

Training System Extension HMI

TSY 033



The TSY 033 training system is an application assembly that is used for training. The TSY 033 is the extension for the basic application TSY 021. The application consists of a 7 inch touch control panel, which is integrated in a device rack. The Ethernet interface serves for the data exchange between the TSY 033 and the basic module TSY 021. Additionally the application has a low voltage connection cable for supplying the application. It is simply connected to the basic module TSY 021 and so needs no own desktop power supply. Additionally a RJ45 network cable for establishing an online connection is part of the application.

Performance Data

Processor	EDGE3 Technology
Processor cores	4
Internal program and data memory (RAM)	2-Gbyte (DDR4)
Internal remnant data memory	128-kByte FRAM
Internal storage device	8-Gbyte eMMC
Internal I/O	no
Interfaces	2x Ethernet (10/100/1000) 2x USB 2.0 Type A 1x USB 2.0 Type Mini-B OTG 1x microSD card holder (SD 3.0)
Internal interface connections and devices	no
Display Resolution	7" TFT color display WSVGA 1024 x 600 pixels

Control panel	touch screen (multi-touch, projective capacitive)
Signal generator	no
Status LEDs	yes (1x red/1x green)
Real-time clock	yes (battery buffered)
Cooling	passive

Electrical Requirements

Supply voltage	+24 V DC $\pm 20\%$ (SELV/PELV) UL: NEC Class 2	
Current consumption of power supply at +24 V	typically 320 mA (with no external devices connected)	maximum 530 mA (with external devices connected)
Inrush current without currentlimiting supply	30 A for max. 20 μ s	
Inrush current with 24 V/10 A fixed voltage supply	1 A for max. 30 ms	

Terminal

Dimensions	215 x 175 x 130 mm (W x H x D)
Material	housing: aluminium/steel chromated
Weight	circa 850 g

Environmental Conditions

Storage temperature	-10 ... +70 °C	
Environmental temperature	0 ... +60 °C	
Humidity	10-95 %, non-condensing	
EMC resistance	according to EN 61000-6-2 (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 (147.15 m/s ²)
Protection type	EN 60529 protection through housing	front: IP65 cover: IP20 (not evaluated by UL)

7" VGA Display incl. Touch

Type	7" TFT color display
Resolution	WSVGA 1024 x 600 pixels
Color depth	24-Bit RGB
LCD mode	normally black
LCD polarizer	transmissive
Pixel size	0.1506 x 0.1432 mm
Active surface	154.08 mm x 85.92 mm
Backlighting	LED
Contrast	typically 800:1
Brightness	typically 400 cd/m ²
Visible field	left, right, top, bottom typically 80°

Article Number and Miscellaneous

Article number	12-100-033
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Notes

