



Electrical Components



IEC Limit Switches

- 30, 35, 40, 50 & 60mm widths
- Non-Metallic Body
- Metallic Body



Comepi Limit Switches



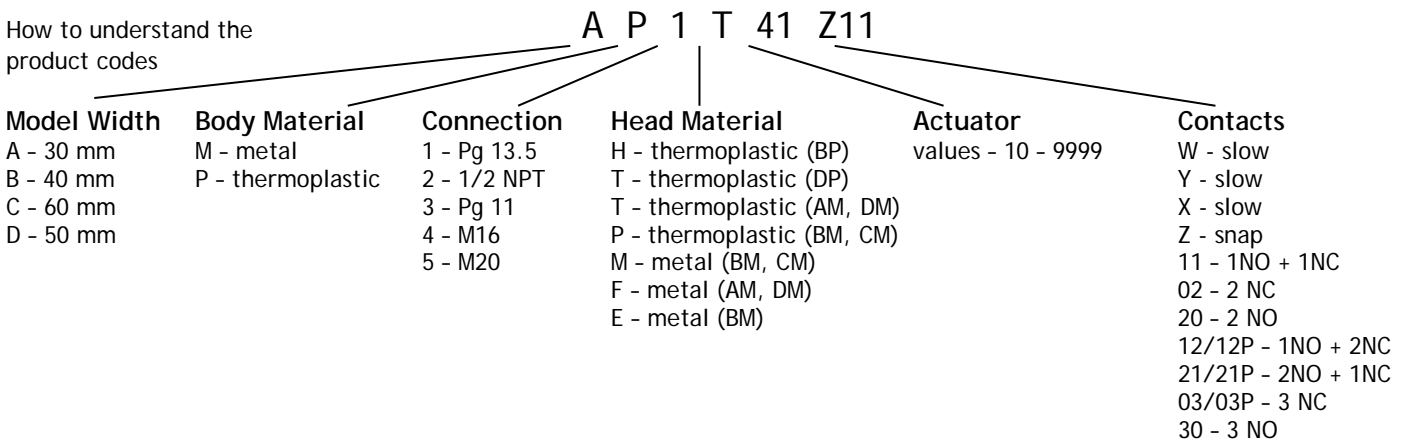
Features and specifications

Approvals	CSA, cULus	
IP rating (IEC 60529 and EN 60529 OR IEC 536)	IP65 - 67	
Operating temperature	-25 to 70°C (low temperature version available -40 to 70°C)	
Protection against electrical shocks (according to IEC 61140 or 536)	metal - class I, thermoplastic class - II	
Rated insulation voltage U_1 According to IEC 60947-1 and EN 60947-1 According to UL 508 and CSA C22-2 n° 14A	500V (degree of pollution 3) (400V for contact types Z02, X12P, X21P, W03P) A 600, Q 600 (A 300, Q 300 for AM... & DM... series & contact types X12P, X21P, W03P)	
Conventional free air thermal current I_{th} (according to IEC 60947-5-1 & EN 60947-5-1) @ <40 °C	10A	
Short-circuit protection, $U_e < 500V$ a.c. - gG (gl) type fuses	10A	
Rated operational current I_e / AC-15 (according to IEC 60947-5-1) I_e / DC-13 (according to IEC 60947-5-1)	AM, AP, BM, BP, CM, DM, DP 24V - 50/60 Hz 10A 120V - 50/60 Hz 6A 400V - 50/60 Hz 4A 24V DC 6A 125V DC 0.55A 250V DC 0.4A	EM 10A 6A 3A 2.8A 0.55A 0.27A
Switching frequency (cycles/hr)	3600	
Load factor	0.5	
Resistance between contacts (mΩ)	25	
Connecting terminals	M3.5 2 pozidriv screws with cable clamp (M3 for 3 poles contact types)	
Connecting capacity (1 or 2 x mm ²)	0.75 ... 2.5 (0.34 ... 1.5 for 3 poles contacts type)	
Terminal marking	according to IEC 60947-5-1	
Mechanical durability (millions of operations)	depends on head/actuator - 5 - 30 million	

Information subject to change without notice

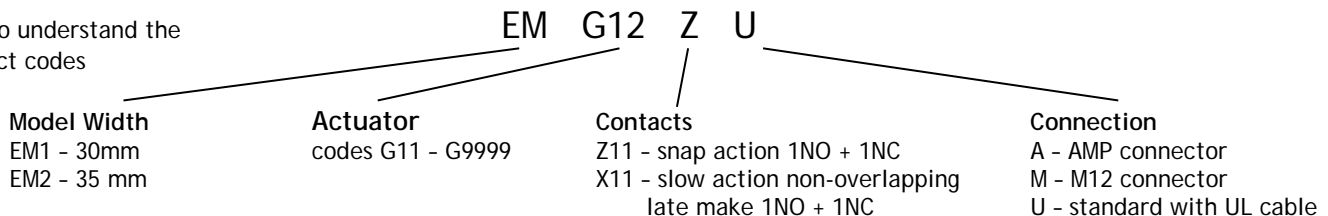
Naming convention for Limit Switches

How to understand the product codes



Naming convention for EM Pre-wired Limit Switches

How to understand the product codes





Non-Metallic & Metallic Limit Switches

AM

AP





							
Series		AM Series - 30mm Metal Limit Switches			AP Series - 30mm Non-Metallic Limit Switches		
Contacts	Code	Action	Contacts	Code	Action	Contacts	
	Z11	snap	1NO + 1NC	Z11	snap	1NO + 1NC	
	X11	slow BBM	1NO + 1NC	X11	slow BBM	1NO + 1NC	
	Y11	slow MBB	1NO + 1NC	Y11	slow MBB	1NO + 1NC	
	W02	slow simultaneous	2NC	W02	slow simultaneous	2NC	
	W20	slow simultaneous	2NO	W20	slow simultaneous	2NO	
	Z02	snap	2NC	Z02	snap	2NC	
	X12P	slow BBM	1NO + 2NC	X12P	slow BBM	1NO + 2NC	
X21P	slow BBM	2NO + 1NC	X21P	slow BBM	2NO + 1NC		
Certifications		CSA, cULus			CSA, cULus		
Material	Body	Heavy duty aluminum alloy			UL-V0 thermoplastic fiberglass		
	Head	Metal (F) or UL-V0 thermoplastic fibreglass (T)			UL-V0 thermoplastic fibreglass (H)		
Cable Entry or Type of Connection		Pg11, Pg13.5, 1/2" NPT, M16 or M20 Pre-wired versions available - contact ITC			Pg11, Pg13.5, 1/2" NPT, M16 or M20 Pre-wired versions available - contact ITC		
IP Rating		IP66			IP65		
Body (WxD)	mm	30.3 x 32.5			30.3 x 30		
	In	1.19 x 1.28			1.19 x 1.18		
Actuators Types		39 options in actuators, see pages 7, 8 & 9			39 options in actuators, see pages 7, 8 & 9		

BBM - Break Before Make, MBB - Make Before Break, otherwise simultaneous
Information subject to change without notice

BM

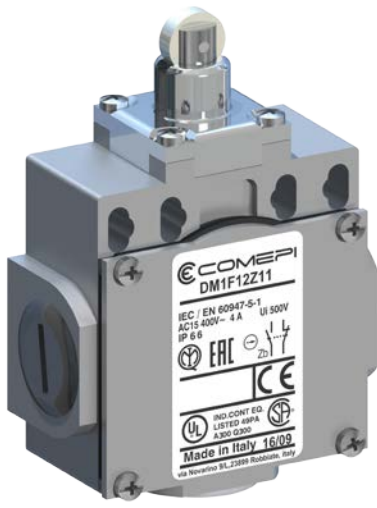

BP

							
Series		BM Series - 40mm Metal Limit Switches			BP Series - 40mm Non-Metallic Limit Switches		
Contacts	Code	Action	Contacts	Code	Action	Contacts	
	Z11	snap	1NO + 1NC	Z11	snap	1NO + 1NC	
	X11	slow BBM	1NO + 1NC	X11	slow BBM	1NO + 1NC	
	Y11	slow MBB	1NO + 1NC	Y11	slow MBB	1NO + 1NC	
	W02	slow simultaneous	2NC	W02	slow simultaneous	2NC	
	W20	slow simultaneous	2NO	W20	slow simultaneous	2NO	
	Z02	snap	2NC	Z02	snap	2NC	
	X12	slow BBM	1NO + 2NC	X12	slow BBM	1NO + 2NC	
	X21	slow BBM	2NO + 1NC	X21	slow BBM	2NO + 1NC	
	W03	slow simultaneous	3NC	W03	slow simultaneous	3NC	
W30	slow simultaneous	3NO	W30	slow simultaneous	3NO		
Certifications		CSA, cULus			CSA, cULus		
Material	Body	Heavy duty aluminum alloy			UL-V0 thermoplastic fibreglass		
	Head	Metal? (F) or UL-V0 thermoplastic fibreglass (T)			UL-V0 thermoplastic fibreglass (T)		
Cable Entry or Type of Connection		Pg13.5, 1/2" NPT or M20 Pre-wired versions available - contact ITC			Pg13.5, 1/2" NPT, or M20 Pre-wired versions available - contact ITC		
IP Rating		IP66			IP65		
Body (WxD)	mm	40 x 43			41 x 40.5		
	in	1.57 x 1.69			1.61 x 1.59		
Actuators Types		49 options in actuators, see pages 10 & 11			29 options in actuators, see pages 10 & 11		

BBM - Break Before Make, MBB - Make Before Break, otherwise simultaneous
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DM



DP

							
Series		DM Series - 50mm Metal Limit Switches			DP Series - 50mm Non-Metallic Limit Switches		
Contacts	Code	Action	Contacts	Code	Action	Contacts	
	Z11	snap	1NO + 1NC	Z11	snap	1NO + 1NC	
	X11	slow BBM	1NO + 1NC	X11	slow BBM	1NO + 1NC	
	Y11	slow MBB	1NO + 1NC	Y11	slow MBB	1NO + 1NC	
	W02	slow simultaneous	2NC	W02	slow simultaneous	2NC	
	W20	slow simultaneous	2NO	W20	slow simultaneous	2NO	
	Z02	snap	2NC	Z02	snap	2NC	
	X12P	slow BBM	1NO + 2NC	X12P	slow BBM	1NO + 2NC	
X21P	slow BBM	2NO + 1NC	X21P	slow BBM	2NO + 1NC		
W03P	slow simultaneous	3NC	W03P	slow simultaneous	3NC		
Certifications		CSA, cULus			CSA, cULus		
Material	Body	Heavy duty aluminum alloy			UL-V0 thermoplastic fibreglass		
	Head	Metal (F) or UL-V0 thermoplastic fibreglass (T)			UL-V0 thermoplastic fibreglass (T)		
Cable Entry or Type of Connection		Pg11, Pg13.5, 1/2" NPT, M16 or M20			Pg11, Pg13.5, 1/2" NPT, M16 or M20		
IP Rating		IP66			IP65		
Body (WxD) mm		59 x 36			57 x 33		
Body (WxD) in		2.32 x 1.42			2.24 x 1.3		
		36 options in actuators, see pages 7, 8 & 9			36 options in actuators, see pages 7, 8 & 9		

BBM - Break Before Make, MBB - Make Before Break, otherwise simultaneous
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CM

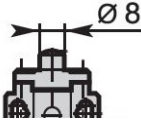
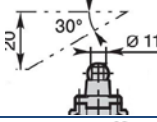
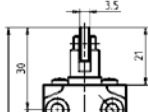
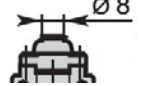
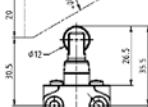
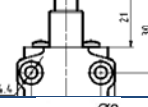

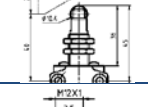
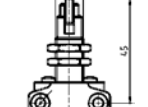

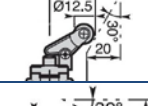
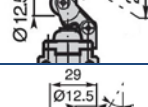

EM

							
Series		CM Series - 60mm Metal Limit Switches			EM - Pre-wired Limit Switches		
Contacts	Code	Action	Contacts	Code	Action	Contacts	
	Z11 X11 Y11 W02 W20 Z02 X12P X21P W03P W30	snap slow BBM slow MBB slow simultaneous snap simultaneous slow BBM slow BBM slow BBM	1NO + 1NC 1NO + 1NC 1NO + 1NC 2NC 2NO 2NC 1NO + 2NC 2NO + 1NC 3NC 3NO	Z11 X11	snap slow	1NO + 1NC 1NO + 1NC	
Certifications		CSA, cULus			cULus		
Material	Body	Heavy duty aluminum alloy			UL-V0 thermoplastic fibreglass		
	Head	Metal (F) or UL-V0 thermoplastic fibreglass (T)			UL-V0 thermoplastic fibreglass		
Cable Entry or Type of Connection		Pg13.5, 1/2" NPT or M20			PVC UL cable - 5 x 0.75mm ² ; length 1m, M12 connector or AMP connector		
IP Rating		IP66			IP67		
Body (WxD) mm		66 x 43			EM1 - 30 x 16, EM2 - 35 x 16		
Body (WxD) in		2.6 x 1.69			EM1 - 1.18 x 0.63, EM2 - 1.38 x 0.63		
Actuators Types		49 options in actuators, see pages 10 & 11			31 options in actuators, see pages 7, 8 & 9		

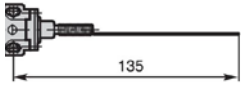
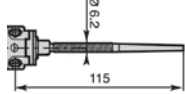

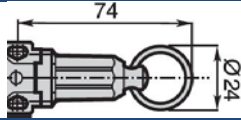
BBM - Break Before Make, MBB - Make Before Break, otherwise simultaneous
Information subject to change without notice

Actuators - for AM, AP, DM & DP Series

This table shows the various actuators that can be used with AM, AP, DM, DP and EM limit switches.

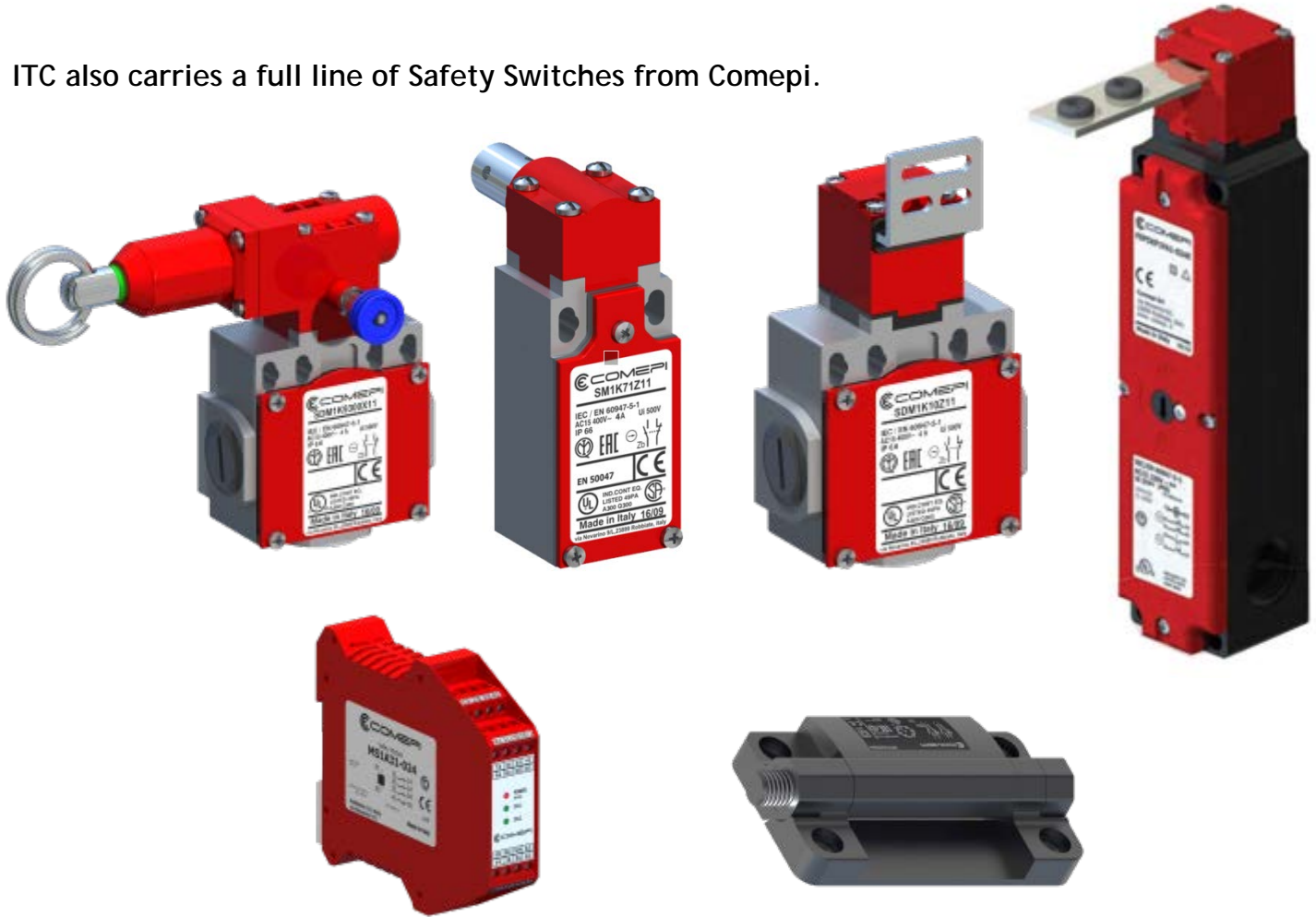
Actuator		Series				
		AM	AP	DM	DP	EM
Plain plunger T10 - nylon plunger F11/G11/T11 - metal plunger		F11	T10 T11	F11	T10 T11	G11
Roller plunger F12/G12/T12 - metal roller G13/T13 - nylon roller		F12	T12 T13	F12	T12 T13	G13
Cross roller plunger (90°) G14 - metal roller G15 - nylon roller		-	-	-	-	G14 G15
T14 - Plunger with dust protection cap		T14	T14	T14	T14	-
G17 - Metal roller plunger with dust protection cap		-	-	-	-	G17
G18 - Bevel plunger		-	-	-	-	G18
Plain plunger with fixing nuts T21 - M18x1 fixing nut G21/T2101 - M12x1 fixing nuts		T21 T2101	T21 T2101	T21 T2101	T21 T2101	G21
Roller plunger with fixing nuts G22 - metal roller G23 - nylon roller		-	-	-	-	G22 G23
Cross roller plunger with fixing nuts (90°) G24 - metal roller G25 - nylon roller		-	-	-	-	G24 G25
Roller lever on plunger - horizontal G31/T30 - plastic plunger T31 - metal plunger		T30 T31	T30 T31	T30 T31	T30 T31	G30
Roller lever on plunger - vertical T32 - metal plunger T34 - plastic plunger		T32 T34	T32 T34	-	-	-
T35 - Roller lever on plunger with dust protection cap		X	T35	T35	T35	-
T36 - Roller lever on plunger with dust protection cap		X	T36	-	-	-

Actuator	Series				
	AM	AP	DM	DP	EM
Adjustable roller lever on metal plunger G38/T38 - no dust cap T39 - with dust cap					
Roller lever G41 - Ø 14mm nylon roller G42 - Ø 14mm metal roller G43 - Ø 14mm ball bearing roller G46/F42/T41 - Ø 18mm nylon roller G45/F43/T43 - Ø 18mm metal roller					
Rubber roller lever T42 - rubber roller lever F42 - rubber roller lever					
Reverse roller lever F45/T45 - nylon roller F46/T46 - metal roller					
T48 - Ceramic rod lever					
Adjustable roller lever G51/F51/T51 - nylon roller G53/F53/T53 - metal roller					
G5100/T5100 - Adjustable serrated rubber roller lever (step 2mm)					
Adjustable rubber roller lever F52/T52- adjustable rubber roller lever F55/T55 - adjustable rubber roller lever					
Adjustable toothed rubber roller lever T5200 - Adjustable lever T5500 - Adjustable serrated lever (step 2mm)					
G61/F61/T61 - nylon actuator with stainless steel spring					
T62 - Spring actuator					
Ø 3mm rod lever F71/G71/T71 - stainless steel rod F72/G72/T72 - fibreglass rod F75/G75/T75 - square steel rod 3x3mm					
Ø 6mm rod lever F73/T73 - nylon rod G73 - nylon rod (max 204) F74/T74 - fibreglass rod G74 - nylon rod (max 204)					

Actuator		Series				
		AM	AP	DM	DP	EM
T91 - Multidirectional spring actuator		T91	T91	T91	T91	-
Multidirectional spring actuator nylon T92 - length 115 Ø 6.2 G92 - length 122 Ø 7		T92	T92	T92	T92	G92
Multidirectional spring actuator T93 - length 117 G93 - length 124		T93	T93	T93	-	G93
T98 - Pull actuator with ring		T98	T98	T98	T98	-

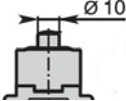
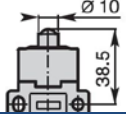
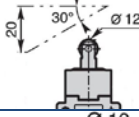
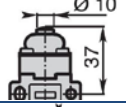

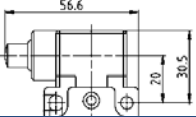
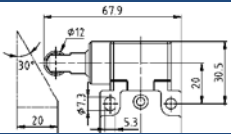
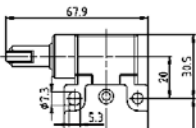
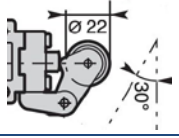
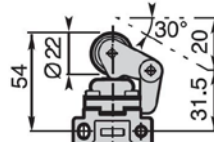
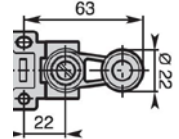
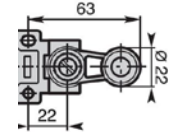
Head Material: H / P=Thermoplastic; E= AL; M=ZAMAK
Information subject to change without notice

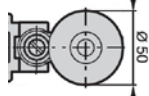
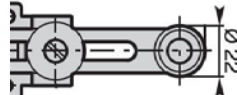
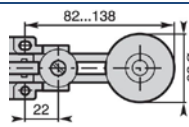
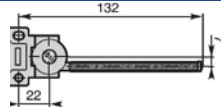
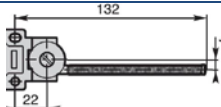
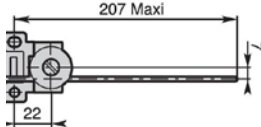

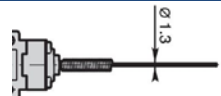


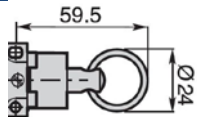
ITC also carries a full line of Safety Switches from Comepi.



Actuators - for BM, BP & CM Series

This table shows the various actuators that can be used with BM, BP and CM limit switches.

Actuator		Series		
		BM	BP	CM
Plain plunger E11 - Stainless steel H11/P11 - Metal		E11 P11	H11	-
E12 - Stainless steel ball plunger H12 - Metal ball plunger		E12	H12	E12
E13/H13/M13 - Stainless steel Ø 12mm roller plunger		E13 M13	H13	M13
H14/M14 - Plain metal plunger with dust protection cap		M14	H14	M14
H19/M19 - Metal roller plunger with dust protection cap		M19	H19	M19
E21 - stainless steel lateral plain plunger		E21	-	E21
E22 - Stainless steel lateral plunger with Ø 12mm vertical roller		E22	-	E22
E23 - Stainless steel lateral plunger with Ø 12mm horizontal roller		E23	-	E23
One way lever - Ø 22mm roller H31 - nylon roller H32 - stainless steel roller H33 - stainless steel roller with metal ball bearing		-	H31 H32 H33	E31 E32 E33
One way lever with dust protection cap - Ø 22mm roller H35 - nylon roller H36 - stainless steel roller H37 - stainless steel roller with metal ball bearing		-	H35 H36 H37	-
Ø 22mm Roller lever H41/M41 - nylon roller H42/M42 - stainless steel roller H43/M42 - stainless steel roller with metal ball bearing		M41 M42 M43	H41 H42 H43	M41 M42 M43
Roller lever Ø 22mm E41/H41 - nylon roller E42/H42 - Stainless steel roller E43/H43 - Stainless steel roller with metal ball bearing		E41 E42 E43	H41 H42 H43	E41 E42 E43

Actuator	Series		
	BM	BP	CM
E44/H44/M44 - Ø 50mm Rubber roller lever 	E44	H44	E44 M44
Adjustable Ø 22mm roller lever E51/H51/M51 - nylon roller E52/H52/M52 - stainless steel roller E53/H53/M53 - stainless steel roller with metal ball bearing 	E51 M51 E52 M52 E53 M53	H51 H52 H53	M51 M52 M53
E54/H54/M54 - Adjustable Ø 50mm rubber roller lever 	E54 M54	H54	M54
E61/H61/M61 - Nylon actuator with stainless steel spring actuator 	E61 M61	H61	E61 M61
E62/H62/M62 - Stainless steel spring actuator 	E62 M62	H62	M62
Ø 3mm adjustable rod lever E71/H71/M71 - stainless steel rod E73/H73/M73 - fibreglass rod E75/H75/M75 - square metal rod 3x3 	E71 M71 E73 M73 E75 M75	H71 H73 H75	E71 M71 E73 M73 E75 M75
Ø 6mm adjustable rod lever E72/H72/M72 - nylon rod E74/H74/M74 - fibreglass rod 	E72 M72 E74 M74	H72 H74	E72 M72 E73 M74
E91/H91 - Multidirectional actuator with stainless steel spring 	E91	H91	E91
E92/H92/P92 - Multidirectional spring actuator nylon 	E92 P92	H92	E92
E93/H93 - Stainless steel spring multidirectional actuator 	E93	H93	E93
E99 - Pull action with ring 	E99	-	E99

Head Material: H / P=Thermoplastic; E= AL; M=ZAMAK
Information subject to change without notice



Electrical Components

Since 1994, ITC is a trusted resource for industrial electrical and automation components. With over 10000 different parts available from its warehouse in Toronto, ITC can provide its customers the perfect blend of dependable stock, quality products, fair pricing, and friendly, knowledgeable service.

Here are some of our manufacturing partners:



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Terminal Blocks



Terminal Strips



Multipole Connectors



Compact IP68 Connectors



22.5mm Pushbuttons



LED Indicators



Control Stations



Midget and CC Fuse Holders



Limit Switches



Micro Limit Switches



Safety Switches



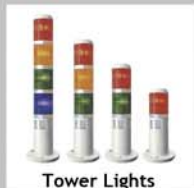
Power Supplies



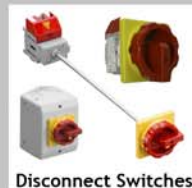
Foot Switches



IEC Contactors



Tower Lights



Disconnect Switches



Termination Kits



Crimp Terminals



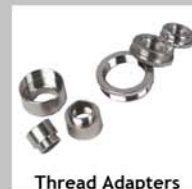
Ferrules



Colour Coded Lugs



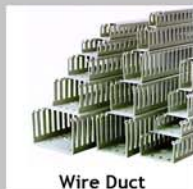
Cable Glands



Thread Adapters



Cable Ties



Wire Duct



DIN Rail Cutters



Crimping Tools



Hole Cutting & Punching Tools



Cutting & Stripping Tools - Wire & Cable