Technical data sheet

Relay module with positive-action contacts

Identification

Type	LRZK 6F-D110-240H-01
Part No.	762090

Product version

Hardware revision	B
Datasheet version	01

Use/Application/Properties

Description	Relay module with positive-action contacts as per EN 50205 for safety switching circuits. Activated via DC 110 V. 2 NC contacts and 4 NO contacts 250 V / 6 A are available for switching small to medium loads.

Input

Rated voltage U_N	DC 110 V
Voltage range	DC 77 V – 137.5 V
Rated current (at U_N)	12 mA
Status indication LED	Yellow LED
Protection device Input	Free-wheeling diode Reverse diode

Output

Switching voltage	AC/DC 5 V – 250 V
Switching current	AC/DC 0.005 A – 6 A
Switching capacity	1500 VA / (50 W @ DC 24 V)
Contact material	AgCuNi + 0.2 µm Au

General

Dimensions (w × h × d)	22.5 mm × 79.0 mm × 84.0 mm
Weight/unit	0.089 kg

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Mounting	DIN rail mountable TS35 (EN 60715)
Housing material	PC-ABS
Form	Microcompact
Installation postition	As desired

Technical data

Connection type	Push-In single-wire 0.20 – 2.5 mm² AWG 20 – AWG 14 fine stranded 0.20 – 2.5 mm² AWG 20 – AWG 14 Stripping length: 8 mm Screwdriver: 3.5 × 0.6 mm
Clearance/creepage dist.	between control and load side (+A1, +A1, -A2, -A2, 13/14, 21/22 -> 31/32, 43/44, 53/54, 63/64) ≥5.5 mm (protective separation) between coil and control contacts (+A1, +A1, -A2, -A2 -> 13/14, 21/22) ≥3 mm (functional insulation)
short circuit protection	1000 A, SCPD 6 A function class gG (back-up fuse)
Rated insulation voltage	AC/DC 300 V between control- and load side AC/DC 300 V between coil and control contacts
Contact type	2 NC contact, 4 NO contact (positively driven EN 50205, Type A)
Mechanical service life	approx. 10 × 10^6 operations
Operation temperature range	-40 °C … +70 °C (+85 °C 10 min)
Storage temperature range	-40 °C … +85 °C

Environmental service conditions

Degree of pollution	PD2
Over voltage category	OV2
Degree of protection	IP20

Failure Rate Prediction (MTBF)

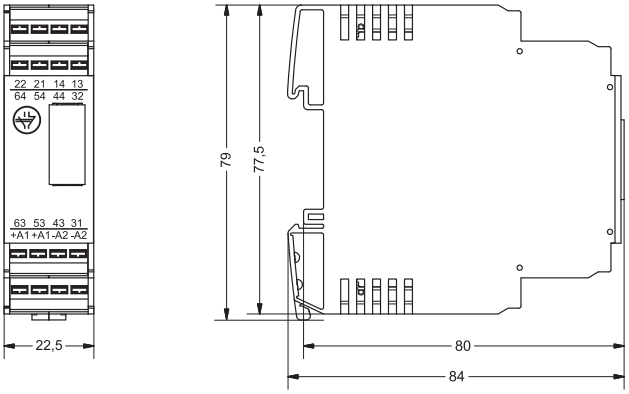
Standards	Electronic components – Reliability – Reference conditions for failure rates and stress models for conversion: EN/IEC 61709 Failure Rates of Components – Expected values: SN 29500
Failure rate at +45 °C	355 fit
Failure rate at +45 °C	2820103 h
	1 fit equals one failure per 10^9 component hours
	The indicated temperature is the mean component ambient temperature.
Comments	The results are valid under following conditions: Automotive environment or industrial areas without extreme dust levels and harmful substances Continuous operation 8760 h per year

Standards/Certifications

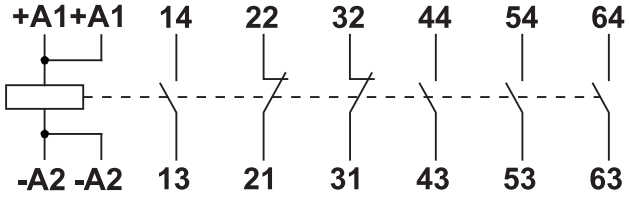
Standards

EN 50155:2007-07: Railway applications – Rolling stock – Electronic equipment
EN 50121-3-2:2016-12: Railway applications – Electromagnetic compatibility – Part 3-2: Rolling stock – Apparatus
EN 50124-1:2017-03: Railway applications – Insulation coordination – Part 1: Basic requirements – Clearances and creepage distances for all electrical and electronic equipment
EN 61373:2010-09: Railway applications – Rolling stock equipment – Shock and vibration tests
EN 45545-2:2013+A1:2015: Railway applications – Fire protection on railway vehicles – Part 2: Requirements for fire behaviour of materials and components
HN_Isolationsprüfung:2017-03: Company internal standard – Insulation test

Dimensions



PIN assignment



Load limit curve