

GESCHÄFTSFÜHRER:  
Uwe Hagenbach  
Bernhard Grill

BANKVERBINDUNG:  
Deutsche Bank  
Kto-Nr. 7 258 601  
BLZ 700 700 10

HRA-Nr. 88773  
Ust.-IdNr.: DE 129402596  
Amtsgericht München

Licht-Technik Vertriebs GmbH

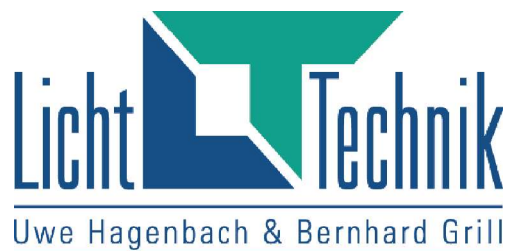
Osterwaldstraße 9-10

D-80805 München

Telefon: +49 (0) 89 / 36 05 28-0

Fax: Int. +49 (0) 89 / 36 05 28-30

E-mail: INFO@LICHT-TECHNIK.COM



## **Motorized barndoor (Suggestion for tendering text)**



### Motorized barndoor Type Stargate02

The motorized barndoor is an accessory for headlights to control the light. With this device it is possible to shadow the light beam and make effects like slots. Five axles are motordriven. Barndoor one to four and rotation as well.

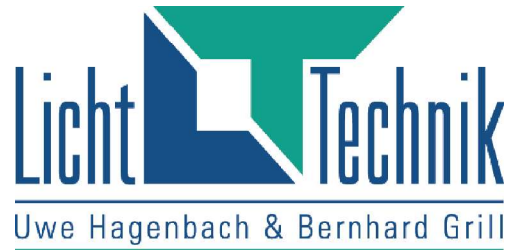
Power supply:	24V DC
Control:	DMX512-1990 by USITT 5 channels, 8 Bit per channel
Barndoor 1-4 moving range:	0° to 125°
Rotation moving range:	up to 180°, but programmable from 1° to 180°
Speed barndoor 1-4:	10°/s
Speed rotation:	10°/s
Memory precision:	smaller 0,5°
Internal control:	16-Bit processor with 5 PID controller
Power off safety:	self locking friction clutches absolute value devices for position detection no initialisation run after power up

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The power circuits of the lamp and the device must be separated. They must not influence each other.

The device must be CE-certified.

The drive of the rotation must be realized via a inner located Teflon(TM) cable to ensure a safe and trouble-free operation.

All drives must have position sensors to recognize the actual position and feedback this to the control electronic.

The firmware of the device must be able to detect any blockings or defects in any single axle. In addition it must have an overcurrent protection, designed in the hardware of the electronics.

It must have friction clutches to avoid any damages to the drives, electronic and leafs by crashes or manual movement.

The drives must be driven in low-voltage implementation to avoid any danger to humans.

There must be no initialisation run after power up.

The motors and the gearboxes should be designed in low noise construction for operating possibility also during a production.

All mechanical and electrical parts must be durable heat resistant or protected by an isolation.

Housings must be made of high density aluminium, gearboxes of heat resistant synthetic.

The surface must be powder coated, heat resistant, scratch resistant, not light reflectable. Preferable color is black.

Complete control of all functions must be realized via DMX512-1990, USITT standard.

Each barndoor and rotation must be separately controllable.

An automove function must implemented for opening, closing or positioning the barndoors successive one after another.

The user interface must be lightened. In addition there should be the possibility to switch the light off.

The programming possibilities must be indicated in plain text.

The user language must be available in german as well as in english language.

manufacturer: Licht-Technik or equal  
type: MT xxx 02  
(xxx = size)

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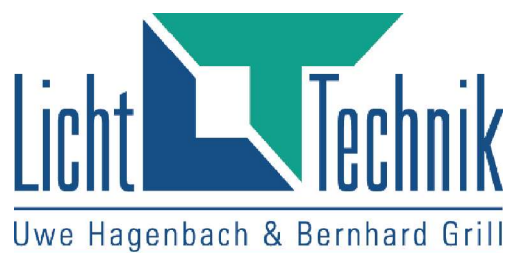
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## Technical data

### Weights and dimensions:

Since dimensions are variable (open/closed barndoors) only weights are indicated.

Type	Weight [kg]
Stargate MT-200-02	5.7
Stargate MT-250-02	6.5
Stargate MT-300-02	7.0
Stargate MT-350-02	7.5
Stargate MT-430-02	9.0
Stargate MT-500-02	10.5

**Connected load:** 24 V DC, max. 1,75 A

**Fuse:** 3,15 A slow blow

### Pin assignment:

#### Data-Power-cable:

4pin XLR

Housing: shield

PIN 1: 0 V

min. cross section 0,75mm<sup>2</sup>

PIN 2: Data –

min. cross section 0,25mm<sup>2</sup>

PIN 3: Data +

min. cross section 0,25mm<sup>2</sup>

PIN 4: +24 V DC

min. cross section 0,75mm<sup>2</sup>

#### DMX-data cable:

5pin XLR

PIN 1: 0V

min. cross section 0,25mm<sup>2</sup>

PIN 2: Data –

min. cross section 0,25mm<sup>2</sup>

PIN 3: Data +

min. cross section 0,25mm<sup>2</sup>

PIN 4: not connected

min. cross section 0,25mm<sup>2</sup>

PIN 5: not connected

min. cross section 0,25mm<sup>2</sup>

**Caution:** To comply EMV rules our equipment has to be connected with shielded cables. This also for reliability of our equipment.

The DMX wires must be twisted pair and shielded separately.

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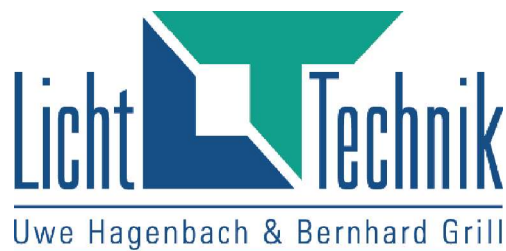
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## Declaration of conformity

**Manufacturer:** Licht-Technik Vertriebs GmbH  
**Address:** Osterwaldstraße 9-10  
80805 München

declares that the product:

**Name of product:** Motorised barndoor  
**Type of product:** Stargate MT-200-02, Stargate MT-250-02, Stargate MT-300-02  
Stargate MT-350-02, Stargate MT-400-02, Stargate MT-430-02,  
Stargate MT-500-02,

corresponds to the following specifications under strict observance of the installation instructions and technical specifications:

**Standard 2004/108/EG of the European Parliament and the council from  
15. December 2004  
for law provision adaptation of the member states concerning the electrical  
compatibility and for  
abrogation of standard 89/336/EWG.**

The device passed the test. A testreport is available at company Licht-Technik Vertriebs GmbH.

Munich, 6. July 2010

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Uwe Hagenbach / Bernhard Grill  
Managing directors