

SWITCHES 2013/2014

PANEL MOUNTED SWITCHES

PCB MOUNTED SWITCHES



A WORLD OF
SWITCHING CAPABILITIES



IC series

- Short case
- For harsh environments
- Momentary
- Square or round actuator

Page B1-2



IL series

- Long bushing for thick panels
- Momentary
- Round actuator
- Illuminated or non-illuminated

Page B1-6



IM series

- Snap-action
- Momentary
- Round actuator

Page B1-11



IH series

- Hall effect
- Linear (IHL) or momentary (IHS)
- 5 million cycles
- Round actuator

Page B1-29



IQ series

- Snap-in mounting
- Dia. 16 mm bushing
- Momentary or latching
- Square or round actuator
- Illuminated or non-illuminated

Page B1-35



13000X778 series

New models :

- 3-pole versions of momentary switches
- Alternate action models

Pages B2-52 and B2-58



CG series

- Capacitive for underlay applications
- 50 million cycles
- Custom colours and marking

Page B2-120



CP series

- Capacitive
- 50 million cycles
- Bushing dia. 16, 19 or 22 mm
- Momentary or latching
- Illuminated or non-illuminated

Page B2-125



FP series

- Fully illuminated actuator
- Suited for integrated designs
- Large but lightweight
- Bushing dia. 24 mm
- Momentary or latching

Page B2-145



MP series

- Two-steps
- SIL2 safety level
- For harsh environments
- Easy to integrate

Page B2-150



MT series

- Sealed selector switch
- Multiple single functions
- Up to 4A

Page D-22



ES series

- Heavy-duty emergency stop
- 2 and 3-pole configurations
- 100.000 cycles
- Lower behind-panel depth

Page G-25



Selection guide - Section A ermec@ermec.com

Toggle switches

										
Series	ZL	SMT TL	TL	S and SF	5000	21000N	10600	11000	12000	12000X778
Page	A-2	A-4	A-6	A-12	A-21	See website	A-54	A-57	A-65	A-72
Poles	1	1	1,2	1,2	1,2,3,4	1,2	1,2	1,2,3,4	2,3,4	2,3,4
Maximum current	500mA 48VDC	0,4VA 20V AC/DC	0,5A 48V AC/DC	(2A 250VAC)* 4A 30VDC	(3A 250VAC)* 4A 30VDC	4A 30VDC	3A 24VDC	4A 30VDC	4A 30VDC	4A 30VDC
Bushing dimension										
Ø4,83 (10-48)	X									
Ø6 (.236)					X					
Ø6,35 (1/4)				X	X	X		X		
Ø10 (.393)							X			
Ø11,9 (15/32)					X				X	X
Mounting options										
Horizontal SMT		X								
Vertical right angle SMT		X								
Vertical - Through hole	X		X	X	X			X	X	X
Horizontal - Through hole			X	X	X	X		X		
Vert. right angle Through hole			X	X	X					
Panel	X			X	X	X	X	X	X	X
Terminal options										
PCB	X	X	X	X	X	X		X	X	X
Solder lugs	X			X	X		X	X	X	X
Quick-connect					X					
Wire wrap			X		X					
Sealing	No	Process sealed	Process sealed	Process sealed	Optional	Optional	No	Optional	Optional	IP67

										
Series	1000	1500	1600/1700	4600/4400	600H	600NH	660	3500	3600NF	6000
Page	A-79	A-82	A-85	A-88	A-94	A-99	A-100	A-102	A-107	A-110
Poles	1	1	1	1,2,3	1,2,3	1,2,3	4	1,2	1,2	1,2,3,4
Maximum current	6A 30VDC	(6A 250VAC)* 5A 12VDC	4A 30VDC	(4A 250VAC)*	(15A 250VAC)* 10A 24VDC	(15A 250VAC)* 10A 24VDC	10A 30VDC	15A 28VDC	(6A 250VAC)* 15A 28VDC	6,5A 30VDC
Bushing dimension										
Ø11,9 (15/32)								X		X
Ø12 (.472)	X	X	X	X	X	X	X		X	
Mounting options										
Vertical Through hole				X						
Panel	X	X	X	X	X	X	X	X	X	X
Terminal options										
PCB				X						
Solder lugs	X	X	X	X	X	X	X	X	X	X
Quick-connect	X	X	X	X	X	X	X	X	X	X
Screw	X		X		X	X	X	X	X	X
Sealing	No	No	No	No	Optional	No	Optional	IP67, IP69K	Yes	Optional

()* See applicable approvals

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Selection guide - Section B1 ermec@ermec.com

«I» range

	New!	New!	New!			New!	New!	New!
								
Series	IC	IL	IM	IP mom. & latching	IB-IS	IHS hall effect	IHL hall effect	IQ momentary
Page	B1-2	B1-6	B1-11	B1-15	B1-25	B1-29	B1-32	B1-35
Poles	1	1	1	1	1	1 NPN	1	1
Maximum current	5A 28VDC	2A 24VDC	3A 28VDC	5A 28VDC 4A 12VDC	100mA 24VDC	5mA 24VDC	1,25mA 4,5VDC	4A 28VDC
Illuminated		X		X				X
Bushing dimension								
Ø12 (.472)	X	X	X	X	X	X	X	
Ø16 (.629)								X
Mounting options								
Panel	X	X	X	X	X	X	X	
Snap-in					X			X
Terminal options								
PCB	X	X	X	X	X			X
Solder lugs	X	X		X	X			X
Quick-connect	X		X	X	X			X
Screw								X
Flying leads	X	X		X		X	X	X
Sealing	IP67	IP67	IP67	IP67	IP54 or IP67	IP67	IP67	IP54

	New!							
								
Series	IQ latching	IZ metal	IZ plastic	IR standard	IR microswitch	IR latching	IA	IF
Page	B1-42	B1-48	B1-58	B1-66	B1-73	B1-79	B1-85	B1-88
Poles	1	1	1	1	1	1	1	1
Maximum current	100mA 24VDC	4A 48VDC 100mA 24VDC	4A 48VDC 100mA 24VDC	4A 48VDC	5A 250VAC	100mA 24VDC	2A 24VDC	100mA 48VDC
Illuminated	X	X	X	X	X	X		
Bushing dimension								
Ø12 (.472)								
Ø16 (.629)	X	X	X	X	X	X	X	X
Mounting options								
Panel		X	X	X	X	X	X	X
Snap-in	X							X
Terminal options								
PCB	X	X	X	X		X		
Solder lugs	X	X	X	X		X		
Quick-connect	X	X	X	X	X	X		X
Screw		X	X	X				
Flying leads	X	X	X	X		X	X	
Sealing	IP54	IP67	IP67	IP67	IP67	IP67	IP67	IP67



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Pushbutton switches

								
Series	ZP	SMT TP	TP	9500	PHAP40	SP	8000	9400/9600
Page	B2-2	B2-4	B2-6	B2-12	B2-20	B2-22	B2-28	B2-34
Poles	1	1	1,2	1	2	1,2	1,2	1
Maximum current	500mA 48VDC	0,4VA 20V AC/DC	0,5A 48V AC/DC	100mA 30VDC	100mA 30VDC	1A 30VDC	(3A 250VAC)* 4A 30VDC	1A 30VDC
Bushing dimension								
Ø4 (.157)				X				
Ø4,83 (10-48)	X							
Ø6,35 (1/4)						X	X	X
Ø11,9 (15/32)							X	
Ø16 (.629)								X
Mounting options								
Horizontal SMT		X						
Vertical right angle SMT		X						
Vertical Through hole	X		X	X	X	X	X	X
Horizontal Through hole			X			X	X	
Vert. right angle Thr. hole			X	X		X		
Panel	X			X		X	X	X
Terminal options								
PCB	X	X	X	X	X	X	X	X
Solder lugs	X			X			X	X
Quick-connect								X
Sealing	No	Process	Process	Optional	No	Process	Optional	Optional
() * See applicable approvals								
								
Series	10400	13000	13000X778	18000	IT	1200	1400	4700/4800
Page	B2-42	B2-44	B2-52	B2-63	see website	B2-107	B-114	B-117
Poles	1,2	1,2	2	1,2	2	1	1	1,2
Maximum current	3A 24VDC	4A 30VDC *2A 250VAC)*	4A 30VDC	7A 30VDC	1,5A 250VAC	(4A 250VAC)* 4A 24VDC	6A 12VDC	(3A 250VAC)*
Bushing dimension								
Ø6,35 (1/4)		X		X				
Ø10 (.393)	X							
Ø11,9 (15/32)		X	X					
Ø 12 (.472)						X		X
Mounting options								
Vertical Through hole		X	X	X			X	X
Horizontal Through hole		X		X	X			
Vert. right angle Through hole				X				
Panel	X	X	X	X		X	X	X
Snap-in				X			X	
Terminal options								
PCB		X	X	X				
Solder lugs	X	X	X	X		X	X	X
Quick-connect						X		X
Screw						X		
Sealing	No	Optional	IP67	No	No	No	No	No

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Pushbutton switches

	New! 	New! 		New! 	New! 			
Series	CG	CP	PBA	FP	MP	LPI		
Page	B2-120	B2-125	B2-129	B2-145	B2-150	B2-156		
Poles	1 NPN	1 NPN	1	1,2	1,2	1		
Maximum current	200mA 24VDC	200mA 24VDC	1A 24VDC	200mA 12VDC	20mA 5VDC	5A 12VDC 100mA 12VDC		
Illuminated	X	X	X	X		X		
Bushing dimension								
Ø15,20 (.598)					X			
Ø16 (.629)		X	X					
Ø19 (.748)		X	X					
Ø22 (.866)		X	X					
Ø24 (.944)				X				
Ø38 (1.496)						X		
Ø44 (1.732)						X		
Mounting options								
Panel	X	X	X	X	X	X		
Terminal options								
Solder lugs				X				
Screw						X		
Flying leads		X	X					
Cable		X	X	X				
Connector	X	X			X			
Sealing	N/A	IP68, IP69K	IP68,IP69K	No	IP68	IP53		

«I» range selection guide : page 7
AV series selection guide : page 10

Selection guide - Section B2

AV series

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Page	B2-78	B2-79	B2-80	B2-81	B2-83	B2-86	B2-87, B2-100	B2-89
General specifications								
Anti-vandal (IK08/IK10)	X	X						
Security			X	X	X	X	X	X
Approval (optional)	UL/CSA	UL/CSA			UL/CSA			
Sealing	Up to IP65	Up to IP65	Up to IP65	Up to IP65	Up to IP65	IP65, IP69K	Up to IP67	Up to IP65
Illumination							X	X
Marking					X			
Electrical specifications								
Maximum current	2A 48VDC (4A 250VAC)*	2A 48VDC (4A 250VAC)*	0,2A 48VDC	1A 24VDC	2A 48VDC (4A 250VAC)*	5A 15VDC 5A 250VAC	1A 30VDC	2A 48VDC
Momentary (NO)	X	X			X			
Momentary (NO) tactile			X					
Momentary (NO/NC)						X	X	
Latching				X				X
Diameter and shape								
Ø 16 (.629)	Flat		AV063	AV061				
	Curved		AV163	AV161				
Ø 19 (.748)	Flat	AV09			AV09	AV19LP	AV9	AV09..EA
	Curved	AV19			AV19	AV19LB		AV19..EA
Ø 22 (.866)	Flat		AV03				AV3	
	Curved		AV02					

() * See applicable approvals

								
Page	B2-91	B2-93, B2-95	B2-97	B2-98	B2-98	B2-102	B2-104	B2-106
General specifications								
Security	X	X	X	X	X	X	X	X
Approval (optional)			UL/CSA					
Sealing	Up to IP65	Up to IP67, IP69K	Up to IP65	Up to IP65	Up to IP65	Up to IP65	IP65	IP65
Illumination	X	X				X		
Marking	X	X		X	X			
Electrical specifications								
Maximum current	50mA 24VDC	50mA 24VDC	2A 48VDC (4A 250VAC)*	2A 250VAC	3(1,5)A 250VAC	2A 48VDC	5A 250VAC	5A 250VAC
Momentary (NO)			X					
Momentary (NC)				X				
Momentary (NO) tactile	X	X	Mom. (NO)					
Momentary (NO/NC)							X	X
Latching						X		
Alternate action					X			
Diameter and shape								
Ø 19 (.748)	Flat	AV09C7	AV9S					
	Curved	AV19C7						
Ø 22 (.866)	Flat		AV3S	AV03	AV031200	AV044700	AV03..EA	AV22LP
	Curved			AV02	AV021200		AV02..EA	AV22LB
Ø 24 (.944)	Flat							AV22PNA
	Concave							

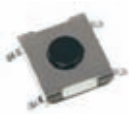
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Selection guide - Section C

Tact switches

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Series	D162	PHAP3390 PHAP3391	PHAP3380	PHAP3371 PHAP3372 PHAP3373 PHAP3374	PHAP3378	PHAP3361	PHAP3355	PHAP3366 PHAP3365
Page	C 2	C-4	C-5	C-6	C-8	C-9	C-9	C-10
Type (SMT/Through hole)	SMT	SMT	SMT	SMT	SMT	SMT	SMT	SMT
Contact	N.O.	N.O.	N.O.	N.O.	N.C.	N.O.	N.O.	N.O.
Case format	6x6mm	4,2x4,2mm	6x6mm	6,2x6,2mm	7,6x7,6mm	6x3,5mm	6x3,5mm	6,1x3,7mm
Button height from PCB	3,96mm	1,5mm	1,6mm	2,6 to 3,4mm	4,3mm	4,3 and 5mm	1,8mm	2,5mm
Grounding tab	Yes	-	Yes	Yes	-	-	Yes	-
Packaging	T/R	T/R - Bags	T/R - Bags	T/R - Bags	T/R	T/R - Bags	T/R	T/R
Maximum ratings	50mA 12VDC	50mA 12VDC	50mA 12VDC	50mA 12VDC	50mA 12VDC	50mA 12VDC	50mA 12VDC	50mA 12VDC
Mounting options								
SMT	X	X	X	X	X	X		X
Right angle SMT							X	

								
Series	PHAP3368	PHAP3305	PHAP3362 PHAP3363	PHAP3301 to PHAP3308	PHAP3307	PHAP3350 PHAP3351 PHAP3352	PHAP3353	PHAP3320 PHAP3321
Page	C-11	C-11	C-12	C-13	C-14	C-15	C-15	C-16
Type (SMT/Through hole)	SMT	SMT	Through hole	Through hole	Through hole	Through hole	Through hole	Through hole
Contact	N.O.	N.O.	N.O.	N.O.	N.O.	N.O.	N.O.	N.O.
Case format	6x6mm	6x6mm	6x3,5mm	6x6mm	6,1x6,1mm	7,2x7,2mm	10x10mm	12x12mm
Button height from PCB	4,3 to 13mm	5,9mm	4,3 and 5mm	4,3 to 13mm	4,3 to 7mm	4,35 to 13mm	13mm	4,3 to 12mm
Grounding tab	-	Yes	-	Yes	-	Yes	-	Yes
Caps	Yes	-	-	Yes	-	-	-	Yes
Packaging	T/R - Bags	T/R	Bags	Bags	Tape	Bags	Bags	Bags
Process sealed						Yes	Yes	
Maximum ratings	50mA 12VDC	50mA 12VDC	50mA 12VDC	50mA 12VDC	50mA 12VDC	50mA 12VDC	50mA 12VDC	50mA 12VDC
Mounting options								
SMT	X							
Right angle SMT		X						
Through hole			X	X	X	X	X	X
Right angle Through hole			X	X		X		

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Rocker and paddle switches

					<i>New!</i> 		
Series	SMT TR	TR	S-SR	AS	MT	7000	FM
Page	D-2	D-4	D-9	D-19	D22	D-24	D-42
Poles	1	1,2	1,2	1	1	1,2	1
Maximum ratings	0,4VA 20V AC/DC	0,5A 48V AC/DC	(2A 250VAC)* 4A 30VDC	(2A 250VAC)*	4A 30VDC	(3A 250VAC)* 4A 30VDC	(10A 250VAC)*
Illuminated							X
Mounting options							
Horizontal SMT	X						
Vertical Through hole		X	X	X	X	X	X
Horizontal Through hole		X	X			X	
Vert. right angle TH		X	X			X	
Snap-in			X	X		X	X
Rear mounting			X			X	
Panel cut-out				18,65X8,9	Ø 17,65		19,2x12,9
Terminal options							
PCB	X	X	X	X	X	X	X
Solder lugs			X	X	X	X	X
Quick-connect							X
Sealing	Process sealed	Process sealed	Process sealed	No	No	No	Optional boot

						() * See applicable approvals	
Series	2600	KR	KL	KI	KG		
Page	D-45	D-53	D-62	D-71	D-76		
Poles	1,2	1,2	1,2		1,2		
Maximum ratings	(16A 250VAC)*	10A 24VDC	10A 24VDC	24VDC	(12A 250VAC)* 15A 12VDC		
Illuminated	X	X	X	X	X		
Mounting options							
Snap-in	X	X	X	X	X		
Panel cut-out	30 x 22	36,8 X 21,08	36,8 X 21,08	36,8 X 21,08	36,8 X 21,08		
Terminal options							
Solder lugs	X	X	X	X	X		
Quick-connect	X	X	X	X	X		
Screw	X	X	X		X		
Sealing	Optional boot	IP68	IP68	IP68	IP65		



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Selection guide - Section E

Slide switches

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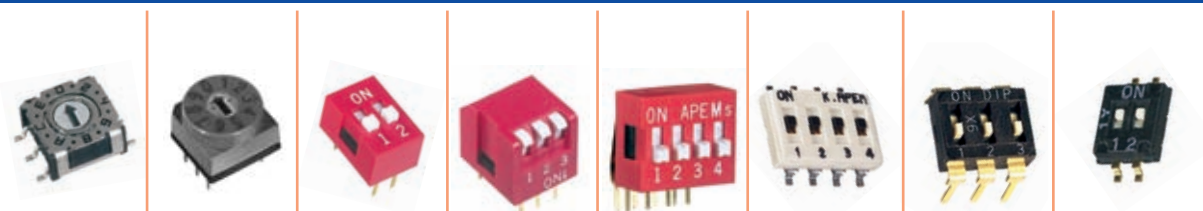
					
Series	NK	SMT TG	TG	G	25000N
Page	E-2	E-3	E-5	E-8	E-14
Poles	1	1	1	1,2	1,2
Maximum ratings	500mA 12VDC	0,4VA 20V AC/DC	0,5A 48V AC/DC	3A 30VDC	(2A 250VAC)* 1A 30VDC
Mounting options					
Horizontal SMT		X			
Vertical Through hole	X		X	X	X
Horizontal Through hole	X		X	X	X
Vert. right angle Through hole				X	
Panel				X	
Terminal options					
PCB	X	X	X	X	X
Solder lugs				X	
Sealing	No	Process sealed	Process sealed	No	No

()* See applicable approvals

Selection guide - Section F

DIP and coded rotary switches

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Series	P36 (CR36)	PT65 (CR65)	DS-DSR	DP-DPL	DA	IKN	IKE	IKH
Type	Coded rotary		DIP					
Page	F-2	F-4	F-7	F-9	F-10	F-11	F-14	F-16
Number of positions	10 & 16	10 & 16	2-12 (except 11)	2-12 (except 11)	2-12 (except 11)	2-8 (even only)	1-12 (except 11)	2-10 (even only)
Maximum ratings	400mA 24VDC	400mA 24VDC	100mA 50VDC	100mA 50VDC	100mA 50VDC	100mA 48VDC	25mA 24VDC	100mA 50VDC
Process Sealed	Yes	Yes	W. optional tape	W. optional tape	W. optional tape	W. optional tape	No	W. optional tape
Profile off PCB	Through hole : 3,65mm SMT: 3,85mm	6,5mm	5,85mm	10,3mm	9,9mm	Through hole: 4mm SMT: 2,85mm	Through hole : 3,4 mm SMT : 3,80mm	1,6mm
Mounting options								
SMT	X					X	X	X
Through hole	X	X	X	X	X	X	X	
Right angle Through hole		X						

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Selection guide - Section G ermec@ermec.com

Industrial controls

							
Series	A1	A01	A01	A01	A01	A01ES	A01
Type	Pushbutton	Pushbutton	Indicator	Rotary	Keylock	Emergency Stop	Mushroom Head Pushbutton
Page	G-4	G-5	G-6	G-7	G-8	G-9	G-11
Poles	1,2,3,4	1,2,3,4		1,2,3,4	1,2,3,4	1,2	1,2,3,4
Sealing	IP65	IP65	IP65	IP65	IP65	IP65	IP65
Back panel sealing	Option	Option	Option	Option	Option	Option	Option
Illuminated	Yes	Yes	Yes	No	No	No	No
Maximum current	6A 250VAC 6A 12VDC	6A 250VAC 6A 12VDC	N/A	6A 250VAC 6A 12VDC	6A 250VAC 6A 12VDC	1,5A 250VAC AC-15	6A 250VAC 6A 12VDC
Panel cut-out							
Ø16mm		X	X	X	X	X	X
Ø22mm	X	X	X	X	X		X
Flush mounting	Yes	Option	Option	Option	Option	No	Option
Terminal options							
Solder lugs	X	X	X	X	X	X	X
Quick-connect	X	X	X	X	X	X	X
PCB Mounting	Option	Option	Option	Option	Option	Option	Option

							 New!
Series	A02	A02	A02	A02ES	A02	A03	ES
Type	Pushbutton	Indicator	Rotary / Keylock	Emergency Stop	Mushroom Head Pushbutton	Pushbutton	Emergency Stop
Page	G-15	G-18	G-19 - G-20	G-21	G-22	G-24	G-25
Poles	1,2,3,4,n		1,2,3,4,n	1,2	1,2,3,4	1,2,3,4	2,3
Sealing	IP65	IP65	IP65	IP65	IP65	IP65	IP65
Back panel sealing	No	No	No	No	No	Option	No
Illuminated	Yes	Yes	No	No	No	Yes	No
Maximum current	16A 250VAC 12A 12VDC	16A 250VAC 12A 12VDC	16A 250VAC 12A 12VDC	2,5A 380VAC AC-15	16A 250VAC 12A 12VDC	6A 250VAC 6A 12VDC	1A 24VDC
Panel cut-out							
Ø22mm	X	X	X	X	X	X	X
Ø30mm	X	X	X			X	Ø 28mm
Flush mounting	Yes	Yes	Option	No	Option	Yes	No
Terminal options							
Solder lugs						X	X
Quick-connect	Option	Option	Option	Option	Option	X	
Screw	X	X	X	X	X		
Straight PC							X
PCB Mounting	No	No	No	No	No		IP65,IP67,IP69K

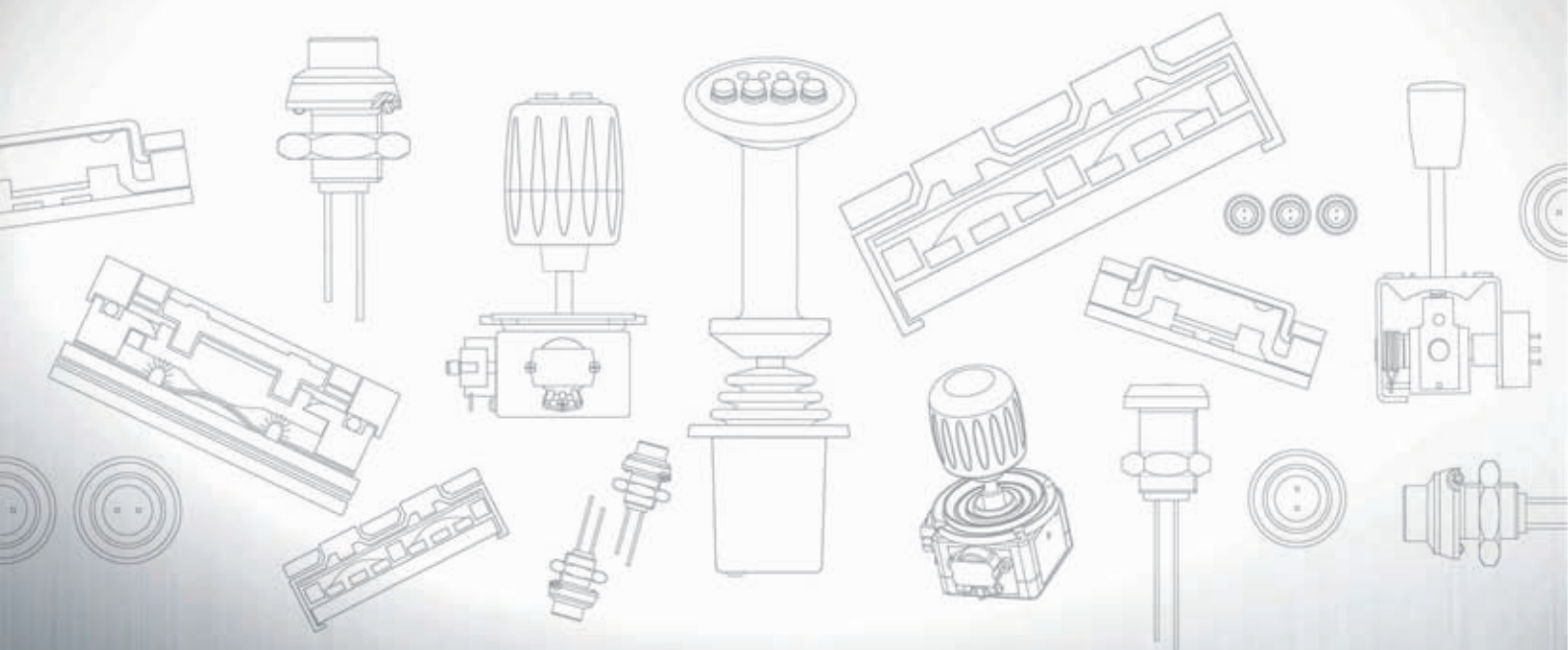
THE BROADEST OFFERING IN THE MAN-MACHINE INTERFACE MARKET

OTHER PRODUCT RANGES

JOYSTICKS

SWITCH PANELS

LED INDICATORS



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