WARNING: If you insert or remove the module while backplane power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

4. Position the module (4) with its alignment bar (5) aligned with the groove (6) on the terminal base.
5. Press firmly and evenly to seat the module in the terminal base unit. The module is seated when the latching mechanism (7) is locked into the module.

Connect Wiring for the 1794-IM8 and 1794-OM8 Module

1. Connect individual input or output wiring to numbered terminals on row (B) as indicated in Table 1.
2. **1794-IM8** – Connect the associated 220V AC L1 power lead of the input device to the corresponding odd-numbered terminal (C-1, 3, 5, 7, 9, 11, 13, or 15) on row (C) for each input as indicated in Table 1. The 220V L1 power terminals of row (C) are internally connected together.

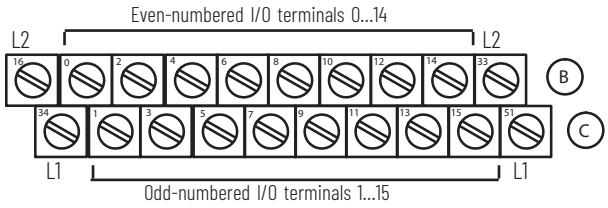
   1794-OM8 – Connect the associated 220V AC common L2 lead of the output device to the corresponding odd-numbered terminal (C-1, 3, 5, 7, 9, 11, 13, or 15) on row (C) as indicated in Table 1. The 220V L2 commons of odd-numbered terminals on row (C) are internally connected together.
3. Connect 220V AC power (L1) to terminal 34 on the row (C).
4. Connect 220V AC common (L2) to terminal 16 on the row (B).
5. If daisychaining L1 power to the next terminal base, connect a jumper from terminal 51 (220V AC L1) on this base unit to terminal 34 on the next base unit.
6. If continuing 220V AC common (L2) to the next base unit, connect a jumper from terminal 33 (220V common L2) on this base unit to terminal 16 on the next base unit.

Table 1 - Wiring Connections for 1794-IM8 and 1794-OM8

1794-IM8			1794-OM8		
	1794-TBN			1794-TBN, 1794-TBNF	
Input(1)	Input Terminal	220V AC Supply	Output	Output Terminal	Common
Input 0	B-0	C-1(1)	Output 0	B-0	C-1(2)
Input 1	B-2	C-3(1)	Output 1	B-2	C-3(2)
Input 2	B-4	C-5(1)	Output 2	B-4	C-5(2)
Input 3	B-6	C-7(1)	Output 3	B-6	C-7(2)
Input 4	B-8	C-9(1)	Output 4	B-8	C-9(2)
Input 5	B-10	C-11(1)	Output 5	B-10	C-11(2)
Input 6	B-12	C-13(1)	Output 6	B-12	C-13(2)
Input 7	B-14	C-15(1)	Output 7	B-14	C-15(2)
B = Even-numbered Input terminals 0...14, AC common terminals 16 and 33 C = Power terminals C-34 and C-51, and odd-numbered input terminals 1...15			B = Even-numbered Output terminals 0...14, AC common terminals 16 and 33 C = Power terminals C-34 and C-51, and odd-numbered terminals 1...15 on row C.		

(1) C-1, 3, 5, 7, 9, 11, 13, and 15 on the 1794-TBN are internally connected in the module to 220V AC L1.
(2) C-1, 3, 5, 7, 9, 11, 13, and 15 on the 1794-TBN are internally connected in the module to 220V AC common L2.

1794-TBN or 1794-TBNF Terminal Base Wiring for 1794-IM8 and 1794-OM8



(1794-TBN shown)

L1 = 220V AC power - Connect to terminal C-34.
L2 = 220V AC common - Connect to terminal B-16.
Use B-33 and C-51 for daisychaining to the next terminal base unit.

Configure Your AC Module

Table 2 - Image Table Memory Map for the 1794-IM8 Module

Dec	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Oct	**17**	**16**	**15**	**14**	**13**	**12**	**11**	**10**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**0**
Read	Not used - set to 0								I7	I6	I5	I4	I3	I2	I1	I0
Write	Not used - set to 0													Filter Time FT		

Where:
I = Input status
FT = Input filter time

Table 3 - Image Table Memory Map for the 1794-OM8 Module

Dec	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Oct	**17**	**16**	**15**	**14**	**13**	**12**	**11**	**10**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**0**
Read	Not used - set to 0															
Write	Not used - set to 0								07	06	05	04	03	02	01	00

Where:
O = Output

Set the Input Filter Time for the 1794-IM8 Module

To select your input filter time (FT) for channels 00...07, set the corresponding bits in the output image table (complementary word) for the module.

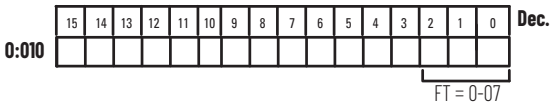
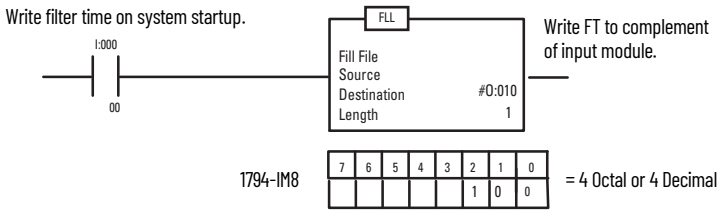


Table 4 - Input Filter Time for the 1794-IM8 Module

Bits			Description	Selected Filter Time	Maximum Filter Time (ms)	
02	**01**	**00**	**Filter Time for Inputs 00...07**		**Off to On**	**On to Off**
0	0	0	Filter time 0 (default)	256 µs	7.5	26.5
0	0	1	Filter time 1	512 µs	8	27
0	1	0	Filter time 2	1 ms	9	28
0	1	1	Filter time 3	2 ms	10	29
1	0	0	Filter time 4	4 ms	12	31
1	0	1	Filter time 5	8 ms	16	35
1	1	0	Filter time 6	16 ms	24.5	44
1	1	1	Filter time 7	32 ms	42	60.5

For example, setting bits 00, 01, and 02 as shown sets the Off to On filter time for inputs 00...07 to 12 ms. For other settings, see Table 4.



Specifications

Specifications – 220V AC Input Module 1794-IM8

Attribute	Value
Number of inputs	8, nonisolated
Recommended terminal base unit	1794-TBN, 1794-TBNK
Module mounting	See Figure 1 on page 9
On-state voltage Min Nom Max	 159V AC 240V AC 264V AC
On-state current Min Max	 5.27 mA 13.21 mA
Off-state voltage, max	40V AC
Off-state current, max	2.6 mA
Nominal input impedance	22.3 kΩ
Nominal input current	12 mA @ 240V
Isolation voltage	250V (continuous), Basic Insulation Type, field side to backplane Type tested @ 1530V AC for 60 s No isolation between individual channels
Input filter time(1)	See Table 4 on page 6
Flexbus current	30 mA @ 5V DC
Power dissipation, max	4.7 W @ 264V AC
Thermal dissipation, max	16.2 BTU/hr @ 264V AC

(1) Input Off to On filter time is the time from a valid input signal to recognition by the module.
Input On to Off filter time is the time from the input signal dropping below the valid level to recognition by the module.

Specifications – 220V AC Output Module 1794-OM8

Attribute	Value
Number of outputs	8, nonisolated
Recommended terminal base unit	1794-TBN, 1794-TBNF, 1794-TBNK, 1794-TBNFK
Module mounting	See Figure 2 on page 9
Output voltage Min Nom Max	 159V AC 240V AC 264V AC
Output current rating	4.0 A (8 outputs @ 500 mA)
On-state current Min Max	 50 mA per output 500 mA per output @ 55 °C (131 °F)
On-state voltage drop, max	1.5V AC @ 0.5 A
Surge current	7 A for 40 ms each, repeatable every 8 seconds
Off-state leakage, max	2.5 mA
Isolation voltage	250V (continuous), Basic Insulation Type, field side to backplane Type tested @ 1530V AC for 60 s No isolation between individual channels
Output signal delay(1) Off to On On to Off	 1/2 cycle max 1/2 cycle max
Flexbus current	60 mA @ 5V DC
Power dissipation, max	5.0 W @ 0.5 A
Thermal dissipation, max	17.1 BTU/hr @ 0.5 A
Fusing (when using the 1794-TBNF(2))	0.8 A, 250 slow-blow fuse (5 X 20 mm SAN-O MQ4-800 mA)

(1) Delay time is the time from the receipt of an output On or Off command to the output actually turning On or Off.
(2) Module outputs are not fused. We recommend that outputs be fused. If not using the 1794-TBNF, and fusing is desired, it must be provided externally.

General Specifications

Attribute	1794-IM8	1794-OM8
Terminal base screw torque	Determined by installed terminal base	
Dimensions, approx. (H x W x D)	94 x 94 x 69 mm (3.7 x 3.7 x 2.7 in.)	
Indicators (field side indication)	8 yellow status indicators (customer device driven)	8 yellow status indicators (logic driven)
External AC power supply voltage, nom	240V AC	
External AC power supply input frequency	47...3 Hz	
External AC power voltage range	159...264V AC (See derating charts on page 9)	
North American temperature code	T4	T4A
Keyswitch position	8	
Enclosure type rating	None (open-style)	
Weight, approx.	100 g (3.53 oz)	85 g (3.00 oz)
Wire size	Determined by installed terminal base	
Wiring category(1)	2 - on signal ports	

(1) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1 for more information.

Environmental Specifications

Attribute	Value
Operating temperature	IEC 60068-2-1 (Test Ad, operating cold), IEC 60068-2-2 (Test Bd, operating dry heat), IEC 60068-2-14 (Test Nb, operating thermal shock): 0...55 °C (32...131 °F)
Storage temperature	IEC 60068-2-1 (Test Ab, unpackaged nonoperating cold), IEC 60068-2-2 (Test Bb, unpackaged nonoperating dry heat), IEC 60068-2-14 (Test Na, unpackaged nonoperating thermal shock): -40...+85 °C (-40...+185 °F)
Temperature, surrounding air, max	55 °C (131 °F)
Relative humidity	IEC 60068-2-30 (Test Db, unpackaged damp heat): 5...95% noncondensing
Vibration	IEC60068-2-6 (Test Fc, operating): 5 g @ 10...500 Hz
Shock	IEC60068-2-27 (Test Ea, unpackaged shock): Operating 30 g Nonoperating 50 g
Emissions	IEC 61000-6-4
ESD immunity	IEC 61000-4-2: 6 kV contact discharges 8 kV air discharges
Radiated RF immunity	IEC 61000-4-3: 10V/m with 1 kHz sine-wave 80% AM from 80...2000 MHz 10V/m with 200 Hz 50% Pulse 100% AM @ 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM @ 1890 MHz 1V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz
EFT/B immunity	IEC 61000-4-4: ±2 kV @ 5 kHz on power ports ±2 kV @ 5 kHz on signal ports
Surge transient immunity	IEC 61000-4-5: ±1 kV line-line(DM) and ±2 kV line-earth(CM) on signal ports
Conducted RF immunity	IEC 61000-4-6: 10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz

Certifications

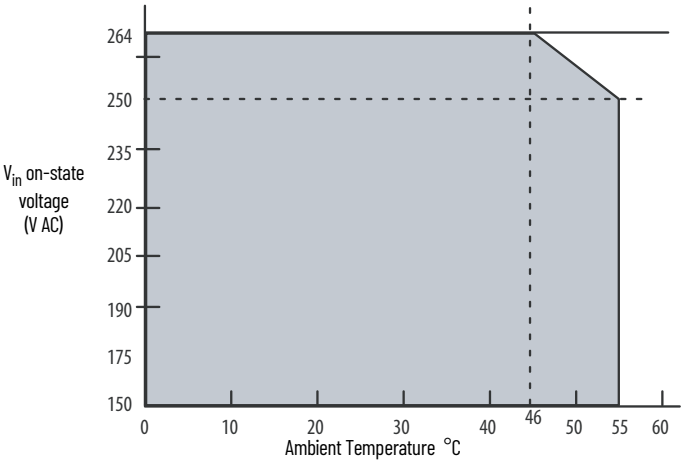
Certifications (when product is marked)(1)	Value
c-UL-us	UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E322657. UL Listed for Class I Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E334470.
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: EN 61326-1; Meas./Control/Lab., Industrial Requirements EN 61000-6-2; Industrial Immunity EN 61131-2; Programmable Controllers (Clause 8, Zone A & B) EN 61000-6-4; Industrial Emissions UK Statutory Instrument 2016 No. 1101 and European Union 2014/35/EU LVD, compliant with: EN 61131-2; Programmable Controllers (Clause 11) UK Statutory Instrument 2012 No. 3032 and European Union 2011/65/EU RoHS, compliant with: EN 63000; Technical documentation

Certifications (Continued)

KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3
EAC	Russian Customs Union TR CU 020/2011 EMC Technical Regulation Russian Customs Union TR CU 004/2011 LV Technical Regulation
RCM	Australian Radiocommunications Act, compliant with: EN 61000-6-4; Industrial Emissions
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436 Arrêté ministériel n° 6404-15 du 1 er muharram 1437

(1) See the Product Certification link at rok.auto/certifications for Declaration of Conformity, Certificates, and other certification details.

Figure 1 - Derating Curve for 1794-IM8

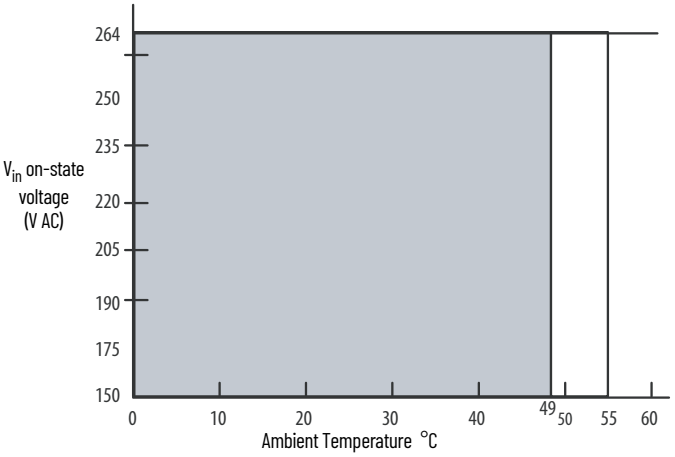


The area within the curve represents the safe operating range for the module under various conditions of user supplied 220V AC supply voltages and ambient temperatures.

= All mounting positions (including normal horizontal, vertical, inverted horizontal) safe operating range

Voltage (max)	Temperature (max)
264	46
250	55

Figure 2 - Derating Curve for 1794-OM8



The area within the curve represents the safe operating range for the module under various conditions of user supplied 220V AC supply voltages and ambient temperatures.

= Normal mounting safe operating range. Includes

= Other mounting positions (including inverted horizontal, vertical) safe operating range

Mounting	Temperature (max)
Normal horizontal	55
Other mounting positions (including inverted horizontal, vertical)	49