# CL50 Column Light



# Datasheet

Multi-Color General Purpose or Audible Indicators

	Standard Audible
	Sealed Audible
Standard	Omni-Directional Sealed Audible

- Rugged, cost-effective, and easy-to-install multi-color indicators
- Illumination provides easy-to-see operator guidance and equipment status indication
  - 1-, 2-, or 3-color models available
- Available in black or light gray housing •
- Audible models available with standard, sealed, or omni-directional audible element
- Continuous, pulsed, and staccato tones available 18 V to 30 V dc operation
- Compact devices are completely self-contained, no controller needed
- No assembly required

#### Non-Audible Models

Models <sup>1</sup>			LED Colors <sup>2</sup>		- Connection <sup>3</sup>	Inputs
MODEIS	Colors	Color 1	Color 1 Color 2 Color 3		— Connection <sup>∞</sup>	
CL50GXXPQ		Green	-	-		PNP
CL50GXXNQ		Green	-	-		NPN
CL50XRXPQ		-	Red	-		PNP
CL50XRXNQ	-	-	Red	-	Integral 4-pin M12/Euro-style quick	NPN
CL50GRXPQ	0	Green	Red	-	disconnect	PNP
CL50GRXNQ	2	Green	Red	-		NPN
CL50GRYPQ	0	Green	Red	Yellow		PNP
CL50GRYNQ	- 3	Green	Red	Yellow		NPN

#### Audible Models

Standard Audible	Standard Audible # of LED		LED Colors <sup>2</sup>	Connection <sup>3</sup>	Innute	
Models <sup>1</sup>	Colors	Color 1	Color 1 Color 2 Color 3		Connection=	Inputs
CL50GXXAPQ		Green	-	-		PNP
CL50GXXANQ		Green	-	-		NPN
CL50XRXAPQ		-	Red	-		PNP
CL50XRXANQ		-	Red	-	Integral 5-pin M12/Euro-style quick	NPN
CL50GRXAPQ	2	Green	Red	-	disconnect	PNP
CL50GRXANQ	2	Green	Red	-		NPN
CL50GRYAPQ	3	Green	Red	Yellow		PNP
CL50GRYANQ	3	Green	Red	Yellow		NPN

Sealed Audible Models 1		# of LED	LED Colors <sup>2</sup>			Connection <sup>3</sup>	Inputs	
Continuous	Pulsed at 1.6 Hz	Staccato	Colors	Color 1	Color 2	Color 3	Connection	inputs
CL50GXXALSPQ	CL50GXXALS3PQ	CL50GXXALS4PQ		Green	-	-		PNP
CL50GXXALSNQ	CL50GXXALS3NQ	CL50GXXALS4NQ		Green	-	-		NPN
CL50XRXALSPQ	CL50XRXALS3PQ	CL50XRXALS4PQ		-	Red	-	Integral 5-pin	PNP
CL50XRXALSNQ	CL50XRXALS3NQ	CL50XRXALS4NQ		-	Red	-	M12/Euro-style	NPN
CL50GRXALSPQ	CL50GRXALS3PQ	CL50GRXALS4PQ	2	Green	Red	-	quick disconnect	PNP
CL50GRXALSNQ	CL50GRXALS3NQ	CL50GRXALS4NQ	2	Green	Red	-		NPN
CL50GRYALSPQ	CL50GRYALS3PQ	CL50GRYALS4PQ	3	Green	Red	Yellow		PNP

Models with black housing are listed. For gray housing, add the suffix "C" at the end of the cabled model number or before the "Q" of quick disconnect model numbers. For example, CL50GXXAPC or CL50GXXAPCQ. 1 2



Available colors include: Green (G), Red (R), Yellow (Y), Blue (B), and White (W). Contact Banner Engineering for other colors and color combinations. 3

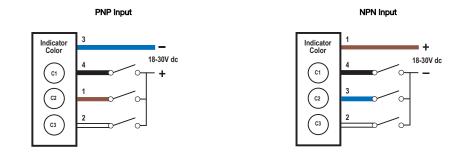
To order the 150 mm (6 in) PVC cable model with a M12/Euro-style quick disconnect, replace the suffix "Q" with "QP" in the model number. For example, CL50GXXAPQP. •

To order the 2 m (6.5 ft) PVC cable model, omit the suffix "Q" in the model number. For example, CL50GXXAP.

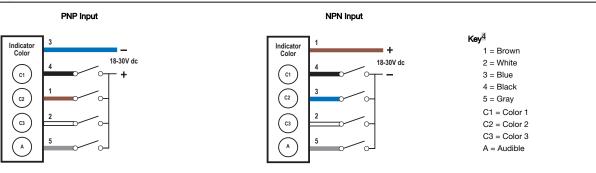
Models with a quick disconnect require a mating cordset. •

	Sealed Audible Models <sup>1</sup>		# of LED		LED Colors $2$		3	
Continuous	Pulsed at 1.6 Hz	Staccato	Colors	Color 1	Color 2	Color 3	- Connection <sup>3</sup>	Inputs
CL50GRYALSNQ	CL50GRYALS3NQ	CL50GRYALS4NQ		Green	Red	Yellow		NPN
Omni-Directional Sealed Audible Models $^{1}$		# of LED		LED Colors <sup>2</sup>		3		
Continuous	Pulsed at 1.6 Hz	Staccato	Colors	Color 1	Color 2	Color 3	- Connection <sup>3</sup>	Inputs
CL50GXXAOSPQ	CL50GXXAOS3PQ	CL50GXXAOS4PQ		Green	-	-	Ì	PNP
CL50GXXAOSNQ	CL50GXXAOS3NQ	CL50GXXAOS4NQ	1	Green	-	-		NPN
CL50XRXAOSPQ	CL50XRXAOS3PQ	CL50XRXAOS4PQ		-	Red	-		PNP
CL50XRXAOSNQ	CL50XRXAOS3NQ	CL50XRXAOS4NQ	_	-	Red	-	Integral 5-pin	NPN
CL50GRXAOSPQ	CL50GRXAOS3PQ	CL50GRXAOS4PQ		Green	Red	-	M12/Euro-style quick disconnect	PNP
CL50GRXAOSNQ	CL50GRXAOS3NQ	CL50GRXAOS4NQ	2	Green	Red	-		NPN
CL50GRYAOSPQ	CL50GRYAOS3PQ	CL50GRYAOS4PQ		Green	Red	Yellow		PNP
CL50GRYAOSNQ	CL50GRYAOS3NQ	CL50GRYAOS4NQ	3	Green	Red	Yellow		NPN
Omni-Directional S	ealed Audible Models with Int	ensity Adjustment $^{1}$	# of LED	LED Colors <sup>2</sup>			- Connection <sup>3</sup>	Innet
Continuous	Pulsed at 1.6 Hz	Staccato	Colors	Color 1	Color 2	Color 3	— Connection <sup>™</sup>	Inputs
CL50GXXAOSIPQ	CL50GXXAOS3IPQ	CL50GXXAOS4IPQ		Green	-	-		PNP
		CL50GXXAOS4INQ	_	Green	-	-		NPN
CL50GXXAOSINQ	CL50GXXAOS3INQ	020000000000000	- 1					
CL50GXXAOSINQ CL50XRXAOSIPQ	CL50GXXAOS3INQ CL50XRXAOS3IPQ	CL50XRXAOS4IPQ	- 1	-	Red	-		PNP
			- 1	-	Red Red	-	Integral 5-pin	PNP NPN
CL50XRXAOSIPQ	CL50XRXAOS3IPQ	CL50XRXAOS4IPQ					Integral 5-pin M12/Euro-style quick disconnect	
CL50XRXAOSIPQ CL50XRXAOSINQ	CL50XRXAOS3IPQ CL50XRXAOS3INQ	CL50XRXAOS4IPQ CL50XRXAOS4INQ	- 1	-	Red		M12/Euro-style	NPN
CL50XRXAOSIPQ CL50XRXAOSINQ CL50GRXAOSIPQ	CL50XRXAOS3IPQ CL50XRXAOS3INQ CL50QRXAOS3IPQ	CL50XRXAOS4IPQ CL50XRXAOS4INQ CL50GRXAOS4IPQ		- Green	Red Red		M12/Euro-style	NPN PNP

## Wiring Diagrams - Non-Audible Models



## Wiring Diagrams — Audible Models



<sup>4</sup> If there is an "X" in the model number, the corresponding wire will not be used.

Key<sup>4</sup>

1 = Brown

2 = White

3 = Blue 4 = Black

C1 = Color 1

C2 = Color 2

C3 = Color 3

#### Functional Truth Table: PNP Models

LED Function	Pin 4 (Black Wire)	Pin 1 (Brown Wire)	Pin 2 (White Wire)	
Color 1 On	+V dc			
Color 2 On		+V dc		
Color 3 On			+V dc	Pin 3 (blue wire) connected to ground (-).
Color 3 On (color 3 inhibits color 1)	+V dc		+V dc	Alarm models: Alarm function is independent of
Color 2 On (color 2 inhibits color 1)	+V dc	+V dc		light functions.
Color 3 On (color 3 inhibits color 2)		+V dc	+V dc	
Color 3 On (color 3 inhibits colors 1 & 2)	+V dc	+V dc	+V dc	

### Functional Truth Table: NPN Models

LED Function	Pin 4 (Black Wire)	Pin 3 (Blue Wire)	Pin 2 (White Wire)	
Color 1 On	–V dc			
Color 2 On		–V dc		
Color 3 On			–V dc	Pin 1 (brown wire) connected to +V dc.
Color 3 On (color 3 inhibits color 1)	–V dc		–V dc	Alarm models: Alarm function is independent of
Color 2 On (color 2 inhibits color 1)	–V dc	–V dc		light functions.
Color 3 On (color 3 inhibits color 2)		–V dc	–V dc	
Color 3 On (color 3 inhibits colors 1 & 2)	–V dc	–V dc	–V dc	_

#### Specifications

#### Supply Voltage and Current

- 18 V dc to 30 V dc Indicators-maximum current per LED color:
  - 100 mA at 18 V dc
    70 mA at 30 V dc

- Standard Audible Alarm: 25 mA maximum current Sealed Audible Alarm: 35 mA maximum current Omni-Directional Sealed Audible Alarm: 45 mA maximum current

Supply Protection Circuitry Protected against reverse polarity and transient voltages

Indicator Response Time

Indicator On/Off: 10 milliseconds maximum

#### Audible Alarm

Standard Audible Alarm: 2.7 KHz ± 500 Hz oscillation frequency; maximum intensity

Standard Audible Alarm: 2.7 KHz ± 500 Hz oscillation frequency; maximum intensity 92 db at 1 meter (3.3 ft) (typical) Sealed Audible Alarm: 2.9 KHz ± 250 Hz oscillation frequency; maximum intensity 94 db at 1 meter (3.3 ft) (typical) Ornni-Directional Sealed Audible Alarm: 2.1 KHz ± 250 Hz oscillation frequency; maximum intensity 99 db at 1m (3.3 ft) (typical) Ornni-Directional Sealed Audible Alarm with Intensity Adjustment: 2.1 KHz ± 250 Hz oscillation frequency; maximum intensity 95 dB at 1m (3.3 ft) (typical)

#### Audible Adjustment

Standard Audible Alarm: Unscrew the cover (up to 1.5 turns maximum) to adjust the audible intensity. Do not exceed 1.5 turns or the cover may detach during operation. For maximum intensity, rotate the center plug 180° counterclockwise to remove it. Sealed Audible Alarm and Omni-Directional Sealed Audible Alarm with Intensity

Adjustment: Rotate the front cover until the desired intensity is reached Typical Reduction in Sound Intensity with Audible Adjustment (maximum to minimum):

Standard Audible: 30 dB Sealed Audible: 20 dB

#### .

Omni-Directional Sealed Audible: 12 dB

# Construction Bases and Covers: ABS Light Segment: Polycarbonate

Ubration and Mechanical Shock Meets IEC 60068-2-6 requirements (Vibration: 10 Hz to 55 Hz, 1.0 mm amplitude, 5 minutes sweep, 30 minutes dwell) Meets IEC 60068-2-27 requirements (Shock: 30G 11 ms duration, half sine wave)

Operating Conditions Non-Audible: -40 °C to +50 °C (-40 °F to +122 °F) Standard and Sealed Audible: -20 °C to +50 °C (-4 °F to +122 °F) 95% at +50 °C maximum relative humidity (non-condensing)

## Environmental Rating

UL Type 4X Indoor and UL Type 13 Non-Audible and Sealed Audible: IEC IP67 Standard Audible: IEC IP50

#### Certifications

CE



#### Indicators

LEDs or audible are independently selected Indicator Characteristics

Color	Dominant Wavelength (nm) or Color Temperature (CCT)	Lumen Output (Typical at 25 °C)
Green	525 nm	72
Red	625 nm	38
Yellow	590 nm	30
Blue	475 nm	28
White	5000 K	85

#### Connections

Integral 4-pin or 5-pin M12/Euro-style quick disconnect, 150 mm (6 in) PVC cable with a M12/Euro-style quick disconnect, or 2 m (6.5 ft) integral PVC cable, depending on model

Models with a quick disconnect require a mating cordset

#### Required Overcurrent Protection



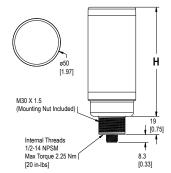
WARNING: Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

Overcurrent protection is required to be provided by end product application per the supplied table.

Supplied table: Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply. Supply wining leads < 24 AWG shall not be spliced. For additional product support, go to *www.bannerengineering.com*.

Supply Wiring (AWG)	Required Overcurrent Protection (Amps)
20	5.0
22	3.0
24	2.0
26	1.0
28	0.8
30	0.5

## Dimensions

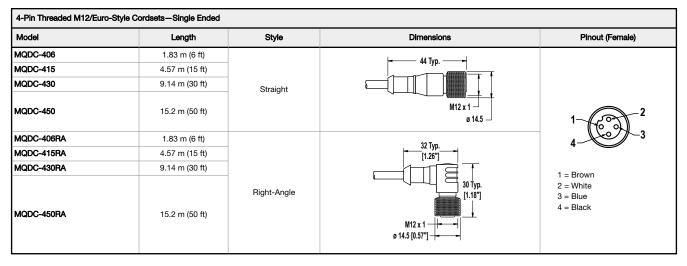


Column Light Height (H)				
Non-Audible	114.2mm (4.5 in)			
Standard Audible*	145.3mm (5.7 in)			
Sealed Audible	168.2mm (6.6 in)			
Omni-Directional Sealed Audible 182.2mm (7.2 in)				
*Column Light (H) with top unscrewed approximately 3.5 mm to allow sound to escape				

All measurements are listed in millimeters [inches], unless noted otherwise.

#### Accessories

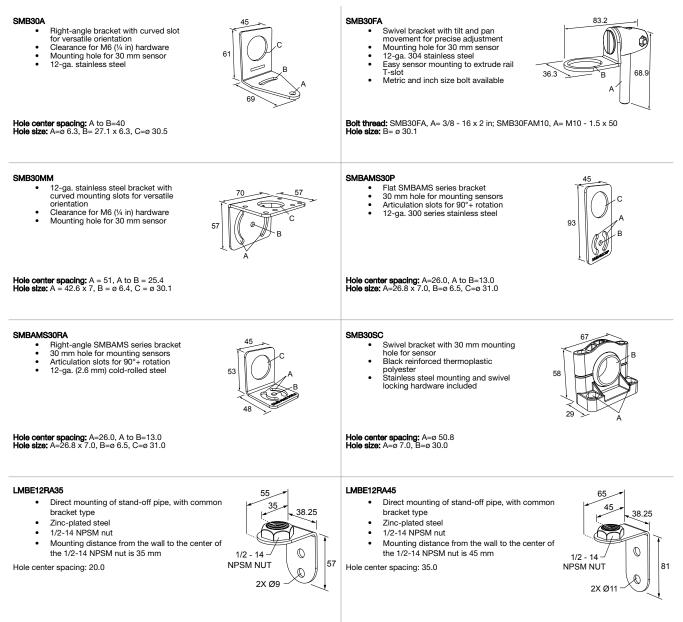
#### Cordsets



5-Pin Threaded M12/Euro-Style Cordsets—Single Ended						
Model	Length	Style	Dimensions	Pinout (Female)		
MQDC1-501.5	0.50 m (1.5 ft)	ĺ	44 Typ			
MQDC1-506	1.83 m (6 ft)					
MQDC1-515	4.57 m (15 ft)	Straight				
MQDC1-530	9.14 m (30 ft)		M12 x 1 ø 14.5	12		
MQDC1-506RA	1.83 m (6 ft)			1000 - 3		
MQDC1-515RA	4.57 m (15 ft)		32 Тур.	45		
MQDC1-530RA	9.14 m (30 ft)	Right-Angle	(1.26") 30 Typ. (1.18") M12 x 1 ø 14.5 [0.57"]	1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray		

#### Mounting Brackets

All measurements are listed in millimeters [inches], unless noted otherwise.



## LMB Sealed Right-Angle Bracket

Model	Description	Construction	
LMB30RA		Black polycarbonate	
LMB30RAC	Direct-Mount Models: Bracket kit with base, 30 mm adapter, set screw, fasteners, O-rings, and gaskets.	Gray polycarbonate	
LMBE12RA		Black polycarbonate	Q
LMBE12RAC	Pipe-Mount Models: Bracket kit with base, ½-14 pipe adapter, set screw, fasteners, O-rings, and gaskets. For use with stand-off pipe (listed and sold separately).	Gray polycarbonate	

#### **Elevated Mount System**

Model			Features	Components
SA-M30TE12 - Black Acetal SA-M30TE12C - White UHMW			<ul> <li>Streamlined black acetal or white UHMW stand-off pipe adapter/cover</li> <li>Connects between 30 mm light base and ½ in. NPSM/DN15 pipe</li> <li>Mounting hardware included</li> </ul>	
Polished 304 Stainless Steel	Black Anodized Aluminum	Clear Anodized Aluminum		
<b>SOP-E12-150SS</b> 150 mm (6 in) long	<b>SOP-E12-150A</b> 150 mm (6 in) long	<b>SOP-E12-150AC</b> 150 mm (6 in) long	<ul> <li>Elevated-use stand-off pipe (½ in. NPSM/DN15)</li> <li>Polished 304 stainless steel, black anodized aluminum, or</li> </ul>	
<b>SOP-E12-300SS</b> 300 mm (12 in) long	<b>SOP-E12-300A</b> 300 mm (12 in) long	<b>SOP-E12-300AC</b> 300 mm (12 in) long	clear anodized aluminum surface ½ in. NPT thread at both ends Compatible with most industrial environments	
<b>SOP-E12-900SS</b> 900 mm (36 in) long	<b>SOP-E12-900A</b> 900 mm (36 in) long	<b>SOP-E12-900AC</b> 900 mm (36 in) long		
SA-E12M30 - Black Acetal			Streamlined black acetal or white UHMW mounting base	db
SA-E12M30C - White UHMW			adapter/cover Connects between ½ in. NPSM/DN15 pipe and 30 mm (1-3/16 in) drilled hole Mounting hardware included	

### Pipe Mounting Flange

Pipe Mounting Flange					
Model	Features	Construction			
SA-F12	<ul> <li>Elevated-use stand-off pipes (½ in, NPSM/ DN15)</li> <li>M5 mounting hardware and nitrile gasket included</li> </ul>	Die-cast zinc base with black paint	1/2-14 NPSM 101 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
SA-F12-3	<ul> <li>Elevated-use stand-off pipes (½ in, NPSM/ DN15)</li> <li>M4 mounting hardware and nitrile blend gasket included</li> </ul>	Black Polycarbonate	1/2-14 NPSM 2 x 120 4 2 x 120 60		

#### Banner Engineering Corp. Limited Warranty

Banner Engineering Corp. warrants its products to be free from defects in material and workmanship for one year following the date of shipment. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture which, at the time it is returned to the factory, is found to have been defective during the warranty period. This warranty does not cover damage or liability for misuse, abuse, or the improper application or installation of the Banner product.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER EXPRESS OR IMPLIED (INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), AND WHETHER ARISING UNDER COURSE OF DEALING OR TRADE USAGE. This Warranty is available and limited to grade or a the discretion of Banger Engineering Comp. Financement II NO EVENTS HALL BANKER ENGINEERING CORP. BE LABLE TO BLIVER OR ANY OTHER

This Warranty is exclusive and limited to repair or, at the discretion of Banner Engineering Corp., replacement. IN NO EVENT SHALL BANNER ENGINEERING CORP. BE LIABLE TO BUYER OR ANY OTHER PERSON OR ENTITY FOR ANY EXTRA COSTS, EXPENSES, LOSS OF PROFITS, OR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM ANY PRODUCT DEFECT OR FROM THE USE OR INABILITY TO USE THE PRODUCT, WHETHER ARISING IN CONTRACT OR WARRANTY, STATUTE, TORT, STRICT LIABILITY, NEGLIGENCE, OR OTHERWISE.

Banner Engineering Corp. reserves the right to change, modify or improve the design of the product without assuming any obligations or liabilities relating to any product previously manufactured by Banner Engineering Corp. Any misuse, abuse, or improve rapplication or installation of this product or use of the product for personal protection applications when the product side there are subject to change, Banner reserves the right to notify product specifications to this product or express approval by Banner Engineering Corp. Mill void the product side there are subject to change, Banner reserves the right to modify product specifications to purpose will void the product warranties. All specifications to this product without prior express approval by Banner Engineering Corp. Will void the product warranties. All specifications published in this document are subject to change, Banner reserves the right to modify product specifications, refer to: *www.bannerengineering.com*.

For patent information, see www.bannerengineering.com/patents.



# **Mouser Electronics**

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

# Banner Engineering:

CL50GRXNQ CL50GRXPQ CL50GRYALSPQ CL50GRYANQ CL50GRYAPQ CL50GRYNQ CL50GRYPQ CL50XRXPQ CL50YXXPQ CL50BRYALSPQ CL50BRYAPQ CL50BRYNQ CL50BRYPQ CL50BWYPQ CL50BXXAOS3PQ CL50BXXAOS4IPQ CL50BXXAOS4PQ CL50BXXN CL50BXXP CL50BXXPQ CL50BXXPQP CL50BYXP CL50BYXPQ CL50GBRAOSIPQ CL50GBXPQ CL50GBYAOS4PQ CL50GBYAPQ CL50GBYPQ CL50GRBAN CL50GRBAOS3PQ CL50GRBAOSIP CL50GRBAOSNQ CL50GRBAP CL50GRBAPQ CL50GRBNQ CL50GRBPQ CL50GRWPQ CL50GRX2PQ CL50GRXALS3N CL50GRXALS3PQ CL50GRXALS4P CL50GRXALS4PQ CL50GRXALSN CL50GRXALSNQ CL50GRXALSP CL50GRXALSPQ CL50GRXAN CL50GRXANQ CL50GRXAOS3IPQ CL50GRXAOS3PQ CL50GRXAOSIPQ CL50GRXAOSP CL50GRXAOSPQ CL50GRXAP CL50GRXAPQ CL50GRXN CL50GRXP CL50GRXPQP CL50GRYALS3P CL50GRYALS4PQ CL50GRYALSN CL50GRYALSNCQ CL50GRYALSNQ CL50GRYALSP CL50GRYALSPCQ CL50GRYALSPQP CL50GRYAN CL50GRYANC CL50GRYANCQ CL50GRYAOS3INQ CL50GRYAOS3IPQ CL50GRYAOS3PC CL50GRYAOS3PCQ CL50GRYAOS3PQ CL50GRYAOS4INQ CL50GRYAOS4IPQ CL50GRYAOSINQ CL50GRYAOSIP CL50GRYAOSIPQ CL50GRYAOSNQ CL50GRYAOSPQP CL50GRYAP CL50GRYAPCQ CL50GRYAPCQP CL50GRYAPQP CL50GRYN CL50GRYNCQ CL50GRYP CL50GRYPC CL50GRYPCQ CL50GRYPQP CL50GXRPQ CL50GXXALSPQ CL50GXXAPQ CL50GXXNQ CL50GXXP CL50GXXPQ CL50GXXPQP CL50GXYPQ CL50GYRALSNQ