1.6.2.21 Connections Cube67 DIO8/DI8 E TB Rail (Art. No. 56 691)

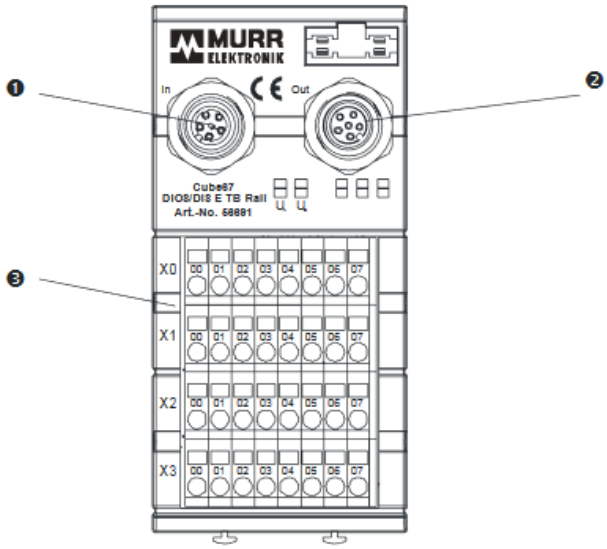

Fig. 47: Connections Cube67 DIO8/DI8 E TB Rail – Art. No. 56 691

1 Connection for the internal system connection (incoming)
2 Connection for the internal system connection (outgoing)
3 Terminal block

X0	Transparent - connection for sensors
X1	Transparent - connection for sensors / actuators
X2	Brown - sensor supply
X3	Blue - ground

2.35.1 Dimension drawing

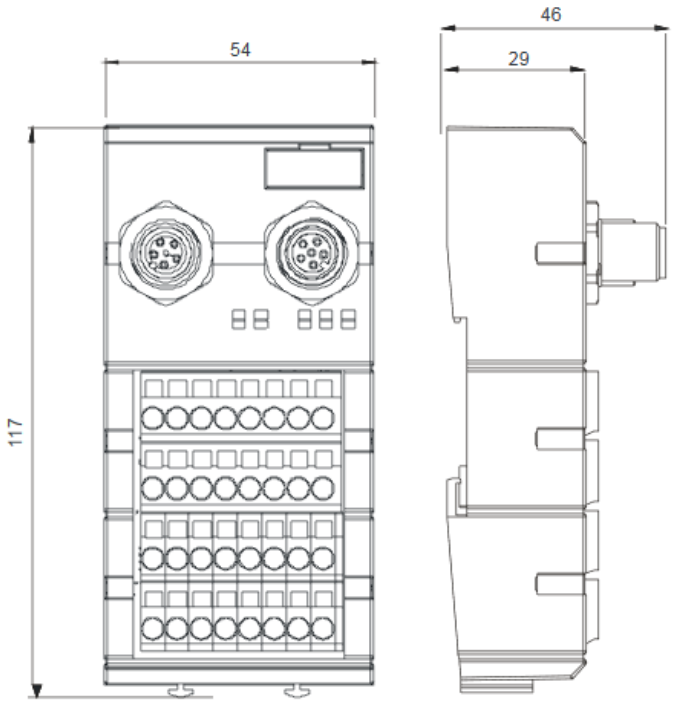

Fig. 106: Dimensions Cube67 DIO8/DI8 E TB Rail – Art. No. 56 691

Terminal assignments

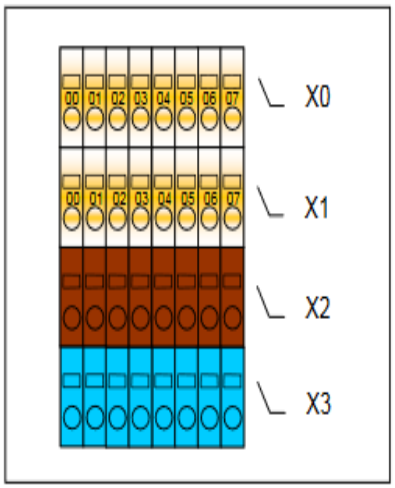

Fig. 66: Terminal assignments

X0	luminous terminal (channel 00 ... 07)
X1	luminous terminal (channel 00 ... 07)
X2	Sensor supply voltage (output)
X3	Ground

Connecting spring clamp terminals

1. Lead the cable through the opening of the housing and the cable gland
2. Strip the cables (approx. 5 mm) and crip wire end ferrules
3. Lead the cables into the terminals with a screwdriver.

2.35.2 Mechanical data

Technical Data	Cube67 DIO8/DI8 E TB Rail – Art. No. 56 691		
Ambient conditions			
Operating temperature	0°C ... 55°C		
Storage temperature	-25°C ... 70°C		
Flammability class	UL 94 V0		
Materials			
Base plate	AlMg		
Housing	AlMg black anodized		
Contact carrier M12	PLC (UL94 V0), black		
Contact	CuZn, with nickel sublayer and gold plated		
Colored spring clamp terminal	Polyamide (not flame retardant)		
Transparent spring clamp terminal	Polyamide (not flame retardant)		
Spring clamp terminal contact	CuZn, with nickel sublayer and gold plated		
Mechanical data			
Mating cycles / contact	≤ 50		
Protection acc. to EN 60629	IP20 (only in screwed condition)		
Vibration, sinusoidal EN 60068-2-6	5 g		
Shock, half-sine EN 60068-2-27	30 g / 11 ms		
Design information			
Weight	152 g		
Torques			
Screw connection of cap	$1^{\pm 0.2}$ Nm		
Cable glands	Cap nut 1 Nm	Thread 0.5 + 0.2 Nm	
Connections			
System connection	M12 connector (A coded) 6-pole		
I/O connections	Spring clamp terminal		

2.35.3 Electrical Data

Technical Data	Cube67 DIO8/DI8 E TB Rail – Art. No. 56 691		
Max. number of inputs	16		
Max. number of outputs	8		
Operating voltage	24V DC ± 25%		
Current consumption	approx. 50 mA		
Sensor Supply			
Max. current	max. 200 mA per M12 socket		
Overload / short circuit fuse	Multi fuse (for each channel)	≤ 100 mA	Automatic restart
		> 100 mA	Reset required
	Tripping time 1 s at Ik ≥ 1 A und 23°C ambient temperature		

Technical Data	Cube67 DIO8/DI8 E TB Rail – Art. No. 56 691	
Reverse polarity protection		
- Module electronics	Yes	
- Sensors	Yes	
- Actuators	Yes	
Outputs		
Nominal current	0.5 A per channel	
Max. total current	4 A	
Over voltage protection	Yes (varistor)	
Cable length	0.75 mm²	Max. 10 m
	0.34 mm²	Max. 5 m
Cable diameter	Max. 1.5 mm²	
Signal delay	2 ... 4 ms	
Max. switching frequency at resistive load	50 Hz	
Max. switching frequency at inductive load	5 Hz	
Max. lamp load	10 W	
Overload / short circuit fuse	electronic short circuit detection, tripping time < 10 ms	
Inputs		
Input characteristics	IEC 1131-2, type 2	
Input filter	approx. 1 ms	
Signal delay	7 ms	
Over voltage protection	Yes (varistor)	
EMC		
EN 61131-2 Programmable controllers - Part 2: Equipment requirements and tests	EN 61000-4-2 ESD	contact ± 4 kV ; air ± 8 kV
	EN 61000-4-3 HF-field + GSM	10 V/m
	EN 61000-4-4 Burst	± 2 kV
	EN 61000-4-5 Surge	asym./symmetrical ± 0.5 kV DC power input
		asym. ± 1 kV signal connections
	EN 61000-4-6 HF asymmetrical	10 V
	EN 61000-4-8 magnet field 50 Hz	30 A/m
	EN 61000-6-3 interference strength	QP 30 dBµV/m (30 - 230 MHz) class B
		QP 37 dBµV/m (230 - 1000 MHz) class B
Insulation	**EN 50178**	
Rated voltage	IEC 60664-1	
Insulation resistance	IEC 60512-2	
Contact resistance	≤ 5 mΩ	