

Cross-references chart

time relays

version: 15.05.2005

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	full substitution	SH - for ON of start impulse
	compatible	NH - for OFF of start impulse
	P - changeover contact	S - switching contact

Producer	Type	Power supply	Number of function	Time range	Number of output contact	CRM-91H	CRM-93H	CRM-2H	CRM-2T	PDR-2 (PDR-3)	CRM-9S	CRM-82TO	CRM-91HE	Function description
	rotary switch, multifunction, 10 functions, time scale 0.1s-10days, 1x16A output													
	rotary switch, multifunction, 10 functions, time scale 0.1s-10days, 3x8A output													
	asymmetric cycler, two independent times 0.1s-100days, 1x16A output													
	star-delta delay, time for star 0.1s-100days, delay 0.1-1s													
	programmable digital relay, 16 functions, 60 memory locations, time 0.01s-100h, 2x16A output, (3 versions)													
	rotary switch, multifunction, 10 functions, time scale 0.1s-10days, 1x0,7A contactless output													
	delay OFF without supply voltage, 2functions, time to 10min., 2x8A output													
	rotary switch, multifunction, 10 functions, time scale 0.1s-10days, 1x16A output, controlling via external potentiometer													

ABB / Germany

module	Type	Power supply	Number of function	Time range	Number of output contact	CRM-91H	CRM-93H	CRM-2H	CRM-2T	PDR-2 (PDR-3)	CRM-9S	CRM-82TO	CRM-91HE	Function description
CT-.D	E234 CT MFD	AC/DC 24-230V	7	0.05s-100h	2x6A P									multifunction
	E234 CT ERD	AC/DC 12-230V	1	0.05s-100h	2x6A P									Delay ON
	E234 CT AHD	AC/DC 12-230V	1	0.05s-100h	2x6A P									Delay OFF
	E234 CT VWD	AC/DC 12-230V	1	0.05s-100h	2x6A P									Delay ON
	E234 CT EBD	AC/DC 12-230V	1	0.05s-100h	2x6A P									Symmetric cycler
	E234 CT TGD	AC/DC 12-230V	1	0.05s-100h	1x6A P									Pulse generator
Industry CT-.S	CT MFS	AC/DC 24-240V	8	0.05s-300h	2x4A P									multifunction
	CT MVS	AC/DC 24,48V, AC 110-240V	8	0.05s-300h	2x4A P									multifunction
	CT MBS	AC/DC 24,48V, AC 110-240V	8	0.05s-300h	2x4A P									multifunction
	CT MBS	AC/DC 24,48V, AC 110-240V	6	0.05s-300h	1x4A P									multifunction
	CT ERS	AC/DC 24,48V, AC 110-240V	1	0.05s-300h	2x4A P									Delay ON
	CT AHS	AC/DC 24,48V, AC 110-240V	1	0.05s-300h	2x4A P									Delay OFF without Un
	CT APS	AC/DC 24,48V, AC 110-240V	1	0.05s-300h	2x4A P									Delay OFF without Un
	CT ARS	AC/DC 24-240V	1	0.05s-10min	1x4A P									Delay OFF without Un
	CT VBS	DC 110-127V, 200-240V	1	0.05s-10min	1x4A P									Delay OFF without Un
	CT EAS	AC/DC 24,48V, AC 110-240V	1	0.05s-300h	2x4A P									symmetric cycler
	CT EVS	AC/DC 24,48V, AC 110-240V	1	0.05s-300h	1x4A P									cycler 1:1
	CT VWS	AC/DC 24, AC 110-240V	1	0.05s-300h	2x4A P									Delay ON
	CT AWS	AC/DC 24,48V, AC 110-240V	1	0.05s-300h	2x4A P									Delay OFF
	CT EBS	AC/DC 24,48V, AC 110-240V	1	0.05s-300h	2x4A P									symmetric cycler
	CT TGS	AC/DC 24,48V, AC 110-240V	1	0.05s-300h	1x4A P									Pulse generator
	CT YDAV	AC/DC 24,48V, AC 110-240V	1	0.05s-300h	2x4A P									with function star/delta
	CT YDEW	AC/DC 24,48V, AC 110-240V	1	0.05s-300h	1x4A P									with function star/delta
Industry CT-.E	CT MFE	AC/DC 24-240V	6	0.05s-100h	2x4A P									multifunction
	CT ERE	AC/DC 24V, AC 220-240V	1	0.1s-30min	2x4A P									Delay ON
	CT AHE	AC/DC 24V, AC 220-240V	1	0.1s-300s	2x4A P									Delay OFF
	CT ARE	AC/DC 24V, AC 220-240V	1	0.1s-30s	1x4A P									Delay OFF without Un
	CT VVE	AC/DC 24V, AC 220-240V	1	0.1s-300s	2x4A P									Delay ON
	CT AWE	AC/DC 24V, AC 220-240V	2	0.05s-300s	2x4A P									Delay OFF (without Un)
	CT EBE	AC/DC 24V, AC 220-240V	1	0.1s-10s	2x4A P									symmetric cycler
	CT YDE	AC/DC 24V, AC 220-240V	1	0.1s-300s	1x4A P									with function star/delta
	CT SDE	AC/DC 24V, AC 220-240V	1	0.3s-30s	1x4A P									with function star/delta
	CT MKE	AC/DC 24-240V	4	0.1s-300s	1x0.8A tr									multifunction
	CT EKE	AC/DC 24-240V	1	0.1s-300s	1x0.8A tr									Delay ON
	CT AKE	AC 24-240V	1	0.1s-300s	1x0.8A tr									Delay OFF

Allen Bradley / USA

module	Type	Power supply	Number of function	Time range	Number of output contact	CRM-91H	CRM-93H	CRM-2H	CRM-2T	PDR-2 (PDR-3)	CRM-9S	CRM-82TO	CRM-91HE	Function description
	700-FEM 1RU22	AC110-240V, AC/DC24V	4	0.75s-1h	1x6A S									multifunction
	700-FEM 3TU23	AC24-240V, DC24-48V	4	0.05s-10h	1x6A P									multifunction
	700-FEA 1SU22	AC110-240V, AC/DC24V	1	0.75s-1h	1x6A S									Delay ON
	700-FEA 3TU23	AC24-240V, DC24-48V	1	0.75s-1h	1x6A P									Delay ON
	700-FEB 1SU22	AC110-240V, AC/DC24V	1	0.75s-1h	1x6A S									Delay OFF
	700-FEB 3TU23	AC24-240V, DC24-48V	1	0.75s-1h	1x6A P									Delay OFF
	700-FED 1SU22	AC110-240V, AC/DC24V	1	0.75s-1h	1x6A S									Delay OFF with impulse
	700-FED 3TU23	AC24-240V, DC24-48V	1	0.75s-1h	1x6A P									Delay OFF with impulse
	700-FEE 3TU23	AC110-240V, AC/DC24V	1	0.75s-1h	1x6A S									Delay OFF
	700-FEF 1SU22	AC110-240V, AC/DC24V	1	0.05s-1h	1x6A S									symmetric cycler
	700-FEF 3TU23	AC24-240V, DC24-48V	1	0.05s-10h	1x6A S									symmetric cycler
	700-FEL 3TU23	AC110-240V, AC/DC24V	1	0.05s-10h	1x6A S									pulsed
	700-FEY 2QU23	AC110-240V, AC/DC24V	1	0.1s-24h	1x10A P									star/delta
	700-FSA 4UZ12	DC 12V	1	0.1s-24h	2x10A P									Delay ON
	700-FSA 4UU23	AC110-240V, AC/DC24V	1	0.1s-24h	2x10A P									Delay ON
	700-FSB 4UZ12	DC 12V	1	0.1s-24h	2x10A P									Delay OFF
	700-FSB 4UU23	AC110-240V, AC/DC24V	1	0.1s-24h	2x10A P									Delay OFF
	700-FSM 3UZ12	DC 12V	8	0.1s-24h	1x10A P									multifunction
	700-FSM 3UU23	AC110-240V, AC/DC24V	8	0.1s-24h	1x10A P									multifunction
	700-FSM 4UZ12	DC 12V	8	0.1s-24h	1x10A P									multifunction
	700-FSM 4UU23	AC110-240V, AC/DC24V	8	0.1s-24h	1x10A P									multifunction
	700-FSQ 4QU18	AC24-240V, DC24-48V	1	0.15s-10min	2x10A P									Delay OFF (without Un)
	700-FSR36	AC110-240V, AC/DC24V	1	0.1s-24h	1x10A P									asymmetric cycler
	EZ12ARV-001		1	0.1s-4h	1x10A P									prolonged impulse

Producer	Type	Power supply	Number of function	Time range	Number of output contact	CRM-91H	CRM-93H	CRM-2H	CRM-2T	PDR-2 (PDR-3)	CRM-9S	CRM-92TO	CRM-91HE	Function description	
ABL Sursum / Germany															
module	MR10230	AC/DC 12-48V	7	0.1s-16h	1x12A P									multifunction	
	ER 112ZA1	AC 110-230V	1	0.1s-16m	1x12A P									Delay OFF	
	ER 112ZT1		1	0.1s-16m	1x12A P									cycler	
	ER 112ZW1		1	0.1s-16m	1x12A P									Delay OFF, impulse	
ALSTOM / Poland															
module	RTx-210	DC 12V, AC 220/230V	1	0.1s-100h	1x5A P									Delay ON	
	RTx-211	DC 12V, AC 220/230V	1	0.1s-100h	1x5A P									Delay OFF	
	RTx-210	DC 12V, AC 220/230V	1	0.1s-100h	1x5A P									cycler - pause beginning	
	RTx-210	DC 12V, AC 220/230V	1	0.1s-100h	1x5A P									cycler - impulse beginning	
	RTx-220	DC 12V, AC 220/230V	4	0.1s-100h	2x5A P									multifunction	
	RTx-230	DC 12V, AC 220/230V	4	0.1s-100h	2x5A P									asymmetric cycler	
BTR Electronic systems / Germany															
module	MARK E08	AC/DC 24V, AC 230V	2	0.15s-10h	1x6A P									Delay ON	
	MFRk E08	AC/DC 24V, AC 230V	6	0.05s-30h	1x6A P									multifunction	
	MFRk E12	AC/DC 24V, AC 230V	6	0.15s-10h	2x4A P									multifunction	
	MFRs E12	AC/DC 20-265V	6	0.15s-10h	1x4A P									multifunction	
	MZAK E10	AC/DC 24V, AC 230V	1	0.15s-10h	1x6A P									Delay ON	
	MZAK E12	AC/DC 24V, AC 230V	1	0.15s-10h	2x4A P									Delay ON	
	RTLk E10	AC/DC 24V, AC 230V	1	0.05s-10h	1x6A P									Delay ON	
	RTLk E12	AC/DC 24V, AC 230V	1	0.15s-10h	2x4A P									Delay ON	
	RTLu E12	AC/DC 24V, AC 230V	1	0.15s-10h	2x4A P									Delay ON	
	VZE E10	AC/DC 24-110V, 80-230V	1	0.15-100s	1x0.8A tr									Delay ON	
	RASK E10	AC 230V	1	0.5s-10h	1x6A P									Delay ON	
	RASK E12	AC/DC 24V, AC 230V	1	0.15s-10h	2x4A P									Delay OFF	
	RKAK E10	AC/DC 24V, AC 230V	1	0.15s-1h	1x6A P									Delay OFF without Un	
	EWek E10	AC/DC 24V, AC 230V	1	0.05s-10h	1x6A P									symmetric cycler	
	REWk E10	AC/DC 24V, AC 230V	1	0.5s	1x6A P									Pulse generator	
	RAWk E10	AC/DC 24V, AC 230V	1	0.5s	1x6A P									Delay OFF without Un	
	RTBK E10	AC/DC 24V, AC 230V	1	0.5s	1x6A P									Pulse generator	
	TERk E08	AC/DC 24V, AC 230V	1	0.15s-10h	1x6A P									asymmetric cycler	
	VEIk E10	AC/DC 24V, AC 230V	1	0.5s-100s	1x6A P									shift of impulse	
	RSDw E10	AC/DC 24V, AC 230V	1	0.5s-100s	1x6A P									star/delta	
RSD E10	AC/DC 24V, AC 230V	1	0.5s-30s	2x6A P									star/delta		
Carlo Gavazzi / Italy															
module	DAA01C M24	DC 24V, AC 24-240V	1	0.1s-100h	1x5A P									Delay ON	
	DAA01D M24	DC 24V, AC/DC 24-240V	1	0.1s-100h	2x5A P									Delay ON	
	DAA51C M24	DC 24V, AC 24-240V	1	0.1s-100h	1x5A P									Delay ON	
	DBB01C M24	DC/AC 24-240V	1	0.1s-600s	1x5A P									Delay OFF without Un	
	DBB01D M24	DC/AC 24-240V	1	0.1s-600s	1x5A P									Delay OFF without Un	
	DBB02C M24	DC/AC 24-240V	1	1min-10h	1x5A P									Delay OFF	
	DBB02D M24	DC/AC 24-240V	1	1min-10h	1x5A P									Delay OFF	
	DBB51C M24	DC 24V, AC 24-240V	1	1s-600s	1x5A P									Delay OFF without Un	
	DCB01C M24	AC 24-240V	4	0.1s-100h	1x5A P									asymmetric cycler	
	DCB01D M24	DC/AC 24-240V	4	0.1s-100h	2x5A P									asymmetric cycler	
	DCB51C M24	DC 24V, AC 24-240V	2	0.1s-120h	1x5A P									asymmetric cycler	
	DMB01C M24	AC 24-240V	7	0.1s-100h	1x5A P									multifunction	
	DMB01D M24	DC/AC 24-240V	7	0.1s-100h	2x5A P									multifunction	
	DMB51C M24	AC 24-240V	7	0.1s-100h	1x5A P									multifunction	
	DMB51D W24	DC/AC 12-240V	7	0.1s-100h	1x5A P									multifunction	
	DMC01C		7	0.1s-100h	1x5A P									multifunction	
	DHA51C M24	AC/DC 24V, AC 24-240V	1	0.1s-120h	1x5A P									programmable relay	
	DAC01C M24	DC/AC 24-240V	1	0.1s-600s	1x5A P									star/delta	
	DAC51C M24	DC/AC 24-240V	1	0.1s-600s	1x5A P									star/delta	
	EAS, EBS, ECS	DC/AC 24-240V	1	0.5s-10min	1x0.5A tr									Delay ON, OFF, cycler sym.	
	Crouzet / France														
	Schneider - electric														
	industry	TUR1	AC 24-240V	10	0.1s-100h	1x8A P									1 contact
		TU2R1	DC 24V	10	0.1s-100h	2x8A P									2 contact
TQR1			1	0.1s-100h	2x8A S									star/delta	
other 11 monofunction types with individual supply														substitution of CRM-93H	
module	MUR1	AC 24-240V	10	0.1s-100h	1x8A P									multifunction	
	MAR1	DC 24V	1	0.1s-100h	1x8A P									Delay ON	
	MBR1		1	0.1s-100h	1x8A P									Delay OFF, NH	
	MCR1		1	0.1s-100h	1x8A P									Delay OFF, SH	
	MHR1		1	0.1s-100h	1x8A P									Delay OFF	
	MLR1		1	0.1s-100h	1x8A P									asymmetric cycler	
	MUR4	AC/DC 12V	10	0.1s-100h	1x8A P									multifunction, na 12V	
	MUR3	AC/DC 12-240V	10	0.1s-100h	1x8A P									multifunction, multivoltage	

Producer	Type	Power supply	Number of function	Time range	Number of output contact	CRM-91H	CRM-93H	CRM-2H	CRM-2T	PDR-2 (PDR-3)	CRM-9S	CRM-82TO	CRM-91HE	Function description
Hager / France														
module	EZ001	AC12, 24-230V. DC12, 24-48V	1	0.1s-10h	1x10A P									Delay ON
	EZ002	AC12, 24-230V. DC12, 24-48V	1	0.1s-10h	1x10A P									Delay OFF, SH
	EZ003	AC12, 24-230V. DC12, 24-48V	1	0.1s-10h	1x10A P									Delay OFF
	EZ004	AC12, 24-230V. DC12, 24-48V	1	0.1s-10h	1x10A P									Delay OFF, NH
	EZ005	AC12, 24-230V. DC12, 24-48V	1	0.1s-10h	1x10A P									cycler
	EZ006	AC12, 24-230V. DC12, 24-48V	6	0.1s-10h	1x10A P									multifunction
Legrand / France														
module	047 40	AC/DC 24V, AC110-240V	1	0.1s-10h	1x8A S									Delay ON
	047 41	AC/DC 24V, AC110-240V	1	0.1s-10h	1x8A S									Delay OFF, SH
	047 42	AC/DC 24V, AC110-240V	1	0.1s-10h	1x8A S									asymmetric cycler
	047 43	AC/DC 24V, AC110-240V	1	0.1s-10h	1x8A S									Delay OFF, NH
	047 44	AC/DC 24V, AC110-240V	4	0.1s-10h	1x8A S									multifunction
	047 45	AC/DC 24V, AC110-240V	1	0.1s-10h	1x8A S									Delay OFF
Lovato / Italy														
module (new)	TM P	DC 24-48V, AC 24-240V	1	0.1s-10days	1xA P									Delay ON
	TM M1	AC/DC 12-240V	10	0.1s-10days	1xA P									multifunction
	TM M2	AC/DC 12-240V	10	0.1s-10days	2xA P/S									multifunction (1xchan.+1xswi.)
	TM PL	AC/DC 12-240V	1	0.1s-10days	1xA P									asymmetric cycler
	TM D	AC/DC 24-240V	1	0.06s-2min	1xA P									Delay OFF, without Un
	TM ST	AC 24-240V	1	0.1s-10min	2xA S									star/delta
module	L45T1S240	AC 24-240V, DC 24V	1	0.1-1s	1x16A P									Delay ON
	L45T10S240	AC 24-240V, DC 24V	1	1-10s	1x16A P									Delay ON
	L45T1M240	AC 24-240V, DC 24V	1	6-60s	1x16A P									Delay ON
	L45T10M240	AC 24-240V, DC 24V	1	1-10min	1x16A P									Delay ON
	L45T1H240	AC 24-240V, DC 24V	1	6-60min	1x16A P									Delay ON
	L45T10H240	AC 24-240V, DC 24V	1	1-10h	1x16A P									Delay ON
	L45TP240	AC 24-240V, DC 24V	1	0.1-10h	1x16A P									Delay ON
	L45M1240	AC 24-240V, DC 24V	8	0.1-10h	1x16A P									multifunction
	L45M3240	AC/DC 12-240V	8	0.1-10h	3x8A P									multifunction
	L45PLM240	AC 24-240V, DC 24V	1	6-60s/1-10m	1x16A P									asymmetric cycler
	L45PLH240	AC 24-240V, DC 24V	1	6-60s/1-10h	1x16A P									asymmetric cycler
	L45PLS240	AC 24-240V, DC 24V	1	0.1-1s/1-10s	1x16A P									asymmetric cycler
	industry	BTPM (BTPM1)	AC/DC 24V	8	0.3-768min	2x8A P								
AT1		AC 24V, 100-240V, 220-440V	1	0.3s-60min	1x8A P									Delay ON
AT1P		AC 24V, 100-240V, 220-440V	1	0.3-768s	1x8A P									Delay ON
AT1C		AC/DC 12-24V 48-60, 110-125	1	0.3s-60min	1x8A P									Delay ON
AT1CP		AC/DC 12-24V 48-60, 110-125	1	0.3-768s	1x8A P									Delay ON
ATD			1	0.3-768s	1x8A P									Delay OFF, without Un
AT1DP			1	0.3-3m	1x8A P									Delay OFF NH
BT2N			1	3-60s	1x8A P									star/delta
DRPL			1	0.3-120m	2x8A P									asymmetric cycler
MANG														
module	RPM	AC/DC 24V nebo AC230V	3	0.1s-60min.	1x16A P									multifunction, possible 30s-20h
	RRS	AC/DC 24V nebo AC230V	1	0.1s-60min.	1x16A P									symmetric cycler
	RPI	AC/DC 24V nebo AC230V	1	0.1s-60min.	1x16A P									Delay OFF after impulse
	RTD	AC 230V	1	0.1s-60sec	1A stat.									cycler - impulse beginning
Moeller / Germany														
Felten&Guilleaume														
X-pole module	Z-ZRER / W	AC/DC 24V, DC 110-240V	2	0.05s-10h	1x8A P									e+r
	Z-ZREWI / W	AC/DC 24V, DC 110-240V	2	0.05s-10h	1x8A P									e+w
	Z-ZRTAK / WW	AC/DC 24V, DC 110-240V	2	0.05s-10h	2x8A P									ii+ip
	Z-ZRMF / W	AC/DC 24V, DC 110-240V	8	0.05s-10h	1x8A P									e,r,w,es,ew,aw,b,st
	Z-ZRBLI / W	AC/DC 24V, DC 110-240V	2	0.05s-10h	1x8A P									b,bi
	Z-ZRMF / WW	AC/DC 24V, DC 110-240V	8	0.05s-10h	2x8A P									e,r,w,es,ew,aw,b,st
industry	ETR4-11-A	AC/DC 24-240V	1	0.05s-100h	1x3A P									Delay ON
	ETR4-51-A	AC/DC 24-240V	1	3-60s	2x3A S									star/delta
	ETR4-69-A	AC/DC 24-240V	8	0.05s-100h	1x3A P									multifunction
	ETR4-70-A	AC/DC 24-240V	8	0.05s-100h	2x3A P									multi - extern potentiometer
Merlin-Gerin / France														
Schneider - electric														
module	RTMF	AC/DC 12-240V	5	0.1s-100h	1x8A P									multifunction
	RTA	AC 24-240V,DC 24V	1	0.1s-100h	1x8A P									Delay ON
	RTB	AC 24-240V,DC 24V	1	0.1s-100h	1x8A P									Delay OFF, NH
	RTC	AC 24-240V,DC 24V	1	0.1s-100h	1x8A P									Delay OFF, SH
	RTH	AC 24-240V,DC 24V	1	0.1s-100h	1x8A P									Delay OFF
	RTL	AC 24-240V,DC 24V	1	0.1s-100h	1x8A P									asymmetric cycler

