MARCUS THREE PHASE REACTOR TYPE - MLR OPEN STYLE
2 Amps - 500 Amps

GENERAL INTRODUCTION

Marcus Line Reactors (MLR) will eliminate most line problems including:

- Harmonic Distortion in current and voltage
- Nuisance tripping (such as overvoltage tripping of AC Pulse Width Modulated Drives)
- Line Notching
- Line Noise
- Surge Current

FEATURES AND BENEFITS OF USING MARCUS MLR LOAD REACTORS

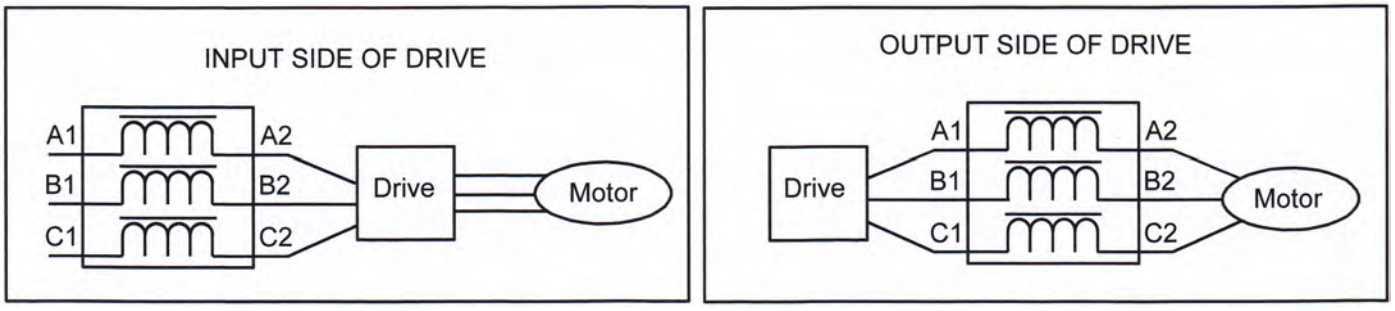
Performance, life expectancy and operating efficiency of the motor and drive are significantly enhanced as Marcus Line Reactors:

- Extend the life of switching components in power electronic circuits
- Eliminate saturation due to the application of advanced grade laminations
- Extend motor life. Reactors used on the output side of the drive improve waveform and help avoid failures due to output circuit faults. Motor temperatures are generally reduced 10°-20°C.
- Reduce motor noise due to the removal of high frequency harmonic currents.
- Lower heat dissipation which translates to lower power losses
- Minimize harmonic distortion - inrush current to the drive rectifier is limited and peak current reduced. Current distortion is typically reduced by up to 30%. Voltage distortion ("flat-topping" voltage wave-form) is also minimized.
- Can withstand current under any kind of short circuit conditions. In the manufacture of dry-type power and control transformers Marcus Transformers Ltd. has designed and tested product to withstand short circuits for most required applications and this experience has been applied to Marcus Line Reactors.

ENGINEERING SPECIFICATIONS

- Rated Parameters: Nominal Inductance +/-10% tolerance at rated current. 95% of nominal inductance at 150% rated current
- System Voltages: 600 Volts maximum
- Operating Frequency: 60HZ Fundamental Current Maximum
- Insulation: Class F (155°C) or Class H (180°C, 200 amps above) with low temperature rise
- Sound level: 2-25 amps <= 55 dB
- Vertical or Horizontal mounting
- All units CSA certified (2 amps - 500 amps), RU Components Recognized (2 amps - 110 amps)
- Unique bobbin-wound coils for greater efficiency and compact structure

CONNECTION DIAGRAMS



MARCUS TRANSFORMER Since 1942

NOTE: Pricing and specifications subject to change without notice.

MARCUS LINE/LOAD REACTORS - SELECTION TABLES

DISCOUNT CODE - A1

MARCUS TRANSFORMER Since 1942

By choosing 3% impedance, line reactors can meet the need for most solid state applications in North America. Where high line disturbances exist, a 5% reactor may be required. Normally these units are used where there are strict limitations concerning harmonic distortion and noise level.

IMPEDANCE RATING AND SELECTION OF THE LINE REACTOR (3% OR 5%) - DEFINITION: Z% = (VD x 100) x √ 3 / VS

Z = Impedance
VD = Voltage Drop across reactor at rated current to flow through it
VS = Voltage Supply

HP*	240 VOLT				
	AMPS#	3% IMPEDANCE	LIST	5% IMPEDANCE	LIST
1	4	MLR0004N30	$150	MLR0004N65	$158
1.5	8	MLR0008N30	$173	MLR0004N50	$200
2	8	MLR0008N15	$170	MLR0008N30	$177
3	12	MLR0012N13	$202	MLR0012N25	$220
5	18	MLR0018P80	$218	MLR0018N15	$236
7.5	25	MLR0025P50	$265	MLR0025N12	$282
10	35	MLR0035P40	$276	MLR0035P80	$348
15	45/55	MLR0045P30	$323	MLR0055P50	$355
20	55	MLR0055P25	$344	MLR0055P50	$355
25	80	MLR0080P20	$450	MLR0080P40	$474
30	80	MLR0080P20	$450	MLR0080P23	$471
40	110	MLR0110P15	$583	MLR0110P18	$620
50	130	MLR0130P10	$844	MLR0130P20	$964
60	160	MLR0160U75	$979	MLR0160P15	$1,115
75	200	MLR0200U55	$1,091	MLR0200P11	$1,259
100	250	MLR0250U45	$1,418	MLR0250U90	$1,491

3 Phase Line Reactor Legend (Part Number Guide)

MLR 0002 M 20

The Inductance Value

The inductance value is preceded with a letter to designate the position of the decimal point determining the inductance. The letters are as follows:

M ..... XX.X mH
N ..... X.X mH
P ..... 0.XX mH
U ..... 0.0XX mH

For instance: M20 is 20.0 mH

4 Digit Rated Current Value

Marcus Line Reactor

Note: All characters of the legend represent only the performance value of the reactor, so part numbers are not completely sequential. They are sorted by rated current.

HP*	480 VOLT					600 VOLT				
	AMPS#	3% IMPEDANCE	LIST	5% IMPEDANCE	LIST	AMPS#	3% IMPEDANCE	LIST	5% IMPEDANCE	LIST
1	2	MLR0002M12	$133	MLR002M20	$145	2	MLR0002M20	$144	MLR0002M32	$152
1.5	4	MLR0004N91	$170	MLR0004M12	$186	2	MLR0002M12	$133	MLR0002M20	$144
2	4	MLR0004N65	$156	MLR0004M12	$186	4	MLR0004M12	$176	MLR0004M22	$189
3	8	MLR0008N50	$194	MLR0008N75	$220	4	MLR0004N91	$170	MLR0004M12	$185
5	8	MLR0008N30	$171	MLR0008N50	$212	8	MLR0008N50	$194	MLR0008N75	$220
7.5	12	MLR0012N25	$226	MLR0012N42	$285	12	MLR0012N31	$226	MLR0012N51	$288
10	18	MLR0018N15	$241	MLR0018N25	$298	12	MLR0012N25	$226	MLR0012N42	$285
15	25	MLR0025N12	$280	MLR0025N20	$379	18	MLR0018N15	$241	MLR0018N25	$298
20	35	MLR0035P80	$355	MLR0035N17	$417	25	MLR0025N12	$280	MLR0055N20	$379
25	35	MLR0035P80	$355	MLR0035N12	$412	35	MLR0035N12	$347	MLR0035N17	$417
30	45	MLR0045P70	$337	MLR0045N12	$448	35	MLR0035P80	$355	MLR0035N17	$421
40	55	MLR0055P50	$361	MLR0055P85	$461	45	MLR0045P70	$336	MLR0045N12	$448
50	80	MLR0080P40	$478	MLR0080P70	$702	55	MLR0055P50	$364	MLR0055P85	$461
60	80	MLR0080P40	$478	MLR0080P70	$702	80	MLR0080P40	$458	MLR0080P70	$741
75	110	MLR0110P30	$726	MLR0110P45	$845	80	MLR0080P40	$458	MLR0080P70	$700
100	130	MLR0130P20	$964	MLR0130P30	$1,106	110	MLR0110930	$726	MLR0110P45	$845

NOTES:
"*" Horsepower rating is for general guideline purposes only. Check actual amperage of motor.
"#" Amp rating is for general guideline only. For input line reactor, check amperage rating of drive. When using as a output line reactor, check output current of drive.

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