

MODEL SPECIFIC OPERATIONAL MANUAL



E-STOP SPLITTER 8/12

TABLE OF CONTENTS

1. Introduction	3
2. General information	4
3. Item Checklist	5
4. System Overview	6
4.1 Front View	7
4.2 Rear View	8
5. Control Options	9
6. Technical Specifications	10
6.1 Technical Specification [E-STOP Splitter 8]	11
6.2 Technical Specification [E-STOP Splitter 12]	12



INTRODUCTION

Thank you for purchasing this KVANT product.

To ensure proper operation, please read this manual carefully before using the product.
After reading it, keep it in a safe place for future reference.

GENERAL INFORMATION



The following chapters explain important information about lasers in general, basic laser safety and some tips about how to use this device correctly.

Please spend some time reading these information as some of them are critical for safe and efficient operation of this laser display system.



This E-STOP system connects to a laser display system, rated as a **Class IV laser product** and manufactured in accordance to **EN 60825-1:2014**. Avoid eye or skin exposure to direct or scattered radiation. Wear protective goggles of suitable optical density if necessary.



If the laser is operated in a situation where health or property injury may occur the operation must be stopped immediately by using this device.



The manufacturer and its distributors cannot be held responsible for any damages caused by improper use or misuse of this KVANT E-STOP system. The owner/user is fully responsible for using this product in accordance to laser safety regulations of the country or state where the system is being used.



Please note that some other optical devices such as cameras, camcorders, video projector etc. can be damaged if exposed to excessive laser radiation.

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER OR BACK PANEL. SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		

3

ITEM CHECKLIST

Before starting, check that all the following items have been included with your E-STOP system. If anything is missing, contact your supplier.

Item	Number of units	Descriptions
	1x	KVANT E-STOP Splitter
	1x	AC Power cable with powerCon TRUE1 connector EU version BUS ID: 605 UK version BUS ID: 606 US version BUS ID: 607



SYSTEM OVERVIEW

Every new Kvant laser display projector is delivered with a top-quality E-STOP system that fulfils all the safety features required by legislation. It allows you to control one or more projectors when connected in series.

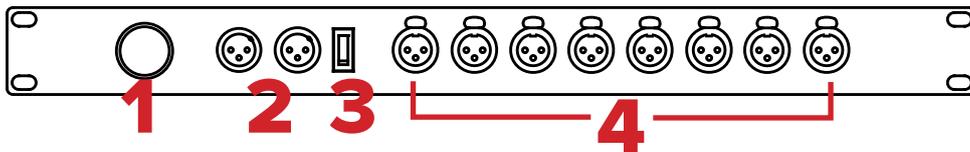
However, in some situations, you may need to control the E-STOP signal from various positions within the setup and/or manage more lasers that are split into multiple groups.

The new 8-12 channel E-STOP splitter offers many ways in which the E-STOP signal can be spread across all the Kvant lasers in a given setup. The splitter distributes the signal in a parallel way, making it possible to connect a virtually unlimited number of laser projectors and control them at once/or per group.

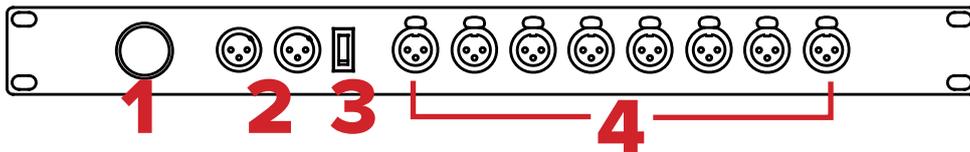
Each splitter has two E-STOP remote inputs, which allows for two E-STOP remote positions (a.i. FOH and stage) per setup or sub-group.

FRONT VIEW

E-STOP Splitter 8



E-STOP Splitter 12



1. E-STOP button.

In the event of an emergency, the E-STOP button is intended to function as a safety feature that instantly stops laser projection after pressing it.

2. 3-pin XLR input connector - 2x

Designed for use with E-STOP Remotes, providing a secure and reliable means of connecting to ensure proper operation and safety regulations.



The US version of the Emergency STOP must also have the Remote Interlock Bypass inserted into it.

3. Bypass Input switch.

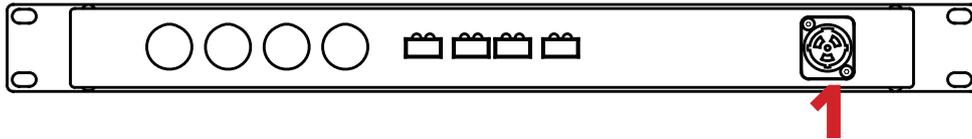
This switch must be in the position "0", if the secondary E-STOP Remote is used and active. It must be in the position "1", when the secondary E-STOP Remote is not used, or the user wants to deactivate it. The secondary E-STOP Remote will not work, if this switch is in the wrong position.

4. 3-pin XLR output connector - 8x

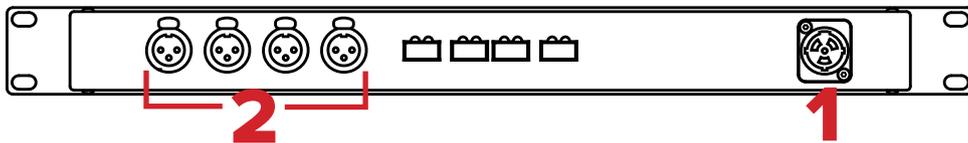
To assemble your laser setup, use the included connectors with the different lasers independently or in series, as necessary. This adaptable structure ensures high efficiency and suitability for a wide range of applications.

4.2 REAR VIEW

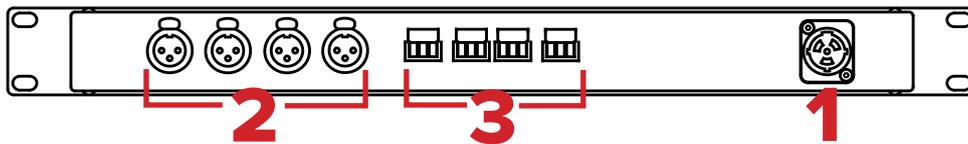
E-STOP Splitter 8



E-STOP Splitter 12



E-STOP Splitter 12 with relay



1. Mains power INPUT - 1x

Use supplied Neutrik powerCON TRUE1 power cable to connect the E-STOP Splitter system to mains power supply using the INPUT connector.

The powerCON TRUE1 is a connector with breaking capacity (CBC), i.e. it can be connected or disconnected under load or live.

3. 3-pin Potential free relay output SPDT - 4x

Mating connector WR-TBL Series 3527 or equivalent (part. number - 691352710003).

The Kvant E-STOP system provides user-accessible output. Each output has a normally open and closed contact. It can be used for warning lights.

It may be used to control fixtures using an on/off switch.

2. 3-pin XLR output connector - 4x.

To assemble your laser setup, use the included connectors with the different lasers independently or in series, as necessary. This adaptable structure ensures high efficiency and suitability for a wide range of applications.



The E-STOP System is an integral part of the laser projector. It is there for the safety of the public as well as the operator. In most countries it is required by law to have a fully working Emergency STOP in place for every laser system used. Modifying or using anything other than the E-STOP Remote or E-STOP Splitter provided, in the manner it was intended, may invalidate your laser projector's warranty.

5 CONNECTION OPTIONS

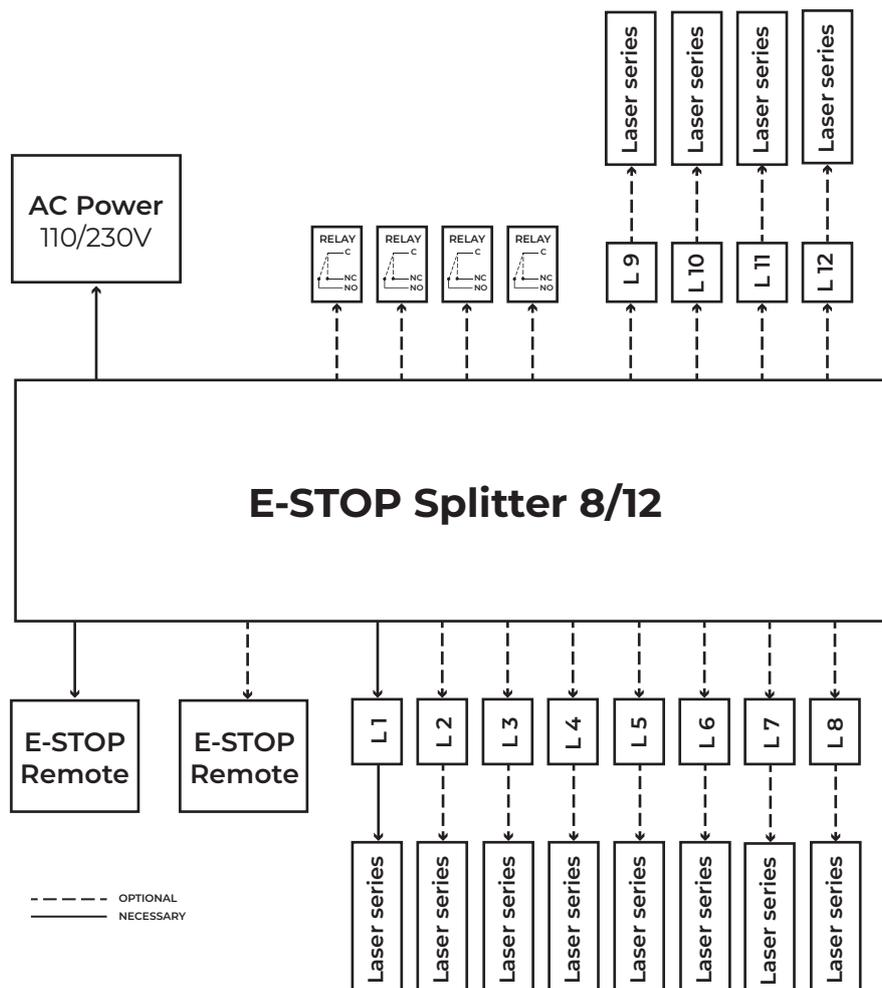
Every new laser display projector comes with the Kvant E-STOP Remote which ensures that it complies with required safety regulations. When one or more projectors are connected in series, the system provides centralized control.

However, in complex configurations, further E-STOP signal control may be required from several locations, as well as the administration of multiple laser groups.

The 8/12-channel E-STOP splitter distributes the signal in a series, allowing an unlimited number of projectors to be connected and controlled simultaneously.

Each splitter has two E-STOP remote inputs, enabling two remote control positions (for example, front of house and stage) per configuration or sub-group.

In addition, four relays can be connected in two ways: “Laser-On” and “Laser-Off” combinations. The “Laser-On” configuration links the interlock when the lasers are emitting, which is normally done with air lamps, but the “Laser-Off” configuration connects the interlock when the lasers are not emitting, which is commonly done in pyrotechnic applications.





TECHNICAL SPECIFICATIONS

All the technical specifications are subject to change without prior notice.

TECHNICAL SPECIFICATIONS [E-STOP SPLITTER 8]

Input:	2x [3-pin XLR]
Output:	8x [3-pin XLR], optically isolated, ESD protected and “power cross safe”, each output can control an unlimited number of Kvant laser projectors.
Power requirements, V:	100-230, 50Hz
Consumption:	max. 20VA
Max. control distance:	Up to 1000 meters with a high-quality signal cable.
Ingress protection rating:	IP 20
Operation temperature, °C:	0-40
Housing colour:	Black
Weight, kg:	2
Dimensions, mm:	483 x 45 x 140 [WxHxD]
Rack space:	1U
Optional relay outputs:	
Maximum current:	5A/250VAC, 5A/30VDC
Contact arrangement:	SPDT (form C, CO)
Dielectric strength:	1kV

TECHNICAL SPECIFICATIONS [E-STOP SPLITTER 12]

Input:	2x [3-pin XLR]
Output:	12x [3-pin XLR], optically isolated, ESD protected and “power cross safe”, each output can control an unlimited number of Kvant laser projectors.
Power requirements, V:	100-230, 50Hz
Consumption:	max. 20VA
Max. control distance:	Up to 1000 meters with a high-quality signal cable.
Ingress protection rating:	IP 20
Operation temperature, °C:	0-40
Housing colour:	Black
Weight, kg:	2
Dimensions, mm:	483 x 45 x 140 [WxHxD]
Rack space:	1U
Optional relay outputs:	
Maximum current:	5A/250VAC, 5A/30VDC
Contact arrangement:	SPDT (form C, CO)
Dielectric strength:	1kV