

FEATURES

BENEFITS

FLAG INDICATOR:

SHOWS RELAY STATUS IN MANUAL OR POWERED CONDITION.

BI - POLAR L.E.D. STATUS LAMP:

ALLOWS FOR REVERSE POLARITY APPLICATIONS, SHOWS COIL "ON" OR "OFF" STATUS. IDEAL IN LOW LIGHT CONDITIONS.

COLOR CODED PUSH BUTTON:

IDENTIFIES AC COILS WITH RED OR DC COILS WITH BLUE PUSH BUTTONS. ALLOWS FOR MANUAL OPERATION OF RELAY WITHOUT THE NEED FOR COIL POWER. IDEAL FOR FIELD SERVICE PERSONNEL TO TEST CONTROL CIRCUITS.

LOCK-DOWN DOOR:

WHEN ACTIVATED, HOLDS PUSH BUTTON AND CONTACTS IN THE OPERATE POSITION. EXCELLENT FOR ANALYZING CIRCUIT PROBLEMS.

FINGER - GRIP COVER:

ALLOWS OPERATOR TO REMOVE RELAYS FROM SOCKETS MORE EASILY THAN CONVENTIONAL RELAYS.

WHITE PLASTIC I.D. TAG/WRITE LABEL:

USED FOR IDENTIFICATION OF RELAYS IN MULTI-RELAY CIRCUITS.

COVER ADAPTERS:

DIN RAIL ADAPTER OR TOP/BOTTOM FLANGE ADAPTER, ALLOWS THE 700 RELAYS TO BE DIRECT MOUNTED TO A DIN RAIL OR PANEL.



UL Recognized
File No. E43641



40787



COMPLIES WITH REQUIREMENTS OF

* IEC STANDARDS 947-4-1 AND 947-5-1 LOW VOLTAGE DIRECTIVE

* IEC = INTERNATIONAL ELECTROTECHNICAL COMMISSION

* CE TESTING AND EVALUATION PERFORMED BY THE UNDERWRITERS LABORATORIES AS A THIRD PARTY PARTICIPANT



LISTED 367G
IND. CONT. EQ.

WHEN USED WITH SOCKETS:

781:70-781D-1

782:70-782D-1

70-459-1

70-461-1

783:70-783D-1

784:70-784D-1

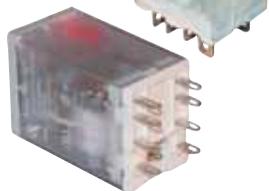
CURRENT LIMITED TO RATING OF RELAY OR SOCKET WHICHEVER IS LESS

MANUFACTURED UNDER ISO 9002 & QS 9000

781
SPDT
15 AMPS



782
SPDT
20 AMPS
DPDT
15 AMPS



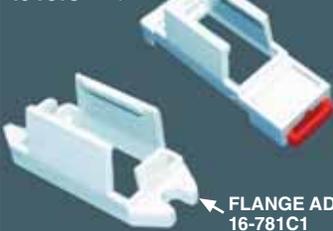
783
3PDT
15 AMPS



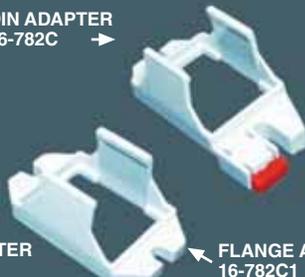
784
4PDT
15 AMPS



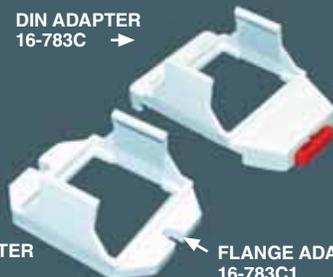
DIN ADAPTER
16-781C



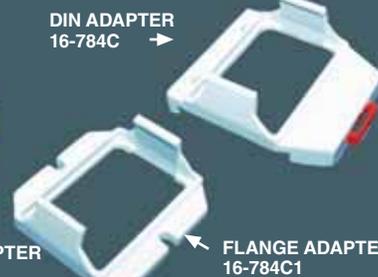
DIN ADAPTER
16-782C



DIN ADAPTER
16-783C



DIN ADAPTER
16-784C



FLANGE ADAPTER
16-781C1

FLANGE ADAPTER
16-782C1

FLANGE ADAPTER
16-783C1

FLANGE ADAPTER
16-784C1

OPTIONAL ADAPTERS ORDERED SEPARATELY





GENERAL SPECIFICATIONS (@ 25°C)

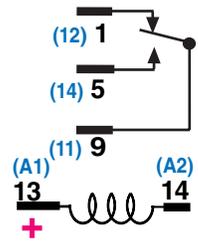
	UNITS	781XAX	782XAX	782XBX	783	784
COIL						
Pull-in Voltage AC (50/60 Hz):≤	% of nominal	85	85	85	85	85
Pull-in Voltage DC:≤	% of nominal	80	80	80	80	80
Dropout Voltage AC (50/60 Hz):≥	% of nominal	10	10	10	10	10
Dropout Voltage DC:≥	% of nominal	10	10	10	10	10
Maximum Voltage:	% of nominal	110	110	110	110	110
Resistance:	% ±	15	15	15	15	15
Coil Power AC (60 Hz):	VA	0.9	1.2	1.2	1.5	1.5
Coil Power DC:	W	0.7	0.9	0.9	1.7	2
Insulation System Per UL Standard 1446:		Class B (130 °C)	Class B (130 °C)	Class B (130 °C)	Class B (130 °C)	Class B (130 °C)
Maximum Coil Dissipation, AC (60 Hz):	VA	2.55	2.55	2.55	3	3
Maximum Coil Dissipation, DC:	W	2.3	2.3	2.3	3.4	2.3
Duty:		Continuous	Continuous	Continuous	Continuous	Continuous
CONTACTS						
Contact Material:		Silver alloy, gold flashed	Silver alloy, gold flashed	Silver alloy, gold flashed	Silver alloy, gold flashed	Silver alloy, gold flashed
Contact Rating AC Amperes (AC1):	A	15	20	15 / 12	15 / 12	15 / 12
Contact Rating AC Voltage:	V	277	277	120 / 277	120 / 277	120 / 277
Contact Rating DC Amperes (DC1):	A	15 / 0.5	20 / 0.5	12 / 0.5	15 / 0.5	15 / 0.5
Contact Rating DC Voltage:	V	28 / 220	28 / 220	28 / 220	28 / 220	28 / 220
General Purpose Rating (75%-80% pf):	A @ V	10 @ 240				
Horse Power (AC):	HP	1/2 @ 120 V	1/2 @ 120 V	1/2 @ 120 V	1/2 @ 120 V	1/2 @ 120 V
Horse Power (AC):	HP	1 @ 250 V	1 @ 250 V	1 @ 250 V	3/4 @ 250 V	3/4 @ 250 V
Pilot Duty (60 Hz):		B300	B300	B300	B300	B300
Utilization Category:	IEC	AC15	AC15	AC15	AC15	AC15
VA Rating Make:	VA	3600	3600	3600	3600	3600
VA Rating Break:	VA	360	360	360	360	360
Minimum Recommended Load:	ma	100 @ 5 VDC or 0.5 W	100 @ 5 VDC or 0.5 W	100 @ 5 VDC or 0.5 W	100 @ 5 VDC or 0.5 W	100 @ 5 VDC or 0.5 W
TIMING						
Operate Time:	ms	20	20	25	25	20
Release Time:	ms	20	20	20	20	20
DIELECTRIC STRENGTH						
Coil to Contacts:	V rms	2500	2500	2500	2500	2500
Across Open Contacts:	V rms	1500	1500	1000	1000	1000
Pole to Pole:	V rms			2500	2500	2500
Insulation Resistance:	megohms minimum @ VDC	100 @ 500	100 @ 500	100 @ 500	100 @ 500	100 @ 500
VIBRATION RESISTANCE						
Functional:	g's	10-55 Hz, 6 g's, 1mm double amplitude	10-55 Hz, 6g's 1mm double amplitude	10-55 Hz, 6g's 1mm double amplitude	10-55 Hz, 6g's 1mm double amplitude	10-55 Hz, 6g's 1mm double amplitude
SHOCK RESISTANCE						
Functional:	g's	10	10	10	10	10
TEMPERATURE						
Operating, AC Lower:	°C	-40	-40	-40	-40	-40
Operating, AC Upper:	°C	+70	+70	+70	+70	+70
Operating, DC Lower:	°C	-40	-40	-40	-40	-40
Operating, DC Upper:	°C	+70	+70	+70	+70	+70
Storage, Lower:	°C	-40	-40	-40	-40	-40
Storage, Upper:	°C	+105	+105	+105	+105	+105
LIFE EXPECTANCY						
Electrical @ Rated Load (AC1):	operations	15 A: 100,000 20 A: 50,000	100,000	200,000	150,000	150,000
Mechanical @ no Load :	operations	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
MISCELLANEOUS						
Operating Position:		Any	Any	Any	Any	Any
Insulation Material:	94V-0	Molded plastic	Molded plastic	Molded plastic	Molded plastic	Molded plastic
Enclosure Material:	94V-0	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Cover Protection Category:	IP	40	40	40	40	40
Terminals:	Inch (mm)	0.187, 0.1, 0.08 x 0.020 (4.47, 2.54, 2.03 x 0.508)	0.187, 0.08 x 0.020 (4.47, 2.03 x 0.508)			
Weight:	grams	29	36	36	60	80

781 - 1 POLE "ICE CUBE" POWER RELAY



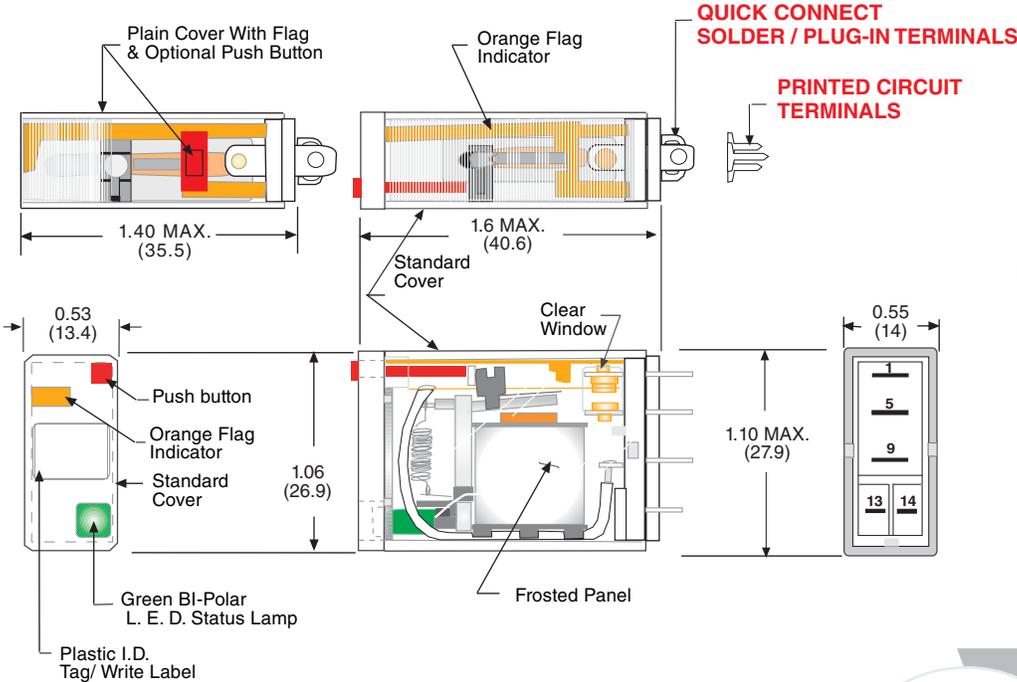
SPDT, 15 AMPS

WIRING DIAGRAM (VIEWED FROM PIN END)

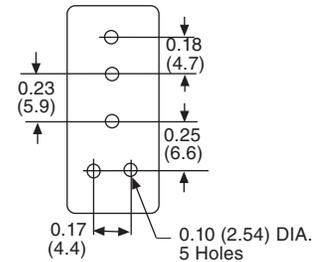


ALTERNATE NEMA
OR IEC () NUMBERS
VIEWED FROM
PIN SIDE

OUTLINE DIMENSIONS DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



PRINTED CIRCUIT MOUNTING HOLE LAYOUT (TOP VIEW)



ORDERING CODE

781 **XAX** **ML** **-120A**

CLASS:

CONTACT CONFIGURATION:
SPDT: **XAX**

OPTIONAL PLAIN COVER:
CODE **C**

TERMINAL STYLE:
QUICK CONNECT SOLDER / PLUG-IN
TERMINALS: **NO CODE**
PRINTED CIRCUIT TERMINALS:
CODE **T**

FULL FEATURED VERSION:
PUSH BUTTON : CODE **M**
BI - POLAR L.E.D. STATUS LAMP: CODE **L**

OPTIONAL PLAIN COVER FEATURES:
PUSH BUTTON : CODE **M**
POLARIZED L.E.D. STATUS LAMP: CODE **L**
(OBSERVE POLARITY **+**)

COIL VOLTAGE:
6, 12, 24, 120, 220/230, 240 ADD "A" FOR AC COILS
6, 12, 24, 48, 110 ADD "D" FOR DC COILS



ALSO UL RATED 20 AMPS @ 277/28 DC - 50,000 OPERATIONS



Mating Sockets
70-781D-1: SCREW/DIN,
70-781F-1: SOLDER,
70-781T-1: PRINTED CIRCUIT
See section 7

FULL FEATURED	PLAIN COVER WITH FLAG	COIL MEASURED @ 25 °C	
		NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)
AC OPERATED - SOLDER/PLUG-IN, 15 AMP			
781XAXML-24A	781XAXC-24A	24 VAC, 50/60Hz	160 Ω
781XAXML-120A	781XAXC-120A	110/120 VAC, 50/60Hz	4,430 Ω
781XAXML-220/230A		220/230 VAC, 50/60HZ	15,720 Ω
781XAXML-240A		240 VAC, 50/60HZ	15,720 Ω
DC OPERATED - SOLDER/PLUG-IN, 15 AMP			
781XAXML-12D		12 VDC	180 Ω
781XAXML-24D	781XAXC-24D	24 VDC	750 Ω
781XAXML-110D		110/125 VDC	13,800 Ω
AC OPERATED - PRINTED CIRCUIT, 15 AMP			
781XAXTML-120A		110/120 VAC, 50/60Hz	4,430 Ω
DC OPERATED - PRINTED CIRCUIT, 15 AMP			
781XAXTML-12D		12 VDC	188 Ω
781XAXTML-24D		24 VDC	750 Ω

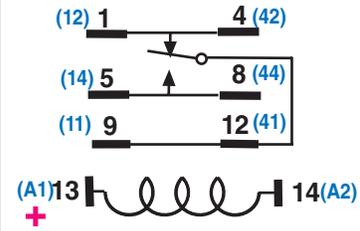
RETROFITS IDEC RH1B- & RH1V2-. SEE END OF SECTION 1 FOR CROSS REFERENCE CADMIUM-FREE CONTACTS AVAILABLE, CONTACT FACTORY FOR DETAILS

782/78 - 1 POLE "ICE CUBE" POWER RELAY



SPDT, 20 AMPS

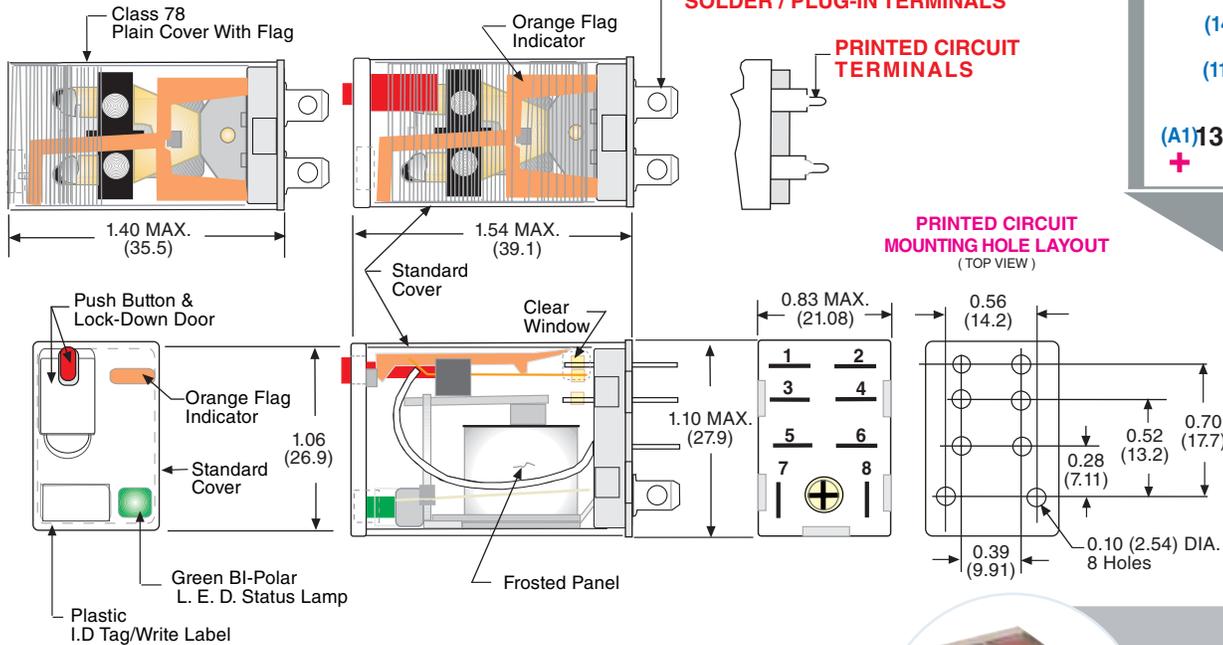
WIRING DIAGRAM (VIEWED FROM PIN END)



ALTERNATE NEMA
OR IEC () NUMBERS
VIEWED FROM
PIN SIDE

OUTLINE DIMENSIONS

DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



QUICK CONNECT SOLDER / PLUG-IN TERMINALS

PRINTED CIRCUIT TERMINALS

PRINTED CIRCUIT MOUNTING HOLE LAYOUT (TOP VIEW)



ORDERING CODE

782 **XAX** **M4L** **-120A**

CLASS:

CONTACT CONFIGURATION:
SPDT: **XAX**

OPTIONAL PLAIN COVER:
CODE **C**

TERMINAL STYLE:
QUICK CONNECTSOLDER/
PLUG-IN TERMINALS: **NO CODE**
PRINTED CIRCUIT TERMINALS: **CODE T**

FULL FEATURED VERSION:
PUSH BUTTON &
LOCK-DOWN DOOR: **CODE M4**
BI - POLAR L.E.D. STATUS LAMP: **CODE L**

OPTIONAL FULL FEATURED DELETION:
PUSH BUTTON WITHOUT
LOCK-DOWN DOOR: **CODE M**

OPTIONAL PLAIN COVER FEATURES:
PUSH BUTTON WITHOUT
LOCK-DOWN DOOR: **CODE M**
POLARIZED L.E.D. STATUS LAMP: **CODE L**
(OBSERVE POLARITY+)

COIL VOLTAGE:
6, 12, 24, 120, 220/230, 240 **ADD "A" FOR AC COILS**
6, 12, 24, 48, 110 **ADD "D" FOR DC COILS**

STANDARD PART NUMBERS

COIL MEASURED @ 25 °C

FULL FEATURED	PLAIN COVER WITH FLAG	NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)
AC OPERATED SOLDER/PLUG -IN, 20 AMP			
DUAL MARKED			
	NEW PART NUMBER	SUPERCEDES	
782XAXM4L-12A	782XAXC-12A	W78ARCSX-108	12 VAC, 50/60Hz 46 Ω
782XAXM4L-24A	782XAXC-24A	W78ARCSX-109	24 VAC, 50/60Hz 180 Ω
782XAXM4L-120A	782XAXC-120A	W78ARCSX-111	110/120 VAC, 50/60Hz 4,430 Ω
782XAXM4L-220/230A	782XAXC-220/230A		220/230VAC, 50/60Hz 15,000 Ω
782XAXM4L-240A	782XAXC-240A	W78ARCSX-112	240 VAC, 50/60HZ 15,700 Ω
DC OPERATED SOLDER/PLUG -IN, 20 AMP			
782XAXM4L-12D	782XAXC-12D	W78RCSX-97	12 VDC 160 Ω
782XAXM4L-24D	782XAXC-24D	W78RCSX-98	24 VDC 650 Ω
782XAXM4L-110D	782XAXC-110D	W78RCSX-100	110/125 VDC 13,800 Ω
AC OPERATED SOLDER/PLUG -IN, 20 AMP WITH STATUS LED LAMP			
	782XAXCL-24A	W78ARNCSX-8	24 VAC, 50/60Hz 180 Ω
	782XAXCL-120A	W78ARNCSX-9	110/120 VAC, 50/60Hz 4,430 Ω
	782XAXCL-240A	W78ARNCSX-10	240 VAC, 50/60HZ 15,700 Ω
DC OPERATED SOLDER/PLUG -IN, 20 AMP WITH STATUS LED LAMP			
	782XAXCL-24D	W78RNCSX-10	24 VDC 650 Ω
AC OPERATED PRINTED CIRCUIT TERMINALS, 20 AMP			
782XAXTM4L-12A	782XAXCT-12A	W78ARPCX-81	12 VAC, 50/60Hz 46 Ω
782XAXTM4L-24A	782XAXCT-24A	W78ARPCX-82	24 VAC, 50/60Hz 180 Ω
782XAXTM4L-120A	782XAXCT-120A	W78ARPCX-84	110/120 VAC, 50/60Hz 4,430 Ω
DC OPERATED PRINTED CIRCUIT TERMINALS, 20 AMP			
782XAXTM4L-12D	782XAXCT-12D	W78RPCX-79	12 VDC 160 Ω
782XAXTM4L-24D	782XAXCT-24D	W78RPCX-83	24 VDC 650 Ω
782XAXTM4L-110D	782XAXCT-110D	W78RPCX-85	110 /125 VDC 13,800 Ω

NOTE: CLASS 782C IS AN ENHANCED VERSION OF THE 78, IT HAS SUPERIOR RATINGS, A FLAG INDICATOR, & DISPLAYS BOTH PART NUMBERS.