

## Kinetix 5100 Single-axis EtherNet/IP Indexing Drives

Catalog Numbers 2198-E1004-ERS, 2198-E1007-ERS, 2198-E1015-ERS, 2198-E1020-ERS, 2198-E2030-ERS, 2198-E2055-ERS, 2198-E2075-ERS, 2198-E2150-ERS, 2198-E4004-ERS, 2198-E4007-ES, 2198-E4015-ERS, 2198-E4020-ERS, 2198-E4030-ERS, 2198-E4055-ERS, 2198-E4075-ERS, 2198-E4150-ERS



**ATTENTION:** Read this document and the documents listed in the Additional Resources section about installation, configuration and operation of this equipment before you install, configure, operate or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice. If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

注意：在安装、配置、操作和维护本产品前，请阅读本文档以及“其他资源”部分列出的有关设备安装、配置和操作的相应文档。除了所有适用规范、法律和标准的相关要求之外，用户还必须熟悉安装和接线说明。

安装、调整、投运、使用、组装、拆卸和维护等各项操作必须由经过适当训练的专业人员按照适用的操作规范实施。

如果未按照制造商指定的方式使用该设备，则可能会损害设备提供的保护。

**ATENÇÃO:** Antes de instalar, configurar, poner en funcionamiento o realizar el mantenimiento de este producto, lea este documento y los documentos listados en la sección Recursos adicionales acerca de la instalación, configuración y operación de este equipo. Los usuarios deben familiarizarse con las instrucciones de instalación y cableado y con los requisitos de todos los códigos, leyes y estándares vigentes.

El personal debidamente capacitado debe realizar las actividades relacionadas a la instalación, ajustes, puesta en servicio, uso, ensamblaje, desensamblaje y mantenimiento de conformidad con el código de práctica aplicable. Si este equipo se usa de una manera no especificada por el fabricante, la protección provista por el equipo puede resultar afectada.

**ATENÇÃO:** Leia este e os demais documentos sobre instalação, configuração e operação do equipamento que estão na seção Recursos adicionais antes de instalar, configurar, operar ou manter este produto. Os usuários devem se familiarizar com as instruções de instalação e fiação além das especificações para todos os códigos, leis e normas aplicáveis.

É necessário que as atividades, incluindo instalação, ajustes, colocação em serviço, utilização, montagem, desmontagem e manutenção sejam realizadas por pessoal qualificado e especializado, de acordo com o código de prática aplicável.

Caso este equipamento seja utilizado de maneira não estabelecida pelo fabricante, a proteção fornecida pelo equipamento pode ficar prejudicada.

**ВНИМАНИЕ:** Перед тем как устанавливать, настраивать, эксплуатировать или обслуживать данное оборудование, прочитайте этот документ и документы, перечисленные в разделе «Дополнительные ресурсы». В этих документах изложены сведения об установке, настройке и эксплуатации данного оборудования. Пользователи обязаны ознакомиться с инструкциями по установке и прокладке соединений, а также с требованиями всех применимых норм, законов и стандартов.

Все действия, включая установку, наладку, ввод в эксплуатацию, использование, сборку, разборку и техническое обслуживание, должны выполняться обученным персоналом в соответствии с применимыми нормами и правилами.

Если оборудование используется не предусмотренным производителем образом, защита оборудования может быть нарушена.

注意：本製品を設置、構成、稼働または保守する前に、本書および本機器の設置、設定、操作についての参考資料の該当箇所に記載されている文書に目を通してください。ユーザは、すべての該当する条例、法律、規格の要件に加えて、設置および配線の手順に習熟している必要があります。

設置調整、運転の開始、使用、組立て、解体、保守を含む諸作業は、該当する実施規則に従って訓練を受けた適切な作業員が実行する必要があります。

本機器が製造メーカーにより指定されていない方法で使用されている場合、機器により提供されている保護が損なわれる恐れがあります。

**ACHTUNG:** Lesen Sie dieses Dokument und die im Abschnitt „Weitere Informationen“ aufgeführten Dokumente, die Informationen zu Installation, Konfiguration und Bedienung dieses Produkts enthalten, bevor Sie dieses Produkt installieren, konfigurieren, bedienen oder warten. Anwender müssen sich neben den Bestimmungen aller anwendbaren Vorschriften, Gesetze und Normen zusätzlich mit den Installations- und Verdrahtungsanweisungen vertraut machen.

Arbeiten im Rahmen der Installation, Anpassung, Inbetriebnahme, Verwendung, Montage, Demontage oder Instandhaltung dürfen nur durch ausreichend geschulte Mitarbeiter und in Übereinstimmung mit den anwendbaren Ausführungsvorschriften vorgenommen werden.

Wenn das Gerät in einer Weise verwendet wird, die vom Hersteller nicht vorgesehen ist, kann die Schutzfunktion beeinträchtigt sein.

**ATTENTION:** Lisez ce document et les documents listés dans la section Ressources complémentaires relatifs à l'installation, la configuration et le fonctionnement de cet équipement avant d'installer, configurer, utiliser ou entretenir ce produit. Les utilisateurs doivent se familiariser avec les instructions d'installation et de câblage en plus des exigences relatives aux codes, lois et normes en vigueur. Les activités relatives à l'installation, le réglage, la mise en service, l'utilisation, l'assemblage, le démontage et l'entretien doivent être réalisées par des personnes formées selon le code de pratique en vigueur.

Si cet équipement est utilisé d'une façon qui n'a pas été définie par le fabricant, la protection fournie par l'équipement peut être compromise.

주의: 본 제품 설치, 설정, 작동 또는 유지 보수하기 전에 본 문서를 포함하여 설치, 설정 및 작동에 관한 참고 자료 섹션의 문서들을 반드시 읽고 숙지하십시오. 사용자는 모든 관련 규정, 법규 및 표준에서 요구하는 사항에 대해 반드시 설치 및 배선 지침을 숙지해야 합니다.

설치, 조정, 가동, 사용, 조립, 분해, 유지보수 등 모든 작업은 관련 규정에 따라 적절한 교육을 받은 사용자를 통해서만 수행해야 합니다.

본 장비를 제조사가 명시하지 않은 방법으로 사용하면 장비의 보호 기능이 손상될 수 있습니다.

**ATTENZIONE:** Prima di installare, configurare ed utilizzare il prodotto, o effettuare interventi di manutenzione su di esso, leggere il presente documento ed i documenti elencati nella sezione "Altre risorse", riguardanti l'installazione, la configurazione ed il funzionamento dell'apparecchiatura. Gli utenti devono leggere e comprendere le istruzioni di installazione e cablaggio, oltre ai requisiti previsti dalle leggi, codici e standard applicabili.

Le attività come installazione, regolazioni, utilizzo, assemblaggio, disassemblaggio e manutenzione devono essere svolte da personale adeguatamente addestrato, nel rispetto delle procedure previste. Qualora l'apparecchio venga utilizzato con modalità diverse da quanto previsto dal produttore, la sua funzione di protezione potrebbe venire compromessa.

**DİKKAT:** Bu ürünün kurulumu, yapılandırılması, işletilmesi veya bakımı öncesinde bu dokümanı ve bu ekipmanın kurulumu, yapılandırılması ve işletimi ile ilgili ilave Kaynaklar bölümünde yer listelenmiş dokümanları okuyun. Kullanıcılar yürürlükteki tüm yönetmelikler, yasalar ve standartların gereksinimlerine ek olarak kurulum ve kablolama talimatlarını da öğrenmek zorundadır.

Kurulum, ayarlar, hizmete alma, kullanma, parçaları birleştirme, parçaları sökme ve bakım gibi aktiviteler sadece uygun eğitimleri almış kişiler tarafından yürürlükteki uygulama yönetmeliklerine uygun şekilde yapılabilir.

Bu ekipman üretici tarafından belirlenmiş amacın dışında kullanılırsa, ekipman tarafından sağlanan koruma bozulabilir.

注意事項：在安装、設定、操作或維護本產品前，請先閱讀此文件以及列於「其他資源」章節中有關安裝、設定與操作此設備的文件。使用者必須熟悉安裝和配線指示，並符合所有法規、法律和標準要求。

包括安裝、調整、交付使用、使用、組裝、拆卸和維護等動作都必須交由已經過適當訓練的人員進行，以符合適用的實作法規。

如果將設備用於非製造商指定的用途時，可能會造成設備所提供的保護功能受損。

**POZOR:** Než začnete instalovat, konfigurovat či provozovat tento výrobek nebo provádět jeho údržbu, přečtěte si tento dokument a dokumenty uvedené v části Dodatečné zdroje ohledně instalace, konfigurace a provozu tohoto zařízení. Uživatelé se musejí vedle požadavků všech relevantních vyhlášek, zákonů a norem nutně seznámit také s pokyny pro instalaci a elektrické zapojení.

Činnosti zahrnující instalaci, nastavení, uvedení do provozu, užívání, montáž, demontáž a údržbu musí vykonávat vhodné proškolený personál v souladu s příslušnými prováděcími předpisy.

Pokud se toto zařízení používá způsobem neodpovídajícím specifikaci výrobce, může být narušena ochrana, kterou toto zařízení poskytuje.

**UWAGA:** Przed instalacją, konfiguracją, użytkowaniem lub konserwacją tego produktu należy przeczytać niniejszy dokument oraz wszystkie dokumenty wymienione w sekcji Dodatkowe źródła omawiające instalację, konfigurację i procedury użytkowania tego urządzenia. Użytkownicy mają obowiązek zapoznać się z instrukcjami dotyczącymi instalacji oraz oprzewodowania, jak również z obowiązującymi kodeksami, prawem i normami.

Działania obejmujące instalację, regulację, przekazanie do użytkowania, użytkowanie, montaż, demontaż oraz konserwację muszą być wykonywane przez odpowiednio przeszkolony personel zgodnie z obowiązującym kodeksem postępowania.

Jesli urządzenie jest użytkowane w sposób inny niż określony przez producenta, zabezpieczenie zapewniane przez urządzenie może zostać ograniczone.

**OBBS:** Läs detta dokument samt dokumentet, som står listat i avsnittet Övriga resurser, om installation, konfigurering och drift av denna utrustning innan du installerar, konfigurerar eller börjar använda eller utföra underhållsarbete på produkten. Användare måste bekanta sig med instruktioner för installation och kabeldragning, förutom krav enligt gällande koder, lagar och standarder.

Åtgärder som installation, justering, service, användning, montering, demontering och underhållsarbete måste utföras av personal med lämplig utbildning enligt lämpligt bruk.

Om denna utrustning används på ett sätt som inte anges av tillverkaren kan det hända att utrustningens skyddsanordningar försätts ur funktion.

**LET OP:** Lees dit document en de documenten die genoemd worden in de paragraaf Aanvullende informatie over de installatie, configuratie en bediening van deze apparatuur voordat u dit product installeert, configureert, bedient of onderhoudt. Gebruikers moeten zich vertrouwd maken met de installatie en de bedringsinstructies, naast de vereisten van alle toepasselijke regels, wetten en normen. Activiteiten zoals het installeren, afstellen, in gebruik stellen, gebruiken, monteren, demonteren en het uitvoeren van onderhoud mogen uitsluitend worden uitgevoerd door hiervoor opgeleid personeel en in overeenstemming met de geldende praktijkregels.

Indien de apparatuur wordt gebruikt op een wijze die niet is gespecificeerd door de fabrikant, dan bestaat het gevaar dat de beveiliging van de apparatuur niet goed werkt.

### Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
added specifications per EU and UK Ecodesign, including efficiency class to the additional resources table	5

### Specifications

Attribute	2198-E1004-ERS, 2198-E1007-ERS, 2198-E1015-ERS, 2198-E1020-ERS, 2198-E2030-ERS, 2198-E2055-ERS, 2198-E2075-ERS, 2198-E2150-ERS, 2198-E4004-ERS, 2198-E4007-ERS, 2198-E4015-ERS, 2198-E4020-ERS, 2198-E4030-ERS, 2198-E4055-ERS, 2198-E4075-ERS, 2198-E4150-ERS
Surrounding air temperature Operating Storage	0...50 °C (32...122 °F) -40...+70 °C (-40...+158 °F)
Short circuit current rating	5000 A rms symmetrical
Branch-circuit short circuit protection	The Kinetix® 5100 drives use internal solid-state motor short-circuit protection and, when connected to a suitable branch circuit protection, are rated for use on a circuit that can deliver up to 5000 A (fuses or circuit breakers). The components for your system must meet code requirements for branch circuit protection. The short-circuit current must be kept below the short-circuit current rating of the circuit breaker. Do not use circuit protection devices on the output of an AC drive as an isolating disconnect switch or motor overload protection. These devices are designed to operate on sine wave voltage. The PWM waveform of the drive prevents the circuit protection devices from proper operation. Damage to the drive can occur.
Leakage current	<ul style="list-style-type: none"> <li>Kinetix 5100 drives produce leakage current in the protective-earthing conductor that exceeds 3.5 mA AC and/or 10 mA DC. The minimum size of the protective-earthing (grounding) conductor that is used in the application must comply with local safety regulations for high protective-earthing conductor current equipment.</li> <li>Kinetix 5100 drives produce DC current in the protective-earthing conductor and can reduce the ability of a residual current device (RCD) or residual current monitor (RCM) of type A or AC to provide protection for the drive module and other equipment in the installation. Only an RCD or an RCM of Type B is allowed on the supply side of this product.</li> </ul>

### Motor Overload Protection

This servo drive uses solid-state motor overload protection that operates in accordance with UL 61800-5-1.

Motor overload protection is provided by algorithms that estimate actual motor temperature that is based on operating conditions.

In addition, this drive provides an input for an external temperature sensor/thermistor device, which is embedded in the motor, to support the UL requirement for motor overload protection.

Some motors supported by this drive, like the Kinetix TLP motor, do not contain temperature sensors/thermistors; therefore, motor overload protection against excessive consecutive motor overloads with power cycling is not supported.

This servo drive meets the following UL 61800-5-1 requirements for solid-state overload protection.

Motor Overload Protection Trip Point	Value
Ultimately	100% overload
Within 8 minutes	200% overload
Within 20 seconds	600% overload



**ATTENTION:** To avoid damage to your motor due to overheating caused by excessive, successive motor-overload trips, follow the wiring diagram that is provided in the Kinetix 5100 Single-axis EtherNet/IP Servo Drives Users Manual, publication [2198-UM004](#) for your motor and drive combination.

See Kinetix 5100 Single-axis EtherNet/IP™ Servo Drives Users Manual, publication [2198-UM004](#), for the interconnect diagram that illustrates the wiring between your motor and drive.



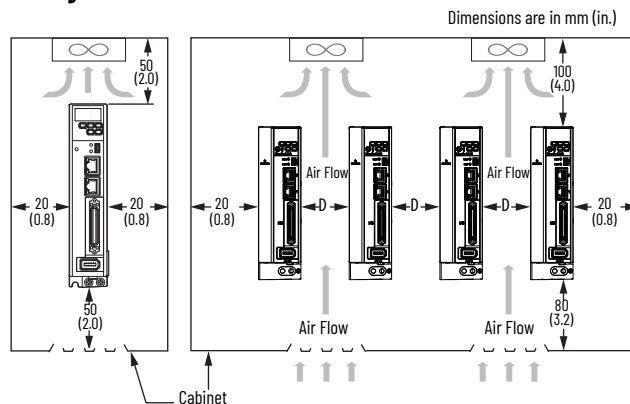
**SHOCK HAZARD:** DC bus capacitors may retain hazardous voltages after input power has been removed. DO NOT touch the Terminal P1, P2, DC-, DC+, ISH and ESH within the capacitor discharging time (listed in the table below). Before working on the drive, measure the DC bus voltage to verify it has reached a safe level. When DC bus voltage is above 50V DC, the Charge LED light on the drive must be on. Failure to observe this precaution could result in severe bodily injury or loss of life.

Cat. No.	Capacitor Discharging Time (minutes)	Cat. No.	Capacitor Discharging Time (minutes)
2198-E1004-ERS	5	2198-E4004-ERS	5
2198-E1007-ERS	15	2198-E4007-ERS	5
2198-E1015-ERS	15	2198-E4015-ERS	5
2198-E1020-ERS	20	2198-E4020-ERS	5
2198-E2030-ERS	20	2198-E4030-ERS	5
2198-E2055-ERS	35	2198-E4055-ERS	5
2198-E2075-ERS	45	2198-E4075-ERS	10
2198-E2150-ERS	110	2198-E4150-ERS	10

### Mount

To maintain adequate ventilation, use at least the minimum clearance dimension shown. Install cooling fans above servo drives inside the cabinet to remove excess heat. Keep servo drives away from heat sources. Make sure that the ambient temperature at 5.0 cm (1.96 in.) beneath the drives does not exceed the operating temperature range.

### Mounting Clearance

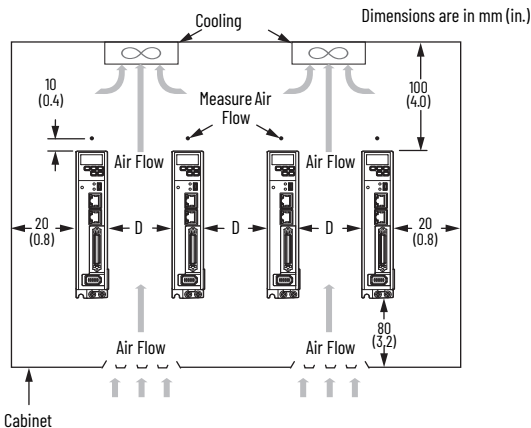


Kinetix 5100 Drive Cat. No.	Temperature, Ambient (Ta) Versus Dimension D
2198-E1004-ERS 2198-E1007-ERS 2198-E1015-ERS 2198-E1020-ERS 2198-E2030-ERS 2198-E2055-ERS 2198-E2075-ERS 2198-E2150-ERS 2198-E4004-ERS 2198-E4007-ERS 2198-E4015-ERS 2198-E4020-ERS 2198-E4030-ERS 2198-E4055-ERS 2198-E4075-ERS 2198-E4150-ERS	

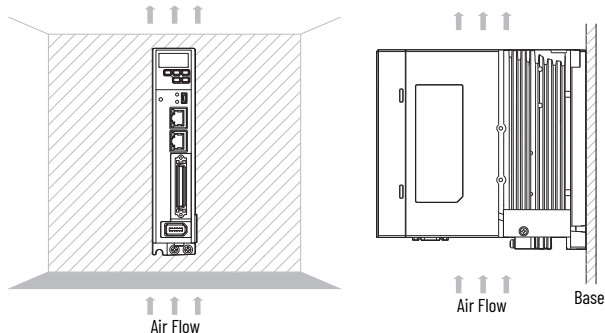
**2198-E1004-ERS Drive Cooling Fan Requirement**



**ATTENTION:** When 2198-E1004-ERS drives are mounted in a cabinet, install a cooling fan. Make sure that there is a minimum of 0.5 m/s (1.6 ft/s) air flow at 10 mm (0.4 in.) above the top center of the drive.



**Mount Orientation**



**IMPORTANT** Mount the drive in an upright position, as shown. Do not mount the drive horizontally (that is, rotated 90 degree from the upright position) or with front cover facing upward or downward.

**Power Wiring Requirements**

Kinetix 5100 Drive Cat. No	Description	Connects to Terminals	Recommended Wire Size mm <sup>2</sup> (AWG) <sup>(2)</sup>	Strip Length mm (in.)	Torque Value N·m (lb·in)
2198-E1004-ERS 2198-E1007-ERS 2198-E1015-ERS	Main V AC input power	L1 L2 L3	0.20...3.31 (24...12)	11 (0.4)	— <sup>(1)</sup>
0.20...5.26 (24...10)			13 (0.5)	— <sup>(1)</sup>	
2198-E2055-ERS 2198-E2075-ERS		L1C L2C	0.82...8.36 (18...8)	11 (0.4)	1.8 (15.49) <sup>(3)</sup>
			2.08...21.1 (14...4)	13 (0.5)	3.1 (27.44) <sup>(3)</sup>
2198-E4004-ERS 2198-E4007-ERS 2198-E4015-ERS	Main V AC input power	L1 L2 L3	0.20...5.26 (24...10)	13 (0.5)	— <sup>(1)</sup>
2198-E4020-ERS 2198-E4030-ERS 2198-E4055-ERS 2198-E4075-ERS			Control 24V DC input power	24V+ 24V-	0.82...8.36 (18...8)
2198-E4150-ERS			2.08...21.1 (14...4)	13 (0.5)	3.1 (27.44) <sup>(3)</sup>

**Power Wiring Requirements (Continued)**

Kinetix 5100 Drive Cat. No	Description	Connects to Terminals	Recommended Wire Size mm <sup>2</sup> (AWG) <sup>(2)</sup>	Strip Length mm (in.)	Torque Value N·m (lb·in)		
2198-E1004-ERS 2198-E1007-ERS 2198-E1015-ERS	Motor power	U V W	0.20...3.31 (24...12)	11 (0.4)	— <sup>(1)</sup>		
2198-E1020-ERS 2198-E2030-ERS			0.20...5.26 (24...10)	13 (0.5)	— <sup>(1)</sup>		
2198-E2055-ERS 2198-E2075-ERS 2198-E2150-ERS			2.08...21.1 (14...4)	13 (0.5)	3.1 (27.44) <sup>(3)</sup>		
2198-E4004-ERS 2198-E4007-ERS 2198-E4015-ERS			0.20...5.26 (24...10)	13 (0.5)	— <sup>(1)</sup>		
2198-E4020-ERS 2198-E4030-ERS 2198-E4055-ERS			0.82...8.36 (18...8)		1.6 (13.9) <sup>(3)</sup>		
2198-E4075-ERS 2198-E4150-ERS			2.08...21.1 (14...4)		3.1 (27.44) <sup>(3)</sup>		
2198-E1004-ERS 2198-E1007-ERS 2198-E1015-ERS			Shunt resistor	DC+ ISH ESH	0.20...3.31 (24...12)	11 (0.4)	— <sup>(1)</sup>
2198-E1020-ERS 2198-E2030-ERS					0.20...5.26 (24...10)	13 (0.5)	— <sup>(1)</sup>
2198-E2055-ERS 2198-E2075-ERS					0.82...8.36 (18...8)	11 (0.4)	1.8 (15.49) <sup>(3)</sup>
2198-E2150-ERS					2.08...21.1 (14...4)	13 (0.5)	3.1 (27.44) <sup>(3)</sup>
2198-E4004-ERS 2198-E4007-ERS 2198-E4015-ERS	0.20...5.26 (24...10)	13 (0.5)			— <sup>(1)</sup>		
2198-E4020-ERS 2198-E4030-ERS 2198-E4055-ERS 2198-E4075-ERS	0.82...8.36 (18...8)	13 (0.5)			1.6 (13.9) <sup>(3)</sup>		
		11 (0.4)			1.6 (13.9) <sup>(3)</sup>		
2198-E4150-ERS	2.08...21.1 (14...4)	13 (0.5)			3.1 (27.44) <sup>(3)</sup>		
2198-E1xxx-ERS 2198-E2xxx-ERS 2198-E4xxx-ERS	Safe Torque-off	SB+ SB- S1 S1C S2 S2C SS+ SS-			0.75 (18) (stranded wire with ferrule) 1.5 (16) (solid wire)	8.0 (0.31)	— <sup>(1)</sup>

- (1) This connector uses spring tension to hold the wire in place.
- (2) Motor power cable depends on motor/drive combination.
- (3) Attach using a terminal crimp lug.

**Input Power UL/CSA Circuit-protection Specifications**

Kinetix 5100 Drive Cat. No	Drive Voltage	Fuses (Bussmann) Cat. No.	Circuit Breaker Cat. No.
2198-E1004-ERS	120V/230V AC, single-phase	KTK-R-15 (15A)	1489-M2D100
	230V AC, three-phase	KTK-R-10 (10A)	1489-M3D100
2198-E1007-ERS	120V/230V AC, single-phase	KTK-R-20 (20A)	1489-M2D200
	230V AC, three-phase	KTK-R-15 (15A)	1489-M3D130
2198-E1015-ERS	120V/230V AC, single-phase	KTK-R-30 (30A)	1489-M2D300
	230V AC, three-phase	KTK-R-25 (25A)	1489-M3D200
2198-E1020-ERS	120V/230V AC, single-phase	LPJ-40SP (40A)	1489-M2D400
	230V AC, three-phase	LPJ-35SP (35A)	1489-M3D300
2198-E2030-ERS	230V AC, three-phase	LPJ-50SP (50A)	1489-M3D350
2198-E2055-ERS		LPJ-70SP (70A)	1489-M3D600
2198-E2075-ERS		LPJ-80SP (80A)	1406-G2C3-C70
2198-E2150-ERS		LPJ-125SP (125A)	1406-G2C3-D12
2198-E4004-ERS	380...480V AC, three-phase	KTK-R-10 (10A)	1489-M3D100
2198-E4007-ERS		KTK-R-15 (15A)	1489-M3D100
2198-E4015-ERS		KTK-R-20 (20A)	1489-M3D150
2198-E4020-ERS		KTK-R-25 (25A)	1489-M3D200
2198-E4030-ERS		KTK-R-30 (30A)	1489-M3D300
2198-E4055-ERS		LPJ-35SP (35A)	-
2198-E4075-ERS		LPJ-45SP (45A)	-
2198-E4150-ERS		LPJ-90SP (90A)	-

**Control Power Circuit-protection Specifications**

Kinetix 5100 Drive Cat. No	Fuse (Bussman) Cat. No.	Circuit breaker Cat. No.
2198-E1004-ERS	KTK-R-2 (2A)	1489-M2D010
2198-E1007-ERS		
2198-E1015-ERS		
2198-E1020-ERS		1489-M2D020
2198-E2030-ERS	KTK-R-3 (3A)	1489-M2D010
2198-E2055-ERS		1489-M2D016
2198-E2075-ERS		
2198-E2150-ERS	KTK-R-5 (5A)	1489-M2D030

**EMI Filters**

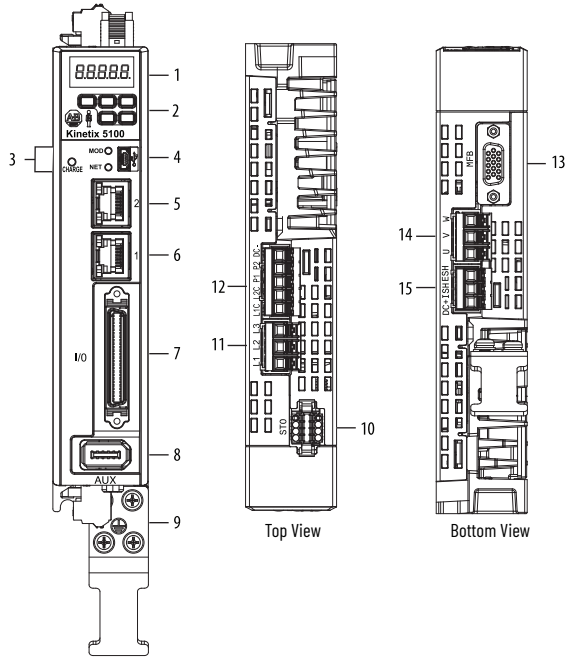
See the Kinetix 5100 Single-axis EtherNet/IP Servo Drives Users Manual, publication [2198-UM004](#) for instructions on how to install EMI filters to comply with the EMC Directive.

**Input Power IEC (non-UL/CSA) Circuit-protection Specifications**

Kinetix 5100 Drive Cat. No	Drive Voltage	DIN gG Fuses Amps. Max	Circuit Breaker Cat. No.
2198-E1004-ERS	120V/230V AC, single-phase	15	1489-M2D100
	230V AC, three-phase	10	1489-M3D100
2198-E1007-ERS	120V/230V AC, single-phase	20	1489-M2D200
	230V AC, three-phase	15	1489-M3D130
2198-E1015-ERS	120V/230V AC, single-phase	30	1489-M2D300
	230V AC, three-phase	25	1489-M3D200
2198-E1020-ERS	120V/230V AC, single-phase	40	1489-M2D400
	230V AC, three-phase	35	1489-M3D300
2198-E2030-ERS	230V AC, three-phase	50	1489-M3D350
2198-E2055-ERS		70	1489-M3D600
2198-E2075-ERS		80	1406-G2C3-C70
2198-E2150-ERS		125	1406-G2C3-D12
2198-E4004-ERS	380...480V AC, three-phase	10	1489-M3D100
2198-E4007-ERS		15	1489-M3D100
2198-E4015-ERS		20	1489-M3D150
2198-E4020-ERS		25	1489-M3D200
2198-E4030-ERS		30	1489-M3D300
2198-E4055-ERS		35	1489-M3D350
2198-E4075-ERS		45	1406-G6C3-C45
2198-E4150-ERS		90	1406-G6C3-C60

### Connector and Feature Description

2198-E1004-ERS Kinetix 5100 drive is shown.



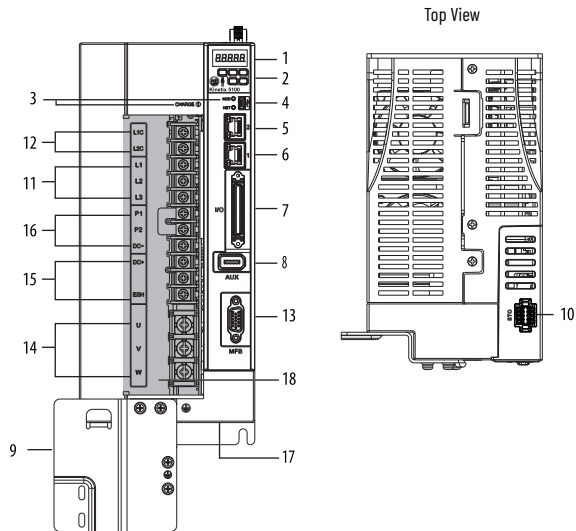
Item	Description
1	Status display
2	Navigation push buttons
3	Module, network, and charge status indicator
4	Mini USB connector
5	Ethernet (PORT2) RJ45 connector
6	Ethernet (PORT1) RJ45 connector
7	I/O signal connector
8	Auxiliary feedback connector
9	Motor cable ground plate
10	Safe torque-off (STO) connector
11	Main power input connector or terminals <sup>(1)</sup>
12	Control power input (200V class drive) and DC bus connector or terminals <sup>(1)</sup>
13	Motor feedback connector
14	Motor power output connector or terminals <sup>(1)</sup>
15	External shunt resistor connector or terminals <sup>(1)</sup>
16	DC bus terminals
17	Cooling fans (on bottom of drive)
18	Protective cover (not included on all models)

(1) Connector plug applies to 2198-E1004, 2198-E1007, and 2198-E1015 drives. For larger drives, access these same signals on the 13 or 14-position terminal block.

### Additional Resources

These documents contain additional information concerning related products from Rockwell Automation. You can view or download publications at [rok.auto/literature](http://rok.auto/literature).

2198-E2055-ERS Kinetix 5100 drive is shown.



Resource	Description
Kinetix 5700, 5500, 5300, 5100 Servo Drive Specifications, publication <a href="#">KNX-TD003</a>	Provides product specifications for Kinetix Integrated Motion over the EtherNet/IP network and EtherNet/IP networking servo drive families.
Kinetix Rotary and Linear Motion Cable Specifications, publication <a href="#">KNX-TD004</a>	Product specifications for Kinetix 2090 motor and interface cables.
Kinetix Servo Drive Performance Specifications per Ecodesign Regulation (EU) 2019/1781 and UK SI 2021 No. 745, publication <a href="#">KNX-TD006</a>	Provides specifications per EU and UK Ecodesign, including efficiency class.
Kinetix 5100 Single-axis EtherNet/IP Servo Drives Users Manual, publication <a href="#">2198-UM004</a>	Information on how to install, configure, start, and troubleshoot your Kinetix 5100 servo drive system.
Industrial Automation Wiring and Grounding Guidelines, publication <a href="#">1770-4.1</a>	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website: <a href="http://rok.auto/certifications">rok.auto/certifications</a>	Provides declarations of conformity, certificates, and other certification details.

## Rockwell Automation Support

Use these resources to access support information.

<b>Technical Support Center</b>	Find help with how-to videos, FAQs, chat, user forums, Knowledgebase, and product notification updates.	<a href="http://rok.auto/support">rok.auto/support</a>
<b>Local Technical Support Phone Numbers</b>	Locate the telephone number for your country.	<a href="http://rok.auto/phonesupport">rok.auto/phonesupport</a>
<b>Technical Documentation Center</b>	Quickly access and download technical specifications, installation instructions, and user manuals.	<a href="http://rok.auto/techdocs">rok.auto/techdocs</a>
<b>Literature Library</b>	Find installation instructions, manuals, brochures, and technical data publications.	<a href="http://rok.auto/literature">rok.auto/literature</a>
<b>Product Compatibility and Download Center (PCDC)</b>	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	<a href="http://rok.auto/pcdc">rok.auto/pcdc</a>

## Documentation Feedback

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## Waste Electrical and Electronic Equipment (WEEE)



At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental compliance information on its website at [rok.auto/pec](http://rok.auto/pec).

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