

## **KBL1D02** LIMIT SWITCH, K SERIES, ADJUSTABLE ROLLER LEVER, 1 BOTTOM CABLE ENTRY. DIMENSIONS TO EN 50047, PLASTIC BODY, CONTACTS 2NC INDEPENDENT. PLASTIC ROD



Product type designation KBL General characteristics Material Housing Polymer thermoplastic Rod Aluminium.zinc alloy Contact characteristics Type of contact Type of contact Thermal current lth A 10 EC/EN 60947-5-1 designation Rated insulation voltage Ui A 4600 Q600 Rated insulation voltage Ui KV 6 Rated insulation voltage Ui KV 6 Switching speed Tise Conventional free air thermal current Ith A 10 Resistance per pole (average value) Mechanical features Deperating head fixing Diperating torque Nem 3 ozin 4.25 Tightening torque (Max) Switch fixing Nm 0.8 Ibin 7 Body lid screw fixing Nm 0.8 Ibin 7					
General characteristics       Material     Housing Rod     Polymer thermoplastic Aluminium-zinc alloy       Contact characteristics     Rod     alloy       Type of contact     2NC Indipendent thermal current lth     A     10       Contact insulation     A 500 Q600     Rated insulation voltage Ui     V     690       Rated insulation class     II     10     G/SC QUICK FUSE     QUICK FUSE       Switching speed     Insulation class     II     10     G/SC QUICK FUSE       Switching speed     min     m/s     0.5       EC Conventional free air thermal current lth     A     10       Resistance per pole (average value)     mQ     <10	Product designation				
Material       Housing       Housing       Polymer thermoplastic Aluminium-zinc allow         Contact characteristics       2NC Indipendent Thermal current Ith       A       10         EC/EN 60947-5-1 designation       A600 Q600       A       6         Rated insulation voltage Ui       V       690         Rated insulation voltage Uimp       kV       6         Insulation class       II       10         Short-circuit protection with fuse       Class/A       10 gG/SC QUICK FUSE         Switching speed       min       m/s       0.5         Switching speed       max       m/s       1.5         EC Conventional free air thermal current Ith       A       10       0         Resistance per pole (average value)       mΩ       <10	Product type designat	ion			KBL
Housing Rod         Polymer thermoplastic Aluminium-zinc alloy           Contact characteristics         NC Indipendent Aluminium-zinc alloy           Type of contact         NC Indipendent A 10           Thermal current lth         A           EC/EN 60947-5-1 designation         A600 Q600           Rated insulation voltage Uin         V         6           Insulation class         II           Short-circuit protection with fuse         Class/A         10 g/SC QUICK FUSE           Switching speed         min         m/s         1.5           EC Conventional free air thermal current lth         A         10           Resistance per pole (average value)         mQ         <10	General characteristic	S			
Contact characteristics         Hormoplastic Aluminum-zinc alloy           Type of contact         2NC Indipendent Premai current lth         A         10           EC/EN 60947-5-1 designation         A         0           Rated insulation voltage Ui Rated insulation voltage Ui Rated insulation voltage Uimp         V         690           Rated insulation voltage Uimp         KV         6           Insulation class         II         10           Short-circuit protection with fuse         Class/A         10 gG/SC QUICK FUSE           Switching speed         min         m/S         0.5           Machanical features	Material				
Kod     alloy       Contact characteristics     2NC Indipendent       Thermal current lth     A     10       EC/EN 60947-5-1 designation     A600 Q600       Rated insulation voltage Uimp     V     690       Rated insulation voltage Uimp     KV     6       Insulation class     II     II       Short-circuit protection with fuse     Class/A     10 gG/SC       Switching speed     min     m/s     0.5       Switching speed     min     m/s     1.5       EC Conventional free air thermal current lth     A     10       Resistance per pole (average value)     mQ     <10			Housing		
Type of contact         2NC Indipendent           Thermal current lth         A         10           EC/EN 60947-5-1 designation         A         600 Q600           Rated insulation voltage Ui         V         690           Rated insulation voltage Uimp         kV         6           Insulation class         II         II           Short-circuit protection with fuse         Class/A         10 gG/SC QUICK FUSE           Switching speed         min         m/s         0.5           Switching speed         min         m/s         1.5           EC Conventional free air thermal current Ith         A         10         Resistance per pole (average value)           Wechanical features         Locking bayonel insert         Insert         Insert           Operating head fixing         Ncm         3         2.5           Tightening torque (Max)         Switch fixing         Nm         2.5           Eody lid screw fixing         Nm         0.8         1bin           Body lid screw fixing         Nm         0.8         1bin         7           Conductor section         AWG/Kcmil         Nm         0.8         1bin         7			Rod		
Thermal current lth         A         10           EC/EN 60947-5-1 designation         A600 Q600           Rated insulation voltage Uimp         V         690           Rated insulation voltage Uimp         KV         6           insulation class         II         10 gG/SC QUICK FUSE           Short-circuit protection with fuse         Class/A         10 gG/SC QUICK FUSE           Switching speed         min         m/s         0.5           EC Conventional free air thermal current lth         A         10           Resistance per pole (average value)         mQ         <10		S			
EC/EN 60947-5-1 designation       A600 Q600         Rated insulation voltage Uimp       V       690         Rated insulation voltage Uimp       kV       6         Insulation class       II       10 gG/SC QUICK FUSE         Switching speed       min m/s       0.5         Switching speed       min m/s       1.5         EC Conventional free air thermal current lth       A       10         Resistance per pole (average value)       mQ       <10	Type of contact				2NC Indipendent
Rated insulation voltage Ui         V         690           Rated impulse withstand voltage Uimp         kV         6           insulation class         II         10 gG/SC QUICK FUSE           Short-circuit protection with fuse         Class/A         10 gG/SC QUICK FUSE           Switching speed         min         m/s         0.5           max         m/s         1.5         1.5           EC Conventional free air thermal current lth         A         10           Resistance per pole (average value)         mΩ         <10	Thermal current Ith			Α	10
Rated impulse withstand voltage Uimp       kV       6         Insulation class       II       10 gG/SC QUICK FUSE         Short-circuit protection with fuse       Class/A       10 gG/SC QUICK FUSE         Switching speed       min       m/s       0.5         Switching speed       min       m/s       1.5         IEC Conventional free air thermal current lth       A       10         Resistance per pole (average value)       mQ<<10	IEC/EN 60947-5-1 de	signation			A600 Q600
Insulation class II II Short-circuit protection with fuse Class/A 10 gG/SC Switching speed min m/s 0.5 max m/s 1.5 IEC Conventional free air thermal current lth A 10 Resistance per pole (average value) Mechanical features Operating head fixing Operating head fixing Derating torque (Max) Switch fixing Mrm 2.5 Ibin 22.1 Contact terminals Nrm 0.8 Ibin 7 Body lid screw fixing Nrm 0.8 Ibin 7 Conductor section AWG/Kcmil MWG/Kcmil Min 16 max 14 IEC min mm <sup>2</sup> 1or 2	Rated insulation voltage	ge Ui		V	690
Short-circuit protection with fuse       Class/A       10 gG/SC QUICK FUSE         Switching speed       min       m/s       0.5         max       m/s       1.5         IEC Conventional free air thermal current lth       A       10         Resistance per pole (average value)       mΩ       <10	Rated impulse withsta	nd voltage Uimp		kV	6
Switching speed           min         m/s         0.5           max         m/s         1.5           EC Conventional free air thermal current lth         A         10           Resistance per pole (average value)         mQ         <10	Insulation class				
min     m/s     0.5       max     m/s     1.5       IEC Conventional free air thermal current lth     A     10       Resistance per pole (average value)     mΩ     <10	Short-circuit protectior	n with fuse		Class/A	
max     m/s     1.5       IEC Conventional free air thermal current lth     A     10       Resistance per pole (average value)     mΩ     <10	Switching speed				
EC Conventional free air thermal current lth A 10 Resistance per pole (average value) mΩ <10 Mechanical features Locking bayonel insert insert Operating head fixing Locking bayonel insert insert Operating torque Tightening torque (Max) Switch fixing Nm 2.5 Ibin 22.1 Contact terminals Nm 0.8 Ibin 7 Body lid screw fixing Nm 0.8 Ibin 7 Conductor section AWG/Kcmil AWG/Kcmil IEC min mm² 1or 2			min	m/s	0.5
Resistance per pole (average value)       mΩ       <10			max	m/s	1.5
Mechanical features       Locking bayonel insert         Operating head fixing       Ncm 3 ozin 4.25         Tightening torque (Max)       Switch fixing         Switch fixing       Nm 2.5         Ibin 22.1       Ibin 22.1         Contact terminals       Nm 0.8         Ibin 7       Body lid screw fixing         Nrm 0.8       Ibin 7         Body lid screw fixing       Nm 16         Ibin 7       Ibin 7         Conductor section       AWG/Kcmil         IEC       min mm² 1or 2	IEC Conventional free air thermal current Ith			Α	
Operating head fixing       Locking bayoned insert         Operating torque       Ncm       3         Tightening torque (Max)       Ncm       4.25         Tightening torque (Max)       Switch fixing       Nm       2.5         Example 1       Ibin       2.5         Ibin       2.5       1bin       2.5         Ibin       2.5       1bin       2.5         Ibin       2.5       1bin       2.5         Ibin       7       0.8       1bin       7         Conductor section       AWG/Kcmil       Nm       0.8       1bin       7         Conductor section       IEC       min       16       max       14		average value)		mΩ	<10
Operating nead fixing insert  Derivating fread fixing  Nrm 3 ozin 4.25  Tightening torque (Max)  Switch fixing  Nm 2.5 Ibin 22.1  Contact terminals  Nm 0.8 Ibin 7  Conductor section  AWG/Kcmil  Mm 16 max 14  IEC  min mm² 1or 2	Mechanical features				
Ncm         3           Tightening torque (Max)         Switch fixing         Nm         2.5           Ibin         22.1         Ibin         22.1           Contact terminals         Nm         0.8           Ibin         7         Ibin         7           Body lid screw fixing         Nm         0.8           Ibin         7         Ibin         7           Conductor section         AWG/Kcmil         min         16           IEC         min <mm²< td="">         10r 2</mm²<>	Operating head fixing				
Tightening torque (Max)     Switch fixing     Nm     2.5       Ibin     22.1       Contact terminals     Nm     0.8       Ibin     7       Body lid screw fixing     Nm     0.8       Ibin     7       Conductor section     AWG/Kcmil     16       IEC     min     mm     14	Operating torque				
Tightening torque (Max)       Switch fixing       Nm       2.5         Ibin       22.1       Ibin       22.1         Contact terminals       Nm       0.8         Ibin       7       Ibin       7         Body lid screw fixing       Nm       0.8         Ibin       7       Ibin       7         Conductor section       AWG/Kcmil       min       16         IEC       min       14				Ncm	3
Switch fixing           Switch fixing         Nm         2.5           Ibin         22.1           Contact terminals         Nm         0.8           Ibin         7           Body lid screw fixing         Nm         0.8           Ibin         7           Conductor section         AWG/Kcmil         min           IEC         min         16           min         14         12				ozin	4.25
Nm       2.5         Ibin       22.1         Contact terminals       Nm       0.8         Ibin       7         Body lid screw fixing       Nm       0.8         Ibin       7         Conductor section       Nm       0.8         AWG/Kcmil       min       16         max       14         IEC       min       mm	Tightening torque (Ma	x)			
Ibin       22.1         Contact terminals       Nm       0.8         Ibin       7         Body lid screw fixing       Nm       0.8         Ibin       7         Conductor section       Nm       0.8         AWG/Kcmil       min       16         IEC       min       mm²       10r 2		Switch fixing			
Contact terminals           Nm         0.8           Ibin         7           Body lid screw fixing         Nm         0.8           Ibin         7           Conductor section         NMG/Kcmil         16           min         16           IEC         min         14				Nm	2.5
Nm       0.8         Ibin       7         Body lid screw fixing       Nm       0.8         Ibin       7         Conductor section       AWG/Kcmil       16				lbin	22.1
Ibin       7         Body lid screw fixing       Nm       0.8         Ibin       7         Conductor section       AWG/Kcmil       Imin       16         Min       16       14         IEC       min       mm²       1 or 2		Contact terminals			
Body lid screw fixing Nm 0.8 lbin 7 Conductor section AWG/Kcmil min 16 max 14 IEC min mm <sup>2</sup> 1 or 2				Nm	0.8
Nm 0.8 Ibin 7 Conductor section AWG/Kcmil min 16 max 14 IEC min mm <sup>2</sup> 1 or 2				lbin	7
Ibin         7           Conductor section         AWG/Kcmil           min         16           max         14           IEC         min         mm		Body lid screw fixing			
Conductor section          AWG/Kcmil       min       16					
AWG/Kcmil min 16 max 14 IEC min mm <sup>2</sup> 1 or 2				lbin	7
min 16 max 14 IEC min mm <sup>2</sup> 1or 2	Conductor section				
max         14           IEC         min         mm²         1 or 2		AWG/Kcmil			
IEC min mm <sup>2</sup> 1or 2			min		
min mm <sup>2</sup> 1or 2			max		14
		IEC			
max mm <sup>2</sup> 2.5			min		
			max	mm²	2.5

The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding

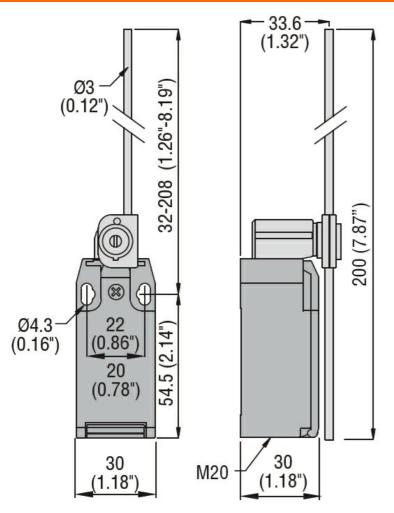


ENERGY AND AUTOMATION

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Cable connection				Self-releasing screw terminal
Cable entry				M20 on the bottom
Operations				
Mechanical life			cycles	<1000000
Mechanical operation			cycles/h	3600
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-25
		max	°C	+70
	Storage temperature			
		min	°C	-40
		max	°C	+70
Resistance & Protect	ion			
IP degree				
		Terminals		IP20
		Body housing		IP65
Pollution degree				3

Dimensions

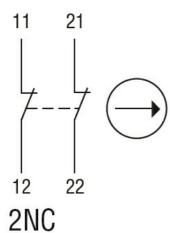


## Wiring diagrams



**KBL1D02** LIMIT SWITCH, K SERIES, ADJUSTABLE ROLLER LEVER, 1 BOTTOM CABLE ENTRY. DIMENSIONS TO EN 50047, PLASTIC BODY, CONTACTS 2NC INDEPENDENT. PLASTIC ROD

## Snap action



Certifications and con	npliance	
Compliance	·	
	CSA C22.2 n° 14	
	EN 50047	
	IEC/EN 60204-1	
	IEC/EN 60947-1	
	IEC/EN 60947-5-1	
	UL508	
Certificates		
	CCC	
	cULus	
	EAC	
ETIM classification		
ETIM 8.0		EC000030 - End switch