

TECHNICAL RATINGS		
AC-1 Resistive Amps	20A	
IEC AC-3	380V	9A
IEC AC-3	600V	5A
HP Ratings		
Three Phase	240V - 2HP	400V → 600V 3HP
Single Phase	120V - 0.5HP	230V-1.5HP
Electrical Life - 1.2 Million ops.		
Mechanical Life-10 million ops.		
Coil Power Consumption		
Coil Pick up	30VA	
Coil Holding	4.5VA	
5kA I.C		

Contactors					
3 Pole					
Part #	List \$	Power poles		Auxiliary Contacts	
		N.O.	N.C.	N.O.	N.C.
ECX2.10-*	\$16.00	3	0	1	0
ECX2.01-*	\$16.00	3	0	0	1

4 Pole Contactor					
Part #	List \$	Power poles		Auxiliary Contacts	
		N.O.	N.C.	N.O.	N.C.
ECX2.40-*	\$17.00	4	0	0	0
ECX2.22-*	\$17.00	2	2	0	0

Motor Starter - Contactor + overload					
Part #	List \$	Power poles		Auxiliary Contacts	
		N.O.	N.C.	N.O.	N.C.
TECX2.10-#0-##	\$38.00	3	0	1	0
TECX2.01-#0-##	\$38.00	3	0	0	1



Auxiliary Contacts			
N.O.	N.C.	Part #	List \$
0	2	AUX2.02	\$9.00
2	0	AUX2.20	\$9.00
1	1	AUX2.11	\$9.00
4	0	AUX2.40	\$9.00
0	4	AUX2.04	\$9.00
3	1	AUX2.31	\$9.00
1	3	AUX2.13	\$9.00
2	2	AUX2.22	\$9.00

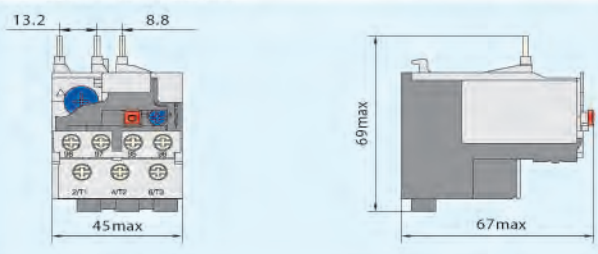
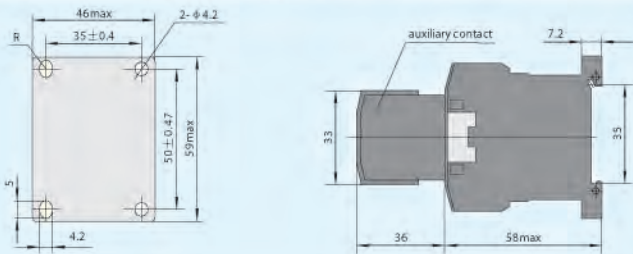
Coil Voltage AC Suffix	
*A	110V
*C	220V
*D	380V
*G	24V
*K	48V



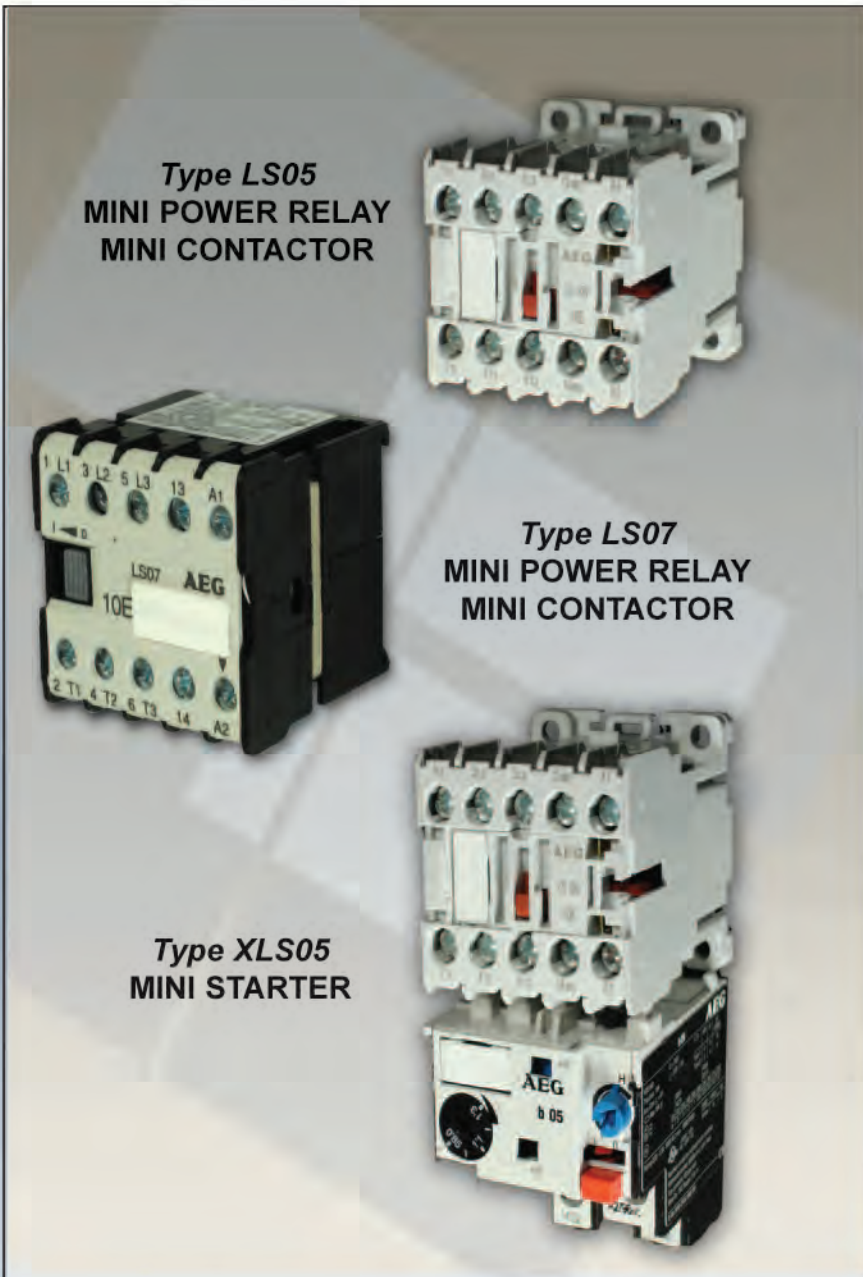
Plug ON - Overloads			
Suffix **	Amp Range	Part #	List
- A	0.10 - 0.16	ECX2-0.16	\$22.00
- B	0.16 - 0.25	ECX2-0.25	\$22.00
- C	0.25 - 0.40	ECX2-0.40	\$22.00
- D	0.40 - 0.63	ECX2-0.63	\$22.00
- E	0.63 - 1.0	ECX2-1.0	\$22.00
- G	1.0 - 1.6	ECX2-1.6	\$22.00
- GN	1.25 - 2.0	ECX2-2.0	\$22.00
- H	1.6 - 2.5	ECX2-2.5	\$22.00
- I	2.5 - 4.0	ECX2-4.0	\$22.00
- K	4.0 - 6.0	ECX2-6.0	\$22.00
- L	5.5 - 8.0	ECX2-8.0	\$22.00
- M	7.0 - 10	ECX2-10	\$22.00
- N	9.0 - 13	ECX2-13	\$22.00

Dimensions: 3 & 4 Pole Contactor

Overload Dimensions (mm)







*Type LS05*  
**MINI POWER RELAY  
 MINI CONTACTOR**

*Type LS07*  
**MINI POWER RELAY  
 MINI CONTACTOR**

*Type XLS05*  
**MINI STARTER**

**MINI CONTACTORS  
 STARTERS  
 POWER RELAYS**

*POSITIVE GUIDED RELAYS & CONTACTORS*

**AEG** COMPONENT  
 CONTROLS

**SERIES LS07  
 SPECIFICATIONS**

- ✓ **16 Amp Resistive (UL)**  
 AC-1 (16 AMP 600 Volt)
- ✓ **Mechanical Life Operations**  
 10,000,000
- ✓ **Maximum HP Ratings**  
 3 Phase  
 460 Volt 3HP CE

**SERIES LS05  
 SPECIFICATIONS**

- ✓ **15 Amp Inductive (UL)**  
 AC-1 (20 AMP 600 Volt)
- ✓ **Mechanical Life Operations**  
 AC 10,000,000
- ✓ **Maximum HP Ratings**  
 3 Phase  
 460 Volt 5HP

**Connection Options LS07**

- Pressure Wire Terminals
  - Spade (Plug-On)
  - PC Board (pin terminal)
- Low Coil Burden 1.2 Watt**

**Internationally Accepted**

- CE, UL, IEC, S +, BS, VDE, CSA

**Overload Relay Type B05**

- Ambient Temperature Compensated
- Three Pole Plug-on Separate Mount
- Differential Single Phasing Protection

**Enclosures**

- M1 - General Purpose
- M12 - Dust Tight
- 4X - Non Metal
- Water & Dust Tight



ELECTRICAL & ELECTRONIC  
 CONTROLS, INC.  
 3881 DANBURY ROAD  
 BREWSTER, NY 10509  
 845-278-5777 FAX 845-278-5444



## 20 AMP GENERAL PURPOSE



**Type XLS05 STARTER**  
with Auxiliary Contacts

### INTERNATIONAL RATINGS

#### Technical Values

Type	LS05
	SH05
Permissible ambient temperature	+60 C
Rated insulation voltage	660V
Mechanical lifespan	10,000,000
General Purpose Amps	20A
Permissible switching frequency	1200 ops/hr

#### Short-circuit protection(Class gL)

Highest rated fuse	20A
(without welding of contacts)	16A
Auxiliary switchHS05	220V 6A
AC-11-Duty Rated current	500V 2.5A
(a.c.)	600V 1.5A
	24V 5A

DC-11-Duty Rated current	110V 1,2A
(d.c.)	220V 0,6A

Operating coil	(Standard -20% - +10%)
	Closing 26VA

Power consumption Holding Phs	VA 4VA
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Switching times at 1, 0 U <sub>s</sub>	
(standard coil !)	closing delay 7-12 MS
	opening delay 6-13 MS

### LS05 CONTACTOR SH05 RELAY B05 OVERLOAD RELAY

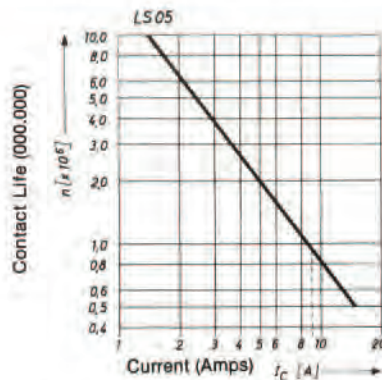
A stylish, and compact family of control relays, type SH05, contactors, type LS05, and overload relays, type B05. Complete with a comprehensive range of accessories, they provide the flexible solution for control systems.

A maximum 10 pole control relay, type SH05, with 6 auxiliary switches, is also available as a contactor, type LS05 with up to 6 auxiliary switches. Rated at 5 HP 480V, it has a high switching performance within its compact dimensions. Panel or DIN mountable.

Front mounting snap on auxiliary switch block, with up to 4 contacts in standard base module.



**Type LS05 CONTACTOR**



#### Contact life of the main contacts

The above diagram shows details of the contact life in relation to the breaking current, when switching resistive and inductive a.c. loads. The above does not relate to synchronising of phase position during switching.  
 $n = \text{Contact Lifespan}$   
 $I_C = \text{Breaking current}$

#### Contactors/Relay Accessories

A single pole auxiliary switch (1 N.O. or 1 N.C.) is available as an accessory, for side mounting, thus avoiding any increase in the high dimension.

Special auxiliary contacts for increased contact reliability at low voltages.

Front or side mounting time delay module 0.5 to 60 seconds.

Coil, overvoltage suppression module.

Mechanical interlock kit.



**Type B05 OVERLOAD RELAY**

#### Thermal Overload Relay Type B05

for direct mounting onto contactors type LS05, and LS07, also available with adaptor for separate mounting. Style and dimensions compatible with contactors.

DIN rail mounting uses an adaptor plate.

The lower coil, and auxiliary switch connection of the contactor is brought to a more accessible terminal.

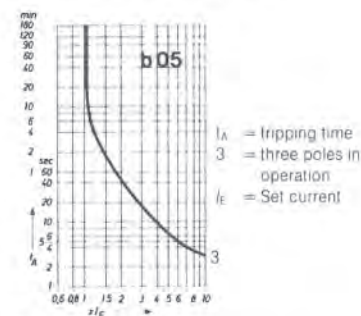
Ambient temperature compensation.

Single phase sensitivity is achieved by a differential tripping action.

Convertible Hand or Automatic reset feature. (Reset button; blue).

Separate red \*Stop\* button.

One N.C. auxiliary trip switch built in, with an additional \*Snap\* 1 N.O. auxiliary trip switch available if required.



#### Type B05 Overload Relay

##### Tripping Characteristic(Example)

Curves show trip characteristic from cold condition. From warm condition, the tripping time can be reduced to approx. 25%. (Average values for all current range)

\* See page 73 for Dimensions.





# MINI CONTACTOR/STARTERS TYPE LS05 - TYPE B05 (20 Amps General Purpose)



## MINI CONTACTOR



### Type LS05 Ratings Maximum HP Ratings

200 Volt	3 HP
230 Volt	3 HP
460 Volt	5 HP
600 Volt	5 HP
1 Phase	
110 Volt	1/2 HP
220 Volt	1.5 HP
15 AMP INDUCTIVE AC-1 20 Amp	
*NOTE: 20 Amp General Purpose.	

## MINI STARTER

Single Phase

Three Phase

## MINI REVERSING CONTACTOR

Three Phase

## MINI REVERSING STARTER

Single Phase

Three Phase

Four Poles

### \* COIL VOLTAGE SUFFIX

AC*	60HZ	50HZ
-A	120V	110V
-C	208V/230V	220V
-E	480V	440V
-F	600V	550V
-D		380V
-G	24V	22V
-H	280V/277V	240V
<b>DC*</b>		
-MSW	12VDC	*Price Addition for DC Coil. \$10
-NSW	24VDC	
-OSW	48VDC	
-PSW	120VDC	
-RSW	220VDC	



## TYPE SH05 MINI RELAYS

A.C. OPERATED  
10 pole maximum with auxiliary

With Pressure Wire Screws Terminals

	Contacts		AC Operated List
	NO	NC	
SH05.22-*	2	2	\$40
SH05.31-*	3	1	\$40
SH05.40-*	4	0	\$40

With Flat Plug (Spade) Connectors

OPEN 3 POLE	ENCLOSED		Auxiliary Contacts	
	NEMA 1 General Purpose	NEMA 4X Outdoor Dust Tight	NO	NC
•LS05.10-★0 \$40 List	LS05.10-★1 \$109 List	LS05.10-★4X \$132 List	1 0	0 1
••LS05.10F-★0 \$45 List			1 0	
•Standard Screw Down Pressure Plate Terminal		•• Spade Terminal		
SXLS05-★0-★★ \$89 List	SXLS05-★1-★★ \$161 List	SXLS05-★4X-★★ \$184 List	1 0	
XLS05-★0-★★ \$89 List	XLS05-★1-★★ \$161 List	XLS05-★4X-★★ \$184 List	1 0	
RLS05.10-★0 \$116 List	RLS05.10-★1 \$185 List	RLS05.10-★4X \$238 List	1 0	0 1
SRXLS05.11-★0-★★ \$171 List	SRXLS05.11-★1-★★ \$243 List	SRXLS05.11-★4X-★★ \$296 List	1 1	
RXLS05.11-★0-★★ \$171 List	RXLS05.11-★1-★★ \$243 List	RXLS05.11-★4X-★★ \$296 List	1 1	
<b>OPEN 4 POLE</b>				
•LS05-4.00-★0 \$40 List	LS05-4.00-★1 \$109 List	LS05-4.00-★4X \$132 List	0 0	

Deduction for less wiring - \$10 list price from reversing contactor and reversing starter, add -LW to part #.

Part# example: RXLS05.11-A1-NN-LW \$233. Reversing Starter, 120V coil 10-14 AMP overload, in NEMA 1 Box, less wiring.

**Dimensions:** Contactor, W-1.8", H-1.9", Deep-2.2".  
Starter, W-1.8", H-3.8", Deep-2.2".

## TYPE B05

OVERLOAD RELAY

## TYPE HS AUXILIARY

Side Mount Front Mount

## LS05 Accessory Kits

	Normally Open	Normally Closed	List	
Mechanical Interlock	LS05-VB05		\$6	
Auxiliary Contacts 10 Amp 600V				
Side Mount	1	0	HS05.10 \$12	
	0	1	HS05.01 \$12	
	2	0	HS05.20 \$13	
	1	1	HS05.11 \$13	
	0	2	HS05.02 \$13	
	0	1	HS05.01-001 \$13	
	1	2	HS05.12 \$16	
	0	4	HS05.04 \$24	
	1	3	HS05.13 \$24	
	2	2	HS05.22 \$24	
Front Mount	3	1	HS05.31 \$24	
	4	0	HS05.40 \$24	
	Front Mount (with spade terminal)	0	1	HS05.01F \$12
		1	2	HS05.12F \$16
Timing Module	12-60 VAC	LS05-EV05-60	\$66	
	90-240 VAC	LS05-EV05-240	\$66	

Type B05 Overload has 1N.C. pilot circuit contact included. If a N.O. additional contact is needed, P/N HB05-143 includes a N.O. Alarm Contact. See Below.

Suffix	Amp Range	Complete Plug-On	List
-A	0.11-0.17	B05-A	\$55
-B	0.17-0.26	B05-B	\$55
-C	0.26-0.43	B05-C	\$55
-D	0.43-0.65	B05-D	\$55
-E	0.65- 1	B05-E	\$55
-F	0.85-1.3	B05-F	\$55
-G	1.1-1.6	B05-G	\$55
-GN	1.35-2	B05-GN	\$55
-H	1.7-2.4	B05-H	\$55
-IN	2.2-3.2	B05-IN	\$55
-JN	3-4.7	B05-JN	\$55
-K	4-6.3	B05-K	\$55
-L	5.5-8	B05-L	\$55
-M	7.5-10.5	B05-M	\$55
-NN	10-14	B05-NN	\$55

### RESET EXTENDER

HB05-143 REQUIRED for overload use with external reset operation by reset plunger. Includes

N.O. Aux. Alarm Contact. #HB05-143 \$13.00 List

### OVERLOAD ADAPTER

Terminal for Separate Mount B05-141-142 \$13.00 List (DIN Rail or Panel mountable)

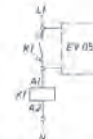


Diagram with time delay module type EV 05

Type EV05 Timer  
Timer. delays coil operation.  
Adjustable 0.5-60.sec.

Surge Suppressor	12-60 VAC	LS05-EB05-60	\$14
	72-240 VAC	LS05-EB05-240	\$14

### 2 Parallel Pole Connector

	LS05-EB05	\$6
Spare Coils	LS05-COIL-★	\$20

★ See coil voltage suffix

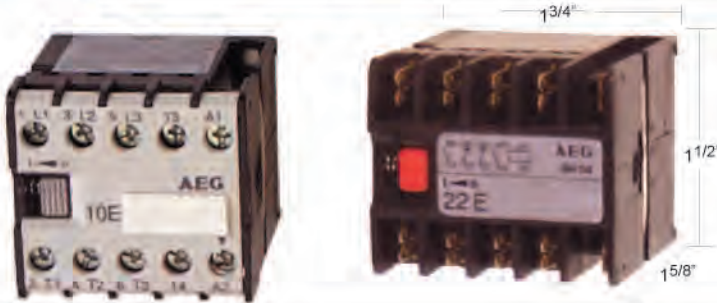
Discount Schedule ST





# MINI-CONTACTORS TYPE LS07

**AEG**



## POSITIVE GUIDED TYPE SH04 RELAYS AND TYPE LS07 CONTACTORS

Certified as Positive Guided  
AEG Relays and Contactors

1. Independent Test Lab Certified per IEC 947-5-1
2. 100% Quality Tested per IEC 947-5-1

H.P. RATING					AMPS (OPEN) Resistive	Cat. No.	OPEN LIST	TYPE M1 NEMA1 LIST	TYPE 4X LIST	Auxiliary Contacts																															
1 Phase		3 Phase								NO	NC																														
115V	230V	208V	230V	460V																																					
<b>AC OPERATED MINI CONTACTOR TYPE LS07</b>																																									
<b>With Pressure Wire Screw Terminals</b>																																									
1	2	3	3	3	16A	LS07.10-	-★0 \$36	-★1 \$105	-★4X \$128	1	-																														
1	2	3	3	3	16A	LS07.01-	-★0 36	-★1 105	-★4X 128	-	1																														
<b>With Flat Plug (Spade) Connectors</b>																																									
1	2	3	3	3	16A	LS07F.10-	-★0 \$36																																		
1	2	3	3	3	16A	LS07F.01-	-★0 36																																		
					<b>SPADE CONNECTOR</b> (Single or Double Spade) Check with factory for cost.			<b>★ COIL VOLTAGE SUFFIX</b> <table border="1"> <thead> <tr> <th>AC★</th> <th>60HZ</th> <th>50HZ</th> <th colspan="2">DC★</th> </tr> </thead> <tbody> <tr> <td>-A</td> <td>120V</td> <td>110V</td> <td>-MSW</td> <td>12VDC</td> </tr> <tr> <td>-C</td> <td>208/230V</td> <td>220V</td> <td>-NSW</td> <td>24VDC</td> </tr> <tr> <td>-D</td> <td></td> <td>380V</td> <td>-OSW</td> <td>48VDC</td> </tr> <tr> <td>-E</td> <td>480V</td> <td>440V</td> <td>-PSW</td> <td>120VDC</td> </tr> <tr> <td>-G</td> <td>24V</td> <td>22V</td> <td>-RSW</td> <td>220VDC</td> </tr> </tbody> </table>				AC★	60HZ	50HZ	DC★		-A	120V	110V	-MSW	12VDC	-C	208/230V	220V	-NSW	24VDC	-D		380V	-OSW	48VDC	-E	480V	440V	-PSW	120VDC	-G	24V	22V	-RSW	220VDC
AC★	60HZ	50HZ	DC★																																						
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<b>CONTACT CODE</b>	<b>POWER</b>		<b>AUXILIARIES</b>																																						
	N.O.	N.C.	N.O.	N.C.																																					
LS07.10	3	-	1	-																																					
LS07.01	3	-	-	1																																					
LS07.22	2	2	-	-																																					
LS07.40	4	-	-	-																																					
<b>DC OPERATED MINI CONTACTOR TYPE LS07</b>																																									
<b>3 Pole Non-Reversing</b>																																									
<b>With Pressure Wire Screw Terminals</b>																																									
1	2	3	3	3	16A	LS07.10-	-★0 \$46																																		
1	2	3	3	3	16A	LS07.01-	-★0 46																																		
<b>With Flat Plug (Spade) Connectors</b>																																									
1	2	3	3	3	16A	LS07F.10-	-★0 \$46																																		
1	2	3	3	3	16A	LS07F.01-	-★0 46																																		

NOTE: In Catalog No. .10 indicates 1-NO Contact; .01 indicates 1-NC Contact.

★ SW Single Winding DC Power Plant

▶ **TYPE 4X ENCLOSED STARTERS.** Type XLS starters are UL/CSA Listed starters enclosed in type 4X U.L. Listed enclosures. Type 4X enclosures are designed for outdoor/hose down/dust tight applications and are non-metal corrosion resistant.

### DESCRIPTION

**Minicontactor Type LS07,** designed for motor control, and distinct *small* size. As such, they are recommended for space saving in industrial control, electronic control and distribution systems.

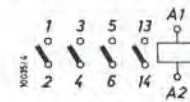
The **Type LS07 Minicontactor** has been proven dependable on both three phase and single

phase systems when controlling motor loads. LS07 is particularly recommended for metal and woodworking machines, for textile and construction machinery and other commercial and industrial applications.

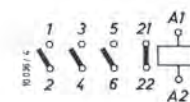
Other loads for minicontactors are resistive, such as heating and lighting circuits, or inductive loads repre-

sented by solenoid valves and clutch couplings.

### CONTACT CONFIGURATION



10 E  
Type LS 07.10



01 E  
Type LS 07.01

For TYPE LS05 - MINI Contactor, 20 Amp 600V, see LS05 Miniature Contactor System.