

Dold LG5925 Series 2-Channel Emergency Stop and Safety Gates



LG5925-48-61-24

Designed to protect people and machines in applications with E-stop buttons and safety gates.

- Outputs: 3 N.O. contacts and 1 N.C. contact
- Feedback circuit to monitor external contactors used for reinforcement of contacts
- Overvoltage and short-circuit protection
- Monitored manual restart
- Single and 2-channel operation
- LED indicators for power and state of operation

Safety Data – Values per EN ISO 13849-1	
Category	4 according to EN 954-1
Performance level	PLe according to EN 13849-1
MTTF _d	>100 years
DC _{avg}	99%

Safety Data – Values per IEC/EN 62061 / IEC/EN 61508	
SIL CL	3 per IEC/EN 62061
SIL	3 per IEC/EN 61508
HFT (Hardware Failure Tolerance)	1
DC _{avg}	99%
SFF	99.7%
PFH _D	2.66E-10 h ⁻¹

Safety Relays Selection Chart				
Part Number	Price	Marking Type	Voltage	Outputs
LG5925-48-61-24	\$115.00	2-channel E-STOP / GATE	24 VAC/DC	3 N.O. and 1 N.C.
LG5925-48-61-110	\$125.00	2-channel E-STOP / GATE	110 VAC	3 N.O. and 1 N.C.
LG5925-48-61-230	\$125.00	2-channel E-STOP / GATE	230 VAC	3 N.O. and 1 N.C.

LG5925 Controllers Safety Relay Specification Table	
General Specifications	
Temperature	Storage: -25°C to 85°C (-13°F to 185°F) Operating: -15°C to 55°C (5°F to 131°F)
Altitude	<2,000 meters
Vibration Resistance	Amplitude: 0.35mm, Frequency: 10 to 55 Hz (IEC/EN 60-068-2-6)
Degree of Protection	Per IEC/EN 60 529. Housing: IP40; Terminals IP20
Housing	UL 94V-0 Thermoplastic; Din mount 35 mm x 7.5 mm
Weight	LG5925 24V AC/DC: 210 g (7.40 oz.); LG5925 110V, 230V AC: 275 g (9.70 oz.)
Agency Approvals and Standards	CSA, cULus file E107778, CE, RoHS, TUV
Terminal Designation per EN 50 005	1x4 mm ² solid or 1 x 2.5 mm ² stranded ferruled (isolated) or 2 x 1.5 mm ² stranded ferruled (isolated) DIN 46 228-1/-2/-3/-4
Wire Connections	or 2 x 2.5 mm ² solid DIN 46 228-1/-2/-3/-4
Wire Fixing	Terminal screws M3.5 box terminals with wire protection or cage clamp terminals.
Input Specifications	
Nominal Voltage	110VAC, 230VAC, 24VAC/DC
Voltage Range	At 10% residual ripple: AC/DC: 0.9 to 1.1 U _N ; AC: 0.85 to 1.1 U _N
Maximum Consumption	DC approx. 1.5W; AC approx. 3.7 VA
Nominal Frequency	50 to 60 Hz
Minimum Off-time	250 ms
Control Voltage on S11 At U _N	AC/DC units: 22VDC; AC units: 24VDC
Control Current Typ. Over S12, S22	30 mA at U _N
Min. Voltage on S12, S22 (relay activated)	AC/DC units: 20VDC; AC units: 19VDC
Short Circuit Protection	Internal with PTC (Positive Temperature Coefficient resistor)
Overvoltage Protection	Internal VDR (Voltage Dependent Resistor)
Output Specifications	
Electrical Contact Life	AC 15 at 5A, 230VAC: > 2.2x10 ⁶ switching cycles
Mechanical Life	> 20x10 ⁶ switching cycles
Contact Type	3 positively driven N.O. and 1 N.C. relay contacts (N.O. contacts are safety contacts)
Operate Delay	Manual start: 30 ms; automatic start: 350 ms.
Release Delay	Disconnecting the supply: AC units:150 ms; DC units: 50 ms Disconnecting S12, S22: AC units: 130 ms. DC units: 50 ms
Nominal Output Voltage	AC: 250V; DC: See continuous current limit curve in installation manual.
Thermal Current (I _{th})	Max. 8A. See continuous current limit curve in installation manual.
Short Circuit Strength	Max. fuse rating: 10A gL (IEC/EN 60 947-5-1); Line circuit breaker: B 6A
Switching Capacity (IEC/EN 60 947-5-1)	AC 15: N.O. contacts: 3A/230V; N.C. contacts: 2A/230V DC 13: N.O. contacts: 4A/DC24V. 0.5A/110V; N.C. contacts: 4A/24V; DC 13: N.O. contacts: 8A/24V >25x10 ³ . ON: 0.4s, OFF: 9.6 s
Switching Frequency	Max. 1200 switching cycles/hr

Dold LG5925 Series 2-Channel Emergency Stop and Safety Gates

Company Information

Terminal Blocks

Power Distribution Blocks

Wiring Accessories

ZIPLink Connection System

Multi-wire Connectors

Sensor Cables and Connectors

M12 Junction Blocks

Panel Interface Connectors

Wiring Duct

Cable Ties

Wire

Flexible Cord

Multi-conductor Flex Cable

Data Cables

Wire Management Products

Power Supplies

DC Converters

Transformers and Filters

Circuit Protection

Tools

Test Equipment

Enclosures

Enclosure Climate Control

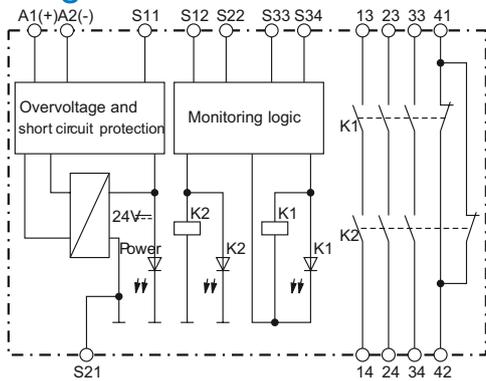
Safety: Electrical Components

Safety: Protective Wear

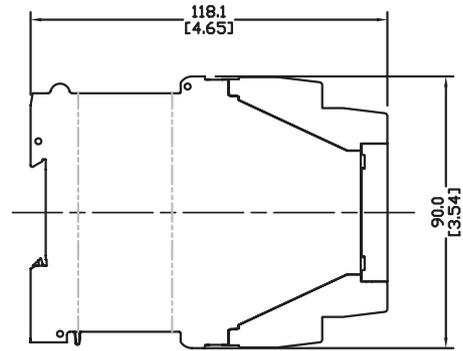
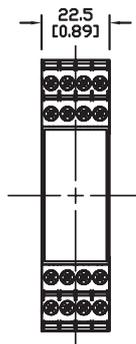
Terms and Conditions

Wiring

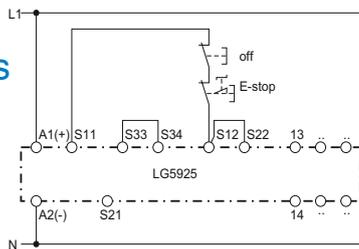
LG5925 Block Diagram



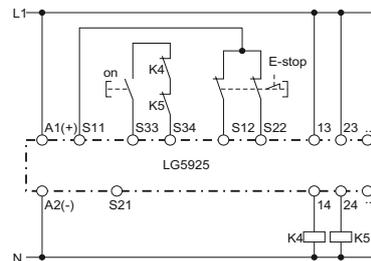
Dimensions mm(in)



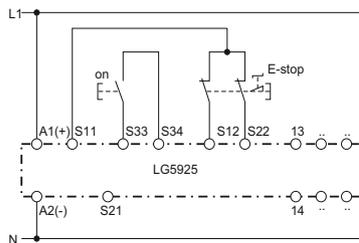
Applications



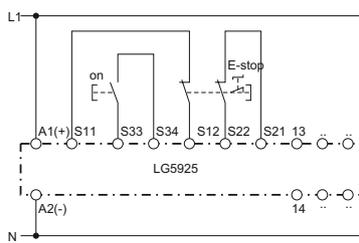
Single channel emergency stop circuit. This circuit does not have any redundancy in the emergency-stop control circuit.
 Note: Refer to "Unit programming"
 Set switch or dip switch in pos.: S1 no cross fault detection
 S2 automatic start



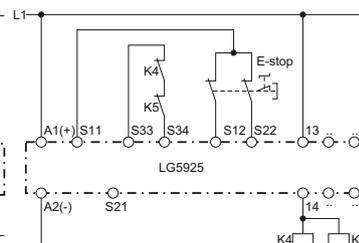
Contact reinforcement by external contactors, 2-channel controlled.
 The output contacts can be reinforced by external contactors with positive guided contacts for switching currents > 8 A.
 Functioning of the external contactors is monitored by looping the N.C. contacts into the closing circuit (terminals S33-S34).
 Note: Refer to "Unit programming"
 Set switch or dip switch in pos.: S1 no cross fault detection
 S2 manual start



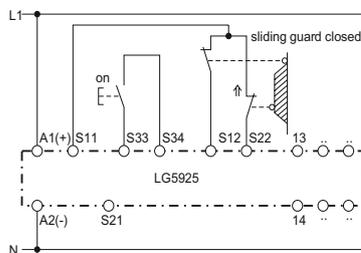
2-channel emergency stop circuit without cross fault monitoring.
 Note: Refer to "Unit programming"
 Set switch or dip switch in pos.: S1 no cross fault detection
 S2 manual start



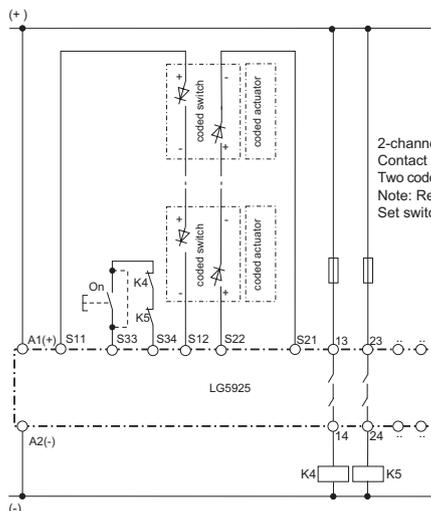
2-channel emergency stop circuit with cross fault detection.
 Note: Refer to "Unit programming"
 Set switch or dip switch in pos.: S1 cross fault detection
 S2 manual start



Contact reinforcement by external contactors controlled by one contact path.
 Note: Refer to "Unit programming"
 Set switch or dip switch in pos.: S1 no cross fault detection
 S2 automatic start



2-channel safety gate monitoring.
 Note: Refer to "Unit programming"
 Set switch or dip switch in pos.: S1 no cross fault detection
 S2 manual start



2-channel emergency stop circuit with cross fault.
 Contact reinforcement by external contactors.
 Two coded non-contact sensors in series.
 Note: Refer to "Unit programming"
 Set switch or dip switch in pos.: S1 cross fault detection
 S2 Manual or Automatic (dotted jumper)

Note: When switching inductive loads, surge suppressors are recommended.

Dold LG5929 Extension Module



Additional contacts for emergency-stop modules and safety gate monitors.

- 1-channel or 2-channel connection
- LED indication for operation
- Output: 5 N.O. and 1 N.C. contacts

Safety Data – Values per EN ISO 13849-1	
Category	4 according to EN 954-1
Performance level	PLe according to EN 13849-1
MTTF _d	>100 years
DC _{avg}	99%
Safety Data – Values per IEC/EN 62061 /IEC/EN 61508	
SIL CL	3 per IEC/EN 62061
SIL	3 per IEC/EN 61508
HFT (Hardware Failure Tolerance)	1
DC _{avg}	99%
SFF	99.7%
PFH _d	4.68E-10 h ⁻¹

Safety Relays Selection Chart

Part Number	Price	Marking Type	Voltage	Outputs
LG5929-60-100-61	\$95.00	Safety relay extension module	24 VAC/VDC	5 N.O./1 N.C.

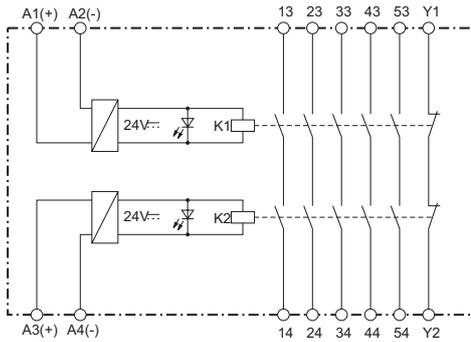
Safety Relay Extension Module Specification Table

General Specifications	
Temperature	Storage: -25°C to 85°C (-13°F to 185°F) Operating: -15°C to 55°C (5°F to 131°F)
Altitude	< 2,000 meters
Vibration Resistance	Amplitude: 0.35mm, Frequency: 10 to 55 Hz (IEC/EN 60-068-2-6)
Degree of Protection	Per IEC/EN 60 529. Housing: IP40; Terminals IP20
Housing	UL 94V-0 Thermoplastic; Din mount 35 mm x 7.5 mm
Weight	205g (7.23 oz.)
Agency Approvals and Standards	CSA, cULus file E107778, CE, RoHS, TUV
Terminal Designation per EN 50 005 Wire Connections	1x4 mm ² solid or 1 x 2.5 mm ² stranded ferruled (isolated) or 2 x 1.5 mm ² stranded ferruled (isolated) DIN 46 228-1/-2/-3/-4 or 2 x 2.5 mm ² solid per DIN 46 228-1/-2/-3 /-4
Wire Fixing	Plus-minus terminal screws M3.5 box terminals with wire protection or cage clamp terminals.
Input Specifications	
Nominal Voltage	24V AC/DC
Voltage Range	AC: 0.85 to 1.1 U _N At 10% residual ripple: 0.9 to 1.1 U _N ; At 48% residual ripple: 0.85 to 1.1 U _N
Maximum Consumption	24VAC/DC: 1.8VA
Nominal Frequency	50 to 60 Hz
Control Current	Control current typ. at 24V over 2 relays: 75 mA
Overvoltage Protection	Internal VDR (Voltage Dependent Resistor)
Output Specifications	
Electrical Contact Life	To AC15 at 2 A,230V: 10 ⁵ switching cycles IEC/EN 60 947-5-1
Mechanical Life	20 x 10 ⁶ switching cycles
Contact Type	5 N.O. positively driven and 1 N.C. relay contacts (N.O. contacts are safety contacts)
Operate/Release Time	Operate typ at U _N : 20 ms.; Release typ at U _N : 35 ms.
Nominal Output Voltage	250VAC
Thermal Current (I _{th})	Max. 5A per contact. See continuous current limit curve in installation manual.
Short Circuit Strength	Max fuse rating:10A gl (IEC/EN 60 9470-5-1); Line circuit breaker: B6A
Switching Capacity IEC/EN 60 947-5-1	AC 15: N.O. contacts: 3A/230V; N.C. contacts: 2A/230VAC DC 13: N.O. contacts: 4A/24V; N.C. contacts: 4A/24VDC; N.O. contact: 8A/24V >25x10 ³ ON: 0.4s, OFF: 9.6s
Switching Frequency	Max. 1,200 switching cycles/hr

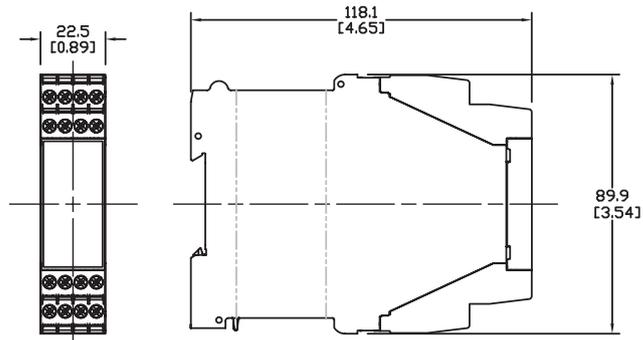
Dold LG5929 Extension Module

Wiring

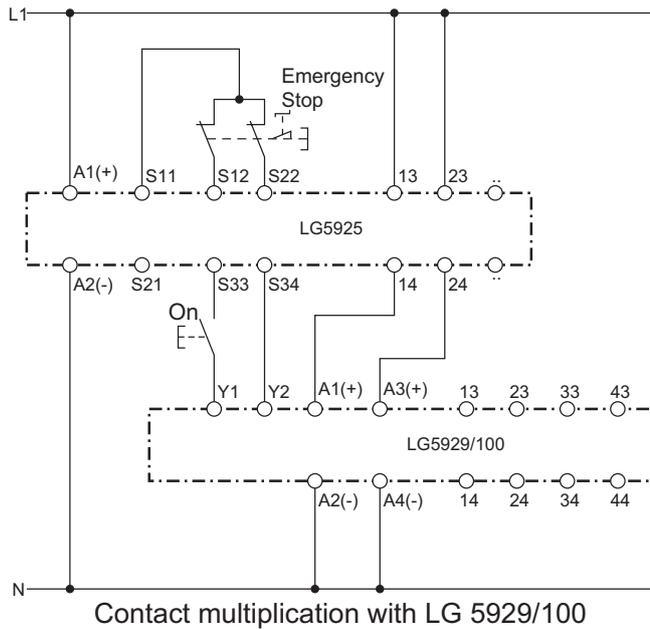
LG5929 Block Diagram



Dimensions mm [in]



Applications



**Note: When switching inductive loads, surge suppressors are recommended.*

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Circuit Protection

Tools

Test Equipment

Enclosures

Enclosure Climate Control

Safety: Electrical Components

Safety: Protective Wear

Terms and Conditions

Safety Products



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