Mini Relay Latching

- **Magnetically latched, ISO plug-in relay**
- **Two coils with set and reset function**
- **Pin assignment similar to ISO 7588 part 1**
- **Plug-in terminals**

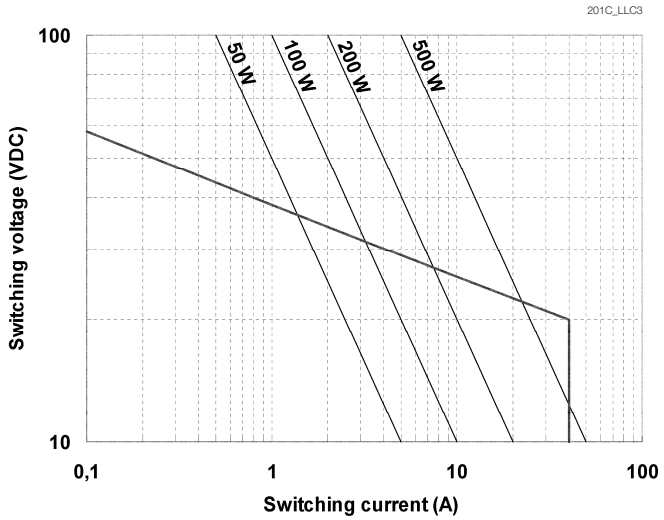
F141L_fcw1_bw

Typical applications
Active power management, disconnection of power outlets and all applications that require a quiescent current of 0A.

Contact Data

Contact arrangement	1 form A, 1 NO
Rated voltage	12VDC
Limiting continuous current	
23°C	40A
85°C	30A
125°C	10A
Contact material	silver based
Min. recommended contact load	1A at 5VDC
Initial voltage drop, form A (NO) contact at 10A, typ./max.	50mV
Frequency of operation	6 ops./min (0.1Hz)
Operate/release time max.	typ. 1.5/1.5ms
Electrical endurance cyclic temperature:-40°C, +23°C, +85°C resistive load at 14VDC	>1x10^5 cycles 40A on/off
Mechanical endurance	typ. >10^6 cycles

Max. DC load breaking capacity



Load limit curve: safe shutdown, no stationary arc/make contact.

Coil Data

Magnetic system	bistable (two coil system)
Rated coil voltage	12VDC, pulsed
Max. coil temperature	155°C

Coil versions, bistable 2 coils

Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance Ω±10%	Rated coil power W
0001	12	6.9	6.9	20	7.2[1)]

1) Set pulse 10ms <pulse width <100ms.
All figures are given for coil without pre-energization, at ambient temperature +23°C.

Insulation Data

Initial dielectric strength between contact and coil	500VAC$_{rms}$

Other Data

EU RoHS/ELV compliance	compliant
Ambient temperature	-40°C to +125°C
Cold storage, IEC 60068-2-1	1000h, -40°C
Dry heat, IEC 60068-2-2	1000h, as per BA at 125°C
Temperature cycling, IEC 60068-2-14, Nb	10 cycles, -40/+85°C (5°C/min)
Damp heat cyclic, IEC 60068-2-30, Db, Variant 1	6 cycles, upper air temp. 55°C
Damp heat constant, IEC 60068-2-3, Ca	56 days
category of environmental protection, IEC 61810	RT I – dustproof
Degree of protection, IEC 60529	IP54 (dustproof)
Corrosive gas	
IEC 60068-2-42	10±2cm^3/m^3 SO_2, 10 days
IEC 60068-2-43	1±0.3cm^3/m^3 H_2S, 10 days
Vibration resistance (functional) IEC 60068-2-6 (sine sweep)	30 to 500Hz >10g[2)]
Shock resistance (functional) IEC 60068-2-27 (half sine)	6 ms >30g[2)]

Mini Relay Latching (Continued)

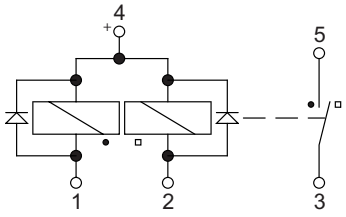
Other Data (continued)	
Terminal type	plug-in, QC
Cover retention	
axial force	150 N
pull force	150 N
push force	200 N
Terminal retention	
pull force	100 N
push force	100 N
resistance to bending[3]	10 N
force applied to side[3]	10 N
torque	0.3 Nm
Weight	approx. 30g (1.1oz)

2) No change in the switching state >10µs. Valid for NC contacts, NO contact values significantly higher.
3) Values apply 2mm from the end of the terminals. When the force is removed, the terminals must not have moved by more than 0.3mm.

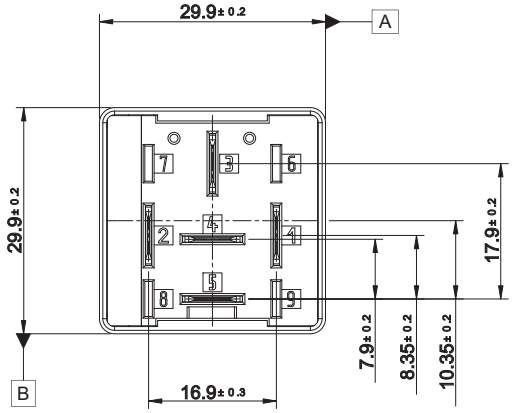
Accessories	
For details see datasheet	Connectors for Mini ISO Relays

Terminal Assignment

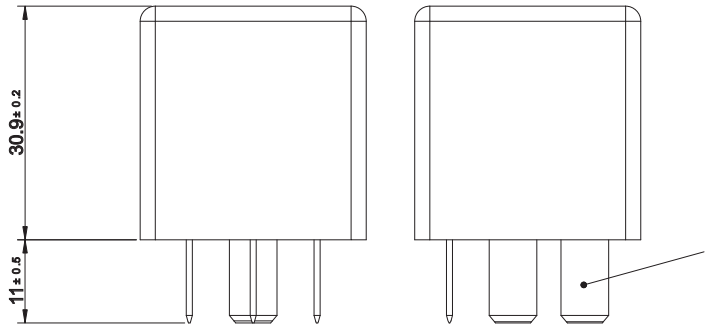
NO2D
1 form A, 1 NO



View of the terminals (bottom view)



Dimensions



Product code structure

Typical product code: **V23141** **-L** **0001** **-X** **039**

Type
V23141 Mini Relay Latching

Magnetic system
L Bistable

Coil
001 12VDC

Terminals
X Plug-in, QC version

Contact material
039 Silver based
X050 Customized: resistor 560Ω

Product code	Arrangement	Coil	Coil system	Coil suppr.	Circuit[1]	Contact material	Terminals	Part number
V23141-L0001-X039	1 form A, 1 NO	12VDC	Bistable (2 coils)	Diode	NO2D	Silver based	Plug-in, QC	tbd

1) See terminal assignment diagrams.