SIGMATEK

TSY 041

Training System
Extension Motion

Date of creation: 02.11.2016 | Version date: 14.02.2020 | Article number: 12-100-041-E

Publisher: SIGMATEK GmbH & Co KG
A-5112 Lamprechtshausen
Tel.: 06274/4321
Fax: 06274/4321-18
Email: office@sigmatek.at
WWW.SIGMATEK-AUTOMATION.COM

Translation from German

Training System Extension Motion TSY 041

The TSY 041 training system is an application assembly that is used for training. The application consists of a S-DIAS VARAN control module, an I/O module resp. 2 servo axes and several operation elements for the simulation of different input and output signals.
The TSY 041 can be connected to the TSY 021 basic system with the S-DIAS VARAN control module VI 021.
The VARAN bus system serves for the data exchange between the TSY 021 and the extension module motion TSY 041.
The application is supplied with a desktop power supply, which is part of the application.

Additionally a Tyco Mini I/O network cable for establishing a VARAN connection to the TSY 021 basic system is part of the application.

The following system components are integrated and fixly wired in the TSY 041:

1x Desktop Power Supply with Three-pin Plug (cable length: 2.5 m)
1x S-DIAS VARAN control module VI 021
1x S-DIAS Power Supply Module KL 090
1x S-DIAS Digital Mixed Module DM 081
2x S-DIAS Axis Module DC 062
1x Tyco Mini I/O cable 1 m
4x Toggle Switches (for the simulation of digital inputs)
2x Servo Motors (for axes simulation)

Contents

1 Technical Data

1.1 Performance Data

Interfaces	1x VARAN In (Tyco Mini I/O) (maximum cable length:100 m) 1x VARAN Out (Tyco Mini I/O) (maximum cable length:100 m)

1.2 Electrical Requirements

Supply voltage	18-30 V DC	
Supply voltage (UL)	18-30 V DC (Class 2)	
Current consumption of the voltage supply	the current consumption is dependent on the connected loads (max. 2.75 A)	
Power supply on S-DIAS bus	via the VI 021	
Current capacity on S-DIAS bus (power supply for I/O/P modules).	+5 V	+24 V
	maximum 1.6 A	maximum 1.6 A

Designed exclusively for connection to a secondary galvanically separated supply with a rated voltage of 24 V DC. In compliance with UL248, the Fuse must be connected in the area between the supply source and the module!

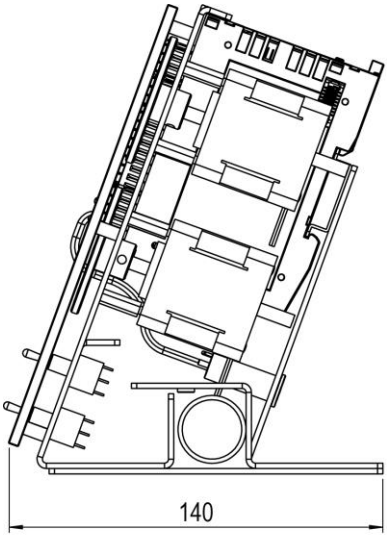
1.3 Miscellaneous

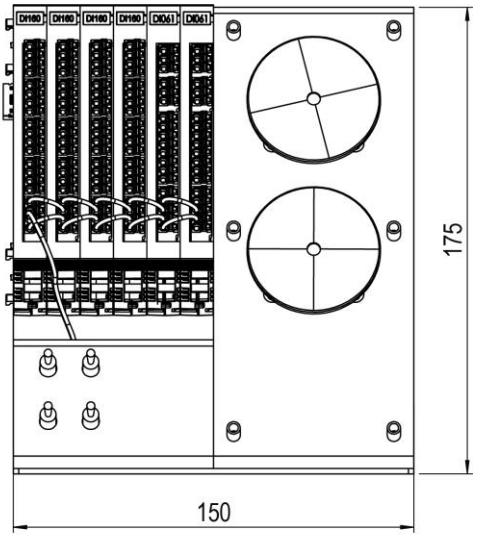
Article number	12-100-041
Hardware version	2.x

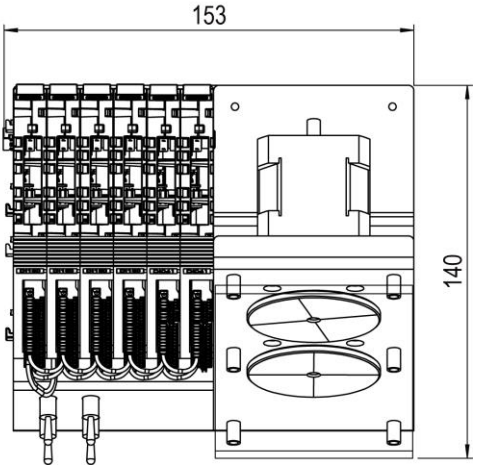
1.4 Environmental Conditions

Storage temperature	-20 ... +85 °C	
Envrionmental temperature	0 ... +55 °C	
Humidity	0-95 %, non-condensing	
EMC resistance	in accordance with EN 61000-6-2 (industrial area)	
EMC noise generation	in accordance with EN 61000-6-4 (industrial area)	
Vibration resistance	EN 60068-2-6	3.5 mm from 5-8.4 Hz 1 g from 8.4-150 Hz
Shock resistance	EN 60068-2-27	15 g
Protection type	EN 60529	IP20

2 Mechanical Dimensions

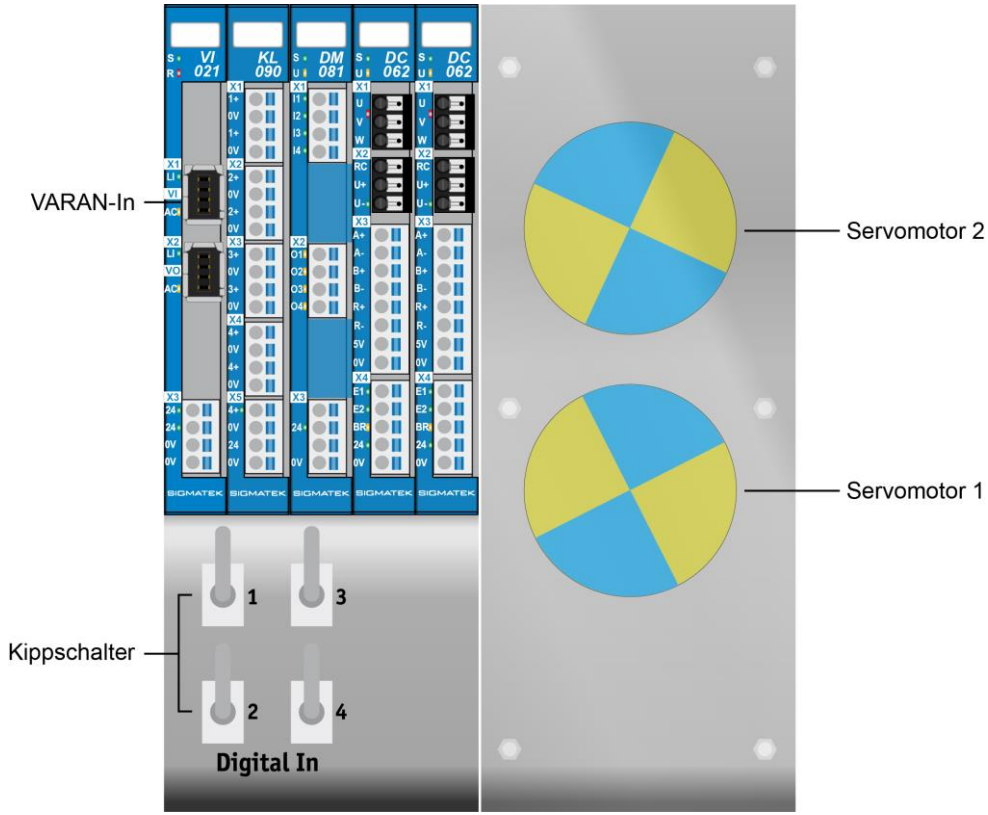




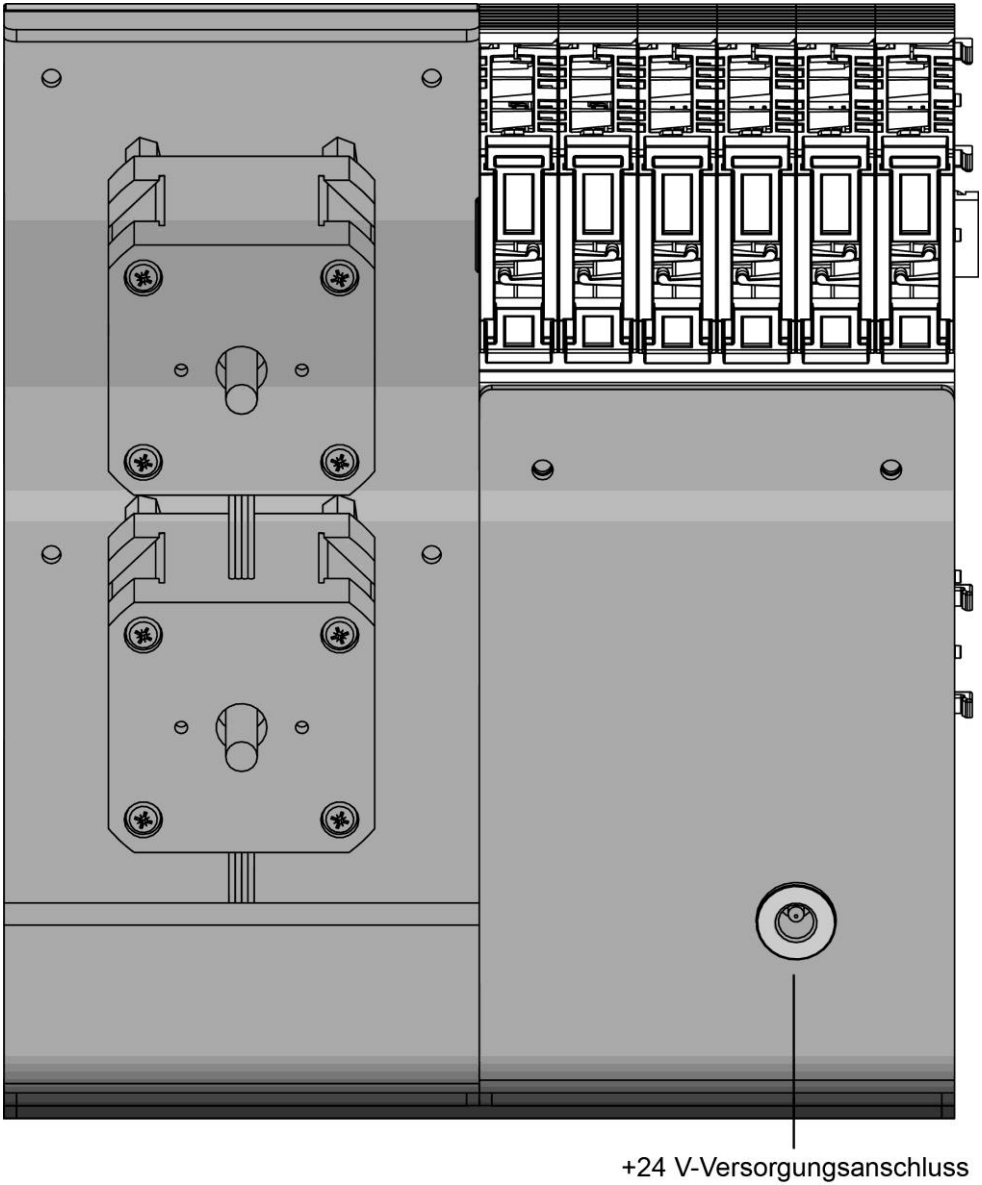


3 System Construction - Control Elements

3.1 Front View



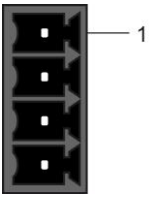
3.2 Back View



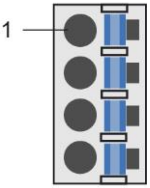
4 Connector Layout

4.1 S-DIAS Mixed Module DM 081 (Digital Inputs Toggle Switches 1-4)

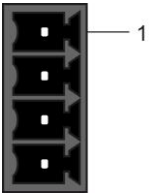
X1: Connector Inputs 1-4



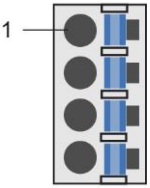
Pin	Assignment
1	Digital input (toggle switch 1)
2	Digital input (toggle switch 2)
3	Digital input (toggle switch 3)
4	Digital input (toggle switch 4)



X2: Connector Outputs 1-4



Pin	Assignment
1	Digital output (enable 1 DC062 module 1)
2	Digital output (enable 2 DC062 module 1)
3	Digital output (enable 1 DC062 module 2)
4	Digital output (enable 2 DC062 module 2)



4.2 S-DIAS Axis Module DC 062

Servo motor 1 is connected to the first DC 062 module resp. servo motor 2 is connected to the second DC 062.

In order to operate the DC 062 the outputs 1-4 of the DM 081 have to be switched by software, as they are wired to the Enable inputs of the DC 062 cards.

Documentation Changes

Change date	Affected page(s)	Chapter	Note
14.02.2020	4	1.3 Miscellaneous	Hardware version changed