



LD Loop detector

Quick start guide

Guida rapida

Schnellstartanleitung

Guía de inicio rápido

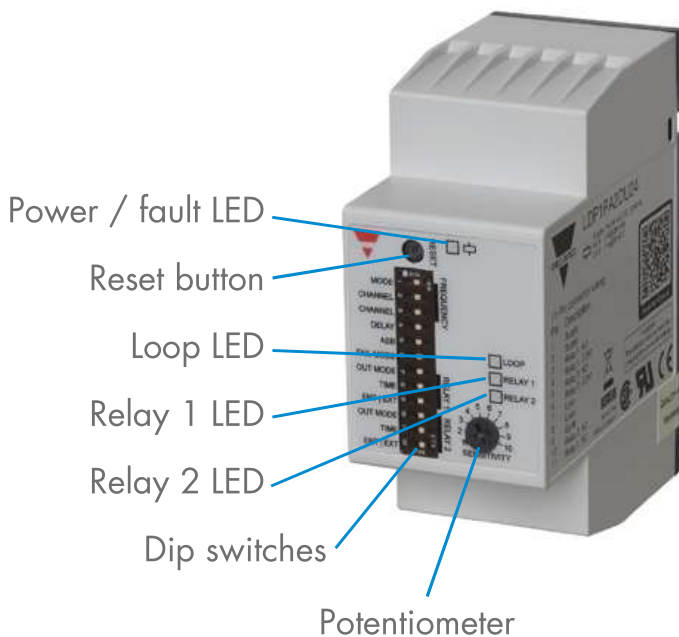
Guide de mise en service

Hurtig start guide

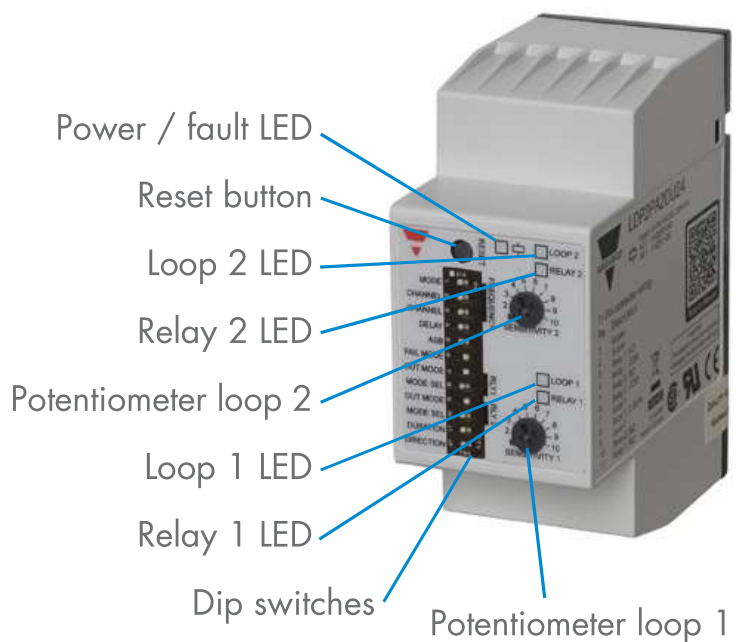
快速入门指南

Structure

LDP1



LDP2



Power / fault indicator LED

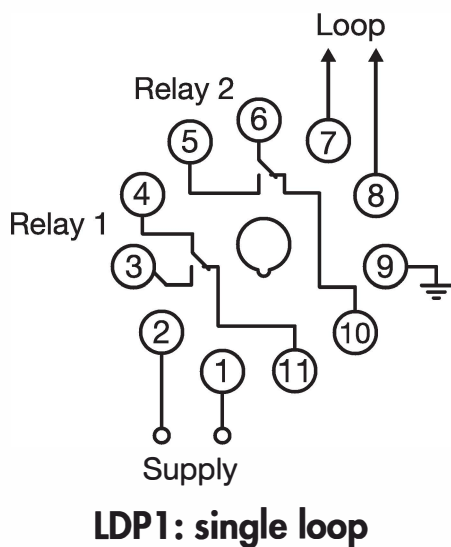
- Green LED (steady): Unit is powered up and everything is working well
- Green LED (flashing): Dip switch has been changed since power up, but change has not taken effect. Please press the reset button
- Blue LED (steady): Automatic Sensitivity Boost is turned ON and everything is working well
- Yellow LED (steady): Signal level is low in the loop. It is recommended to increase sensitivity
- Red LED (steady): Crosstalk of loop frequency with another loop detected. Select different frequency channel on DIP switches and reset product
- White LED (flashing): After start up, the number of times the LED flashes, indicates the frequency channel selected in both manual and automatic frequency tuning mode (e.g. LED flashes two times is equivalent to channel 2)

Loop state LED

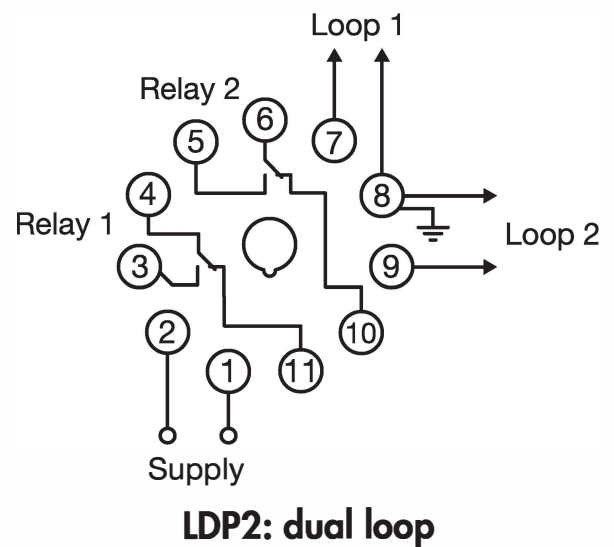
- Green LED (steady): Loop inductance is within limit and working well
- Yellow LED (steady): Loop inductance is too high (more than 1000 μ H)
- Yellow LED (flashing): Loop inductance is too low (less than 20 μ H)
- Red LED (steady): Loop is open circuit
- Red LED (flashing): Loop is short circuit

Relay state LED

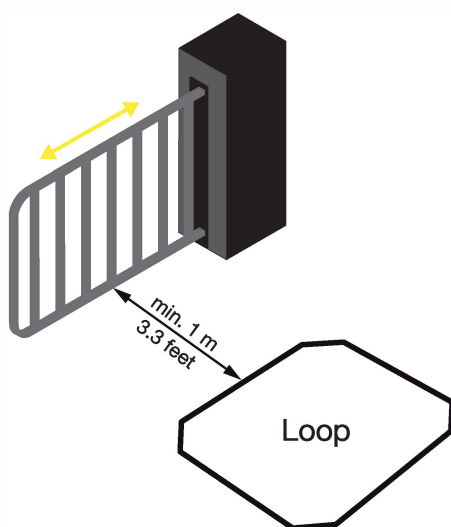
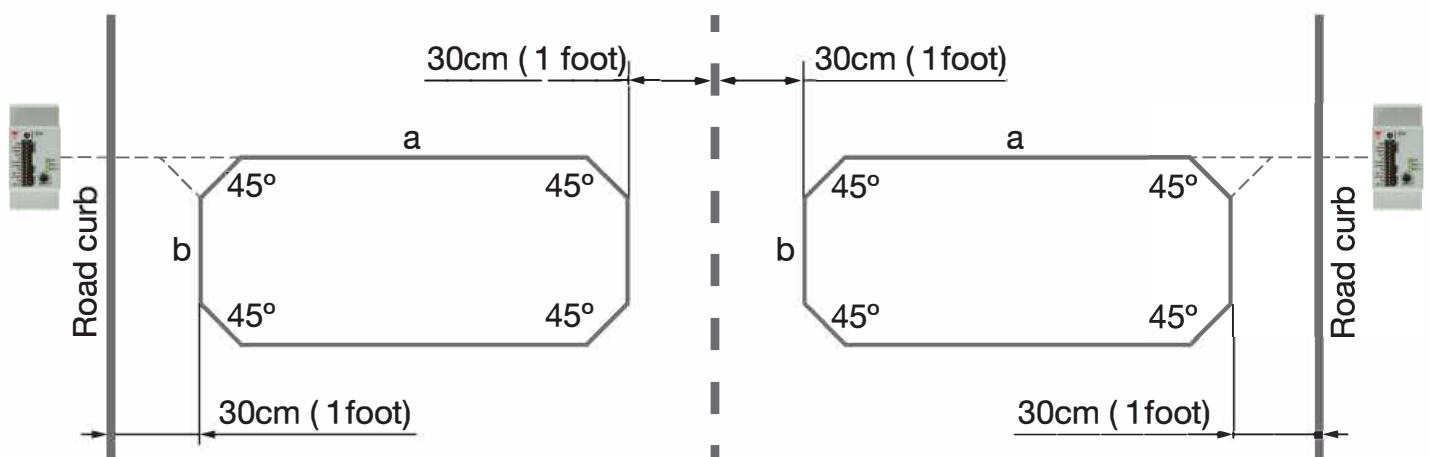
- Yellow LED (off): Relay is not activated
- Yellow LED (steady): Relay is activated and in presence mode
- Yellow LED (on for 0.5 s): Relay is activated and in pulse mode, 0.1 s
- Yellow LED (on for 1.0 s): Relay is activated and in pulse mode, 0.5 s



Earth pin must be connected to earth.
Do not wipe grease off pins.

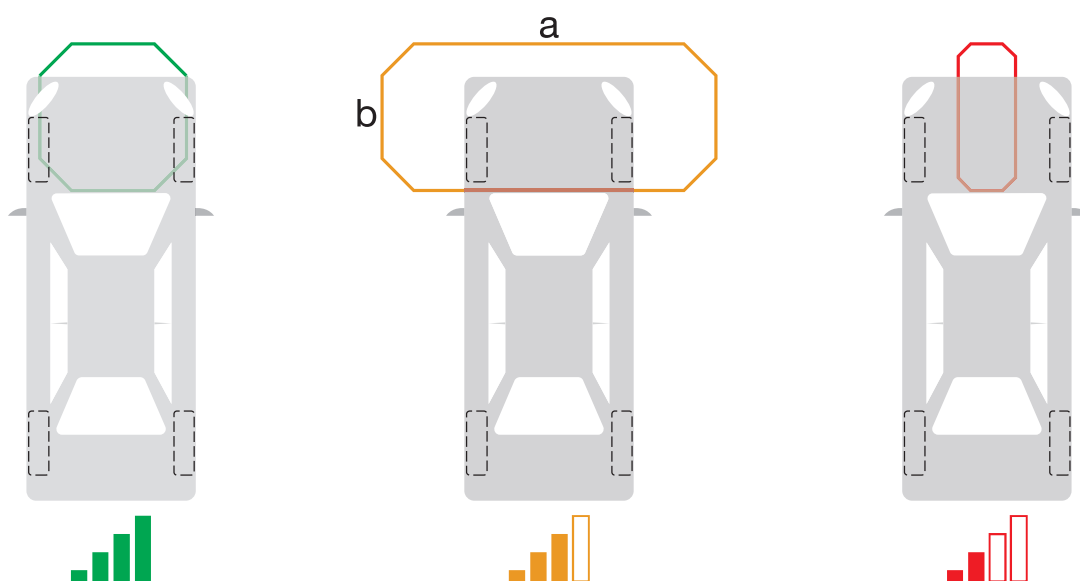


Dimension and placement of the loop

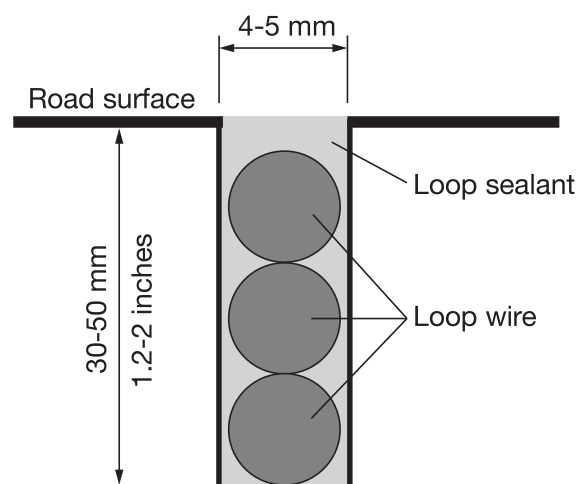


⚠ WARNING: Before making any changes to the product settings, make sure no persons or vehicles can be hit by any closing/opening mechanisms connected to the output of the Loop Detector.

⚠ CAUTION: It is important to carefully test the application before the system is put into operation. Setting the sensitivity too high or too low, can lead to unexpected behaviour of the application.



Minimum loop length (b)	Maximum vehicle speed
0.25 m (0.8 feet)	75 km/h (47 mph)
0.5 m (1.6 feet)	80 km/h (50 mph)
1 m (3.3 feet)	95 km/h (59 mph)
2 m (6.6 feet)	120 km/h (75 mph)
5 m (16.4 feet)	200 km/h (124 mph)



Inductance and loop turns

Loop circumference: (2 x a) + (2 x b)	Recommended turns (80 μ H)	Minimum turns (20 μ H)
2 m (6.6 feet)	13	9
5 m (16.4 feet)	7	5
6 - 7 m (19.7 - 23 feet)	6	4
8 - 9 m (26.2 - 29.5 feet)	5	3
10 - 14 m (32.8 - 45.9 feet)	4	3
15 - 23 m (49.2 - 75.5 feet)	3	2
24 - 30 m (78.7 - 98.4 feet)	2	1

Feeder cable

Cable gauge [mm ²]	Cable gauge [AWG]	Maximum recommended length
0.75 mm ²	18 AWG	20 m (66 feet)
1.50 mm ²	15 AWG	40 m (131 feet)
2.50 mm ²	13 AWG	50 m (164 feet)

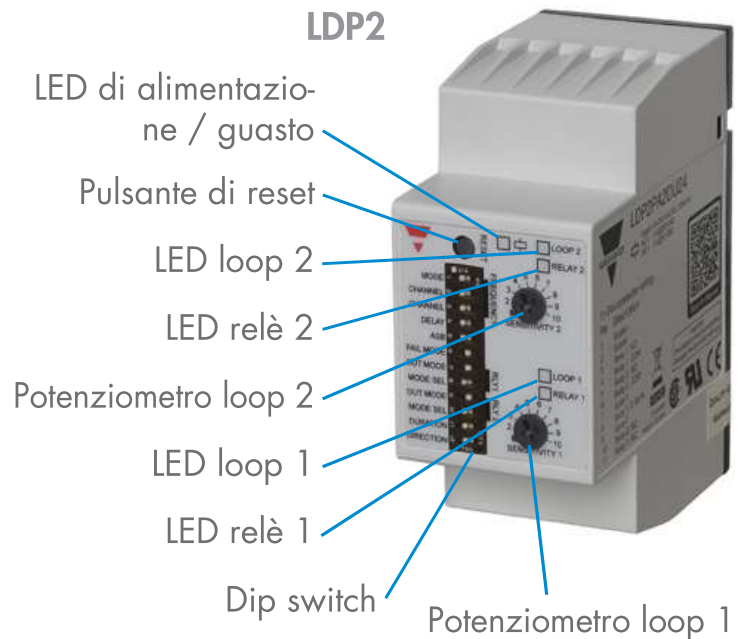
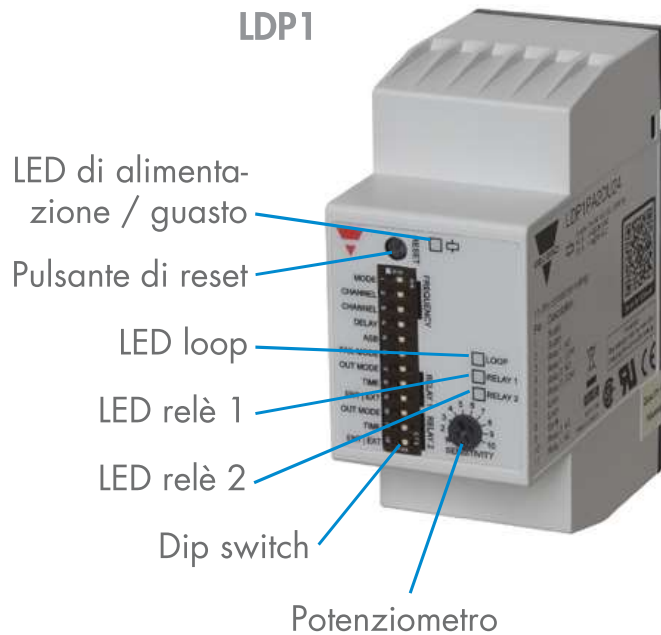
Dip switch settings

GENERAL	1	Selection mode	Automatic channel selection <input type="checkbox"/>	Manual channel selection <input type="checkbox"/>
	2	Channel selection	DIP switch 2 and 3 are not used in automatic channel selection	1 <input type="checkbox"/>
	3			2 <input type="checkbox"/>
	4	Turn-on delay	Delay OFF <input type="checkbox"/>	Delay 2s <input type="checkbox"/>
	5	ASB	ASB OFF <input type="checkbox"/>	ASB ON <input type="checkbox"/>
	6	Failure mode	Fail safe <input type="checkbox"/>	Fail secure <input type="checkbox"/>

LDPI	Relay 1	7	Output mode	Pulse mode <input type="checkbox"/>	Presence mode <input type="checkbox"/>
		8	Time	0.1 s pulse <input type="checkbox"/> 0.5 s pulse <input type="checkbox"/>	Infinite <input type="checkbox"/> 60 min <input type="checkbox"/> 10 min <input type="checkbox"/> 1 min <input type="checkbox"/>
		9	Entry / Exit	Vehicle entry <input type="checkbox"/> Vehicle exit <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Relay 2	10	Output mode	Pulse mode <input type="checkbox"/>	Presence mode <input type="checkbox"/>
		11	Time	0.1 s pulse <input type="checkbox"/> 0.5 s pulse <input type="checkbox"/>	Infinite <input type="checkbox"/> 60 min <input type="checkbox"/> 10 min <input type="checkbox"/> 1 min <input type="checkbox"/>
		12	Entry / Exit	Vehicle entry <input type="checkbox"/> Vehicle exit <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

LDPI	Relay 1	7	Output mode	Pulse mode <input type="checkbox"/>	Presence mode <input type="checkbox"/>
		8	Mode select	Vehicle entry <input type="checkbox"/> Vehicle exit <input type="checkbox"/>	Infinite <input type="checkbox"/> 1 min <input type="checkbox"/>
	Relay 2	9	Output mode	Pulse mode <input type="checkbox"/>	Presence mode <input type="checkbox"/>
		10	Mode select	Vehicle entry <input type="checkbox"/> Vehicle exit <input type="checkbox"/>	Infinite <input type="checkbox"/> 1 min <input type="checkbox"/>
	Rly 1, 2	11	Pulse duration	0.1 s <input type="checkbox"/> 0.5 s <input type="checkbox"/>	Not used in Presence mode
		12	Direction logic	OFF <input type="checkbox"/>	ON <input type="checkbox"/>

Struttura



Indicatore di alimentazione/guasto LED

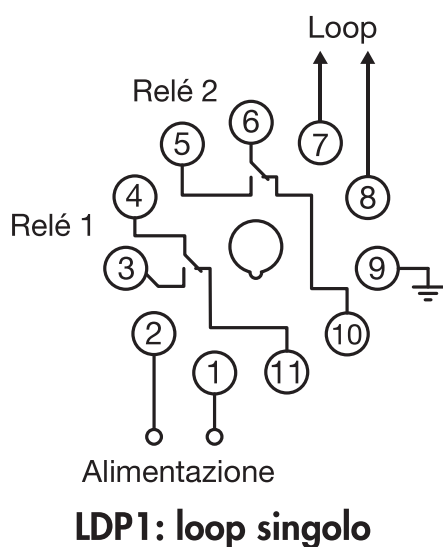
- LED verde (fisso): l'unità è accesa e tutto funziona bene.
- LED verde (lampeggiante): il Dip switch è stato modificato dopo l'accensione, ma la modifica non ha avuto effetto. Premere il pulsante di reset.
- LED blu (fisso): la funzione di incremento automatico della sensibilità è attivata e tutto funziona bene.
- LED giallo (fisso): il livello del segnale nel loop è basso. Si consiglia di aumentare la sensibilità.
- LED rosso (fisso): cross-talk della frequenza del loop con altro loop rilevato. Selezionare un canale di frequenza diverso sui DIP switch e resettare il prodotto.
- LED bianco (lampeggiante): dopo l'avvio, il numero di volte in cui il LED lampeggia indica il canale di frequenza selezionato in modalità di sintonizzazione della frequenza sia manuale che automatica (ad esempio, se il LED lampeggia due volte, equivale allora al canale 2).

Stato del loop LED

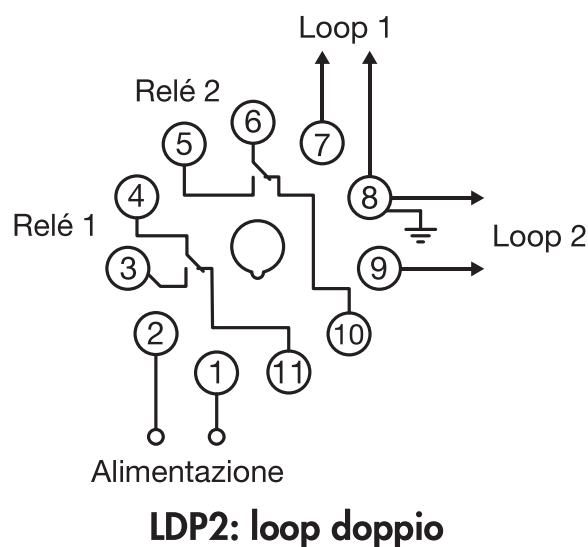
- LED verde (fisso): l'induttanza del loop è entro i limiti e funziona bene
- LED giallo (fisso): l'induttanza del loop è troppo alta (più di 1000 μH)
- LED giallo (lampeggiante): l'induttanza del loop è troppo bassa (meno di 20 μH)
- LED rosso (fisso): il loop è in circuito aperto
- LED rosso (lampeggiante): il loop è in cortocircuito

Stato del relè LED

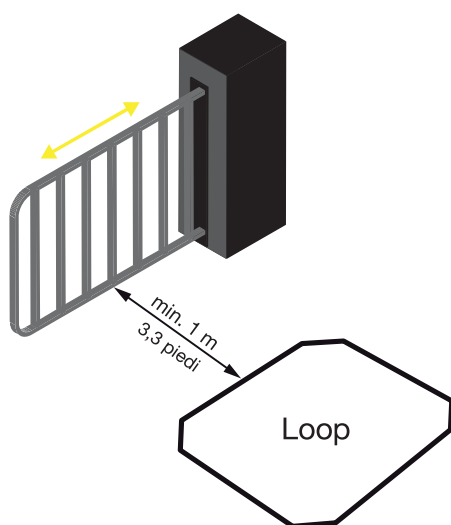
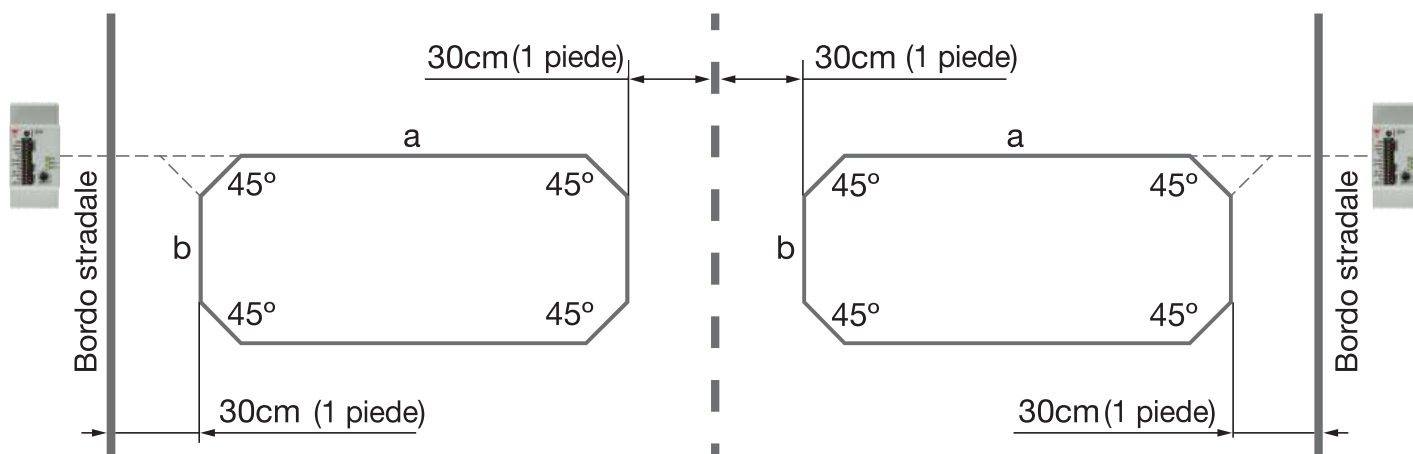
- LED giallo (spento): il relè non è attivato
- LED giallo (fisso): il relè è attivato ed è in modalità presenza
- LED giallo (acceso per 0,5 sec): il relè è attivato ed è in modalità impulso, 0,1 s
- LED giallo (acceso per 1,0 sec): il relè è attivato ed è in modalità impulso, 0,5 s



Il pin di terra deve essere collegato a terra.
Non eliminare il grasso dai pin.

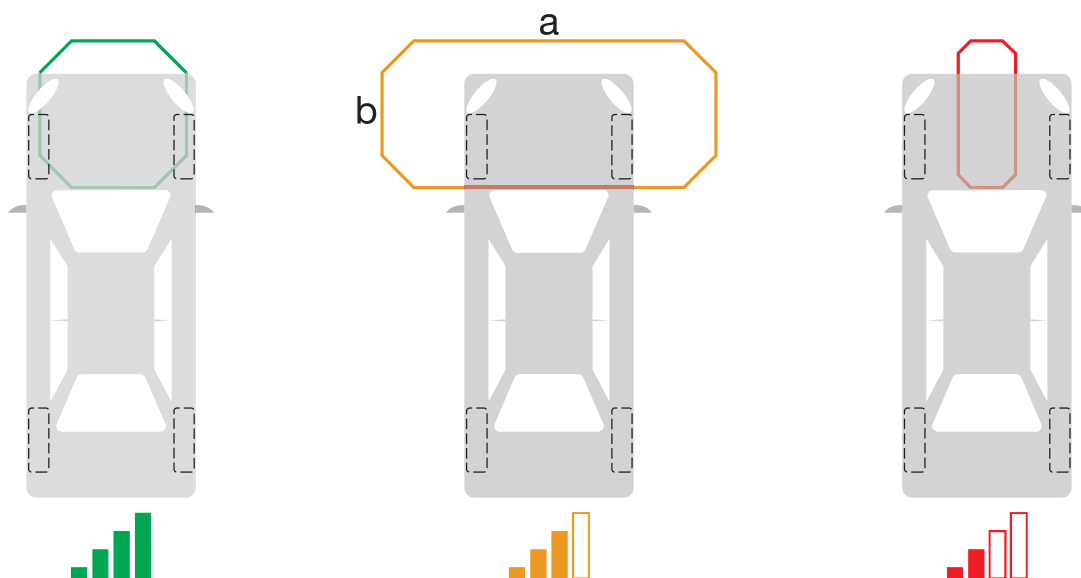


Dimensione e posizionamento del loop

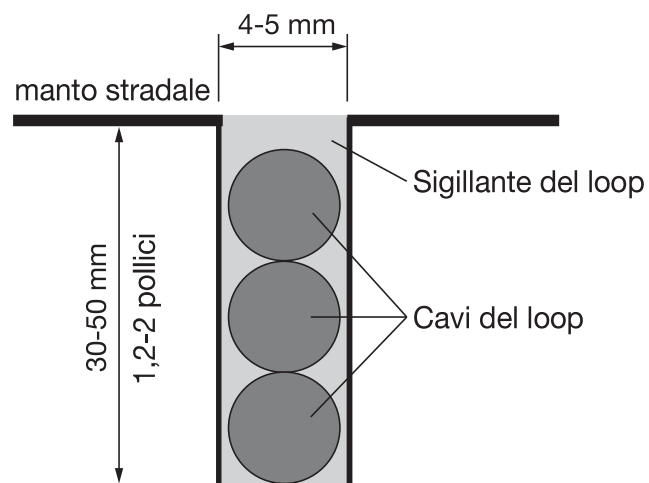


⚠ Avvertimento: prima di apportare modifiche alle impostazioni del prodotto, assicurarsi che nessuna persona o veicolo possa essere colpito da alcun meccanismo di chiusura/apertura collegato all'uscita del rilevatore di loop.

⚠ Attenzione: è importante sottoporre a test attentamente l'applicazione prima di mettere in funzione il sistema. Un'impostazione della sensibilità troppo alta o troppo bassa può determinare un comportamento imprevisto dell'applicazione.



Lunghezza minima del loop (b)	Velocità massima del veicolo
0,25 metri (0,8 piedi)	75 km/h (47 mph)
0,5 metri (1,6 piedi)	80 km/h (50 mph)
1 metro (3,3 piedi)	95 km/h (59 mph)
2 metri (6,6 piedi)	120 km/h (75 mph)
5 metri (16,4 piedi)	200 km/h (124 mph)



Induttanza e spire del loop

Circonferenza del loop: (2 x a) + (2 x b)	Numero consigliato di spire (80 μ H)	Numero minimo di spire (20 μ H)
2 metri (6,6 piedi)	13	9
5 metri (16,4 piedi)	7	5
6 - 7 metri (19,7 - 23 piedi)	6	4
8 - 9 metri (26,2 - 29,5 piedi)	5	3
10 - 14 metri (32,8 - 45,9 piedi)	4	3
15 - 23 metri (49,2 - 75,5 piedi)	3	2
24 - 30 metri (78,7 - 98,4 piedi)	2	1

Cavo di alimentazione

Sezione del cavo [mm²]	Sezione del cavo [AWG]	Lunghezza massima consigliata
0,75 mm²	18 AWG	20 metri (66 piedi)
1,50 mm²	15 AWG	40 metri (131 piedi)
2,50 mm²	13 AWG	50 metri (164 piedi)

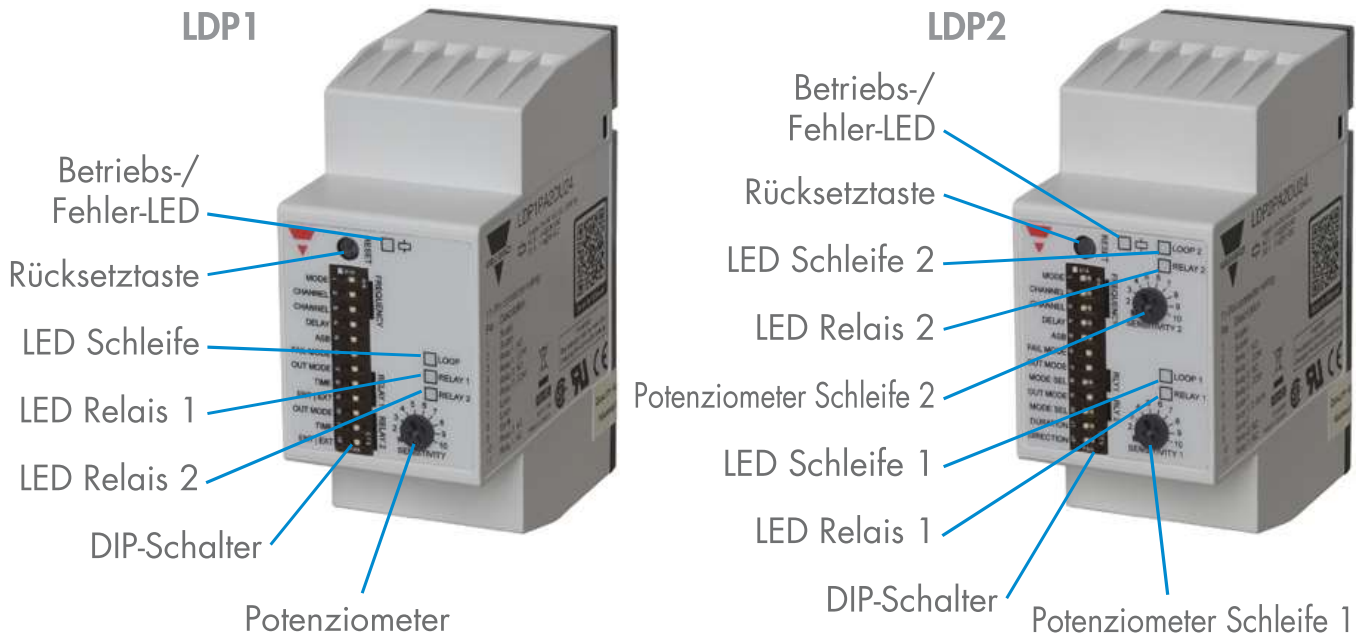
Impostazioni dip switch

GENERALI	1	Modalità	Selezione automatica dei canali <input type="checkbox"/>	Selezione manuale dei canali <input type="checkbox"/>			
	2	Canale	DIP switch 2 e 3 non vengono utilizzati nella selezione automatica dei canali	1	2	3	4
	3			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4	Ritardo all'accensione	Ritardo OFF <input type="checkbox"/>	Ritardo 2s <input type="checkbox"/>			
	5	ASB	ASB OFF <input type="checkbox"/>	ASB ON <input type="checkbox"/>			
	6	Modalità di guasto	Fail safe <input type="checkbox"/>	Fail secure <input type="checkbox"/>			

LDP1	Relé 1	7	Modalità di uscita	Modalità impulso <input type="checkbox"/>	Modalità presenza <input type="checkbox"/>			
		8	Tempo	0.1s impulso <input type="checkbox"/> 0.5s impulso <input type="checkbox"/>	Infinito	60 min	10 min	1 min
		9	Entrata / Uscita	Entrata del veicolo <input type="checkbox"/> Uscita del veicolo <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Relé 2	10	Modalità di uscita	Modalità impulso <input type="checkbox"/>	Modalità presenza <input type="checkbox"/>			
		11	Tempo	0.1s impulso <input type="checkbox"/> 0.5s impulso <input type="checkbox"/>	Infinito	60 min	10 min	1 min
		12	Entrata / Uscita	Entrata del veicolo <input type="checkbox"/> Uscita del veicolo <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

LDP2	Relé 1	7	Modalità di uscita	Modalità impulso <input type="checkbox"/>		Modalità presenza <input type="checkbox"/>	
		8	Selezione modalità	Entrata del veicolo <input type="checkbox"/>	Uscita del veicolo <input type="checkbox"/>	Infinito <input type="checkbox"/>	1 min <input type="checkbox"/>
	Relé 2	9	Modalità di uscita	Modalità impulso <input type="checkbox"/>		Modalità presenza <input type="checkbox"/>	
		10	Selezione modalità	Entrata del veicolo <input type="checkbox"/>	Uscita del veicolo <input type="checkbox"/>	Infinito <input type="checkbox"/>	1 min <input type="checkbox"/>
	Relé 1, 2	11	Durata dell'impulso	0.1s <input type="checkbox"/>	0.5s <input type="checkbox"/>	Non utilizzato in modalità presenza	
		12	Logica di direzione	OFF <input type="checkbox"/>		ON <input type="checkbox"/>	

Struktur



Betriebs-/Fehleranzeige-LED

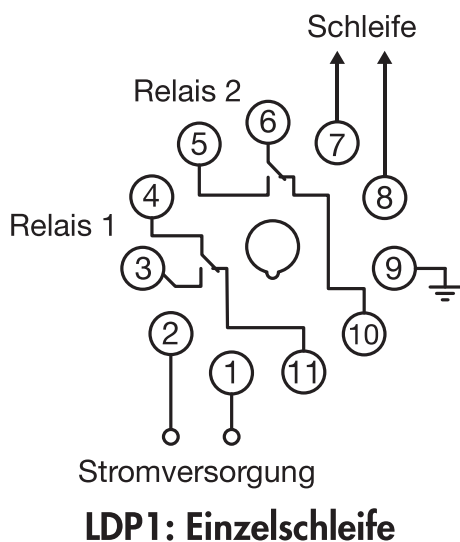
- Grüne LED (dauerhaft): Stromversorgung des Geräts hergestellt, und alles arbeitet einwandfrei.
- Grüne LED (Blinken): Die Position des DIP-Schalters wurde seit dem letzten Einschalten geändert, die Änderung wurde jedoch nicht übernommen. Drücken Sie die Rücksetztaste.
- Blaue LED (dauerhaft): Die automatische Empfindlichkeitsanhebung (ASB, Automatic Sensitivity Boost) ist EINGeschaltet, und alles arbeitet einwandfrei.
- Gelbe LED (dauerhaft): Die Signalstärke der Schleife ist niedrig. Es empfiehlt sich, die Empfindlichkeit zu erhöhen.
- Rote LED (dauerhaft): Es wurde Frequenzübersprechen zwischen dieser und einer anderen Schleife erkannt. Wählen Sie mithilfe der DIP-Schalter eine andere Frequenz, und setzen Sie das Gerät zurück. Weiße LED (Blinken): Zeigt nach dem Einschalten des Geräts sowohl bei automatischer als auch bei manueller Kanalwahl den gewählten Funkkanal durch mehrmaliges Blinken an (zweimaliges Blinken der LED entspricht zum Beispiel Kanal 2).

LED für Schleifenzustand

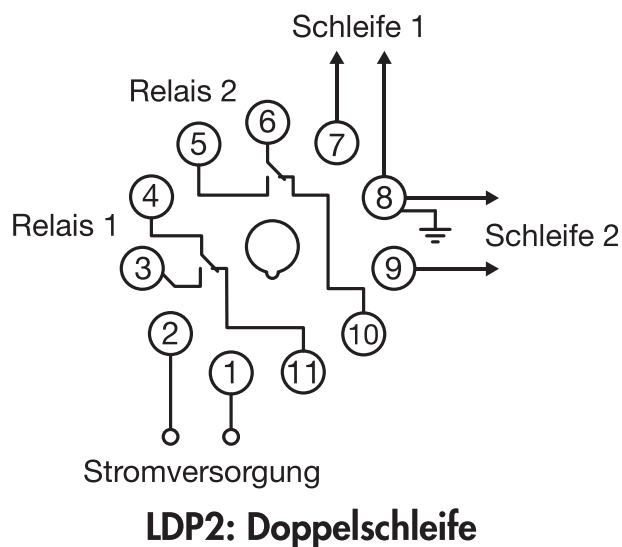
- Grüne LED (dauerhaft): Schleifeninduktivität innerhalb der Grenzwerte, und alles arbeitet einwandfrei.
- Gelbe LED (dauerhaft): Schleifeninduktivität zu hoch (über 1.000 μH)
- Gelbe LED (Blinken): Schleifeninduktivität zu niedrig (unter 20 μH)
- Rote LED (dauerhaft): Schleifenkreis offen
- Rote LED (Blinken): Kurzschluss im Schleifenkreis

LED für Relais

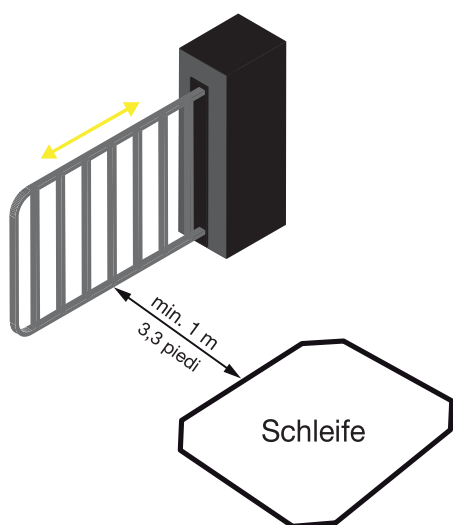
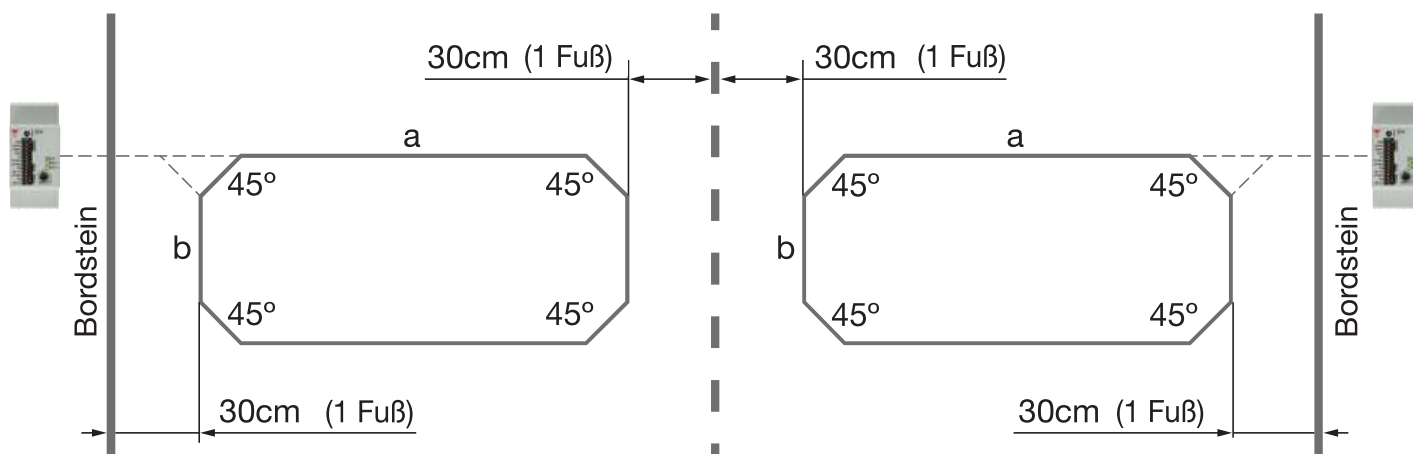
- Gelbe LED (aus): Relais ist nicht aktiviert
- Gelbe LED (dauerhaft): Relais ist aktiviert und befindet sich im Anwesenheitsmodus
- Gelbe LED (0,5 s lang ein): Relais ist aktiviert und befindet sich im Impulsmodus, 0,1 s
- Gelbe LED (1,0 s lang ein): Relais ist aktiviert und befindet sich im Impulsmodus, 0,5 s



Masseanschluss muss mit Erde verbunden werden. Nicht das Fett von den Anschlusspins entfernen.

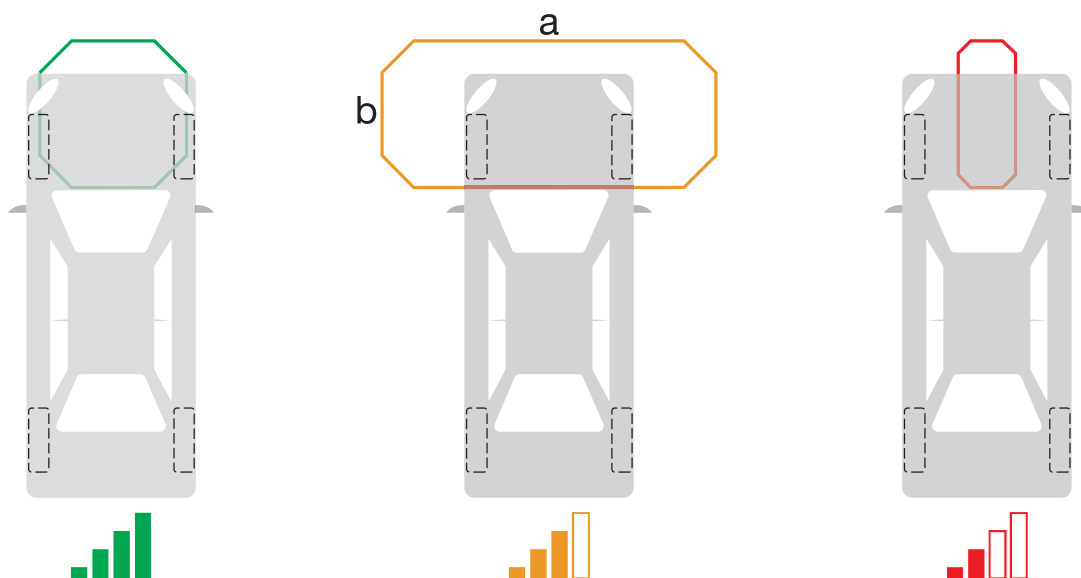


Größe und Platzierung der Schleife

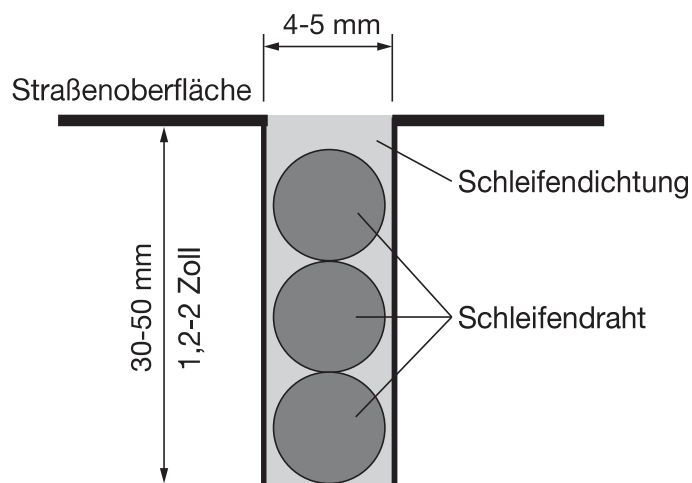


⚠ Warnung: Stellen Sie vor jeglicher Einstellungsänderung am Produkt sicher, dass keine Personen oder Fahrzeuge durch Öffnungs-/Schließmechanismen getroffen oder beschädigt werden können, die mit dem Ausgang des Schleifensensors verbunden sind.

⚠ Vorsicht: Die Anwendung muss sorgfältig getestet werden, bevor das System in den Regelbetrieb überführt wird. Eine zu hohe oder zu niedrige Einstellung der Empfindlichkeit kann zu unerwartetem Verhalten der Anwendung führen.



Mindestlänge der Schleife (b)	Maximale Fahrzeuggeschwindigkeit
0,25 meter (0,8 Fuß)	75 km/h (47 mph)
0,5 meter (1,6 Fuß)	80 km/h (50 mph)
1 meter (3,3 Fuß)	95 km/h (59 mph)
2 meter (6,6 Fuß)	120 km/h (75 mph)
5 meter (16,4 Fuß)	200 km/h (124 mph)



Induktivität und Schleifenwindungen

Schleifenumfang: (2 x a) + (2 x b)	Empfohlene Anzahl Windungen (80 µH)	Mindestanzahl Windungen (20 µH)
2 meter (6,6 Fuß)	13	9
5 meter (16,4 Fuß)	7	5
6 - 7 meter (19,7 - 23 Fuß)	6	4
8 - 9 meter (26,2 - 29,5 Fuß)	5	3
10 - 14 meter (32,8 - 45,9 Fuß)	4	3
15 - 23 meter (49,2 - 75,5 Fuß)	3	2
24 - 30 meter (78,7 - 98,4 Fuß)	2	1

Speiseleitung

Cable gauge [mm ²]	Cable gauge [AWG]	Maximum recommended length
0,75 mm ²	18 AWG	20 metri (66 piedi)
1,50 mm ²	15 AWG	40 metri (131 piedi)
2,50 mm ²	13 AWG	50 metri (164 piedi)

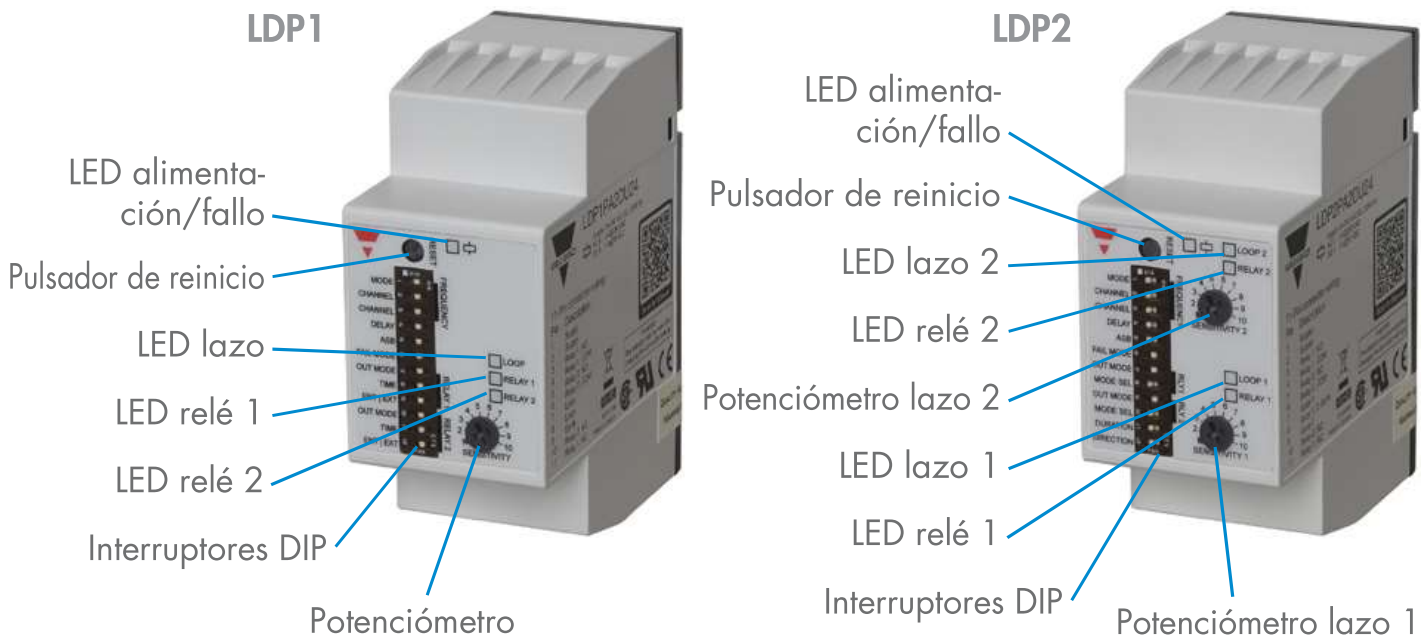
DIP-Schaltereinstellungen

A l i g e m e n e	1	Modus	Automatische Kanalwahl <input type="checkbox"/>	Manuelle Kanalwahl <input type="checkbox"/>
	2	Kanal	Bei automatischer Kanalwahl sind DIP-Schalter 2 und 3 ohne Funktion	1 <input type="checkbox"/>
	3			2 <input type="checkbox"/>
	4	Einschaltverzögerung	Verzögerung AUS <input type="checkbox"/>	Verzögerung 2s <input type="checkbox"/>
	5	ASB	ASB AUS <input type="checkbox"/>	ASB EIN <input type="checkbox"/>
	6	Ausfallmodus	Ausfallsicher <input type="checkbox"/>	Ausfallgeschützt <input type="checkbox"/>

L D P 1	Relais 1	7	Ausgangsmodus	Impulsmodus <input type="checkbox"/>	Anwesenheitsmodus <input type="checkbox"/>
		8	Zeit	Impuls 0.1s <input type="checkbox"/> Impuls 0.5s <input type="checkbox"/>	Unendlich 60 min 10 min 1 min
		9	Einfahrt/Ausfahrt	Fahrzeugeinfahrt <input type="checkbox"/> Fahrzeugausfahrt <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Relais 2	10	Ausgangsmodus	Impulsmodus <input type="checkbox"/>	Anwesenheitsmodus <input type="checkbox"/>
		11	Zeit	Impuls 0.1s <input type="checkbox"/> Impuls 0.5s <input type="checkbox"/>	Unendlich 60 min 10 min 1 min
		12	Einfahrt/Ausfahrt	Fahrzeugeinfahrt <input type="checkbox"/> Fahrzeugausfahrt <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

L D P 2	Relais 1	7	Ausgangsmodus	Impulsmodus <input type="checkbox"/>	Anwesenheitsmodus <input type="checkbox"/>
		8	Modusauswahl	Fahrzeugeinfahrt <input type="checkbox"/> Fahrzeugausfahrt <input type="checkbox"/>	Unendlich <input type="checkbox"/> 1 min <input type="checkbox"/>
	Relais 2	9	Ausgangsmodus	Impulsmodus <input type="checkbox"/>	Anwesenheitsmodus <input type="checkbox"/>
		10	Modusauswahl	Fahrzeugeinfahrt <input type="checkbox"/> Fahrzeugausfahrt <input type="checkbox"/>	Unendlich <input type="checkbox"/> 1 min <input type="checkbox"/>
	Rel. 1, 2	11	Impulsdauerx	0.1s <input type="checkbox"/> 0.5s <input type="checkbox"/>	Im Anwesenheitsmodus nicht verwendet
		12	Richtungslogik	OFF <input type="checkbox"/>	ON <input type="checkbox"/>

Estructura



Indicador de alimentación/fallo LED

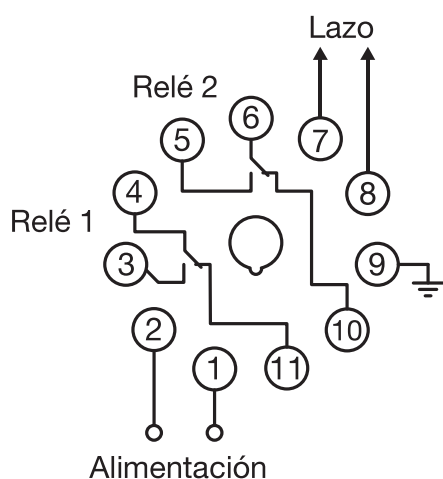
- LED verde (fijo): La unidad está encendida y todo funciona correctamente.
- LED verde (parpadeo): El interruptor DIP se ha cambiado desde el encendido, pero el cambio no ha surtido efecto. Pulse el pulsador Reset.
- LED azul (fijo): El aumento automático de la sensibilidad (ASB) está activado y todo funciona correctamente.
- LED amarillo (fijo): El nivel de señal es bajo en el lazo. Se recomienda aumentar la sensibilidad.
- LED rojo (fijo): Interferencias de la frecuencia del lazo con otro lazo detectado. Seleccione un canal de frecuencia distinto en los interruptores DIP y reinicie el equipo.
- LED blanco (parpadeo): Tras el encendido, el número de veces que parpadea el LED indica el canal de frecuencia seleccionado en los modos de sintonización de frecuencia manual y automático (p. ej., si el LED parpadea dos veces significa que se trata del canal 2).

LED de estado del lazo

- LED verde (fijo): La inductancia del lazo está dentro del límite y funciona correctamente
- LED amarillo (fijo): La inductancia del lazo es demasiado alta (superior a 1.000 μH)
- LED amarillo (parpadeo): La inductancia del lazo es demasiado baja (inferior a 20 μH)
- LED rojo (fijo): Circuito abierto en lazo
- LED rojo (parpadeo): Cortocircuito en lazo

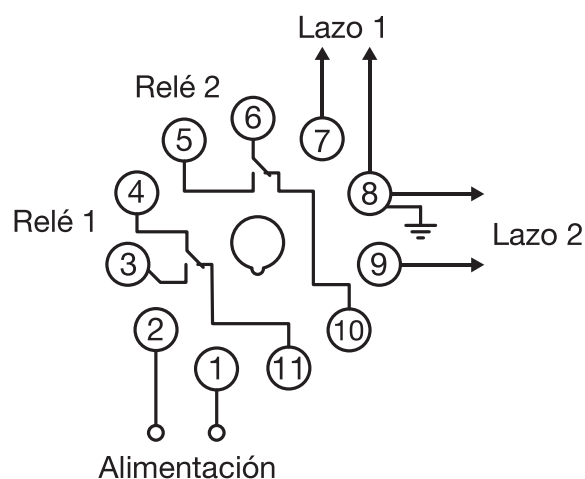
LED de estado del relé

- LED amarillo (apagado): El relé no está activado
- LED amarillo (fijo): El relé está activado y en el modo de presencia.
- LED amarillo (encendido durante 0,5 s): El relé está activado y en el modo de pulsos, 0,1 s.
- LED amarillo (encendido durante 1,0 s): El relé está activado y en el modo de pulsos, 0,5 s.



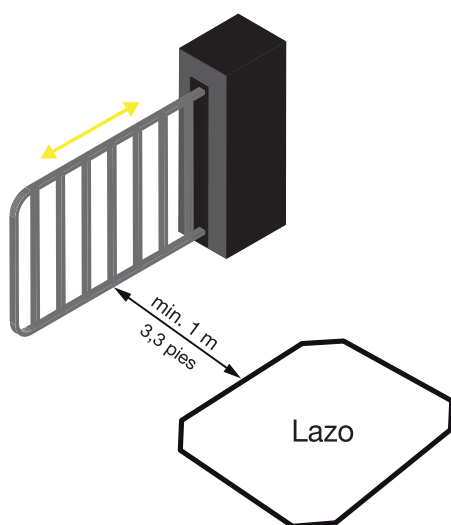
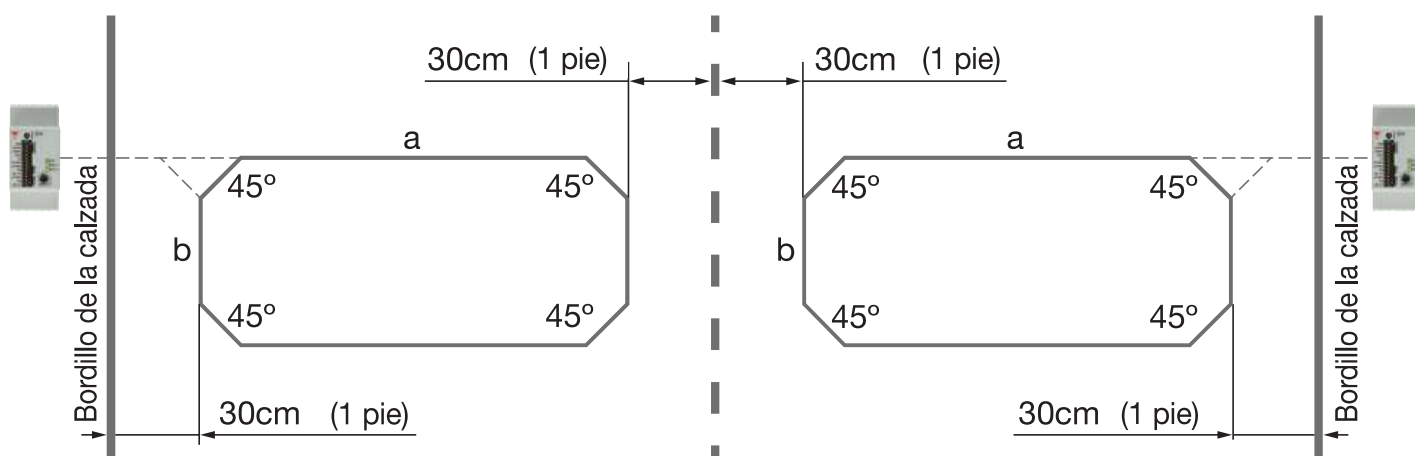
LDP1: un lazo

La patilla de tierra (GND) debe conectarse a tierra. No limpiar la grasa de los terminales.



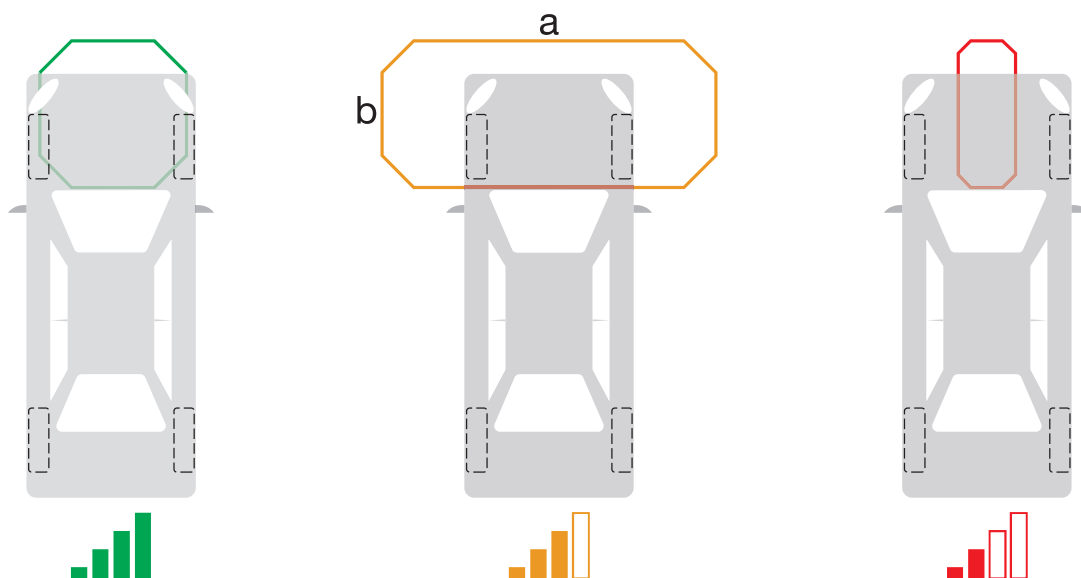
LDP2: doble lazo

Dimensiones y colocación del lazo

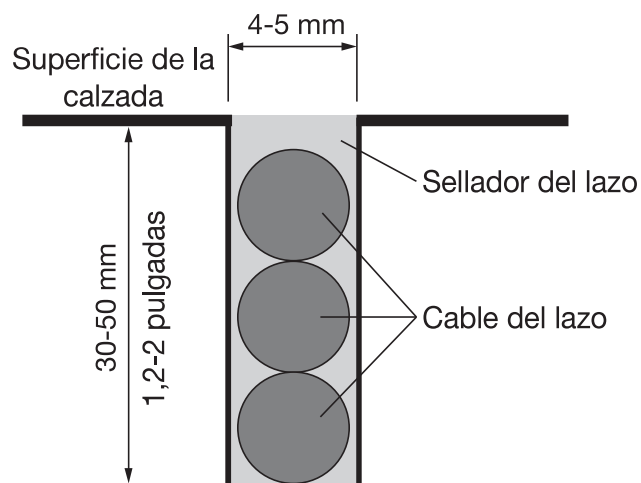


⚠ Advertencia: Antes de realizar cambios en los ajustes del equipo, asegúrese de que los mecanismos de cierre/apertura conectados a la salida del detector de lazo no están a la altura de ninguna persona o vehículo.

⚠ Precaución: Es importante probar detenidamente la aplicación antes de poner en funcionamiento el sistema. Un ajuste de la sensibilidad demasiado alto o demasiado bajo puede dar lugar a un comportamiento ilógico de la aplicación.



Longitud mínima del lazo (b)	Velocidad máxima del vehículo
0,25 metros	75 km/h
0,5 metros	80 km/h
1 metros	95 km/h
2 metros	120 km/h
5 metros	200 km/h



Inductancia y giros del lazo

Circunferencia del lazo: (2 x a) + (2 x b)	Vueltas recomendadas (80 μ H)	Vueltas mínimas (20 μ H)
2 metros	13	9
5 metros	7	5
6 - 7 metros	6	4
8 - 9 metros	5	3
10 - 14 metros	4	3
15 - 23 metros	3	2
24 - 30 metros	2	1

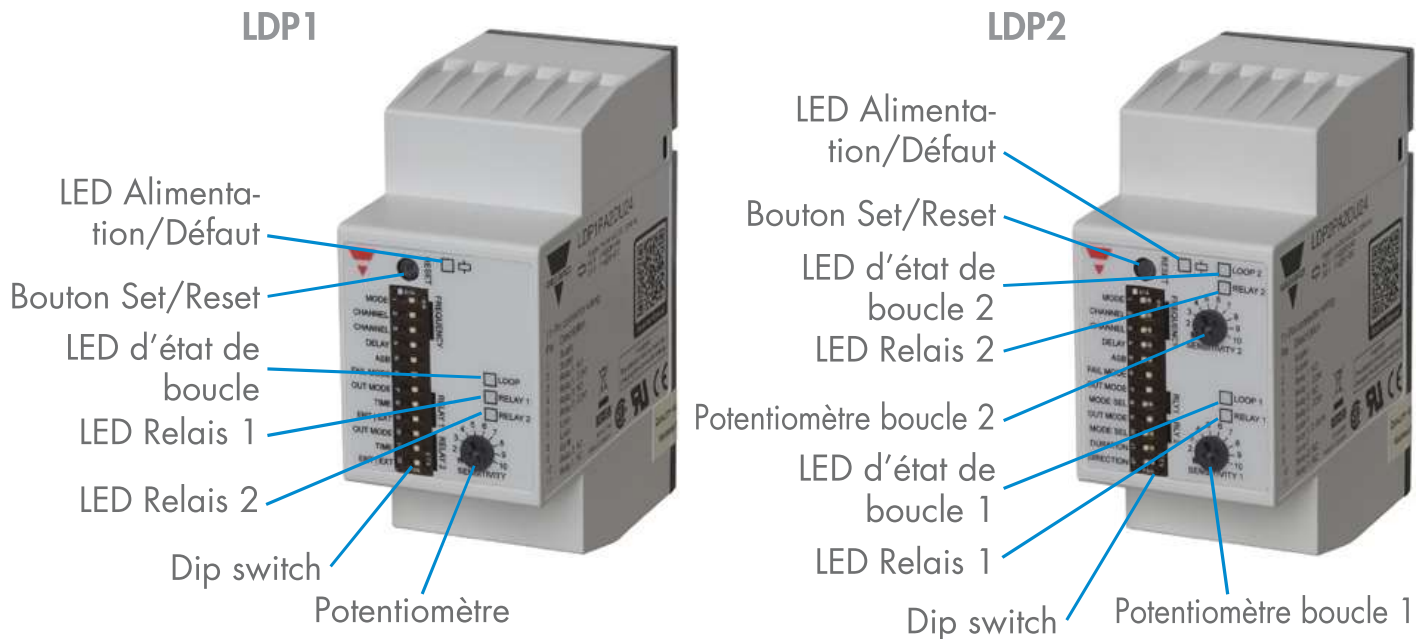
Cable desde el lazo al detector de lazo

Sección del cable [mm²]	Sección del cable [AWG]	Longitud máxima recomendada
0,75 mm²	18 AWG	20 metros
1,50 mm²	15 AWG	40 metros
2,50 mm²	13 AWG	50 metros

Ajustes de los interruptores DIP

G E N E R A L E S	1	Modo	Selección automática de canal <input type="checkbox"/>		Selección manual de canal <input type="checkbox"/>				
	2	Canal	Los interruptores DIP 2 y 3 no se utilizan en la selección automática de canales		1	2	3	4	
	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	4	Retardo a la conexión	Sin retardo <input type="checkbox"/>		Retardo 2s <input type="checkbox"/>				
	5	ASB	ASB desactivado <input type="checkbox"/>		ASB activado <input type="checkbox"/>				
6	Configuración relés NA/NC	Modo de fallo <input type="checkbox"/>		Modo seguro <input type="checkbox"/>					
L D P 1	Relé 1	7	Modo de salida	Modo de pulsos <input type="checkbox"/>		Modo de presencia <input type="checkbox"/>			
		8	Tiempo	Pulso de 0.1 s <input type="checkbox"/> Pulso de 0.5s <input type="checkbox"/>		Infinito	60 min	10 min	1 min
		9	Entrada / salida	Vehículo entra <input type="checkbox"/>	Vehículo sale <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Relé 2	10	Modo de salida	Modo de pulsos <input type="checkbox"/>		Modo de presencia <input type="checkbox"/>			
		11	Tiempo	Pulso de 0.1 s <input type="checkbox"/> Pulso de 0.5s <input type="checkbox"/>		Infinito	60 min	10 min	1 min
		12	Entrada / salida	Vehículo entra <input type="checkbox"/>	Vehículo sale <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L D P 2	Relé 1	7	Modo de salida	Modo de pulsos <input type="checkbox"/>		Modo de presencia <input type="checkbox"/>			
		8	Selección de modo	Vehículo entra <input type="checkbox"/>	Vehículo sale <input type="checkbox"/>	Infinito <input type="checkbox"/>	1 min <input type="checkbox"/>		
	Relé 2	9	Modo de salida	Modo de pulsos <input type="checkbox"/>		Modo de presencia <input type="checkbox"/>			
		10	Selección de modo	Vehículo entra <input type="checkbox"/>	Vehículo sale <input type="checkbox"/>	Infinito <input type="checkbox"/>	1 min <input type="checkbox"/>		
	Relé 1, 2	11	Duración pulso	0.1 s <input type="checkbox"/>	0.5s <input type="checkbox"/>	No se utiliza en modo de presencia			
		12	Lógica direccional	OFF <input type="checkbox"/>		ON <input type="checkbox"/>			

Réglages et informations en face avant



LED d'indication Alimentation/Défaut

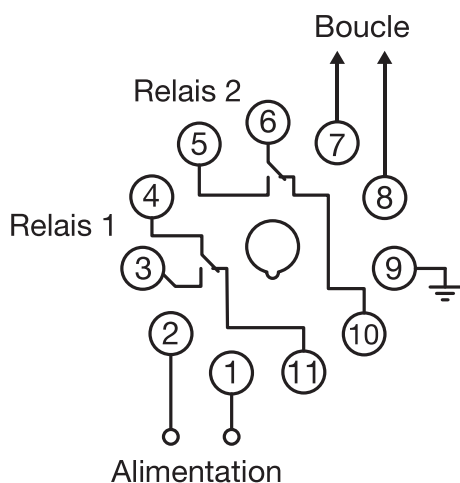
- LED verte (allumée en fixe) : Le module est alimenté électriquement et tout fonctionne parfaitement.
- LED verte (clignotement) : Réglage du DIP switch modifié depuis la mise sous tension mais la modification est sans effet. Veuillez appuyer sur le bouton Set/Reset.
- LED bleue (allumée en fixe) : L'Augmentation Automatique de Sensibilité (ASB) est activée et tout fonctionne parfaitement.
- LED jaune (allumée en fixe) : Le niveau du signal dans la boucle est faible. Recommandation: augmenter la sensibilité.
- LED rouge (allumée en fixe) : Détection de diaphonie entre une fréquence de boucle et une autre boucle. Sélectionner un autre canal de fréquence au moyen des DIP switch et réinitialiser le détecteur de boucle avec le bouton Set/Reset.
- LED blanche (clignotement) : Après démarrage, le nombre de clignotements de la LED indique le canal de fréquence sélectionné, à la fois en mode de réglage manuel et automatique de la fréquence (par exemple, deux clignotements de la LED équivalent au canal 2).

LED d'état de boucle

- LED verte (allumée en fixe) : L'inductance de boucle est dans la plage de fonctionnement et opère correctement.
- LED jaune (allumée en fixe) : L'inductance de boucle est trop élevée (supérieure à 1000 μ H).
- LED jaune (clignotement) : L'inductance de boucle est trop faible (inférieure à 20 μ H).
- LED rouge (allumée en fixe) : Boucle en circuit ouvert.
- LED rouge (clignotante) : Boucle en court-circuit.

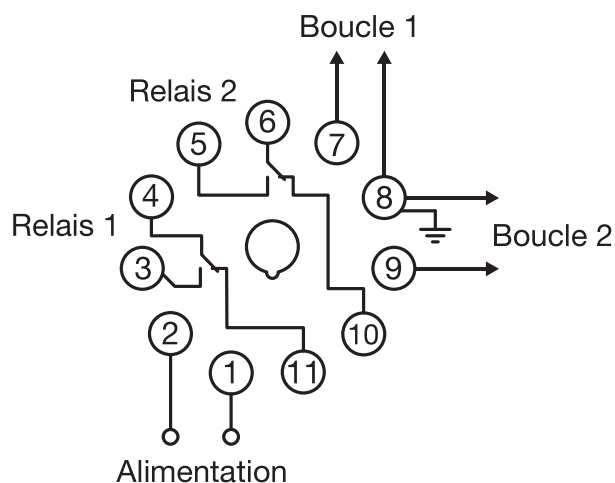
LED d'état des relais

- LED jaune (éteint) : Le relais n'est pas activé
- LED jaune (allumée en fixe) : Relais activé et en mode présence
- LED jaune (allumée pendant 0,5 s) : Relais activé et en mode impulsion, 0,1 s
- LED jaune (allumée pendant 1,0 s) : Relais activé et en mode impulsion, 0,5 s



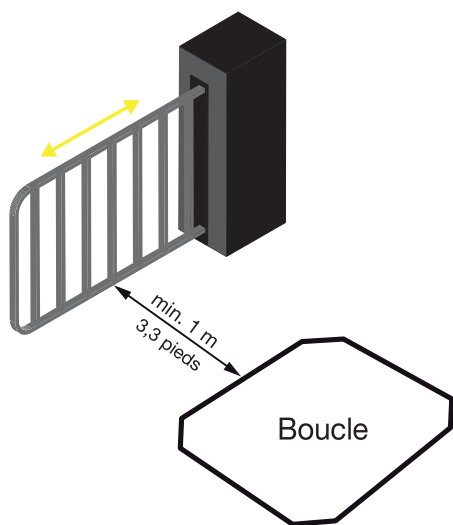
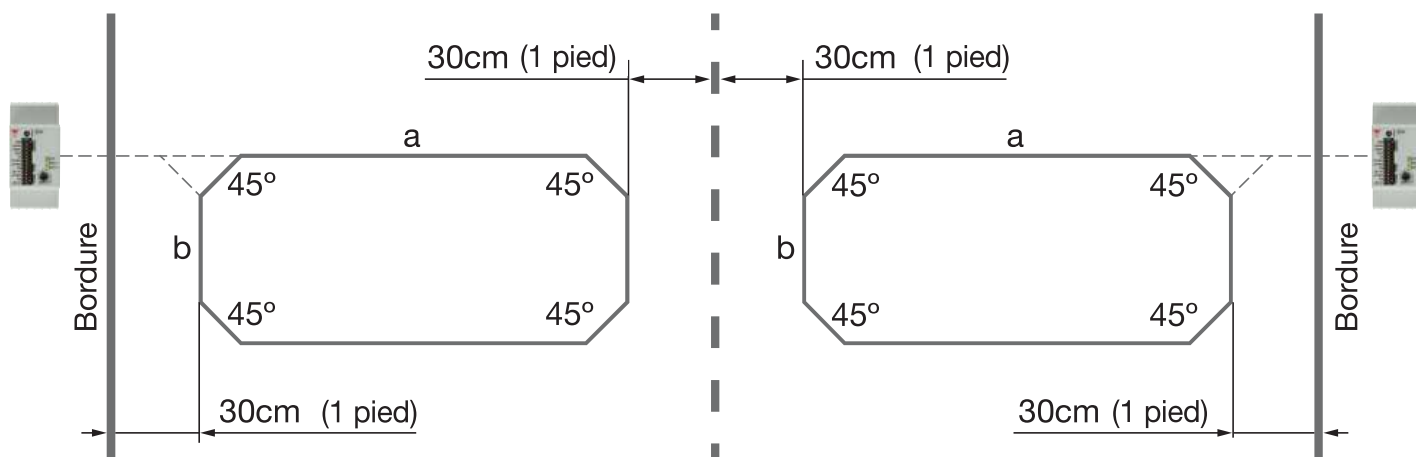
LDP1: simple boucle

La borne de terre doit être connectée à la terre.
Ne pas essayer la graisse des broches.



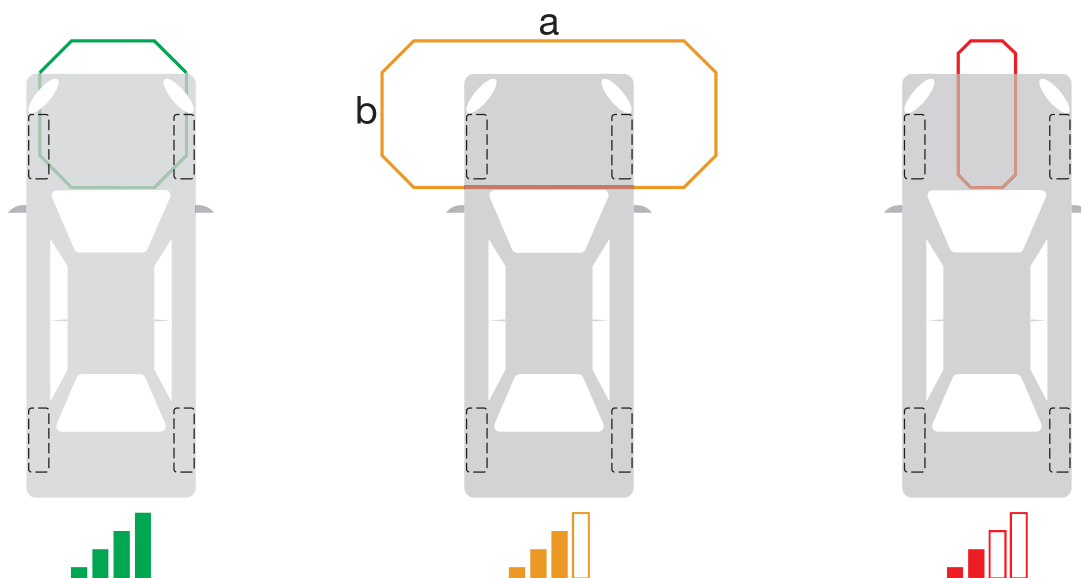
LDP2: double boucle

Dimension et positionnement d'une boucle

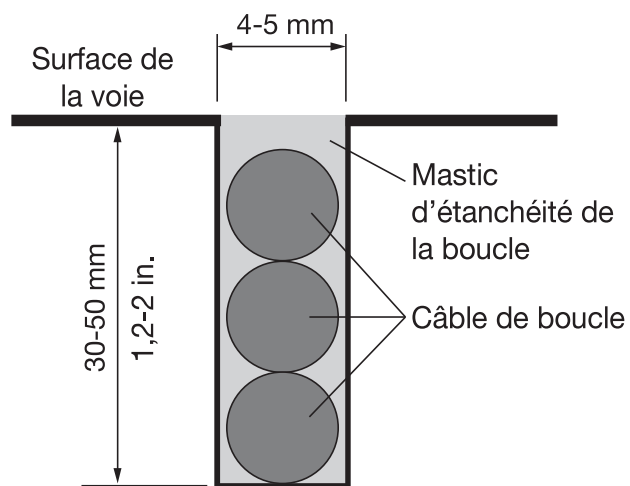


⚠ Attention danger : avant toute modification des paramètres du produit, constater l'absence de personnes ou de véhicules à proximité de tout mécanisme de fermeture/ouverture connecté à la sortie du détecteur de boucle.

⚠ Nota: tester l'application avec soin avant tout mise en service du système. Un réglage de sensibilité trop élevé ou trop faible peut aboutir à un comportement imprévu de l'application.



Largeur (b) minimale de boucle	Vitesse maximale du véhicule
0.25 m (0.8 pieds)	75 km/h (47 mph)
0.5 m (1.6 pieds)	80 km/h (50 mph)
1 m (3.3 pieds)	95 km/h (59 mph)
2 m (6.6 pieds)	120 km/h (75 mph)
5 m (16.4 pieds)	200 km/h (124 mph)



Inductance et tours de boucle
























































Circonférence de la boucle: (2 x a) + (2 x b)	Nombre de tours recommandé (80 µH)	Nombre minimum de tours (20 µH)
2 m (6,6 pieds)	13	9
5 m (16,4 pieds)	7	5
6 - 7 m (19,7 - 23 pieds)	6	4
8 - 9 m (26,2 - 29,5 pieds)	5	3
10 - 14 m (32,8 - 45,9 pieds)	4	3
15 - 23 m (49,2 - 75,5 pieds)	3	2
24 - 30 m (78,7 - 98,4 pieds)	2	1

Câble d'alimentation de la boucle

Section du câble [mm²]	Section du câble [AWG]	Longueur maximale recommandée
0,75 mm²	18 AWG	20 m (66 pieds)
1,50 mm²	15 AWG	40 m (131 pieds)
2,50 mm²	13 AWG	50 m (164 pieds)

Réglage des DIP switch

Switch n°↓

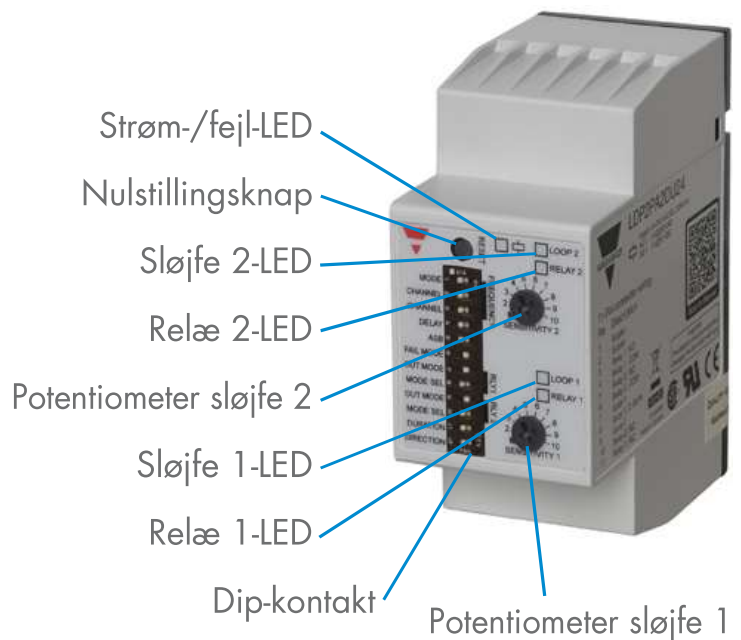
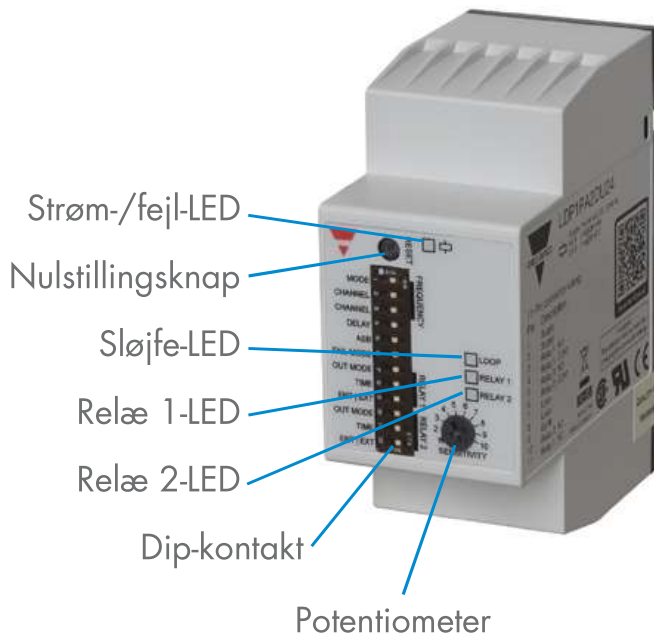
Général	1	Mode	Sélection automatique du canal 		Sélection manuelle du canal 			
	2	Canal	En mode sélection automatique du canal, les DIP switch 2 et 3 ne sont pas utilisés		canal 1	canal 2	canal 3	canal 4
								
	3							
	4	Tempo travail	Temporisation désactivée 		Temporisation 2s 			
	5	ASB	ASB désactivée 		ASB activée 			
6	Mode défaillance	Sûreté intrusion 		Sécurité des personnes 				
Relais 1 DIP 1	7	Mode	Mode impulsion 		Mode présence 			
	8	Temps d'impulsion	Impulsion de 0.1 s 	Impulsion de 0.5s 	Infini 	60 min 	10 min 	1 min 
	9	Entrée/Sortie	Entrée véhicule 	Sortie véhicule 				
	10	Mode	Mode impulsion 		Mode présence 			
	11	Temps d'impulsion	Impulsion de 0.1 s 	Impulsion de 0.5s 	Infini 	60 min 	10 min 	1 min 
	12	Entrée/Sortie	Entrée véhicule 	Sortie véhicule 				
Relais 1 DIP 2	7	Mode	Mode impulsion 		Mode présence 			
	8	Sélection du mode	Entrée véhicule 	Sortie véhicule 	Infini 	1 min 		
	9	Mode	Mode impulsion 		Mode présence 			
	10	Sélection du mode	Entrée véhicule 	Sortie véhicule 	Infini 	1 min 		
	11	Durée d'impulsion	0.1 s 	0.5s 	Non utilisé en mode présence			
	12	Logique directionnelle	OFF 		ON 			

Réglage usine par défaut: ☒

Struktur

LDP1

LDP2



DA

Strøm-/fejlindikator LED

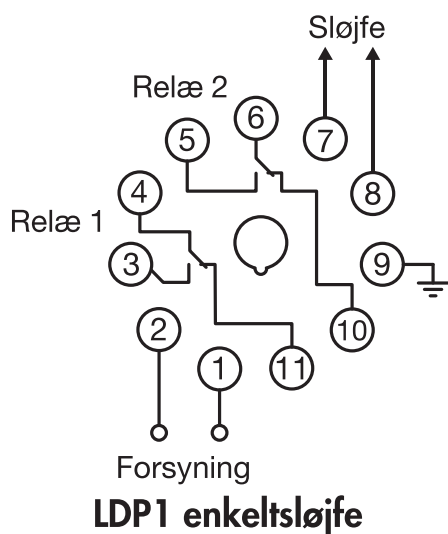
- Grøn LED (konstant): Enheden forsynes med strøm, og alt fungerer korrekt.
- Grøn LED (blinkende): DIP-kontakt er blevet ændret siden opstart, men ændringen er endnu ikke trådt i kraft. Tryk venligst på nulstillingsknappen.
- Blå LED (konstant): Automatisk følsomheds-boost (ABS) er slået TIL (ON), og alt fungerer korrekt.
- Gul LED (konstant): Signalniveauet i sløjfen er lavt. Det anbefales at øge følsomheden.
- Rød LED (konstant): Krydstale imellem sløjfefrekvensen og en anden sløjfe detekteret. Vælg en anden frekvenskanal på DIP-kontakterne, og nulstil produktet.
- Hvid LED (blinkende): Efter opstarten indikerer antallet af blink fra LED'en den valgte frekvenskanal i både manuel og automatisk frekvensfinjusteringsmodus (eksempel: LED'en blinker to gange svarende til kanal 2).

Sløjfetilstands-LED

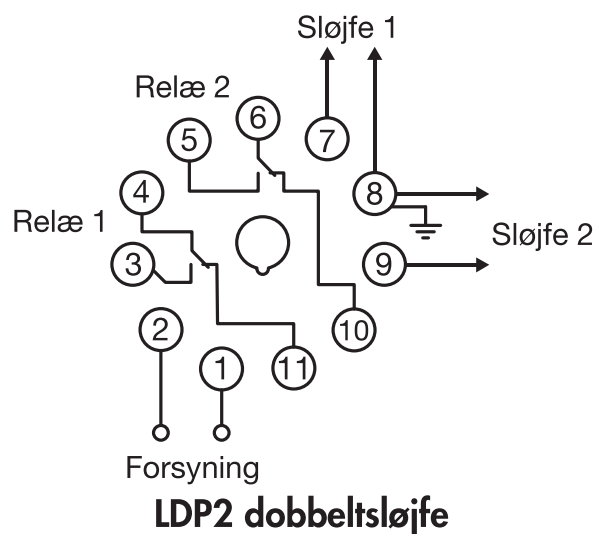
- Grøn LED (konstant): Sløjfeinduktansen er inden for grænsen og fungerer korrekt
- Gul LED (konstant): Sløjfeinduktansen er for høj (højere end 1.000 μH)
- Gul LED (blinkende): Sløjfeinduktansen er for lav (lavere end 20 μH)
- Rød LED (konstant): Sløjfekredsløb brudt
- Rød LED (blinkende): Sløjfe kortsluttet

Relay state LED

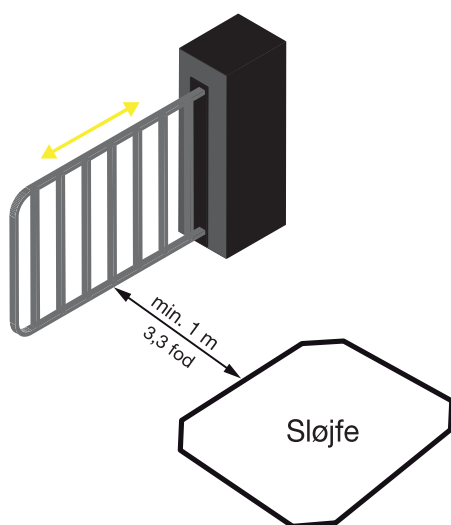
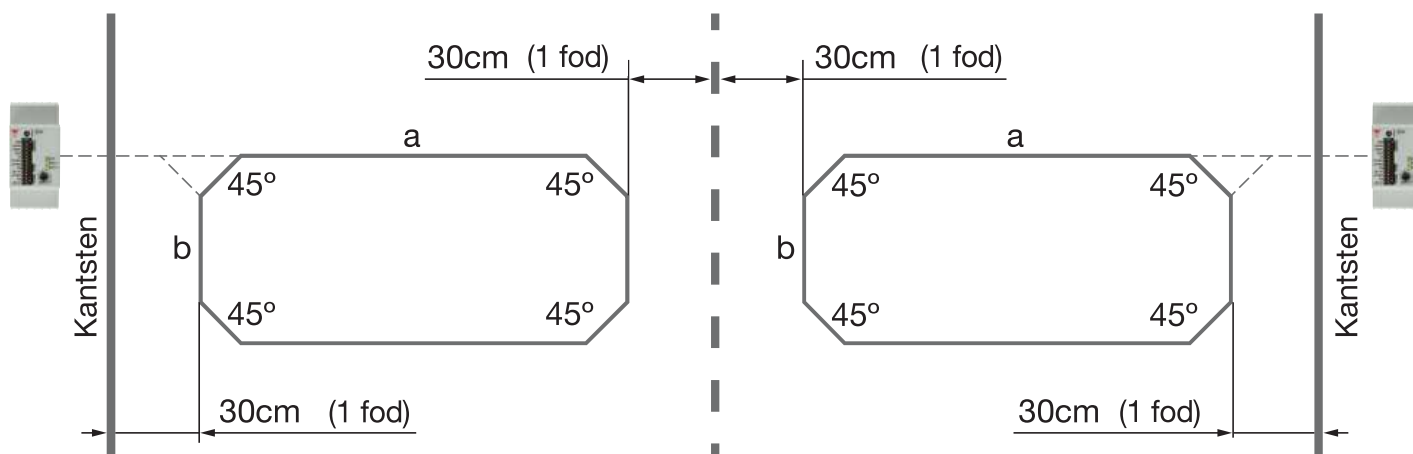
- Gul LED (slukket): Relæet er ikke aktiveret.
- Gul LED (konstant): Relæet er aktiveret og i tilstedeværelsesmodus.
- Gul LED (lyser i 0,5 s): Relæet er aktiveret og i impulsmodus, 0,1 s.
- Gul LED (lyser i 1,0 s): Relæet er aktiveret og i impulsmodus, 0,5 s.



Jordbenet skal være forbundet med jord. Tør ikke fedtet af benene.

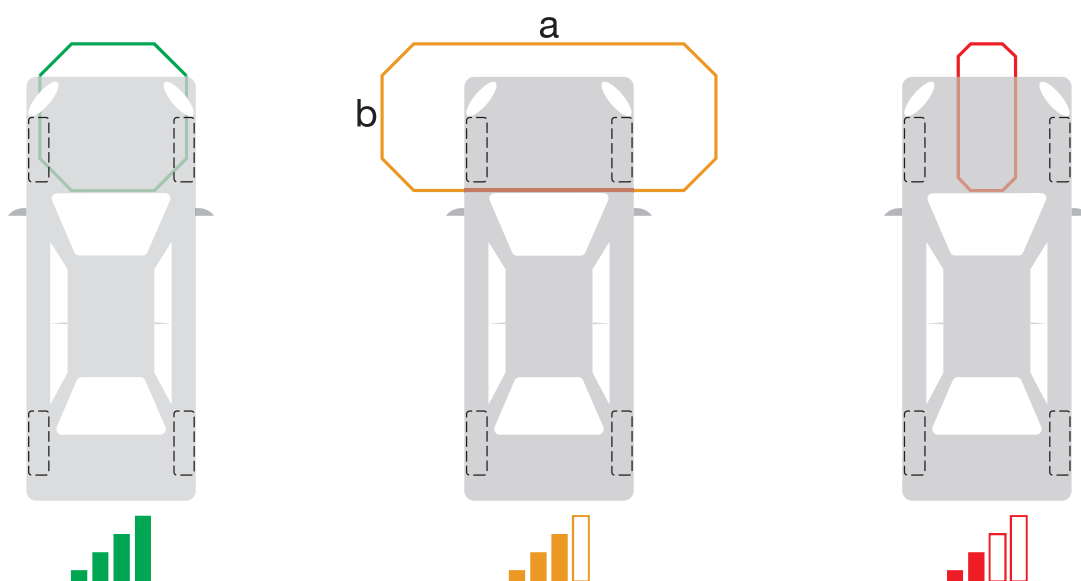


Dimensionering og placering af sløjfen

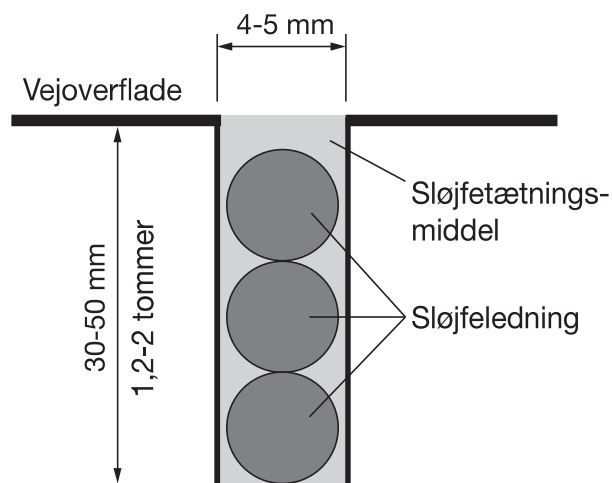


⚠ Advarsel: Inden der foretages nogen form for ændringer af produktindstillingerne, skal det sikres, at hverken personer eller køretøjer kan blive ramt af eventuelle lukkende/åbnende mekanismer, der måtte være forbundet med udgangen på sløjfedektoren.

⚠ Forsigtig: Det er meget vigtigt at afprøve anvendelsen omhyggeligt, inden systemet sættes i drift. Hvis følsomheden indstilles for højt eller for lavt, kan det føre til uventede reaktioner fra anvendelsen.



Minimal sløjfelængde (b)	Maksimal køretøjshastighed
0.25 m (0.8 fod)	75 km/h (47 mph)
0.5 m (1.6 fod)	80 km/h (50 mph)
1 m (3.3 fod)	95 km/h (59 mph)
2 m (6.6 fod)	120 km/h (75 mph)
5 m (16.4 fod)	200 km/h (124 mph)



Induktans og sløjfeviklinger

Sløjfeomfang: (2 x a) + (2 x b)	Anbefalet antal viklinger (80 μ H)	Mindste antal viklinger (20 μ H)
2 m (6.6 fod)	13	9
5 m (16.4 fod)	7	5
6 - 7 m (19.7 - 23 fod)	6	4
8 - 9 m (26.2 - 29.5 fod)	5	3
10 - 14 m (32.8 - 45.9 fod)	4	3
15 - 23 m (49.2 - 75.5 fod)	3	2
24 - 30 m (78.7 - 98.4 fod)	2	1

Fødekabel

Kabeldiameter [mm²]	Kabeldiameter [AWG]	Anbefalet maksimum-længde
0.75 mm²	18 AWG	20 m (66 fod)
1.50 mm²	15 AWG	40 m (131 fod)
2.50 mm²	13 AWG	50 m (164 fod)

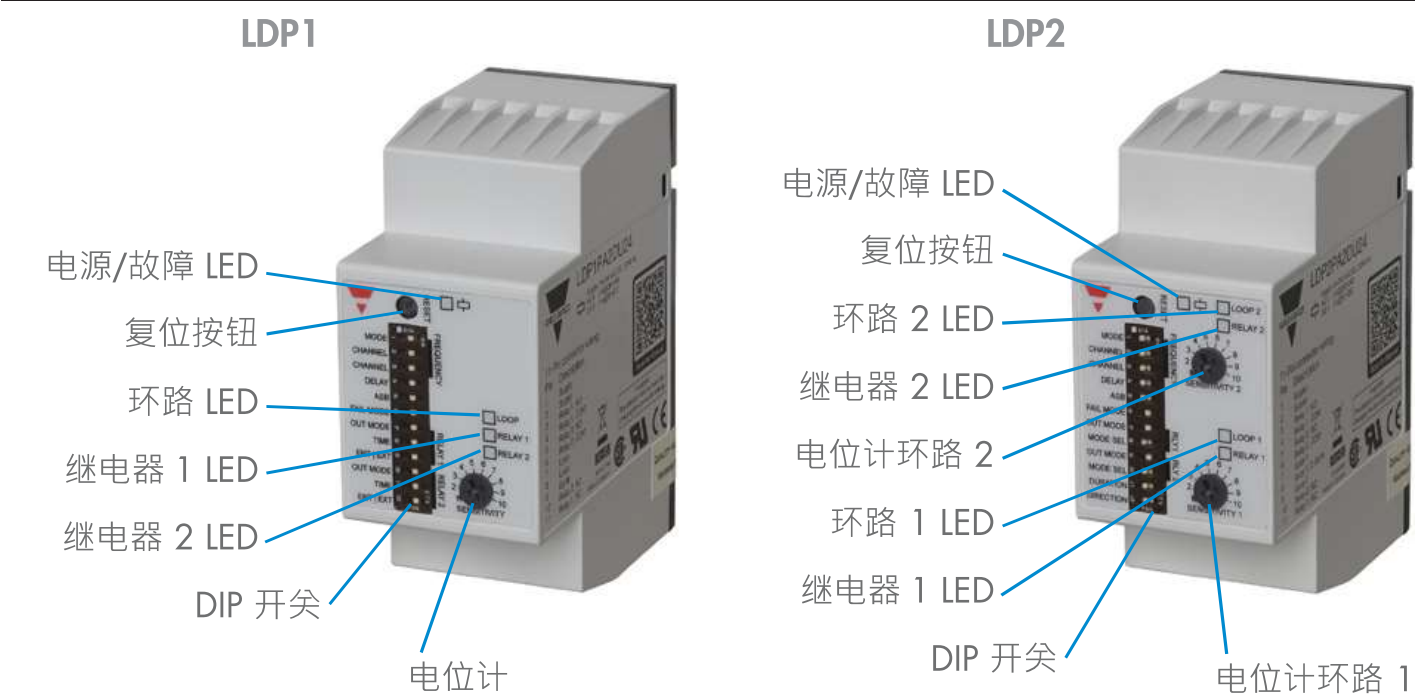
DIP-kontaktindstillinger

G E N E R E L L E	1	Modus	Automatisk valg af kanal <input type="checkbox"/>		Manuelt valg af kanal <input type="checkbox"/>			
	2	Kanal	DIP-kontakt 2 og 3 bruges ikke i forbindelse med automatisk valg af kanal		1	2	3	4
	3				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4	Indkoblingsforsinkelsestid	Forsinkelse FRA (OFF) <input type="checkbox"/>		Forsinkelse 2s <input type="checkbox"/>			
	5	ASB	ASB FRA (OFF) <input type="checkbox"/>		ASB TIL (ON) <input type="checkbox"/>			
	6	Fejlmodus	Oplåsende ved strømsvigt <input type="checkbox"/>		Oplåsende ved strømindkobling <input type="checkbox"/>			

L D P 1	Relæ 1	7	Udgangsmodus	Impulsmodus <input type="checkbox"/>		Tilstedeværelsesmodus <input type="checkbox"/>		
		8	Tid	0.1s impuls <input type="checkbox"/>	0.5s impuls <input type="checkbox"/>	Uendelig	60 min	10 min
		9	Indkørsel/udkørsel	Køretøjsindkørsel <input type="checkbox"/>	Køretøjsudkørsel <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Relæ 2	10	Udgangsmodus	Impulsmodus <input type="checkbox"/>		Tilstedeværelsesmodus <input type="checkbox"/>		
		11	Tid	0.1s impuls <input type="checkbox"/>	0.5s impuls <input type="checkbox"/>	Uendelig	60 min	10 min
		12	Indkørsel/udkørsel	Køretøjsindkørsel <input type="checkbox"/>	Køretøjsudkørsel <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

L D P 2	Relæ 1	7	Udgangsmodus	Impulsmodus <input type="checkbox"/>		Tilstedeværelsesmodus <input type="checkbox"/>	
		8	Modusvalg	Køretøjsindkørsel <input type="checkbox"/>	Køretøjsudkørsel <input type="checkbox"/>	Uendelig <input type="checkbox"/>	1 min <input type="checkbox"/>
	Relæ 2	9	Udgangsmodus	Impulsmodus <input type="checkbox"/>		Tilstedeværelsesmodus <input type="checkbox"/>	
		10	Modusvalg	Køretøjsindkørsel <input type="checkbox"/>	Køretøjsudkørsel <input type="checkbox"/>	Uendelig <input type="checkbox"/>	1 min <input type="checkbox"/>
	Rel. 1, 2	11	Impulsvarighed	0.1s <input type="checkbox"/>	0.5s <input type="checkbox"/>	Bruges ikke i tilstedeværelsesmodus	
		12	Retningslogik	FRA (OFF) <input type="checkbox"/>		TIL (ON) <input type="checkbox"/>	

结构



电源/故障指示灯 LED

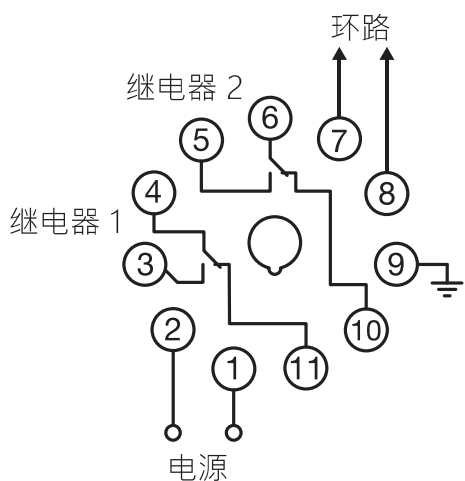
- 绿色 LED (常亮) : 装置已通电，一切工作正常。
- 绿色 LED (闪烁) : DIP 开关自通电以来已更改，但更改尚未生效。请按下复位按钮。
- 蓝色 LED (常亮) : 自动灵敏度提升已打开，一切工作正常。
- 黄色 LED (常亮) : 环路中的信号水平低。建议提高灵敏度。
- 红色 LED (常亮) : 与检测到的其他环路频率串扰。在 DIP 开关上选择其他频率通道并复位产品。
- 白色 LED (闪烁) : 启动后，LED 闪烁的次数表示在手动和自动频率调谐模式下选择的频率通道 (例如，LED 闪烁两次相当于通道 2)。

环路状态 LED

- 绿色 LED (常亮) : 环路电感位于限制以内并工作正常
- 黄色 LED (常亮) : 环路电感过高 (高于 1000 μ H)
- 黄色 LED (闪烁) : 环路电感过低 (低于 20 μ H)
- 红色 LED (常亮) : 环路开路
- 红色 LED (闪烁) : 环路短路

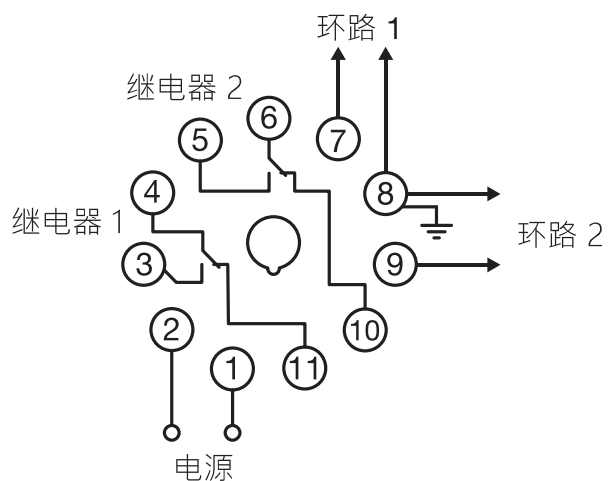
继电器状态 LED

- 黄色 LED (熄灭) : 继电器未激活
- 黄色 LED (常亮) : 继电器已激活并处于有无检测模式
- 黄色 LED (亮起 0.5 s) : 继电器已激活并处于脉冲模式，0.1 s
- 黄色 LED (亮起 1.0 s) : 继电器已激活并处于脉冲模式，0.5 s



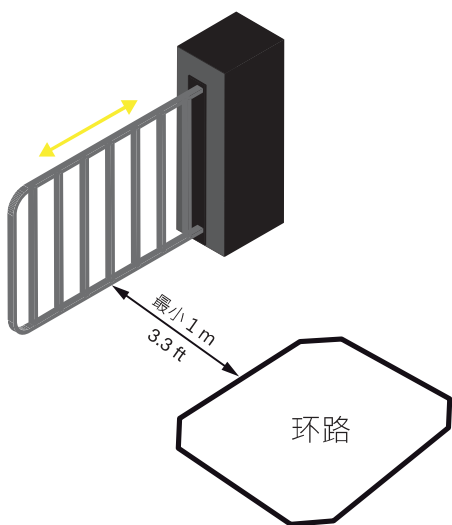
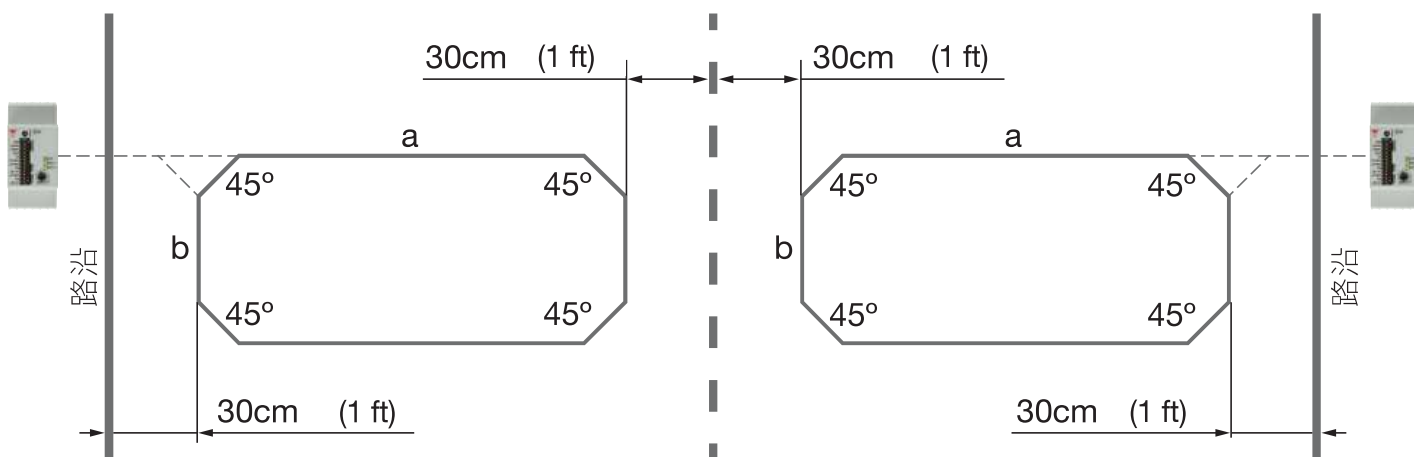
LDP1 单环路

接地针必须接地
请勿擦掉针上的
润滑脂



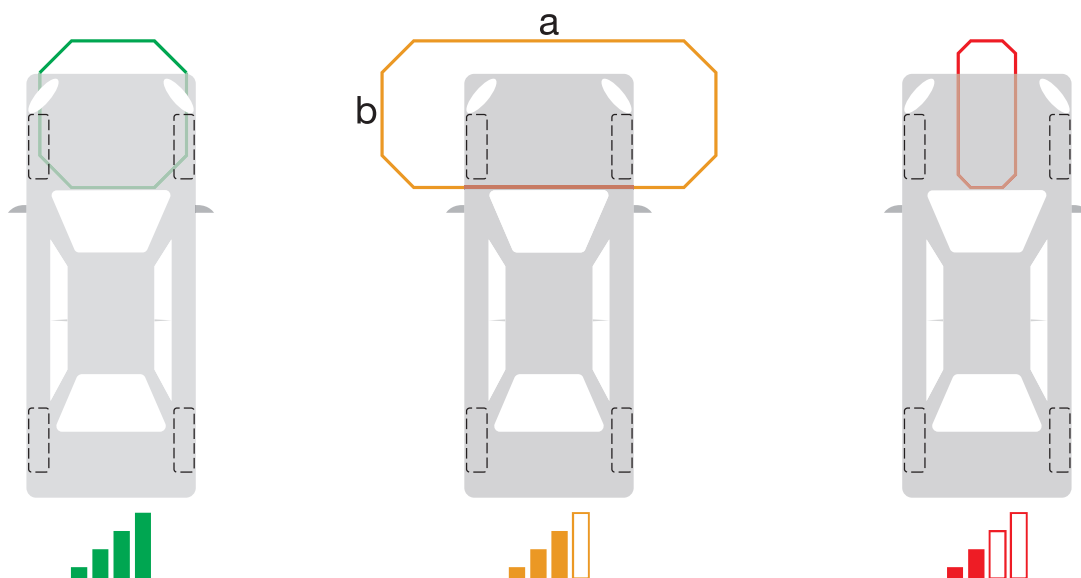
LDP2 双环路

环路尺寸和位置

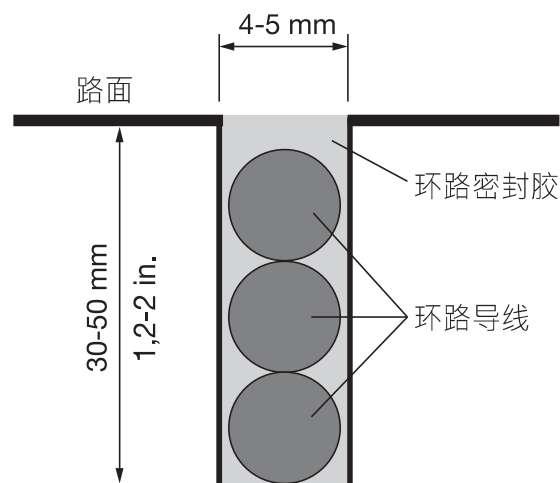


警告： 在对产品设置进行任何更改之前，请确保与环路检测器输出连接的任何关闭/打开机构都不会碰到任何人或车辆。

警告： 将系统投入使用之前，必须认真测试应用。灵敏度设置过高或高低可能导致应用出现意外行为。



最小环路长度 (b)	最大车速
0.25 m (0.8 ft)	75 km/h (47 mph)
0.5 m (1.6 ft)	80 km/h (50 mph)
1 m (3.3 ft)	95 km/h (59 mph)
2 m (6.6 ft)	120 km/h (75 mph)
5 m (16.4 ft)	200 km/h (124 mph)



电感和环路线圈匝数

环路周长: (2 x a) + (2 x b)	建议匝数 (80 μ H)	最低匝数 (20 μ H)
2 m (6.6 ft)	13	9
5 m (16.4 ft)	7	5
6 - 7 m (19.7 - 23 ft)	6	4
8 - 9 m (26.2 - 29.5 ft)	5	3
10 - 14 m (32.8 - 45.9 ft)	4	3
15 - 23 m (49.2 - 75.5 ft)	3	2
24 - 30 m (78.7 - 98.4 ft)	2	1

馈电电缆

线规 [mm²]	线规 [AWG]	建议最大长度
0.75 mm²	18 AWG	20 m (66 ft)
1.50 mm²	15 AWG	40 m (131 ft)
2.50 mm²	13 AWG	50 m (164 ft)

DIP 开关设置

通用设置	1	模式选择	通道自动选择 <input type="checkbox"/>		通道手动选择 <input type="checkbox"/>			
	2	通道选择	DIP 开关 2 和 3 不用于通道自动选择		1	2	3	4
	3				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4	打开延迟	延迟关闭 <input type="checkbox"/>		延迟 2s <input type="checkbox"/>			
	5	ASB	ASB 关闭 <input type="checkbox"/>		ASB 打开 <input type="checkbox"/>			
	6	故障模式	故障保护 <input type="checkbox"/>		故障断电 <input type="checkbox"/>			
LDP 1	7	输出模式	脉冲模式 <input type="checkbox"/>		有无模式 <input type="checkbox"/>			
	8	时间	0.1s 脉冲 <input type="checkbox"/>	0.5s 脉冲 <input type="checkbox"/>	无限时间 <input type="checkbox"/>	60 m <input type="checkbox"/>	10 m <input type="checkbox"/>	1 m <input type="checkbox"/>
	9	进入/退出	车辆进入 <input type="checkbox"/>	车辆退出 <input type="checkbox"/>				
	10	输出模式	脉冲模式 <input type="checkbox"/>		有无模式 <input type="checkbox"/>			
	11	时间	0.1s 脉冲 <input type="checkbox"/>	0.5s 脉冲 <input type="checkbox"/>	无限时间 <input type="checkbox"/>	60 m <input type="checkbox"/>	10 m <input type="checkbox"/>	1 m <input type="checkbox"/>
	12	进入/退出	车辆进入 <input type="checkbox"/>	车辆退出 <input type="checkbox"/>				
LDP 2	7	输出模式	脉冲模式 <input type="checkbox"/>		有无模式 <input type="checkbox"/>			
	8	模式选择	车辆进入 <input type="checkbox"/>	车辆退出 <input type="checkbox"/>	无限时间 <input type="checkbox"/>		1 m <input type="checkbox"/>	
	9	输出模式	脉冲模式 <input type="checkbox"/>		有无模式 <input type="checkbox"/>			
	10	模式选择	车辆进入 <input type="checkbox"/>	车辆退出 <input type="checkbox"/>	无限时间 <input type="checkbox"/>		1 m <input type="checkbox"/>	
	11	脉冲持续时间	0.1s <input type="checkbox"/>	0.5s <input type="checkbox"/>	未用于有无模式			
	12	方向逻辑	关闭 <input type="checkbox"/>		打开 <input type="checkbox"/>			



QR code of instruction manual

Codice QR del manuale

QR Betriebsanleitung

QR manual de instrucciones

QR manuel d'instructions

QR Brugervejledning

指导手册的QR码

http://www.productselection.net/manuals/uk/LDP_IM.pdf

UAB Carlo Gavazzi Industri Kaunas

Raudondvario pl. 101 Kaunas LT-47184 Lithuania