TELETASK
trendsetter in domotics

TDS13620 — DALI - DSI - DMX interface

TDS13620 is a TELETASK- AUTOBUS interface for DALI / DSI / DMX. It can be configured to integrate up to 64 DALI ballasts or 1 DSI output or 64 DMX compliant channels in combination with the TELETASK domotics system.

The interface is suited for controlling monochrome and multicolour ballasts and lighting units with DALI, DSI or DMX control input. The interface supports ramp speeds up to 1 hour, also for DALI/DSI.

The TDS13620 interface has a manual override button and an external override input which can be used in case of emergency/evacuation.

Advantage of DSI over DALI: In case of failure or replacement of DSI electronic ballast, the unit replaced does not need to be re-addressed/configured.

Advantage of DALI/DSI over 1-10V: It dims to off, so no mains switching equipment is required to turn them off.

Advantage of DALI: individual (addressable) and grouped control, including feed-back to the TDS system when ballast or lamp is defect.

APPLICATION

Output interface to control 64 DALI or 1 DSI or 64 DMX compliant channels

CHARACTERISTICS

Outputs

DALI output: up to 64 DALI ballasts/addresses.
DSI output: 1 DSI output / up to 100 ballasts.
DMX output: up to 64 DMX addresses.
The DALI / DSI / DMX bus is 1500V galvanic isolated from the AUTOBUS (higher available on request).
Build-in DALI/DSI power supply (power is taken from the AUTOBUS for both galvanic sides). No external power supply is needed.

Override

Manual override button: When pressed, the output alters to 40% (LED blinking) to 100% (LED ON) to normal/OFF (LED OFF). As soon as an AUTOBUS command is received, the manual override will get ignored until pushed again.

External override contact: Must be a voltage free contact within 100m away from the interface. When the external contact is closed, all connected DALI/DSI/DMX devices will go to 100% (LED ON). If this contact is used, it may be necessary to implement this feature into the emergency evacuation procedures of the concerned area/building.

DALI feedback features

Touch panel LED will blink on lamp/ballast defect.
Full status information of every individual lamp/ballast address is available in PROSOFT-Diagnostics.

SETTINGS

AUTOBUS address

Via two rotary switches 'Tens' and 'Units'.

Configuration

Via PROSOFT Suite 3.3 or higher (to be set as DALI- or DSI- or DMX-mode).

Jumpers

Terminating resistor (supplied with the interface). To be used when the interface is at the physical end of the AUTOBUS cable.

DALI address

The ballast must be addressed before connecting. Groups are simply configured within PROSOFT.

Two methods (A or B) for ballast address configuration are possible:

A: **Recommended**: Use DALISOFT together with the TDS20620V2 DALI-address configuration tool:
1. Disconnect the TDS13620 from the DALI-bus.
2. Connect the TDS20620V2 (see datasheet TDS20620V2).
3. Use DALISOFT within the PROSOFT suite, to assign the DALI-addresses.

B: Physical address allocation mode:
1. Close external override input.
2. Press manual override button for 10sec.
3. Indication led will start blinking 3 times in repeat. All ballasts go to 100%. Configuration mode will be terminated after 15min.
4. Decouple lamp at first ballast to assign address 1.
5. Reinsert lamp. Ballast will go to 50%. If not repeat step 4.
6. Repeat step 4 to 5 to assign the rest of the addresses for the remaining ballasts.
7. Press manual override button to terminate configuration. Indication LED will blink fast and all the ballasts will go to 100% > 0% > 100% > 0% > 100%.
8. Open the external override input.

DSI address

Not applicable

DMX address

0 to 255 (max. 64 addresses can be defined).
Follow the supplier instructions of the used DMX devices for address configuration.

INSTALLATION

DIN-rail mounting

4 modules wide

CONNECTION

AUTOBUS

AUTOBUS connector set + patch cable supplied with this unit

DALI / DSI / DMX

Screw terminals for wires max. 1.5mm² (solid or stranded).
DMX: Always use shielded cable with twisted pair wires (1 pair for DMX data and 1 wire for 0V signal)
DALI/DSI wire sections:
0.5mm² for total cable length 0-100m
0.75mm² for total cable length 100m-150m
1.5mm² for total cable length 150m-300m

External override

Override input: voltage free contact
0.34mm² for total cable length 0-100m

POWER CONSUMPTION

AUTOBUS

Min. 140mA (DMX or 1 DSI / DALI ballast connected)
+ 2.5mA for every DSI / DALI ballast connected
DALI = Max. 300mA
DSI = Max. 390mA
DMX = Max. 140mA

DIMENSIONS NET | PACKED

72W x 90H x 60D | 180W x 84H x 107D (mm)

WEIGHT NET | PACKED

0.139kg | 0.227kg

ERROR PREVIEW

In Diagnostics

- Lamp defect
- Ballast defect
- Power failure (230V missing)
- Ballast not found
- DALI bus error message (not a single ballast found)

On the interface

- AUTOBUS voltage
- Interface malfunction (+additional information)
- Interface error message (eg. to hot)
- External contact (only with DALI)
- Interface warning (eg. voltage to low)

PACKAGING CONTENT

TDS13620 interface
AUTOBUS connector set + terminating resistor
AUTOBUS Patch cable

STORAGE

Temperature

-20°C to +65°C

Relative humidity

15% to 85%

IP PROTECTION RATE

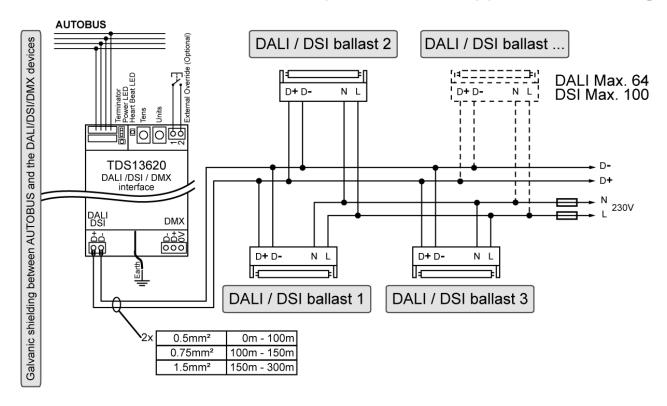IP20

OPERATING RANGE

Temperature

0°C to +50°C max.

Relative humidity

5% to 80% at 25°C (no humidity/condense)

SCHEMATIC DRAWING

Example <u>DALI / DSI</u> application Drawing

AUTOBUS

Galvanic shielding between AUTOBUS and the DALI/DSI/DMX devices

Terminator
Power LED
Heart Beat LED
Tens
Units
External Override (Optional)

TDS13620
DALI /DSI / DMX interface

DALI DSI
DMX

Earth

DALI / DSI ballast 2

D+ D-   N L

DALI / DSI ballast ...

D+ D-   N L

DALI Max. 64
DSI Max. 100

D-
D+
N   230V
L

D+ D-   N L

D+ D-   N L

DALI / DSI ballast 1

DALI / DSI ballast 3

2x	0.5mm²	0m - 100m
	0.75mm²	100m - 150m
	1.5mm²	150m - 300m

Example <u>DMX</u> application Drawing

AUTOBUS

Galvanic shielding between AUTOBUS and the DALI/DSI/DMX devices

Terminator
Power LED
Heart Beat LED
Tens
Units
External Override (Optional)

TDS13620
DALI /DSI / DMX interface

DALI DSI
DMX

Earth

3x min 0.25mm²
shielded twisted pair

0V
D+
D-

RED	= Address 001
GREEN	= Address 002
BLUE	= Address 003

0V
D+
D-

RED	= Address 001
GREEN	= Address 002
BLUE	= Address 003

0V
D+
D-

RED	= Address 004
GREEN	= Address 005
BLUE	= Address 006

Light Group 1

Light Group 2