



Industry





Universal Relays

Universal relays

Miniature industrial relays







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Universal plug-in relays				
	12 A - 2 C/O	10 A - 3 C/O	6 A - 4 C/O	12 A - 2 C/O
				
	M2	M3	M4	L2
Number of contacts	2 C/O contacts	3 C/O contacts	4 C/O contacts	2 C/O contacts
	Manual test button Mechanical position indicator Optional LED-indicator			LED-indicator
Nom. voltage / max. switching voltage	AC 250 V / 440 V	250 V / 440 V	250 V / 250 V	250 V / 440 V
Switching current (capacity)	AC1 12 A / 250 VAC	10 A / 250 VAC	6 A / 250 VAC	12 A / 250 V
	DC1 12 A / 24 VDC	10 A / 24 VDC	6 A / 24 VDC	12 A / 30 VDC
Minimum switching voltage	10 V	10 V	10 V	5 V
Minimum switching current	10 mA	10 mA	10 mA	5 mA

* Lower switching current with gold plated contacts on request

Coil voltage					
Nominal voltage	AC	12, 24, 48, 110, 230	12, 24, 48, 110, 230	12, 24, 48, 110, 230	12, 24, 48, 110, 230
	DC	12, 24, 48, 110, 125, 220	12, 24, 48, 110, 125, 220	12, 24, 48, 110, 125, 220	12, 24, 48, 110, 125
Voltage range		0.8...1.1 Un	0.8...1.1 Un	0.8...1.1 Un	0.8...1.1 Un

General					
Dimensions (l x w x h)	mm	27.5 x 21.2 x 35.6	27.5 x 21.2 x 35.6	27.5 x 21.2 x 35.6	27.5 x 21.2 x 34.5
Ambient temperature	AC	-40 °C...+55 °C	-40 °C...+55 °C	-40 °C...+55 °C	-40 °C...+55 °C
	DC	-40 °C...+70 °C	-40 °C...+70 °C	-40 °C...+70 °C	-40 °C...+55 °C
Ordering examples	AC	M2-A110 110 VAC	M3-A230 230 VAC	M4-A230 230 VAC	L2-A230 230 VAC
		M2-L-A024 24 VAC+LED	M3-L-A024 24 VAC+LED	M4-L-A024 24 VAC+LED	L2-L-A012 12 VAC+LED
	DC	M2-D24 24 VDC	M3-D24 24 VDC	M4-D230 230 VDC	L2-D110 110VDC
		M2-L-D110 110 VDC+LED	M3-L-D110 110 VDC+LED	M4-L-D110 110 VDC+LED	L2-L-D024 24 VDC+LED
Approvals					

Accessories

					
VM-2R socket for M2-relays	VM-3R socket for M3-relays	VM-4R socket for M4-relays	VM-4L socket for M4-relays	MS-35 railclip for M-relays	VL-2 socket for ML2-relays

Universal relays

Miniature industrial relays



Universal plug-in relays		Universal PCB / plug-in relays		Interface relays		
10 A - 2 C/O		10 A - 2 C/O		16 A - 1 C/O	8 A - 2 C/O	6 A - 1 C/O
G08		G11		S1	S2	I1
2 C/Ocontacts		3 C/O contacts		1 C/O contact	1 C/O contact	2 C/O contacts
Manual test button Mechanical position indicator Optional LED-indicator						Magnetic arc blow-out LED-indication 35 mm rail
250 V / 440 V		250 V / 440 V		250 V / 440 V	250 V / 440 V	250 V / 440 V
10 A / 250 VAC		10 A / 250 VAC		16 A / 250 VAC	8 A / 250 VAC	6 A / 250 VAC
10 A / 24 VDC		10 A / 24 VDC		16 A / 24 VDC	8 A / 24 VDC	6 A / 24VDC
10 V		10 V		10 V	10 V	10 V
10 mA		10 mA		10 mA	10 mA	100 mA

6...240 V 50/60 Hz	6...240 V 50/60 Hz	12, 24 V	12, 24 V	12, 24, 230 V
6...220 V	6...220 V	230 V	230 V	24, 230 V
0.8...1.1 Un	0.8...1.1 Un	0.8...1.2 Un	0.8...1.2 Un	0.8...1.1 Un

35 x 35 x 54.4		35 x 35 x 54.4		29 x 12.7 x 15.7		29 x 12.7 x 15.7		27.5 x 21.1 x 34.5	
-40 °C...+55 °C		-40 °C...+55 °C		-40 °C...+70 °C		-40 °C...+70 °C		-40 °C...+55 °C	
-40 °C...+55 °C		-40 °C...+55 °C		-40 °C...+85 °C		-40 °C...+85 °C		-40 °C...+55 °C	
G08-A24	24 VAC	G11-A24	24 VAC	S1-A230	230 VAC	S2-A230	230 VAC	L2-A230	230 VAC
G08-L-A230	230 VAC+LED	G11-L-A230	230 VAC+LED	S1-D012	12 VDC	S2-D012	12 VDC	L2-L-A012	12 VAC+LED
G08-D110	110 VDC	G11-D110	110 VDC	S1-D024	24 VDC	S2-D024	24 VDC	L2-L-D110	110 VDC
G08-L-D024	24 VDC+LED	G11-L-D024	24 VDC+LED					L2-L-D024	24 VDC+LED





VG-8T socket for G08-relays	VG-11T socket for G11-relays	VS-2L socket for S-relays	MS-2L railclip for S-relays	Contact strips for I1-relays

Universal relays

Timer relays

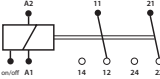
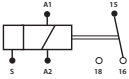
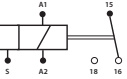
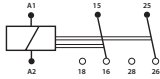


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Single function timer relays					
		16 A - 2 C/O	16 A - 1 C/O	16 A - 1 C/O	12 A - 2 C/O
					
		XT-17M-L	XT-17M-A	XT-17M-B	XT-17M-S
Number of contacts		2 C/O contacts	1 C/O contact	1 C/O contact	2 C/O contacts
Function		Bi-stable	Delay on	Delay off	Delay on for star / delta engines
Time range		-	0.1...1 s / 1...10 s / 6...60 s / 1...10 min / 6...60 min / 1...10 h (depending on model)	0.1...1 s / 1...10 s / 6...60 s / 1...10 min / 6...60 min / 1...10 h (depending on model)	0.1...1 s / 1...10 s / 0.1...1 min / 1...10 min / 0.1...1 h / 1...1 h / 0.1...1 d / 1...10 d / 3...30 d / 10...100 d
LED-indication		Green / red	Green / red	Green / red	Green / red
Max. switching voltage	AC/DC	250 V / 24 V	250 V / 24 V	250 V / 24 V	250 V / 24 V
Switching current (capacity)	AC1	16 A / 250 V	16 A / 250 V	16 A / 250 V	16 A / 250 V
	DC1	16 A / 24 V	16 A / 24 V	16 A / 24 V	16 A / 24 V

Supply						
Voltage	AC: 50/60 Hz	AC/DC	12...240 V	12...240 V	12...240 V	12...240 V
Remote control via S contact			Yes	Yes	Yes	No

General					
Dimensions (l x w x h)	mm	90 x 17.6 x 64	90 x 17.6 x 64	90 x 17.6 x 64	90 x 17.6 x 64
Protection category		IP40	IP40	IP40	IP40
Ambient temperature		-20 °C...+55 °C	-20 °C...+55 °C	-20 °C...+55 °C	-20 °C...+55 °C
Article number		326001020	various	various	326006006
Approval		CE	CE	CE	CE







Connection diagram				
				



Universal relays

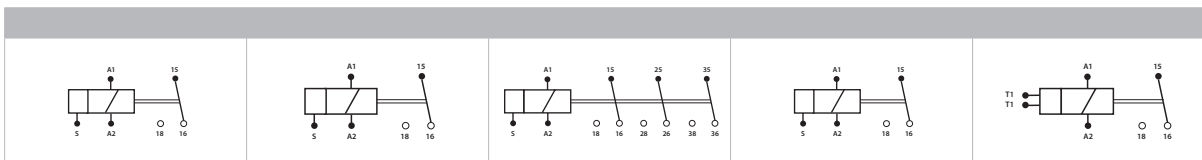
Timer relays



Single function timer relays	Multi function timer relays			Digital timer
16 A - 1 C/O	16 A - 1 C/O	8 A - 3 C/O	16 A - 1 C/O	8 A - 1 C/O
				
XT-17M-P	XT-17M-C1	XT-17M-C3	XT-17M-C1/6	XT-35M-DCL1
1 C/O contact	1 C/O contact	3 C/O contacts	1 C/O contact	1 C/O contact
Pulse / pause	Delay on / delay off / delay on & off / delay on via S contact / delay off via S contact / Flashing 1-shot		Delay on / delay off / delay on via S contact / delay off via S contact / Flashing	Digital timer with twilight switch 
0.1...1 s / 1...10 s / 0.1...1 min / 1...10 min / 0.1...1 u / 1...1 u / 0.1...1 d / 1...10 d / 3...30 d / 10...100 d	0.1...1 s / 1...10 s / 0.1...1 min / 1...10 min / 0.1...1 u / 1...10 u / 0.1...1 d / 1...10 d / on-off		0.1...1 s / 1...10 s / 0.1...1 min / 1...10 min / 0.1...1 u / 1...10 u	0...24 hr daily
Green / red	Green / red		Green / red	-
250 V / 24 V	250 V / 24 V		250 V / 24 V	250 V / 24 V
16 A / 250 V	16 A / 250 V	8 A / 250 V	8 A / 250 V	8 A / 250 V
16 A / 24 V	16 A / 24 V	8 A / 24 V	10 A / 24 V	8 A / 24 V

12...240 V	12...240 V	24...240 V	230 VAC
Yes	Yes	Yes	No


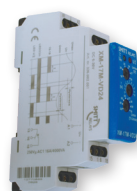


90 x 17.6 x 64	90 x 17.6 x 64		90 x 17.6 x 64	90 x 35.6 x 64
IP40	IP40		IP40	IP40
-20 °C...+55 °C	-20 °C...+55 °C		-20 °C...+55 °C	-20 °C...+55 °C
326001005	326001003	326001004	326001025	326001028
CE	CE	CE	CE	CE



Universal relays

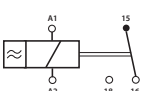
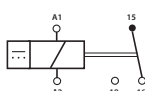
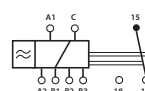
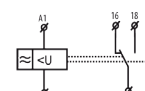
Modular measuring- / monitoring relays



1 phase monitoring relay			
16 A - 1 C/O	16 A - 1 C/O	16 A - 2 C/O	16 A - 2 C/O
			
XM-17M-VA230	XM-17M-VD24	XM-52M-VA500	XM-17M-2XVA230

Number of contacts		1 C/O contact	1 C/O contact	2 C/O contacts	2 C/O contacts
Max. switching voltage	AC/DC	250 V / 24 V	250 V / 24 V	250 V / 24 V	250 V / 24 V
Operating range		48...276 VAC	6...30 VDC	10...500 VAC/DC	48...276 VAC
Operating range max		160 ...276 VAC	18...30 VDC	20 - 100 % U	160...276 VAC
Operating range min		30 - 95 % Umax	35 - 95 % Umax	30 - 95 % Umax	30 - 95 % Umax
Auxiliary power		-	-	230 VAC	-
Function		Under- and over voltage protection	Under- and over voltage protection	Under- and over voltage protection	Under- and over voltage protection
Adjustable time delay		0...10 s	0...10 s	T1 0...10 s T2 0...10 s	0...10 s
LED-indication		Green / red	Green / red	Green / red / yellow	Green / red
Switching current (capacity)	AC1	16 A / 250 VAC	16 A / 250 VAC	16 A / 250 VAC	16 A / 250 VAC
	DC1	16 A / 24 VDC	16 A / 24 VDC	16 A / 24 VDC	16 A / 24 VDC

General					
Dimensions (l x w x h)	mm	90 x 17.6 x 64	90 x 17.6 x 64	90 x 52 x 65	90 x 52 x 65
Protection category		IP40	IP40	IP40	IP40
Ambient temperature		-20 °C...+55 °C	-20 °C...+55 °C	-20 °C...+55 °C	-20 °C...+55 °C
Article number		326002000	326002001	326002005	326002002
Approval		CE	CE	CE	CE

Connection diagram			
			

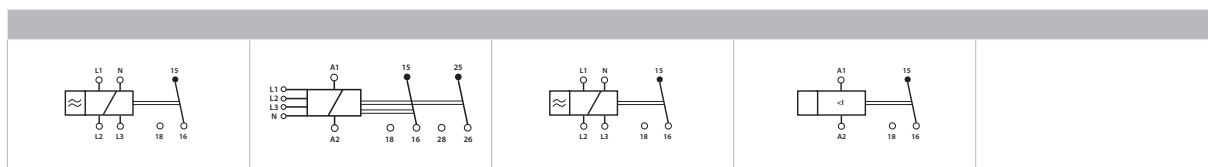
Universal relays

Modular measuring- / monitoring relays



3 phase voltage monitoring			Current monitoring	
8 A - 1 C/O	16 A - 2 C/O	8 A - 2 C/O	8 A - 1 C/O	
XM-17M-M400L(N)	XM-52M-M400L(N)	XM-17M-VA400LN	XM-17M-IA25U	XM-CT
1 C/O contact	2 C/O contacts	1 C/O contact	1 C/O contact	Current transformer
250 V / 24 V	250 V / 24 V	250 V / 24 V	250 V / 24 V	-
3x 400 VAC / 230 VAC	3x 400 VAC / 230 VAC	3x 400 VAC / 230 VAC	0...25 AAC	50 A, 100 A, 150 A, 200 A, 250 A, 300 A, 400 A, 60 A
125 % U	138...276 V	105 - 125 % U	0.5...25 A	-
75 % U	35 - 99 % U _{max}	75 - 95 % U	-	-
-	230 VAC	-	230 VAC	-
Under- and over voltage protection Phase sequence Phase failure Phase failure (&N)	Under- and over voltage protection Phase sequence Phase failure (&N) Fase assymetry	Under- and over voltage protection Phase sequence Phase & N failure	Current monitoring	Expandable measuring range for XM-17M-IA25U Output 0...5 A
T1 500 ms T2 0.1...10 s	T1 500 ms T2 0...10 s	T1 500 ms T2 0...10 s	0.5...10 s	-
Green / red	Green / red / yellow	Green / red	Green / red	-
8 A / 250 VAC	16 A / 250 VAC	8 A / 250 VAC	8 A / 250 VAC	-
8 A / 24 VDC	16 A / 24 VDC	8 A / 24 VDC	8 A / 30 VDC	-

90 x 17.6 x 64	90 x 52 x 65	90 x 17.6 x 64	90 x 17.6 x 64	Various
IP40	IP40	IP40	IP40	-
-20 °C...+55 °C	-20 °C...+55 °C	-20 °C...+55 °C	-20 °C...+55 °C	-20 °C...+55 °C
326002003 (326002004)	326002006 (326002007)	326002011	326001027	Various
CE	CE	CE	CE	CE



Industrial relays

Power relays



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	Auxiliary relays			Low current
				
	D	D8	D-Z	D-E

Number of contacts		4 C/O contacts	8 C/O contacts	4 C/O contacts	4 C/O contacts
		LED-indication Magnetic arc blow-out Plug-in relay	LED-indication Magnetic arc blow-out Plug-in relay	Plug-in relay	Gold plated contacts LED-indication Magnetic latching Plug-in relay
Max. switching voltage	AC	440 VAC	440 VAC	440 VAC	440 VAC
	DC	350 VDC	350 VDC	350 VDC	350 VDC
Switching current (capacity)	AC1	10 A / 230 VAC	10 A / 230 VAC	10 A / 230 VAC	10 A / 230 VAC
	DC1	1 A / 110 VDC	1 A / 110 VDC	1 A / 110 VDC	1 A / 110 VDC
Minimal switching voltage		12 V	12 V	12 V	5 V
Minimal switching current		10 mA	10 mA	10 mA	1 mA

Coil voltage					
Nominal voltage	AC	12...380 VAC	12...250 VAC	12...380 VAC	12...380 VAC
	DC	12...250 VDC	12...250 VDC	12...250 VDC	12...250 VDC
Voltage range		0.8...1.1 Un	0.8...1.1 Un	0.8...1.1 Un	0.8...1.1 Un

General							
Dimensions (l x w x h)	mm	40 x 40 x 53	40 x 88 x 56	40 x 40 x 53	40 x 40 x 53		
Ordering examples	AC	D	24 VAC	D8	24 VAC	D-Z	110...115 V, 50 Hz
		D	230 VAC	D8	48 VAC	D-Z	220...230 V, 50 Hz
	DC	D	24 VDC	D8	100 VDC	D-Z	24 VDC
		D	230 VDC	D8	220 VDC	D-Z	110 VDC
						D-E	48 VAC
						D-E	320 VAC
						D-E	24 VDC
						D-E	110 VDC



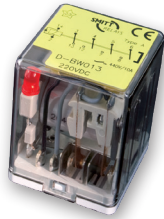


Sockets

					
V23 D-relays socket	V29 D-relays socket	V33 D-relays socket	V93 D8 & KDN-relays socket	V23BR D-relays socket	V99 for D8 & KDN relays

Industrial relays

Power relays



High current	Trip relays	Safety relays	Bistable relays	Bistable relays
				
D-B	D-R4	D-BW	KDN	BD
4 C/O contacts	4 C/O contacts	4 contacts	8 C/O contacts	4 contacts
Arcing chambers LED-indication Magnetic arc blow out Plug-in relay	High speed switching < 7 ms Plug-in relay	Positive guided contacts LED-indication Magnetic latching Plug-in relay	Bistable Mechanical latching Position indicator Plug-in relay	Bistable Magnetic latching Plug-in relay
440 VAC 350 VDC	220 VDC	440 VAC 350 VDC	440 VAC 350 VDC	440 VAC 250 VDC
10 A / 230 VAC 7 A / 110 VDC	10 A / 230 VAC 1 A / 110 VDC	10 A / 230 VAC 7 A / 110 VDC	10 A / 230 VAC 1 A / 110 VDC	10 A / 230 VAC 1 A / 110 VDC
12 V	12 V	12 V	12 V	12 V
10 mA	10 mA	10 mA	10 mA	10 mA

12...380 VAC 12...250 VDC 0.8...1.1 Un	12...250 VDC 0.8...1.1 Un	12...250 VDC 0.8...1.1 Un	12...380 VAC 12...250 VDC 0.8...1.1 Un	12...380 VAC 12...250 VDC 0.85...1.1 Un
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40 x 40 x 53		40 x 40 x 53		40 x 40 x 53		40 x 88 x 40		40 x 40 x 53	
D-B	24 VAC, 50 Hz	D-R4	24 VDC	D-BW022	24 VDC	KDN	24 VAC, 50 Hz	BD	24 VAC
D-B	230 VAC, 50 Hz	D-R4	48 VDC	D-BW031	24 VDC	KDN	220 VAC, 50 Hz	BD	220-230 VAC
D-B	24 VDC	D-R4	110 VDC	D-BW013	110 VDC	KDN	24 VDC	BD	24 VDC
D-B	110 VDC	D-R4	220 VDC			KDN	110 VDC	BD	110 VDC

Sockets & accessoires

		
Increased touch safety for V23	19 inch module D-relays socket	19 inch module for D8 & KDN relays

Industrial relays

Control, trip & supervision relays



Relays



		ARD4	TRD4	XRD
Number of contacts		4 contacts	4 contacts	3 or 4 contacts
		Auxiliary relay	High speed switching < 10 ms , trip relay	Supply or circuit supervision relay
		Status indication LED-indication Magnetic arc blow-out		
		Mono / bistable contacts Rack / surface mount Plug-in relay		
Max. switching voltage	AC	440 VAC	440 VAC	440 VAC
	DC	350 VDC	250 VDC	250 VDC
Switching voltage (capacity)	AC1	10 A / 230 VAC	10 A / 230 VAC	10 A / 230 VAC
	DC1	7 A / 110 VDC	7 A / 110 VDC	1 A / 110 VDC
Minimal switching voltage		12 V	12 V	12 V
Minimal switching current		10 mA	10 mA	10 mA

Coil current				
Nominal voltage	DC	24...250 VDC	24...250 VDC	24...250 VDC
Voltage range	DC	0.8...1.2 Un	0.7...1.2 Un	0.7...1.2 Un

General				
Dimensions (l x w x h)	rack	80 x 51 x 94 mm	88 x 51 x 94 mm	88 x 51 x 94 mm
	construction	65 x 45 x 94 mm	65 x 45 x 94 mm	65 x 45 x 94 mm
Approval		CE	CE	CE

Sockets



V23 socket **V29 socket** **TBD-R rack & socket**







Industrial relays

Control, trip & supervision relays



Relays



			
AR	TR	XR	PR
5, 10 or 12 contacts	5 or 12 contacts	5 contacts	5 contacts
Auxiliary relay	High speed switching Tripping relay < 8 ms	Supervision relay	Intertrip relay
HD contacts Automatic & manual reset	HD contacts Automatic & manual reset	Circuit supervision Trip supervision Relays supervision	5 kV isolation
Flag indication 4U high 19 inch rack modular configuration			
660 VAC 660 VDC	660 VAC 660 VDC	660 VAC 660 VDC	660 VAC 660 VDC
See datasheet	See datasheet	See datasheet	See datasheet
-	-	-	-
-	-	-	-

32...250 VDC	32...250 VDC	32...250 VDC	32...250 VDC
0.7...1.2 Un	0.7...1.2 Un	0.5...1.2 Un	0.7...1.2 Un

51 x 217 x 157 mm	51 x 217 x 157 mm	51 x 217 x 157 mm	51 x 217 x 157 mm
-	-	-	-
CE	CE	CE	CE

Options			
<ul style="list-style-type: none"> • Contact configuration • Contact function • Hand reset flag • Switch counter • Gold plated contacts • LED-indication • Electrical reset 	<ul style="list-style-type: none"> • Contact configuration • Contact function • Hand reset flag • Switch counter • Gold plated contacts • LED-indication • Electrical reset 	<ul style="list-style-type: none"> • Contact configuration • Supervision function • Hand reset flag • LED-indication 	<ul style="list-style-type: none"> • Contact configuration • Hand reset flag • Gold plated contacts • LED-indication

Testblock systems

	
4M400	4M420
14 test groups	14 test groups
Test block system	Test plug
14 test circuits	14 test groups
Automatic CT shorting Stage 3 isolation	4 mm shrouded test plugs
600 VAC 320 VDC	600 VAC 320 VDC
See datasheet	See datasheet
-	-
-	-

-	-
-	-

51 x 217 x 157 mm	51 x 217 x 157 mm
-	-
CE	CE



Industry

Sales offices & factories:

Mors Smitt Asia Ltd.
Unit B&C, 25/F, Casey Aberdeen House
38 Heung Yip Road,
Wong Chuk Hang, Hong Kong
Tel: +852 2343 5555
sales.msa@wabtec.com

Mors Smitt France SAS
2 Rue de la Mandinière
72300 Sablé-sur-Sarthe, France
Tel: +33 (0) 243 92 82 00
sales.msf@wabtec.com

Mors Smitt Technologies Ltd.
1010 Johnson Drive
Buffalo Grove, IL 60089-6918, USA
Tel: +1 847 777 6497
salesmst@wabtec.com

Mors Smitt UK Ltd.
Graycar Business Park
Burton on Trent
DE13 8 EN, UK
Tel: +44 (0)1283 357 263
sales.msuk@wabtec.com

RMS Mors Smitt
19 Southern Court
Keysborough, VIC 3173, Australia
Tel: +61 (0)3 8544 1200
sales.rms@wabtec.com

Wabtec Netherlands B.V.
Darwinstraat 10
6718 XR Ede, Netherlands
Tel: +31 (0)88 600 4500
sales.msbv@wabtec.com

www.morssmitt.com



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