



Your motor, your way...now

The Mod-Squad stands on alert ready to tailor a LEESON or Lincoln stock motor to meet your modified motor needs in a few days or less. From one modified motor up to a few—there is no faster, more versatile source for mechanically or electrically “customerized” motors.

Starting with an off-the-shelf LEESON or Lincoln motor selected from the nearly 6,000 LEESON or Lincoln stock motors, the modifications listed here can be completed in the time frame noted for each item.

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ORDERING INFORMATION

To order please specify the catalog number of the LEESON or Lincoln stock motor to be modified and the Mod-Squad modification catalog number or numbers desired.

An inventory of popular motors is maintained by the Modification Center for fast delivery. **However, delivery of the modified motor is governed by availability of the stock motor.** If a stock motor is shipped from a District Warehouse to the Modification Center in Indianapolis, IN, the cost of the inbound freight is added to the price of the modified motor and delivery of the modified motor will be extended by the inbound transit time.

Modification list prices are subject to the same discounts as apply to the motor. (Some motors, such as explosion-proof, may not be modified.) Days noted are working days excluding holidays and weekends—larger quantities may require additional leadtime.

MOD-SQUAD CANCELLATION POLICY

Modified motors may not be returned for credit or re-stocking. If a modification order is cancelled before shipment, a cancellation charge of double the modification charge will be invoiced to the customer. Any Mod-Squad order cancelled before modification is completed is subject to cancellation charges of 10% of total charges for that item.

Terms are net 30 days, FOB Indianapolis, IN, with freight prepaid on single shipments of 1,500 pounds or more to the first destination within the continental United States, excluding Alaska.

L1 Balancing

Two Days*

The LEESON balancing modification has been discontinued due to high costs of re-balancing by an outside firm. Contact your sales office for a quote on special or precision balanced production motors, requiring a minimum order of 10 pieces or contact a LEESON Authorized Service Center for a quote on a Special balance modification.

L2 Bearing Modifications

Two Days

#L2a Available on all motors except the Lincoln motors with NN in the NOTES column. 48, 56 and 143T-145T, Agricultural motors as well as all Washguard duty and Wash-Thru motors have sealed bearings as standard. Note! Adding sealed bearings to Motors having grease fittings may not make the bearings regreasable. Grease fittings will be removed and plugged.

NEMA Frame	Catalog Number
42	L2A42
48	L2A48
56	L2A56
143T-145T	L2A140
182T-184T	L2A180
213T-215T	L2A210
254T-256T	L2A250
284T-286T	L2A280
324T-326T	L2A320
364T-365T	L2A360
404T-405T	L2A400
444T-449T	L2A440

#L2b Stock motors with shielded or sealed bearings – Replace standard bearings with ones having low-temperature lubricant (Beacon #325 or equivalent), with a temperature range of -75°F to +250°F. Standard lubricant has a temperature range of -20°F to +300°F and is considered a high temp lubricant for these motors. **Explosion proof motors can only be rated to a -13°F temperature.**

NEMA Frame	Catalog Number
42	L2B42
48	L2B48
56	L2B56
143T-145T	L2B140
182T-184T*	L2B180
213T-215T*	L2B210

*Rolled steel, cast iron or aluminum motors

#L2c Change bearing grease on cast iron motors with open-type regreaseable bearings. Endbells and bearings are purged and repacked with low-temperature grease (Beacon #325 or equivalent) with a temperature range of -75°F to +250°F or high-temperature grease (Dow Corning DC44M or equivalent) with a temperature range of -40°F to +400°F. **Specify grease to be used.** Check with LEESON to verify the motor can operate in the temperature range required!

LEESON Only

NEMA Frame	IEC Frame	Catalog Number
254T-256T	–	L2C250
284T-286T	160	L2C280
324T-326T	180	L2C320
364T-365T	200	L2C360
404T-405T	225	L2C400
444T-449T	250	L2C440

#L2d Install insulated bearings to protect inverter-driven motors from inverter-sourced shaft voltages. **May not be installed on Division 1 or Division 2 hazardous locations.** Contact factory for lead time on installing insulated bearings

NEMA Frame	Catalog Number
143T-145T	L2D140
182T-184T	L2D180
213T-215T	L2D215
254T-256T	L2D250
284T-286T	L2D280
324T-326T	L2D320
364T-365T	L2D360
404T-405T	L2D400
444T-449T	L2D440

L3 Brakemotor Modifications - LEESON Only

Three Days

"Motors and BrakeKits sold separately"

#L3a Convert brakemotors (TENV only) with standard enclosure brakes to weatherproof brakes by changing the disc brake. Weatherproof brakes have additional sealing and protection. Price includes cost of weatherproof brake.

Brake Rating	Catalog Number
3 lb-ft	L3A3
6 lb-ft	L3A6
10 lb-ft	L3A10
15 lb-ft	L3A15
25 lb-ft	L3A25

#L3b Change the standard brake to one with a different torque rating. **Specify torque rating.** Standard enclosure brakes only—not weatherproof. Some torque limitations apply, specify torque rating. **Catalog Number L3B.**

#L3c Change Brake Coil Voltage. Change from standard coil voltage to 115 volts (for Stearns brand brakes only). **Catalog Number L3C.**

#L3d Install a LEESON BrakeKit. See page 46 for BrakeKits available and motors that can be converted. **Specify the catalog number of both the stock motor and the BrakeKit.**



BrakeKit Installation

#L3e Remove brake from stock brakemotor for customers supplying their own brake. **Specify Catalog Number L3E.**

#L3f Assemble double C-face coupler brake on C-face motor. MOD charge is for assembly only. Brake and motor are purchased separately. **Specify the catalog number of the stock motor and coupler brake.**
Catalog Number L3F56140 - 56C, 143TC, or 145TC motors.
Catalog Number L3F180210 - 182TC, 184TC, 213TC, or 215TC motors.

#L3g Change Brake Coil Voltage. Change from standard coil voltage to 200 volts (for Stearns brand brakes only).
Catalog Number L3G1.5-3 - 1.5 & 3 lb-ft brakes
Catalog Number L3G6-10 - 6 & 10 lb-ft brakes

L5 Cords, Plugs and Grounding Provisions

Three Days

#L5a For single phase motors, install grounded line cord of type S.O., three-conductor oil resistant cord, connected in the conduit box or terminal panel, with strain relief. No plug. **Specify cord length, voltage and shaft rotation (clockwise or counterclockwise) viewed from the drive shaft end of the motor.**

Wire Gauge	Max Amp Rating Single Phase	Catalog Number 6 ft. or Less	X Catalog Number Each Add'l. Foot
16	13	L5A16	L5A16ADD
14	18	L5A14	L5A14ADD
12	25	L5A12	L5A12ADD

#L5b Install 6-foot grounded type S.O. cord with plug, 115VAC single phase only. **Specify cord length, shaft rotation (clockwise or counterclockwise) viewed from the drive shaft end of the motor.**

HP	Catalog Number 6 ft. or Less	X Catalog Number Each Add'l. Foot
1 and smaller	L5B	L5BADD

#L5c Add an additional grounding screw to the endbell of drip-proof or totally enclosed non-ventilated NEMA 48 or 56 frame motors. Meets UL 1081 swimming pool motor grounding provisions (includes slinger). **Catalog Number L5C.**



Grounded Cord w/Plug

L6 Switches – Power or Electronic Starting

Three Days

#L6a On-off switch for 2 HP and smaller single phase motors only. Install double-pole, single-throw switch in the conduit box, with switch guard and a 6-foot type S.O. cord with grounded plug, **115 VAC or 230 VAC—please specify. Also specify shaft rotation (clockwise or counterclockwise) viewed from the drive shaft end of the motor.**

HP	Rating	Catalog Number
Thru 2	16-20A/115V or 230V	L6A



On-Off Switch w/Guard

#L6b Replace mechanical centrifugal switch on single phase motors 2HP and smaller with solid-state, encapsulated, electronic starting switch. Capacitor-start, induction-run motors only. **Subject to engineering approval. Catalog Number L6B.**

L7 Severe Duty - Cast Iron Fan Covers - LEESON Only

Three Days

#L7a Remove steel fan guard and install a cast iron fan guard on LEESON 150 and 170 series NEMA and 193 series IEC TEFC cast iron motors to meet severe duty, mill and chemical duty specifications. Note: These motors have cast iron endbells, frame, and conduit box as standard. **Lincoln Motors has a line of Severe Duty motors that include a cast iron fan guard. See page 59.**

NEMA Frame	IEC Frame	Catalog Number
182T-184T	–	L7A180
213T-215T	–	L7A210
254T-256T	–	L7A250
284T-286T	160	L7A280
324T-326T	180	L7A320
364T-365T	200	L7A360
404T-405T	225	L7A400
444T-445T	250	L7A445
447T-449T	280	L7A449



Cast Iron Fan Cover

L8 Condensate Drains - Totally Enclosed Motors

Two Days

#L8a 215T and smaller *steel frame* motors. Drill one or two condensation drain holes on the **periphery or in the face** of each endbell of steel frame 215T frame and smaller totally enclosed motors. **Specify location in both the shaft end and opposite endbell using a drawing or clockface analogy.** When specified, a drain can be added to the face of one endbell for shaft up or down mounting.

NEMA Frame	Catalog Number
215T and smaller	L8A40210
254T-365T	L8A250360
404T-449T	L8A400440



Condensate Drain

#L8b 182T and larger *cast iron frame* motors. Provides an additional one-way, cross-drilled stainless steel condensation drain on the periphery or in the face of each endbell. **Provide a drawing or clockface analogy for position in each endbell.**

NEMA Frame	Catalog Number
215T and smaller	L8B40210
254T-365T	L8B250360
404T-449T	L8B400440

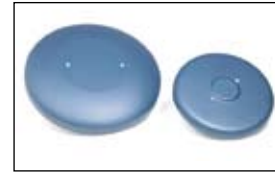
L9 Drip Cover – Open, Drip-Proof Motors

Two Days

#L9a Install a drip cover on steel frame motors. Price includes drip cover.

LEESON Only

NEMA Frame	Catalog Number
48-145T	L9A40140
182T-184T	L9A180
213T-215T	L9A210



Drip Cover

#L9b Install a drip cover on cast iron motors. Price includes drip cover.

LEESON Only

NEMA Frame	Catalog Number
182T-184T	L9B180
213T-215T	L9B210
254T-256T	L9B250

#L9c Install a drip cover on SPD, SRD and SSD Model Numbers. Not suitable for use on motors having NN in Notes column.

Lincoln Only

NEMA Frame	Catalog Number
48-56*	L9C4856
56-145T	L9C56145
182T-184T	L9C182184
213T-215T	L9C213215

* Motors having a 2.18 inch bolt circle for the mounting holes

L10 Leads – Reconnect, Remark or Extend

Two Days

#L10a Re-Connect leads in the conduit box to a single voltage and/or for wye or delta connection. Most motors 444T frame and above are single voltage. **Specify voltage and connection.**

NEMA Frame	Catalog Number
48-145T	L10A40140
182T-184T	L10A180
213T-215T	L10A210
254T-256T	L10A250
284T-286T	L10A280
324T-326T	L10A320
364T-365T	L10A360
404T-405T	L10A400
444T-449T	L10A440

#L10c Extend leads up to 42 inches longer than standard by splicing. **Specify additional length required.**

NEMA Frame	Catalog Number
48-145T	L10C40140
182T-184T	L10C180
213T-215T	L10C210
254T-256T	L10C250
284T-286T	L10C280
324T-326T	L10C320
364T-365T	L10C360
404T-405T	L10C400
444T-449T	L10C440

#L10b Remark leads using metal markers. Any size motor. **Specify markings, letters or numbers. Specify Catalog Number L10B.**

#L10d Add crimp-type terminal lugs – steel frame motors. Lugs standard on LEESON cast iron motors. **Specify Catalog Number L10D.**

L11 Shaft Seals

Three Days

#L11a Install an oil seal on the shaft end of 215T and smaller steel frame LEESON motors. May be installed on single, three phase or direct current motors, but not explosion-proof motors.

Catalog Number
L11A

L12 Mountings

Two Days

- #L12a** Add a stamped steel rigid base to steel frame motors. For 182-4T frame motors, minimum 8.50" (TEFC, rigid, C face) or 8" (ODP, rigid, C face) frame length is required. **LEESON Only**

NEMA Frame	Catalog Number
42-48	L12A4248
56	L12A56
143T-145T	L12A140
182T-184T	L12A180
213T-215T	L12A210

Note: It is not possible to add a base to some three phase motors as the resulting rigid base motor will be subject to EISA mandated efficiency values. Contact the factory.

This Mod. cannot be done on an explosion proof motor for an F1 conduit box location.

- #L12b** Remove stamped steel rigid base from steel frame motors.

NEMA Frame	Catalog Number
42-56	L12B4256
143T-145T	L12B140

- #L12c** Install a NEMA C face on steel frame motors 215T and smaller. **Specify if the rigid base is to be removed. If so, add for modification #L12b listed above. LEESON Only**

NEMA Frame	Catalog Number
42-56*	L12C4256
143T-145T	L12C140
182T-184T	L12C180
182T-184T**	L12C180U
213T-215T	L12C210

* Adding a 48 C-Face results in a non-NEMA BA dimension.

** Convert a 182T-184T frame motor to have a C-face dimensions of a 143T-145T or 182U-184U frame motor (AJ = 5 7/8", AK = 4 1/2"). The shaft dimensions and base location will not change.

- #L12d** Install a NEMA C face to 150 or 170 series cast iron motors. **The rigid base cannot be removed from these cast iron frame motors (non-800 Series). LEESON Only**

NEMA Frame	Catalog Number
182T-184T	L12D180
213T-215T	L12D210
254T-256T	L12D250
284T-286T	L12D280
324T-326T	L12D320
364T-365T	L12D360
404T-405T	L12D400
444T-445T	L12D440
447T-449T	L12D4479

- #L12e** Install a NEMA D flange to open or totally enclosed motors of steel frame construction in 182-4T frame and cast iron 150 and 170 series motors in 213T frames through 445T frame. Steel rigid base can be removed from steel frame 182-4T frame motors. **Specify and add for modification L12b. Rigid base cannot be removed from cast iron frame motors. LEESON Only**

NEMA Frame	Catalog Number
182T-184T	L12E180
213T-215T	L12E210
254T-256T	L12E250
284T-286T	L12E280
324T-326T	L12E320
364T-365T	L12E360
404T-405T	L12E400
444T-445T	L12E440

- #L12f** Convert standard F1 motors to F2, sidewall or ceiling mounting. Consists of repositioning the endbell vents and condensation drains where applicable and the conduit box lead hole. Note: If brakemotor, brake knob will be located at 6 o'clock. Note: Only the 56/140 frame motors can have the motor bases removed where needed.

NEMA Frame*	Catalog Number
56-184T	L12F56180
213T-215T	L12F210
254T-326T	L12F250320
364T-449T	L12F360449

* Three phase only; single phase motors cannot be converted. Please contact factory for Explosion proof motor approval for this modification.

- #L12g** Rotate standard conduit box position by 90° increments. **Specify by clock face, i.e. 9 o'clock, 12 o'clock, etc. for position (viewed from shaft end).** Consists of repositioning the endbell vents and condensation drains where applicable and the conduit box lead hole. Note: If brakemotor, brake knob will be rotated 90° from conduit box. **This mod. can no longer be offered on the 180 and 210 frame motors for the bases of these motors can no longer be removed without damaging the motor.**

NEMA Frame*	Catalog Number
56-145T	L12G56140

* Three phase rolled steel only; single phase motors cannot be converted.

More L12 mountings on next page.

L12 Mountings

Two Days

#L12h Install a metric (IEC) B5 flange to 190 series cast aluminum or cast iron AC motors and DC steel frame motors. **LEESON Only**

IEC Frame	Catalog Number
63	L12H63
71	L12H71
71 (DC)	L12HD71
80	L12H80
80 (DC)	L12HD80
90	L12H90
90 (DC)	L12HD90
100	L12H100
112	L12H112
100/112 (DC)	L12HD100112
132	L12H132
160	L12H160
180	L12H180
200	L12H200
225	L12H225

#L12j Install a metric (IEC) B14 face to 190 series cast aluminum or cast iron AC motors and DC steel frame motors. **LEESON Only**

*Note: C-face kit (B14) not available in NEMA frame 180.

IEC Frame	Catalog Number
63	L12J63
71	L12J71
71 (DC)	L12JD71
80	L12J80
80 (DC)	L12JD80
90	L12J90
90 (DC)	L12JD90
100	L12J100
112	L12J112
100/112 (DC)	L12JD100112
132	L12J132
160	L12J160

#L12k Reposition feet and nameplate (to relocate conduit box) on AC aluminum-frame IEC motors (63 thru 90L frame). **LEESON Only**

IEC Frame	Catalog Number
63	L12K63
71	L12K71
80	L12K80
90	L12K90

#L12l Install C-Face. For motors having AF/AAF in the model number.

Lincoln Only

NEMA Frame	Catalog Number
182T-184T	L12L182184
213T-215T	L12L213215
254T-256T	L12L354256
284T-286T	L12L284286

#L12m Install C-Face. For motors having SRF in the model number.

Lincoln Only

NEMA Frame	Catalog Number
56 (203 brg)	L12M56203
56 (205 brg)	L12M56205

#L12n Install C-Face. For motors having SSF in the model number.

Lincoln Only

NEMA Frame	Catalog Number
143-145T	L12N143145
182-184T	L12N182184
213-215T	L12N213215

#L12o Install C-Face. For motors having SF in the model number, having a cast iron endbell.

Lincoln Only

NEMA Frame	Catalog Number
324T/TS-326T/TS	L12O324326
364T/TX-365T/TS	L12O364365
404T/TS-405T/TS	L12O404405
444T/TS-445T/TS	L12O444445
447T/TS-449T/TS	L12O447449

#L12p Install C-Face. For motors having CCN in the model number.

Lincoln Only

NEMA Frame	Catalog Number
143-145T	L12P143145

#L12q Install C-Face. For motors having CCF in the model number.

Lincoln Only

NEMA Frame	Catalog Number
143T-145T	L12Q143145
182T-184T	L12Q182184
213T-215T	L12Q213215
254T-256T	L12Q254256
284T-286T	L12Q284286
342T-326T	L12Q324326

#L12r Install C-Face. For motors having CCS in the model number.

Lincoln Only

NEMA Frame	Catalog Number
143T-145T	L12R143145
182T-184T	L12R182184
213T-215T	L12R213215
254T-256T	L12R254256
284T/TS-286T/TS	L12R284286
342T/TS-326T/TS	L12R324326
364T/TS-365T/TS	L12R364365
404T/TS-405T/TS	L12R404405
444T/TS-445T/TS	L12R444445

L13 Nameplates

Three Days

#L13a Provide an extra motor nameplate-unmounted. Add customer part number or change to other voltage or frequency service. **Unmounted nameplates are not available for explosion-proof motors.**

Note: Markings for UL and CSA cannot be included on unmounted nameplates that are shipped loose and not installed on a motor.① Add \$1 (net) for each additional Aluminum or Mylar nameplate.② Add \$2 (net) for each additional stainless steel nameplate.② Catalog Number L13A.

#L13b Replace, existing nameplate. Add customer part number or change to other voltage or frequency service and mount to motor.①

Note: Not available for motors that are all stainless steel construction.

#L13c Replace standard aluminum nameplate with stainless steel nameplate. LEESON cast iron, WASHGUARD and severe duty motors have stainless steel nameplates as standard.① Add \$2 (net) for each additional stainless steel nameplate.②

① Must specify catalog number and date code of motor's existing nameplate. Nameplates changed to a single voltage connection does not mean motors would be re-connected to this connection unless the L10 Mod is also requested.

② Additional nameplates must be identical.

L14 Paint

Two Days*

#L14a Repaint motor to another LEESON or Lincoln stock paint color. A sample of choices include LEESON blue, white epoxy, farm duty red, light gray epoxy, black, or black epoxy.

For Lincoln motors, your choices include: Lincoln gray, severe duty blue, black or gloss white. Not available on Lincoln Wash-thru motors. **Specify color.**

***Note:** Epoxy paint requires extra curing time. Please allow one additional day.

	Frame	Catalog Number
NEMA	42-215T	L14A40210
NEMA	254T-365T	L14A250360
NEMA	404T-449T	L14A400440
IEC	63-90	L14A6390
IEC	100-225	L14A100225

L15 Rodent Screens - LEESON Only

Two Days

#L15a Add rodent screens to open drip-proof motors, cast iron and steel frame, 326T and smaller.

NEMA Frame	Catalog Number
182T-S213T	L15A40210
254T-286T	L15A250280
324T-326T	L15A320

L16 Space Heaters, Anti-Condensation

Five Days

#L16a Add anti-condensation space heaters to totally enclosed or open motors. Standard space heater voltage is 115 VAC. **Heaters for 230 or 460 VAC are available. Specify circuit voltage.** May be installed in single, three phase or direct current motors. **Explosion proof motors are not included. Washdown duty motors are not included.**

NEMA Frame	Catalog Number
145T and smaller	L16A40140
182T-215T	L16A180210
254T-365T	L16A250360
404T-449T	L16A400440

L17 Lint-Proof Textile Service Motors - LEESON Only

Two Days

#L17a Convert a standard totally enclosed-fan cooled motor to textile service by modifying the fan cover to reduce "snagging" of lint and reduction in cooling air for the motor. Price includes kit cost.

NEMA Frame	Catalog Number
56-145T	L17A40140
182T-184T	L17A180



Lint-Proof Kit

L18 Motor Protection

Two Days

#L18a Thermostats on the winding. Install one or more thermostats in the windings of NEMA frame AC motors on the brush plate of DC motors or on the inside of frame on Sub-FHP DC motors. These are pilot or signal devices only, to be used in series with a motor controller or starter to remove power from the motor. Red color leads are brought into the conduit box. **Specify normally open or closed contacts.** Normally closed thermostats connected in series. Thermostats cannot be installed in explosion-proof motors.

Type	NEMA Frame	Catalog Number	No. of Devices
Single Phase	All	L18AS40210	1
Three Phase	42-215T	L18AT40210	2
Three Phase	254T-365T	L18AT250360	2
Three Phase	404T-449T	L18AT400440	2
Direct Current	42-56	L18AD4056	1

#L18b For a motor equipped with a thermal overload, exchange a manual or automatic reset thermal overload to the opposite style. Delivery is dependent upon availability of the thermal overload. **LEESON Only**

NEMA Frame	Catalog Number
48-56	L18B4056
143T-145T	L18B140
182T-184T	L18B180
213T-215T	L18B210

Note: Automatic thermal overloads return power to the motor automatically after cooling-off. Automatic thermal overloads should not be used in installations where a sudden restart could cause injury.

#L18c Thermistors on the winding. As standard, three (3) thermistors are furnished, one per phase. As the critical temperature of the motor's winding is reached, the resistance of the thermistor changes radically, causing operation of a control relay. Not available on washdown duty motors or medium voltage motors.

Type	NEMA Frame	Catalog Number	No. of Devices
Three Phase	42-215T	L18CT40210	3
Three Phase	254T-365T	L18CT250360	3
Three Phase	404T-449T	L18CT400440	3

Note: Thermostat and Thermistor Descriptions:

Thermostats are made of two or three different metal strips that each expand at different rates when heated. They are sandwiched together to make a laminated strip, with a set of electrical contacts at one end securely mounted to a platform. When the strip is heated it warps and the contacts open as a threshold temperature is exceeded. Thermostats are reliable, noise immune and easily configured into control schemes. Typically, inverter-duty motors have thermostats as standard equipment.

Thermistors are conductive ceramic materials, whose resistance remains relatively constant over a broad temperature range, then changes abruptly at a design threshold point, creating essentially a solid-state thermal switch. Attached control modules register this abrupt resistance change and produce an amplified output signal, usually a contact closure or fault trip annunciation. Thermistors are more accurate and faster responding than thermostats.

L19 Fungus Proofing and Tropicalization

Two Days

#L19a Special treatment of the motor's windings and mechanical parts to resist tropical environments. **Not available on brakemotors, washguard duty motors and explosion proof motors.**

** AC or DC Motors

NEMA Frame	Catalog Number
42-215T**	L19A40210
254T-365T	L19A250360
404T-449T	L19A400440

L20 Weatherproofing – Three Phase, Totally Enclosed Motors*

Five Days

#L20a Treatment of mechanical and electrical components of LEESON steel frame totally enclosed motors to resist weather in application outside or in high-moisture conditions. NOTE: LEESON 150 and 170 series cast iron motors are weatherproofed as standard. LEESON WASHGUARD motors are also well-suited for outside and high-moisture applications. **Not available on brakemotors or explosion proof motors.** ** AC or DC Motors

NEMA Frame	Catalog Number
42-215T**	L20A40210

* For single phase weatherproofed motors, see WASHGUARD motors on pages 28 and 35.

L21 Marine Service (IEEE 45) Motors – Three Phase, Totally Enclosed - LEESON Only

Five Days

#L21a Treatment of mechanical and electrical components for application below deck aboard ships. Meets IEEE 45 marine specifications. Includes die cast conduit box with tapped lead hole and nameplate stamped 50°C ambient and marked IEEE 45. Standard LEESON blue epoxy paint will be applied unless otherwise specified. Not available on brakemotors and subject to engineering approval. Not available in 42 and 48 frame sizes for no kit is available to change conduit box to have a tapped hole. ** AC or DC Motors

NEMA Frame	Catalog Number
56-215T**	L21A40210
254T-365T	L21A250360
404T-405T	L21A400
444T-449T	L21A440

Specifications are subject to change without notice

L22 Shaft Modifications

Five Days

#L22a Drill and tap one hole in either end of motor's shaft or mill a flat on the drive end shaft extension. **Provide details of hole or flat with the order.** List price is per modification. For example, a motor modified by adding a tapped hole and flat would be priced by adding the list price twice.
3 inches maximum depth hole

NEMA Frame	Catalog Number
42-145T	L22A40140
182T-184T	L22A180
213T-215T	L22A210
250T-280T	L22A250280

#L22b TEFC to air-over service. Convert a motor from totally enclosed, fan cooled construction to totally enclosed, air-over service by removing fan cover and fan and cutting off the fan end shaft. The modified motor must be mounted in the air stream of the driven fan for cooling purposes.

NEMA Frame	Catalog Number
42-145T	L22B40140
182T-184T	L22B180
213T-215T	L22B210

L23 Tachometer Mounting Provisions – DC Motors - LEESON Only

Five Days

#L23a Add a tachometer mounting kit to NEMA frame size Direct Current motors. See page 81 for availability of tachometer mounting kits. Does not include tachometer. For TEFC motors only.

NEMA Frame	Catalog Number
S56	L23AS56
SS56	L23ASS56
56/145T	L23A56140



Tach Kit Adaptor

L24 CE Marking*

Five Days

#L24 Modify motor to comply with the nameplate designation, lead markings and connection diagrams required by the IEC34 motor specification. Modification includes a nameplate with the CE logo or a separate CE decal and a CE Declaration of Conformity document. Not available on DC motors below 75 V.D.C. **LEESON Only**

Catalog Number
L24



#L24b CE Marking Kit - Includes new nameplate with data in IEC34 format, lead markers for IEC lead designations, a connection diagram, and a CE Declaration of Conformity document. The nameplate will have the CE logo, or a CE decal will be provided. **LEESON Only**

Catalog Number
L24B

*CE Marking is typically required for motors being shipped to Europe where 50Hz power is standard. For this reason, CE Marking includes adding 50Hz data to the motor nameplate. Not all motors can be used with 50Hz power – especially single-phase motors with centrifugal switches. Contact LEESON to verify acceptability for CE Marking.

#L24c Modification includes larger than standard Steel terminal box. CS models normally have a cast iron box. Blower motor on TEBC CTAC models, 284T frame and larger, is not CE compliant. Useable on 380 to 575V motors. Price includes terminal strip suitable for six connections and grounding lug. CE decal to be provided. CE Declaration of Conformity are available upon request. **Lincoln Only**

NEMA Frame	Catalog Number
143T-145T	L24C140
182T-184T	L24C180
213T-215T	L24C210
254T-256T	L24C250
284T-286T	L24C280
324T-326T	L24C320
364T-365T	L24C360
404T-405T	L24C400
444T-445T	L24C440
447T-449T	L24C447449

Contact your local sales office for Lincoln CE kits.

Explosion proof motors cannot be modified to meet CE.



**L25 Micro Series Inverter - Remote Keypad
Option - LEESON Only**

Two Days

#L25 A remote keypad for Micro Series inverters is available only as a factory installed option. The keypad is mounted in a gasketed steel faceplate that must be mounted in an enclosure for protection. An inverter modified for remote operation can only be operated from the remote keypad. Price includes remote keypad, faceplate, cable and factory modification charges. **Not available on Washguard Duty Inverters.** See page 208 for Remote Keypad kits for the Sub-Micro Series Inverters.



Catalog Number	Description
L25A25	Keypad with 2.5 foot cable
L25A50	Keypad with 5 foot cable
L25A100	Keypad with 10 foot cable

L27 Terminal Blocks – NEMA Motors - LEESON Only

Five Days

#L27a Add a terminal block in the conduit box of rolled steel motor from 56 to 215T-frame. Install ring terminals on the motor leads.

- Conduit box on 56-frame motors will be changed to a longer version to accommodate the terminal board.
- Use with single-phase or three-phase motors with no protector.
- Specify connection voltage and direction of rotation for single-phase.
- Not intended for 56, 143T & 145T-frame TENV or ODP motors that have a built-in conduit box. Contact LEESON for the suitability of adding a terminal board to one of these motors.
- Cannot be added to WASHGUARD Duty motors.

NEMA Frame	Catalog Number
56/143T/145T	L27A56140
182T/184T/S213T	L27A180
213T-215T	L27A210

#L27b Install a terminal block kit in the conduit box of a cast iron NEMA frame motor. Price includes kit. (IEC motors have a terminal block installed as standard.)

NEMA Frame	Catalog Number
180/210T	L27B180210
250/280T	L27B250280
320/360T	L27B320360
400/440T	L27B400440

**L28 Dynamic Braking Board – Micro Series
Drives - LEESON Only**

Two Days

#L28 Install Dynamic Braking board in Micro Series drive. Note: Does not include Dynamic Braking resistor, which is ordered as a separate line item. See Micro Series accessory section of catalog for resistor selection. See page 207 for Dynamic Brake kits for the Sub-Micro Series inverters.

HP Rating	Voltage	Catalog Number
1/2 - 3HP	All	L28A174184
5HP	200-230V	L28A174185
5HP	460-480V	L28A174185
5HP	550-575V	L28A174184
7 1/2HP	200-230V	L28A174192
7 1/2HP	460-480V	L28A174193
7 1/2HP	550-575V	L28A174193
10-60HP	All	L28A174192



L29 Encoder Kits – WATTS AVER® & SPEEDMASTER® Motors

Two Days

#L29a Assemble a stock Encoder Kit on a WATTS AVER® motor. Price is for assembly only. Motor and kit are purchased separately. Specify motor and kit numbers. Note: The assembly of an encoder kit on a WATTS AVER® motor requires the removal of the external fan. The use of a Blower Fan Kit is strongly encouraged for proper cooling! For TENV applications, contact LEESON with application details. (Kit Number: L29A360400) LEESON Only

Table with 2 columns: NEMA Frame, Catalog Number. Rows: 56-215T (L29A56215), 254T-324T (L29A250320), 360T-405T (L29A360400)

#L29b Assemble a stock Encoder Kit on a SPEEDMASTER® motor. Includes assembly of conduit box kit ECB175926 on 215T-449T frame motors. Price is for assembly only. Motor and kits are purchased separately. Specify motor and kit numbers. LEESON Only

Table with 2 columns: NEMA Frame, Catalog Number. Rows: 143T-215T (L29B140210), 254T-365T (L29B250360), 404T-449T (L29B400440)

#L29c Available on Inverter Duty CTAC Motors that have Model Number ending with Q10. Price is for assembly only. Encoder kit, Mounting kit and Motor sold separately. Lincoln Only

Table with 2 columns: NEMA Frame, Catalog Number. Rows: 56-215T (L29C56210), 254T-365T (L29C250360), 404T-445T (L29C400440)

L30 Blower Fan Kits – WATTS AVER® Motors

Two Days

#L30b Install a blower fan kit on a WATTS AVER® motor. Price is for assembly only. Motor and kit are purchased separately. Specify motor and kit numbers. LEESON Only

Table with 2 columns: NEMA Frame, Catalog Number. Rows: 56-215T (L30B56210), 254T-326T (L30B250320), 360T-440T (L30B360440)

L31 Conduit Box Kits – Larger Size - Lincoln Only

#L31a Install larger size conduit box. AF, MD, SD and SF Model Numbers, S and H Efficiency Codes

Table with 2 columns: NEMA Frame, Catalog Number. Rows: 213T-215T (L31A213215), 254T-256T (L31A254256), 284T-286T (L31A284286), 324T-326T (L31A324326), 364T-365T (L31A363365), 404T-405T (L31A404405)

#L31b Install larger size conduit box. AF, AAF, CF, CS, CP, SD and SF Model Numbers, P and B Efficiency Codes

Table with 2 columns: NEMA Frame, Catalog Number. Rows: 143T-184T (L31B143184), 213T-215T (L31B213215), 254T-256T (L31B254256), 284T-286T (L31B284286), 324T-326T (L31B324326), 364T-365T (L31B364365), 404T-405T (L31B404405), 444T-445T (L31B444449)