



MasterPort 3

Universal DMX/RDM Network Node

The LSS MasterPort 3 is an RDM-capable DMX/Ethernet network node for demanding lighting networks and represents the new generation of LSS network nodes. It converts lighting data between Ethernet and DMX and supports up to four DMX universes. Within each universe, up to four sources can be merged using either HTP or LTP. In addition to DMX512, the MasterPort 3 supports all common network protocols, in particular sACN and Art-Net 4.

Each LSS MasterPort 3 port can be configured as a DMX input or output in the port settings, regardless of the physical connector type. Signals received at a port configured as an input are transmitted to the network using the selected network protocol. Different protocols can be used for transmitting and receiving over Ethernet.

The LSS MasterPort 3 was designed specifically for use close to the stage. Its fanless design ensures completely silent operation. The unit can be fully configured locally via the graphical colour LCD. A powerful menu system provides intuitive control using the rotary encoder. Both the display and the power LED on the front panel can be switched off.

Alternatively, the LSS MasterPort 3 can be fully configured using the LSS ConfigStudio configuration software. Both the local menu system and the configuration software are continuously developed to meet new requirements. Firmware updates can be installed via ConfigStudio. The latest update files are available on the LSS website.

The LSS MasterPort 3 also supports Multicast DNS (mDNS) and RDMnet. Integration into broadcast domains and VLANs is also possible.

The LSS MasterPort 3 has two Gigabit Ethernet ports connected via an internal switch. Port 2 does not support PoE and is intended primarily for servicing and administration. It can also be used to daisy-chain multiple MasterPorts.

RDM functionality can be enabled separately for each port configured as an output. Various intervals are available for RDM discovery. Incremental discovery can also run in the background. Data collected from connected RDM devices can be shown on the display or forwarded via RDM over Ethernet.

The LSS MasterPort 3 provides extensive logging functions to assist with troubleshooting. Message priorities, log destinations such as Telnet or Syslog, and up to 32 log sources can be selected.

The built-in unit is powered via PoE or 24–48 V DC. The portable version can also be powered from 230 V AC via an internal power supply.

The LSS MasterPort 3 is available in different versions. These include a built-in version for installation in walls or stage connection boxes, with a minimum installation depth of 80 mm, and a portable version with an integrated power supply. Both versions are available with various DMX connector configurations: 4 × DMX-In, 4 × DMX-Out, 1 × DMX-In / 3 × DMX-Out, or 2 × DMX-In / 2 × DMX-Out.

Technical Data

General	
Ports – Front	4 × 5-pin XLR connectors, galvanically isolated Choice of male or female (see connector configurations)
Ports – Rear	4 × 3-pin Phoenix connectors, 3.81 mm pitch, for DMX (optional) 1 × 3-pin Phoenix connector, 5.08 mm pitch, for power supply 2 × RJ45, 10/100/1000 Mbit/s; port 1 supports PoE; speed/link indication
Indicators	Blue power LED (can be switched off via software) 2.4" colour display, QVGA resolution (320 × 240 pixels)
Controls	Incremental encoder with 24 detents and push-button
Power supply	PoE via LAN port 1 (priority) or 24–48 V DC, ±10 % Power consumption: 12 W Reverse polarity protection Transient overvoltage protection (10 µs pulse / 1000 µs pause, up to 400 W)
Temperature sensing	Onboard temperature sensing with an accuracy of ±1 °C
DMX/RDM	
Standards – DMX512	USITT 1990, DIN 56930-2, ANSI E1.11
Standards – RDM	ANSI E1.20, ANSI 1.37-1 (2012), ANSI 1.37-2 (2021), ANSI 1.37-7 (2019)
Baud rate	250 kbit/s
Termination	Internal, factory-fitted
Transmission (DMX-Out)	
Start code	0 (lighting), CCh (RDM)
Frame length	Start code + 2 ... 512 values
Min. frame time	22.4 ms
Frames transmitted per second	3 ... 44
Break length	88 µs ... 999 ms
Mark After Break	4 µs ... 999 ms
Inter Slot Time	0 µs ... 4000 µs
Pause after start code	25 µs (when the configured frame rate is < 44)
Reception (DMX-In)	
Start code	0 (lighting), CCh (RDM)
Min. frame length	Start code only
Max. frame length	Start code + 512 values (Values beyond 512 are lost)
Throughput latency	44 µs ... 22.5 ms
Max. interval between frames	2 s
Break length	48 µs ... 1.95 s

Ethernet	
Speed	10 Mbit/s, 100 Mbit/s, 1000 Mbit/s; auto-negotiation
Duplex mode	Auto-MDI/MDIX
Indicators	Link LED, data LED; speed and duplex mode are shown on the display
Lighting protocols	Art-Net 4 (Artistic License), AVAB-IPX (AVAB, transtechnik, LDDE, ...), AVAB/UDP (transtechnik), ShowNet (Strand Lighting) sACN (ANSI E1.31 R2018), sACN DD Priority-per-Channel, RDMnet, ANSI E1.33 (2019)
Other network protocols	ARP, TCP/IP, IPX, UDP, IGMPv3, Syslog, mDNS, Telnet
Reception	
Max. packet rate	> 1000/s (with 1 lighting frame per packet)
Throughput latency	4 µs ... 22.7 ms
Transmission	
Max. transmit rate on value change	50 frames/s (minimum interval: 20 ms)
Transmit interval without value changes	20 ms ... 4 s (adjustable)

Each DMX connector can be configured as an input or output in the device settings, regardless of its physical type.

Conductor Cross-Sections for Rear Connectors

Connector	Solid (mm ²)	Flexible (mm ²)	With ferrule (mm ²)	
			With plastic collar	Without plastic collar
DMX-Out	0.14 ... 1.5	0.14 ... 1.5	0.25 ... 1.5	0.25 ... 0.5
Power supply	0.14 ... 2.5	0.14 ... 2.5	0.25 ... 2.5	0.25 ... 1.5

IP Rating / Protection Class	
Built-in unit	IP00 / Class III
Portable	IP20 / Class I
Ambient Temperature and Humidity	
Temperature	0 °C ... +40 °C (operation and storage)
Humidity	20–90 %, non-condensing
RoHS	Compliant
Material	
Front panel	Aluminium, blue powder-coated
Built-in unit protective cage	Aluminium, 1 mm, uncoated
Portable	Sheet steel, 1 mm, black powder-coated (RAL 9005)

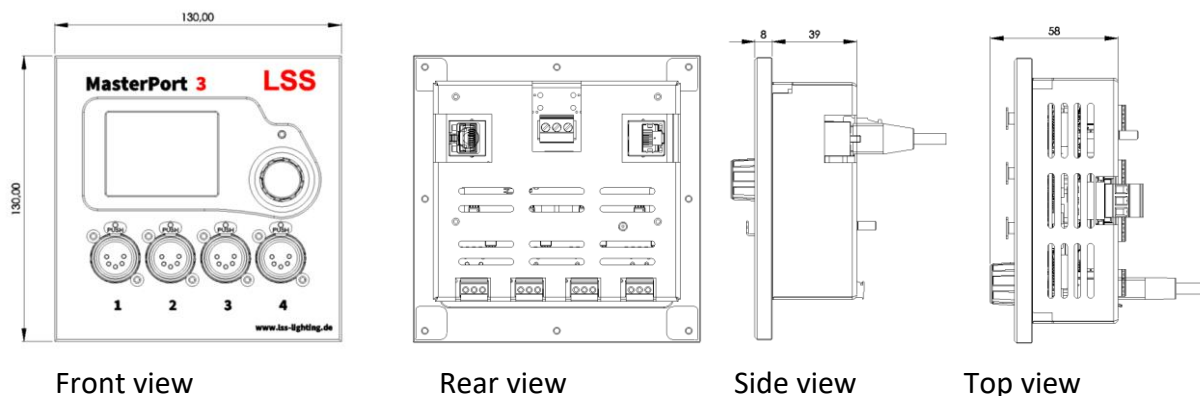
LSS MasterPort 3 Built-in Unit

The built-in unit is the standard version of the LSS MasterPort 3 and is designed for installation in the following systems and enclosures:

- Stage connection boxes
- Data cabinets
- LSS multifunction trunking 180 × 120 and 250 × 140
- LSS VK Profile 155
- Other enclosures

The built-in unit is available with the following connector configurations: 4 × DMX-In, 4 × DMX-Out, 1 × DMX-In / 3 × DMX-Out, or 2 × DMX-In / 2 × DMX-Out.

The version with 4 × DMX-Out is also optionally available with four rear-mounted connectors.

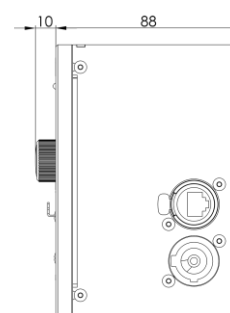
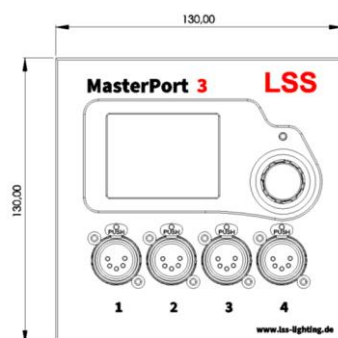
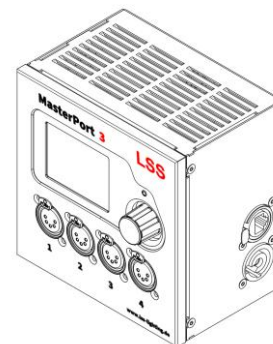


Technical Specifications	
Dimensions (W × H × D)	130 × 130 × 58 mm with encoder 130 × 130 × 47 mm without encoder
Installation depth	At least 80 mm
Power supply	Either 48 V DC via Power over Ethernet (IEEE 802.3af) or 24 V DC via the rear connector
Power consumption	10 W
Weight	466 g
Order Numbers and Connector Configurations	5612: Built-in unit, 2 × DMX-In / 2 × DMX-Out 5601: Built-in unit, 4 × DMX-Out 5611: Built-in unit, 4 × DMX-In 5613: Built-in unit, 1 × DMX-In / 3 × DMX-Out The 4 × DMX-Out version (5601) is optionally available with rear-mounted DMX connectors. Rear DMX connectors cannot be retrofitted.

MasterPort 3 portable for Mobile Use

The LSS MasterPort 3 portable is designed for mobile use, for example on stage. The unit has an enclosure with a side-mounted Ethernet connector.

The standard version is powered via PoE. Operation from 230 V AC is also available as an option. In this case, the mains connection uses a Neutrik powerCON® cable.



Technical Specifications	
Dimensions (W × H × D)	130 × 130 × 98 mm with encoder 130 × 130 × 88 mm without encoder
Power supply	PoE Optional: 230 V AC with internal switch-mode power supply
Power consumption	200 mA / 12 W
Weight	1.25 kg
Order Numbers and Connector Configurations	5612: Built-in unit, 2 × DMX-In / 2 × DMX-Out 5601: Built-in unit, 4 × DMX-Out 5611: Built-in unit, 4 × DMX-In 5613: Built-in unit, 1 × DMX-In / 3 × DMX-Out L03017: Portable enclosure for power supply via PoE L03007: Portable enclosure with Neutrik powerCON® blue and RJ45 connector