information to Dupline® Transmitters

Switch Settings

1: Device Address

OFF: 1
ON: 2

2: Baudrate

OFF: 9600
ON: 19200

3: Dupline transmission

OFF: Off
ON: On

4: Not Used

Memory Mapping

Modbus-RTU Digital Input Register Mapping

Reg. no.	Dupline® Group (Word)		Word															
	HIGH BYTE	LOW BYTE	HIGH BYTE								LOW BYTE							
0	B	A	B8	B7	B6	B5	B4	B3	B2	B1	A8	A7	A6	A5	A4	A3	A2	A1
1	D	C	D8	D7	D6	D5	D4	D3	D2	D1	C8	C7	C6	C5	C4	C3	C2	C1
2	F	E	F8	F7	F6	F5	F4	F3	F2	F1	E8	E7	E6	E5	E4	E3	E2	E1
3	H	G	H8	H7	H6	H5	H4	H3	H2	H1	G8	G7	G6	G5	G4	G3	G2	G1
4	J	I	J8	J7	J6	J5	J4	J3	J2	J1	I8	I7	I6	I5	I4	I3	I2	I1
5	L	K	L8	L7	L6	L5	L4	L3	L2	L1	K8	K7	K6	K5	K4	K3	K2	K1
6	N	M	N8	N7	N6	N5	N4	N3	N2	N1	M8	M7	M6	M5	M4	M3	M2	M1
7	P	O	P8	P7	P6	P5	P4	P3	P2	P1	O8	O7	O6	O5	O4	O3	O2	O1

Modbus-RTU Digital Output Register Mapping

Reg. no.	Dupline® Group (Word)		Word															
	HIGH BYTE	LOW BYTE	HIGH BYTE								LOW BYTE							
100	B	A	B8	B7	B6	B5	B4	B3	B2	B1	A8	A7	A6	A5	A4	A3	A2	A1
101	D	C	D8	D7	D6	D5	D4	D3	D2	D1	C8	C7	C6	C5	C4	C3	C2	C1
102	F	E	F8	F7	F6	F5	F4	F3	F2	F1	E8	E7	E6	E5	E4	E3	E2	E1
103	H	G	H8	H7	H6	H5	H4	H3	H2	H1	G8	G7	G6	G5	G4	G3	G2	G1
104	J	I	J8	J7	J6	J5	J4	J3	J2	J1	I8	I7	I6	I5	I4	I3	I2	I1
105	L	K	L8	L7	L6	L5	L4	L3	L2	L1	K8	K7	K6	K5	K4	K3	K2	K1
106	N	M	N8	N7	N6	N5	N4	N3	N2	N1	M8	M7	M6	M5	M4	M3	M2	M1
107	P	O	P8	P7	P6	P5	P4	P3	P2	P1	O8	O7	O6	O5	O4	O3	O2	O1

Modbus AnaLink Register Mapping

Dupline® Analink Channel	Register number Hex	Register	
		Highbyte	Lowbyte
A1	80	0	0 - 255
A2	81	0	0 - 255
A8	87	0	0 - 255
B1	88	0	0 - 255
C1	90	0	0 - 255
D1	98	0	0 - 255
E1	A0	0	0 - 255
F1	A8	0	0 - 255
G1	B0	0	0 - 255
H1	B8	0	0 - 255
I1	C0	0	0 - 255
J1	C8	0	0 - 255
K1	D0	0	0 - 255
L1	D8	0	0 - 255
M1	E0	0	0 - 255
N1	E8	0	0 - 255
O1	F0	0	0 - 255
P1	F8	0	0 - 255
P8	FF	0	0 - 255

Pin Assignment

Pin	Signal
7, 25	GND
10	TxRx-
16	+5V
22	TxRx+
4, 5	intern connection
15, 18	intern connection