
Submersible Wastewater Pump with Anti-Clog Technology



Model DKE(X)U
Model DDKE(X)U



Motor Data

Motor Data**General Specification**

- a. The pump motor shall be FM/FMc Explosion Proof, Class 1, Division 1, Group C, D. The design shall be an air-filled induction type with a squirrel-cage rotor, shell type design, built to NEMA MG-1, Design B specification. The motor shall be inverter duty rated for VFD operation. Stator windings shall be copper, insulated with moisture resistant Class H insulation, rated for 356° F (180° C). The stator shall be dipped and baked in Class H varnish and heat shrunk fitted into the stator housing. Rotor bars and short circuit rings shall be manufactured of cast aluminum. The motor shaft shall be one-piece AISI 403 SS material, rotating on two permanently lubricated ball bearings designed for a minimum life of 50,000 hours.
- b. The Premium Efficient motor shall meet the efficiency standard in accordance with IEC 60034-30, level IE3. Motor rating tests shall be conducted in accordance with IEC 60034-2-1.
- c. The motor service factor shall be 1.15 and capable of up to 20 starts per hour. The motor shall be designed for continuous duty pumping at a maximum sump temperature of 104° F. The motor shall be non-overloading over the entire specified range of operation and be able to operate at full load for up to 30 minutes while unsubmerged without damage to the unit.
- d. ICS (Internal Cooling System) allows the motor to be cooled down by Propylene Glycol (PG), which circulates inside the ICS Jacket so that the motor may be operated at full load continuously while unsubmerged without damage to the unit. ICS is applied as standard for 7.5hp to 60hp and optionally available for 2 to 5hp.
- e. The junction chamber shall be sealed off from the stator housing with O-rings and packing and contain a terminal board mounted on a DIN rail for simple connection of the cable conductors to the motor stator and sensor leads. The use of wire nuts or crimp-type connectors is not acceptable.
- f. Voltage and frequency tolerances shall be a maximum $\pm 10 / 5\%$ respectively. Motor over temperature protection shall be provided by three miniature thermal protectors (one per phase) embedded in the windings. Mechanical seal failure protection shall be provided by a mechanical float switch located in a chamber above the seal. This switch shall be comprised of a magnetic float that actuates a dry reed switch encapsulated within the stem. Should the mechanical seal fail, liquid shall be directed into the float chamber, in which the rising liquid activates the switch opening the normally closed circuit. The float body and float shall be a polypropylene material with a 316SS stopper.
- g. Motor shall have oversized AISI 304 SS lifting hanger to easily install and remove pump and motor.
- h. Motor cable shall be a single eight core cable containing both power and sensor conductors. The cable jacket shall be manufactured of an oil-resistant chlorinated polyethylene (CPE) rubber material, designed for submerged applications. Cable shall be Type RHW-2 / RW90, 90°C, 600V, UL/CSA Listed, & NEC/CEC approved for wet locations. The cable shall be watertight to a depth of at least 65'. The cable entry system shall comprise of primary, secondary, and tertiary sealing methods. The primary seal shall be achieved by an NBR tapered elastomeric grommet compressed between the cable gland, cable housing, and 304SS washers. Secondary sealing is accomplished with a compressed O-ring made of NBR material. Compression and subsequent sealing shall preclude specific torque requirements. The system shall also include tertiary sealing to prevent leakage into the motor housing due to capillary action through the insulation if the cable is damaged or cut. The cable wires shall be cut, stripped, re-connected with a copper butt end connector, and embedded in epoxy within the cable gland. This provides a dead end for leakage through the cable insulation into the motor junction area.



Motor Data

ZXDL-4P 60Hz 208V - 2 to 5hp

Nameplate Rating	Model	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL
	Output - kW/HP	1.5 / 2		2.2 / 3		3.7 / 5	
	Cooling system	Non-ICS	ICS	Non - ICS	ICS	Non-ICS	ICS
	Phase	3	3	3	3	3	3
	Poles	4	4	4	4	4	4
	Volts	208	208	208	208	208	208
	Frequency	60	60	60	60	60	60
	Amps	6.4	6.4	9.9	10.2	15.5	15.7
	Speed - min ⁻¹	1725	1725	1750	1750	1735	1735
	Insulation Class	H	H	H	H	H	H
	Service Factor	1.15	1.15	1.15	1.15	1.15	1.15
Frame Size		145	145	160	160	160	160
Bearing Size	Power Slide	6306ZZ	6306ZZ	5307ZZ	5307ZZ	5307ZZ	5307ZZ
	Opposite Side	6204ZZ	6204ZZ	6205ZZ	6205ZZ	6205ZZ	6205ZZ
No Load Test	Amps	2.88	2.88	3.83	3.83	4.8	4.8
	Watts	118.8	118.8	179.7	179.7	234	234
Resistance at 20°C (with Cable 50ft)	Ohms	1.8368	1.8368	1.1413	1.1413	0.8859	0.8859
Cable Size	AWG No.	14	14	14	14	14	14
75% Load	Current - Amps	5.16	5.16	8.07	8.35	12.07	12.2
	Efficiency - %	75.06	75.06	69.35	66.3	76.04	75.29
	Power Factor - %	80.61	80.61	81.88	82.73	83.92	83.88
	Speed - min ⁻¹	1749	1749	1762	1760	1753	1752
100% Load	Current - Amps	6.4	6.4	9.9	10.2	15.5	15.7
	Efficiency - %	76.52	76.52	72.1	69.67	76.63	76.06
	Power Factor - %	85.69	85.69	86.03	86.45	86.28	85.69
	Speed - min ⁻¹	1725	1725	1751	1751	1736	1735
Locked Rotor Torque-%		349	349	150	150	114	113
Start Current-Amps		48.9	48.9	56.8	56.8	73.8	73.8
NEMA MG- 1 Design Letter		B	B	B	B	B	B
Voltage Tolerance with Rated Frequency		±10%	±10%	±10%	±10%	±10%	±10%
Frequency Tolerance with Rated Voltage		±5%	±5%	±5%	±5%	±5%	±5%
Combined Tolerance of Voltage and Frequency (Frequency Tolerance: ±5%)		±10%	±10%	±10%	±10%	±10%	±10%
Max. Cable Length - (m/ft)		110/361	110/361	71/233	68/223	45/148	44/144



Motor Data

ZXDL-4P 60Hz 208V - 7.5 to 30hp

Nameplate Rating	Model	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL
	Output - kW/HP	5.5 / 7.5	7.5 / 10	11 / 15	15 / 20	18.5 / 25	22 / 30
	Cooling system	ICS	ICS	ICS	ICS	ICS	ICS
	Phase	3	3	3	3	3	3
	Poles	4	4	4	4	4	4
	Volts	208	208	208	208	208	208
	Frequency	60	60	60	60	60	60
	Amps	22.7	30	41.9	56.1	66.3	79.3
	Speed - min ⁻¹	1755	1755	1760	1765	1770	1770
	Insulation Class	H	H	H	H	H	H
	Service Factor	1.15	1.15	1.15	1.15	1.15	1.15
Frame Size		180	180	220	220	260	260
Bearing Size	Power Slide	5309ZZ	5309ZZ	6310ZZ DR	6310ZZ DR	6312ZZ DR	6312ZZ DR
	Opposite Side	6306ZZ	6306ZZ	6308ZZ	6308ZZ	6309ZZ	6309ZZ
No Load Test	Amps	8.34	11.57	16.31	21.27	20.44	25.68
	Watts	320.4	410.5	440.9	579.1	501.8	612
Resistance at 20°C (with Cable 50ft)	Ohms	0.395	0.3262	0.1695	0.1238	0.0843	0.0701
Cable Size	AWG No.	10	10	6	6	3	3
75% Load	Current - Amps	18.01	23.8	33.22	44.34	51.84	62.2
	Efficiency - %	78.85	82.35	84.66	85.51	87.29	87.2
	Power Factor - %	80.65	79.67	81.44	82.36	85.11	84.45
	Speed - min ⁻¹	1769	1768	1773	1774	1779	1778
100% Load	Current - Amps	22.7	30	41.9	56.1	66.3	79.3
	Efficiency - %	80.18	83.58	85.71	86.51	88.39	88.19
	Power Factor - %	83.76	82.72	85.69	86.29	87.48	87.21
	Speed - min ⁻¹	1757	1756	1762	1765	1770	1771
Locked Rotor Torque-%		109	117	162	165	134	159
Start Current-Amps		127.2	173.6	258.8	360.8	395	533.6
NEMA MG- 1 Design Letter		B	B	B	B	B	B
Voltage Tolerance with Rated Frequency		±10%	±10%	±10%	±10%	±10%	±10%
Frequency Tolerance with Rated Voltage		±5%	±5%	±5%	±5%	±5%	±5%
Combined Tolerance of Voltage and Frequency (Frequency Tolerance: ±5%)		±10%	±10%	±10%	±10%	±10%	±10%
Max. Cable Length - (m/ft)		80/262	61/200	105/344	78/256	134/440	112/367



Motor Data

ZXDL-4P 60Hz 230V - 2 to 5hp

Nameplate Rating	Model	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL
	Output - kW/HP	1.5 / 2		2.2 / 3		3.7 / 5	
	Cooling system	Non-ICS	ICS	Non - ICS	ICS	Non-ICS	ICS
	Phase	3	3	3	3	3	3
	Poles	4	4	4	4	4	4
	Volts	230	230	230	230	230	230
	Frequency	60	60	60	60	60	60
	Amps	6.2	6.2	9.2	9.4	14.4	14.6
	Speed - min ⁻¹	1745	1745	1760	1760	1750	1750
	Insulation Class	H	H	H	H	H	H
	Service Factor	1.15	1.15	1.15	1.15	1.15	1.15
Frame Size	145	145	160	160	160	160	
Bearing Size	Power Slide	6306ZZ	6306ZZ	5307ZZ	5307ZZ	5307ZZ	5307ZZ
	Opposite Side	6204ZZ	6204ZZ	6205ZZ	6205ZZ	6205ZZ	6205ZZ
No Load Test	Amps	3.31	3.31	4.81	4.81	6.03	6.03
	Watts	140	140	207	207	304.2	304.2
Resistance at 20°C (with Cable 50ft)	Ohms	1.8368	1.8368	1.1413	1.1413	0.8859	0.8859
Cable Size	AWG No.	14	14	14	14	14	14
75% Load	Current - Amps	5.09	5.09	7.68	7.8	11.6	11.65
	Efficiency - %	74.34	74.34	74.26	72.42	76.17	75.71
	Power Factor - %	74.57	74.57	72.64	73.3	78.86	78.98
	Speed - min ⁻¹	1760	1760	1771	1771	1767	1767
100% Load	Current - Amps	6.2	6.2	9.2	9.4	14.4	14.6
	Efficiency - %	76.48	76.48	76.34	75.14	77.44	77.08
	Power Factor - %	79.92	79.92	78.51	78.68	83.08	83.13
	Speed - min ⁻¹	1749	1749	1763	1762	1754	1753
Locked Rotor Torque-%	412	412	180	180	137	137	
Start Current-Amps	54.7	54.7	64.5	64.5	83.9	83.9	
NEMA MG- 1 Design Letter	B	B	B	B	B	B	
Voltage Tolerance with Rated Frequency	±10%	±10%	±10%	±10%	±10%	±10%	
Frequency Tolerance with Rated Voltage	±5%	±5%	±5%	±5%	±5%	±5%	
Combined Tolerance of Voltage and Frequency (Frequency Tolerance: ±5%)	±10%	±10%	±10%	±10%	±10%	±10%	
Max. Cable Length - (m/ft)	134/440	134/440	92/302	90/295	55/180	55/180	



Motor Data

ZXDL-4P 60Hz 230V - 7.5 to 30hp

Nameplate Rating	Model	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL
	Output - kW/HP	5.5 / 7.5	7.5 / 10	11 / 15	15 / 20	18.5 / 25	22 / 30
	Cooling system	ICS	ICS	ICS	ICS	ICS	ICS
	Phase	3	3	3	3	3	3
	Poles	4	4	4	4	4	4
	Volts	230	230	230	230	230	230
	Frequency	60	60	60	60	60	60
	Amps	21.6	28.6	40	53.6	63	75.4
	Speed - min ⁻¹	1765	1760	1770	1770	1770	1775
	Insulation Class	H	H	H	H	H	H
	Service Factor	1.15	1.15	1.15	1.15	1.15	1.15
Frame Size		180	180	220	220	260	260
Bearing Size	Power Slide	5309ZZ	5309ZZ	6310ZZ DR	6310ZZ DR	6312ZZ DR	6312ZZ DR
	Opposite Side	6306ZZ	6306ZZ	6308ZZ	6308ZZ	6309ZZ	6309ZZ
No Load Test	Amps	10.74	13.66	20.3	26.05	25.69	32.84
	Watts	428.4	458.4	585	756.8	646.2	792
Resistance at 20°C (with Cable 50ft)	Ohms	0.395	0.3262	0.1695	0.1238	0.0843	0.0701
Cable Size	AWG No.	10	10	6	6	3	3
75% Load	Current - Amps	17.92	23.2	33.12	44.04	50.58	60.64
	Efficiency - %	78.41	81.86	84.08	84.61	86.22	87.57
	Power Factor - %	73.68	74.36	74.37	75.78	79.86	78
	Speed - min ⁻¹	1774	1772	1777	1779	1780	1783
100% Load	Current - Amps	21.6	28.6	40	53.6	63	75.4
	Efficiency - %	80.96	83.49	85.86	86.02	87.49	88.94
	Power Factor - %	78.87	78.81	80.27	81.47	84.26	83
	Speed - min ⁻¹	1769	1762	1770	1772	1773	1776
Locked Rotor Torque-%		132	143	195	198	160	190
Start Current-Amps		143.6	197.4	291.2	405.6	439	594.2
NEMA MG- 1 Design Letter		B	B	B	B	B	B
Voltage Tolerance with Rated Frequency		±10%	±10%	±10%	±10%	±10%	±10%
Frequency Tolerance with Rated Voltage		±5%	±5%	±5%	±5%	±5%	±5%
Combined Tolerance of Voltage and Frequency (Frequency Tolerance: ±5%)		±10%	±10%	±10%	±10%	±10%	±10%
Max. Cable Length - (m/ft)		98/322	74/243	130/427	95/312	162/531	137/449



Motor Data

ZXDL-4P 60Hz 460V - 2 to 5hp

Nameplate Rating	Model	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL
	Output - kW/HP	1.5 / 2		2.2 / 3		3.7 / 5	
	Cooling system	Non-ICS	ICS	Non-ICS	ICS	Non-ICS	ICS
	Phase	3	3	3	3	3	3
	Poles	4	4	4	4	4	4
	Volts	460	460	460	460	460	460
	Frequency	60	60	60	60	60	60
	Amps	3.1	3.1	4.6	4.7	7.2	7.3
	Speed - min ⁻¹	1745	1745	1760	1760	1750	1750
	Insulation Class	H	H	H	H	H	H
	Service Factor	1.15	1.15	1.15	1.15	1.15	1.15
Frame Size		145	145	160	160	160	160
Bearing Size	Power Slide	6306ZZ	6306ZZ	5307ZZ	5307ZZ	5307ZZ	5307ZZ
	Opposite Side	6204ZZ	6204ZZ	6205ZZ	6205ZZ	6205ZZ	6205ZZ
No Load Test	Amps	1.66	1.66	2.41	2.41	3.02	3.02
	Watts	140.4	140.4	207	207	304.2	304.2
Resistance at 20°C (with Cable 50ft)	Ohms	6.6039	6.6039	3.8217	3.8217	2.8001	2.8001
Cable Size	AWG No.	14	14	14	14	14	14
75% Load	Current - Amps	2.55	2.55	3.84	3.94	5.8	5.83
	Efficiency - %	74.34	74.34	74.26	71.59	76.17	75.71
	Power Factor - %	74.59	74.59	72.56	73.48	78.81	78.92
	Speed - min ⁻¹	1760	1760	1771	1771	1767	1767
100% Load	Current - Amps	3.1	3.1	4.6	4.7	7.2	7.3
	Efficiency - %	76.48	76.48	76.34	74.49	77.44	77.08
	Power Factor - %	79.88	79.88	78.42	78.77	83.07	83.13
	Speed - min ⁻¹	1749	1749	1763	1761	1754	1753
Locked Rotor Torque-%		412	412	180	180	137	137
Start Current-Amps		27.4	27.4	32.3	32.3	42	42
NEMA MG- 1 Design Letter		B	B	B	B	B	B
Voltage Tolerance with Rated Frequency		±10%	±10%	±10%	±10%	±10%	±10%
Frequency Tolerance with Rated Voltage		±5%	±5%	±5%	±5%	±5%	±5%
Combined Tolerance of Voltage and Frequency (Frequency Tolerance: ±5%)		±10%	±10%	±10%	±10%	±10%	±10%
Max. Cable Length - (m/ft)		536/1759	536/1759	368/1207	360/1181	220/722	220/722



Motor Data

ZXDL-4P 60Hz 460V - 7.5 to 60hp

Nameplate Rating	Model	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL
	Output - kW/HP	5.5 / 7.5	7.5 / 10	11 / 15	15 / 20	18.5 / 25	22 / 30	30 / 40	37 / 50	45 / 60
	Cooling system	ICS	ICS	ICS	ICS	ICS	ICS	ICS	ICS	ICS
	Phase	3	3	3	3	3	3	3	3	3
	Poles	4	4	4	4	4	4	4	4	4
	Volts	460	460	460	460	460	460	460	460	460
	Frequency	60	60	60	60	60	60	60	60	60
	Amps	10.8	14.3	20	26.8	31.5	37.7	50.9	63.3	76.2
	Speed - min ⁻¹	1765	1760	1770	1770	1770	1775	1780	1780	1780
	Insulation Class	H	H	H	H	H	H	H	H	H
	Service Factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Frame Size		180	180	220	220	260	260	292	292	292
Bearing Size	Power Slide	5309ZZ	5309ZZ	6310ZZ DR	6310ZZ DR	6312ZZ DR	6312ZZ DR	6312ZZ DR	6315ZZ DR	6315ZZ DR
	Opposite Side	6306ZZ	6306ZZ	6308ZZ	6308ZZ	6309ZZ	6309ZZ	6310ZZ	6310ZZ	6310ZZ
No Load Test	Amps	5.37	6.83	10.15	13.02	12.84	16.42	21.52	28.72	34.65
	Watts	428.4	458.4	585	756.8	646.2	792	1127.1	1308	1530
Resistance at 20°C (with Cable 50ft)	Ohms	1.2849	1.0096	0.5592	0.3762	0.2794	0.2228	0.1515	0.1167	0.0894
Cable Size	AWG No.	10	10	6	6	3	3	6	3	3
75% Load	Current - Amps	8.96	11.6	16.52	22.02	25.29	30.32	40.88	51.51	62.14
	Efficiency - %	78.41	81.86	84.4	84.61	86.22	87.57	87.62	87.54	88.24
	Power Factor - %	73.68	74.36	74.27	75.79	79.85	78	78.83	77.24	77.26
	Speed - min ⁻¹	1774	1772	1777	1779	1780	1783	1783	1783	1783
100% Load	Current - Amps	10.8	14.3	20	26.8	31.5	37.7	50.9	63.3	76.2
	Efficiency - %	80.96	83.49	85.88	86.02	87.49	88.94	88.71	88.65	89.39
	Power Factor - %	78.87	78.81	80.27	81.49	84.25	83	83.87	82.72	82.79
	Speed - min ⁻¹	1769	1762	1770	1772	1773	1776	1781	1784	1781
Locked Rotor Torque-%		132	143	195	198	160	190	170	176	176
Start Current-Amps		71.8	98.7	145.6	202.8	219.5	297.1	411.5	495.8	638.1
NEMA MG- 1 Design Letter		B	B	B	B	B	B	B	B	B
Voltage Tolerance with Rated Frequency		±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%
Frequency Tolerance with Rated Voltage		±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%
Combined Tolerance of Voltage and Frequency (Frequency Tolerance: ±5%)		±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%
Max. Cable Length - (m/ft)		392/1286	296/971	520/1706	380/1246	648/2125	548/1797	195/640	328/1076	272/892



Motor Data

ZXDL-4P 60Hz 575V - 2 to 5hp

Nameplate Rating	Model	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL
	Output - kW/HP	1.5 / 2		2.2 / 3		3.7 / 5	
	Cooling system	Non-ICS	ICS	Non - ICS	ICS	Non-ICS	ICS
	Phase	3	3	3	3	3	3
	Poles	4	4	4	4	4	4
	Volts	575	575	575	575	575	575
	Frequency	60	60	60	60	60	60
	Amps	2.4	2.5	3.6	3.8	5.8	5.8
	Speed - min ⁻¹	1750	1745	1765	1760	1755	1755
	Insulation Class	H	H	H	H	H	H
	Service Factor	1.15	1.15	1.15	1.15	1.15	1.15
Frame Size		145	145	160	160	160	160
Bearing Size	Power Slide	6306ZZ	6306ZZ	5307ZZ	5307ZZ	5307ZZ	5307ZZ
	Opposite Side	6204ZZ	6204ZZ	6205ZZ	6205ZZ	6205ZZ	6205ZZ
No Load Test	Amps	1.32	1.32	1.92	1.92	2.41	2.41
	Watts	140.4	140.4	207.0	207.0	304.2	304.2
Resistance at 20°C (with Cable 50ft)	Ohms	10.8477	10.8477	5.8948	5.8948	4.4198	4.4198
Cable Size	AWG No.	14	14	14	14	14	14
75% Load	Current - Amps	1.99	2.05	2.98	3.15	4.62	4.62
	Efficiency - %	77.13	73.48	77.99	71.64	76.68	76.68
	Power Factor - %	73.47	74.90	71.29	73.53	78.72	78.72
	Speed - min ⁻¹	1761	1760	1772	1771	1767	1767
100% Load	Current - Amps	2.4	2.5	3.6	3.80	5.80	5.80
	Efficiency - %	78.59	75.77	79.59	74.34	77.75	77.77
	Power Factor - %	79.62	80.04	77.51	78.74	82.78	82.77
	Speed - min ⁻¹	1750	1748	1766	1763	1755	1755
Locked Rotor Torque-%		413	412	181	180	137	137
Start Current-Amps		21.9	21.9	25.8	25.8	33.6	33.6
NEMA MG- 1 Design Letter		B	B	B	B	B	B
Voltage Tolerance with Rated Frequency		±10%	±10%	±10%	±10%	±10%	±10%
Frequency Tolerance with Rated Voltage		±5%	±5%	±5%	±5%	±5%	±5%
Combined Tolerance of Voltage and Frequency (Frequency Tolerance: ±5%)		±10%	±10%	±10%	±10%	±10%	±10%
Max. Cable Length - (m/ft)		874/2867	835/2740	599/1965	558/1831	348/1142	348/1142



Motor Data

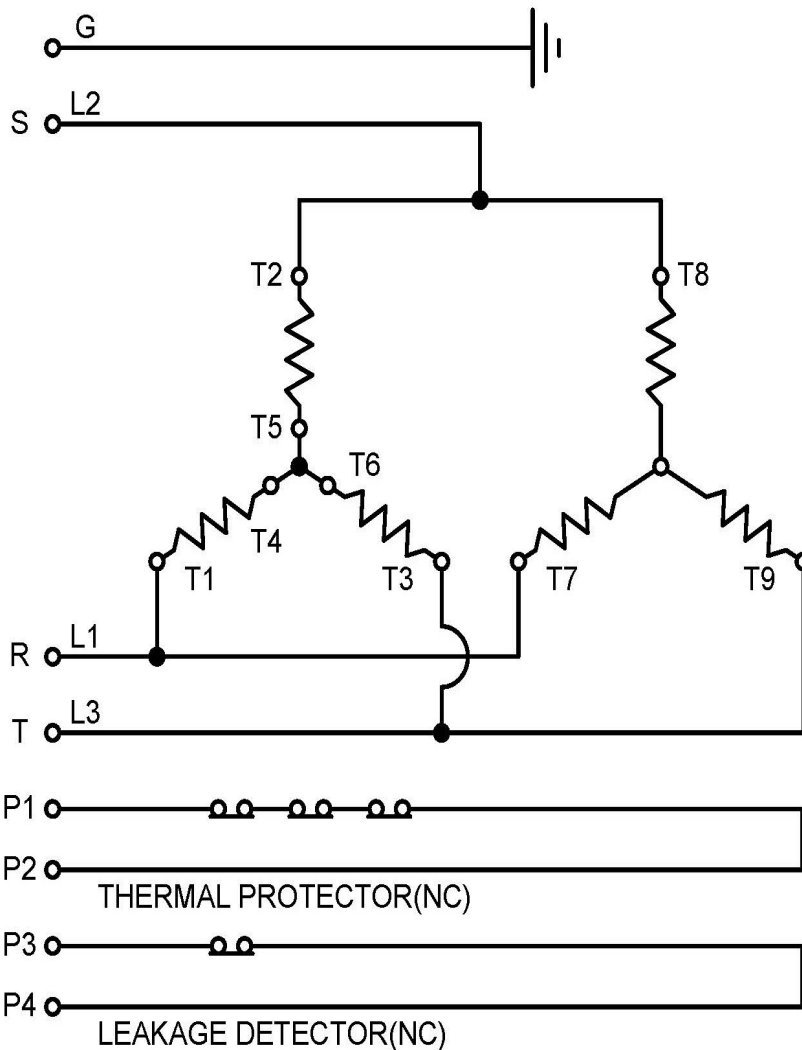
ZXDL 4-P 60Hz 575V - 7.5 to 60hp

Nameplate Rating	Model	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL	ZXDL
	Output - kW/HP	5.5 / 7.5	7.5 / 10	11 / 15	15 / 20	18.5 / 25	22 / 30	30 / 40	37 / 50	45 / 60
	Cooling system	ICS	ICS	ICS	ICS	ICS	ICS	ICS	ICS	ICS
	Phase	3	3	3	3	3	3	3	3	3
	Poles	4	4	4	4	4	4	4	4	4
	Volts	575	575	575	575	575	575	575	575	575
	Frequency	60	60	60	60	60	60	60	60	60
	Amps	8.7	11.6	16	21.6	25.2	30.4	40.7	51.1	61.6
	Speed - min ⁻¹	1765	1760	1765	1770	1770	1775	1780	1770	1780
	Insulation Class	H	H	H	H	H	H	H	H	H
	Service Factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Frame Size	180	180	220	220	260	260	292	292	292	
Bearing Size	Power Slide	5309ZZ	5309ZZ	6310ZZ DR	6310ZZ DR	6312ZZ DR	6312ZZ DR	6315ZZ DR	6315ZZ DR	6315ZZ DR
	Opposite Side	6306ZZ	6306ZZ	6308ZZ	6308ZZ	6309ZZ	6309ZZ	6310ZZ	6310ZZ	6310ZZ
No Load Test	Amps	4.30	5.46	8.12	10.42	10.28	13.14	17.21	22.97	27.72
	Watts	428.4	458.4	585.0	756.8	646.2	792.0	1127.1	1308.0	1530.0
Resistance at 20°C (with Cable 50ft)	Ohms	2.0593	1.5413	0.8594	0.5684	0.4360	0.3325	0.2136	0.1662	0.1271
Cable Size	AWG No.	10	10	6	6	3	3	6	3	3
75% Load	Current - Amps	7.14	9.43	13.22	17.72	20.21	24.56	32.80	41.25	50.11
	Efficiency - %	78.87	80.02	84.41	83.86	86.36	86.04	87.11	87.40	87.22
	Power Factor - %	78.53	74.86	74.26	76.01	79.82	78.40	79.07	77.29	77.53
	Speed - min ⁻¹	1775	1772	1777	1778	1780	1782	1783	1781	1783
100% Load	Current - Amps	8.70	11.60	16.00	21.60	25.20	30.40	40.70	51.10	61.60
	Efficiency - %	81.49	82.20	85.97	85.59	87.49	87.83	88.56	87.86	88.40
	Power Factor - %	78.45	79.31	80.06	81.40	84.04	82.96	83.98	82.75	82.86
	Speed - min ⁻¹	1768	1763	1768	1770	1773	1775	1782	1774	1782
Locked Rotor Torque-%	132	143	195	198	160	190	170	176	176	
Start Current-Amps	57.4	79.0	116.5	162.3	175.6	237.7	329.2	396.6	510.5	
NEMA MG- 1 Design Letter	B	B	B	B	B	B	B	B	B	
Voltage Tolerance with Rated Frequency	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	
Frequency Tolerance with Rated Voltage	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	
Combined Tolerance of Voltage and Frequency (Frequency Tolerance: ±5%)	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	
Max. Cable Length - (m/ft)	617/2024	457/1499	815/2674	594/1949	1015/3330	852/2795	305/1001	508/1667	421/1381	



Motor Data

Winding Connection - Output 2 to 10HP - 208/230V

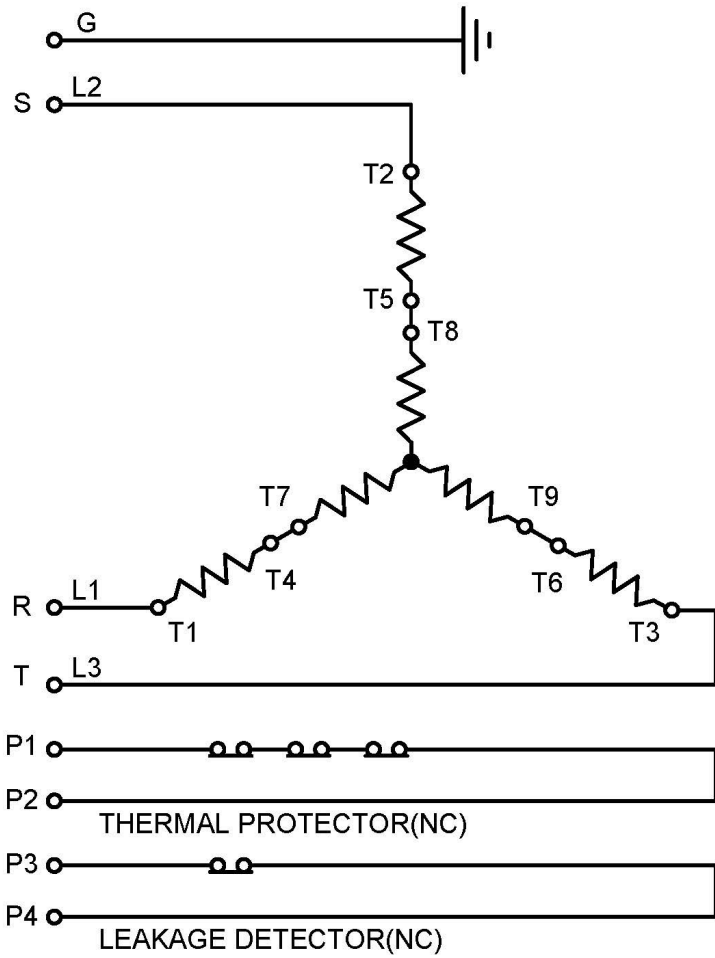


- G - GRN
- L1 - RED - T1 - T7
- L2 - WHT - T2 - T8
- L3 - BLK - T3 - T9
- T4 - T5 - T6
- P1 - RED
- P2 - WHT
- P3 - BLK
- P4 - ORG



Motor Data

Winding Connection - Output 2 to 10HP - 460V

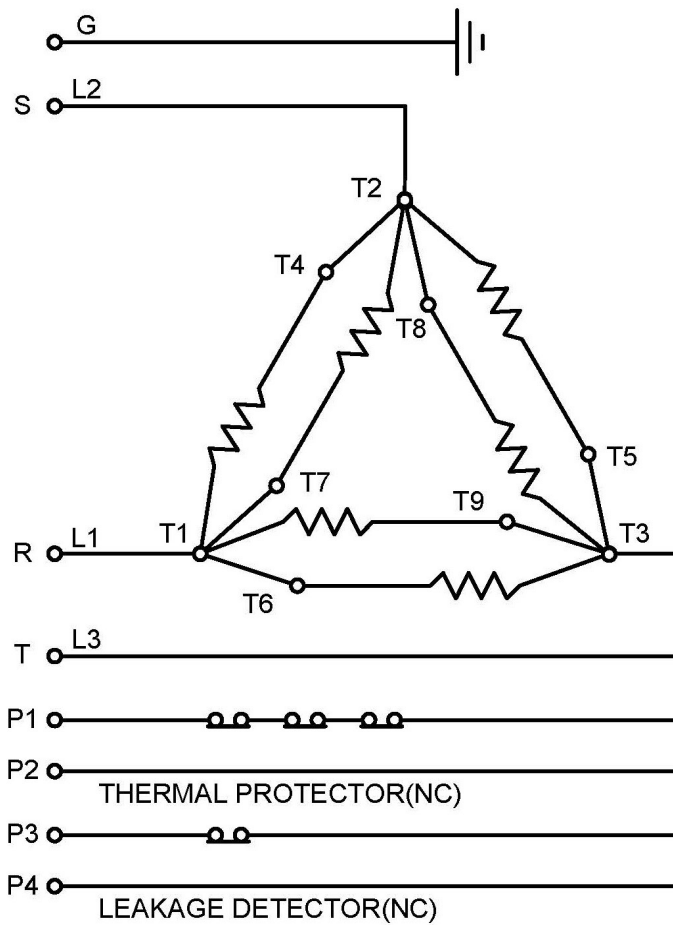


- G - GRN
- L1 - RED - T1
- L2 - WHT - T2
- L3 - BLK - T3
- T4 - T7
- T5 - T8
- T6 - T9
- P1 - RED
- P2 - WHT
- P3 - BLK
- P4 - ORG



Motor Data

Winding Connection - Output 15 to 30HP - 208/230V

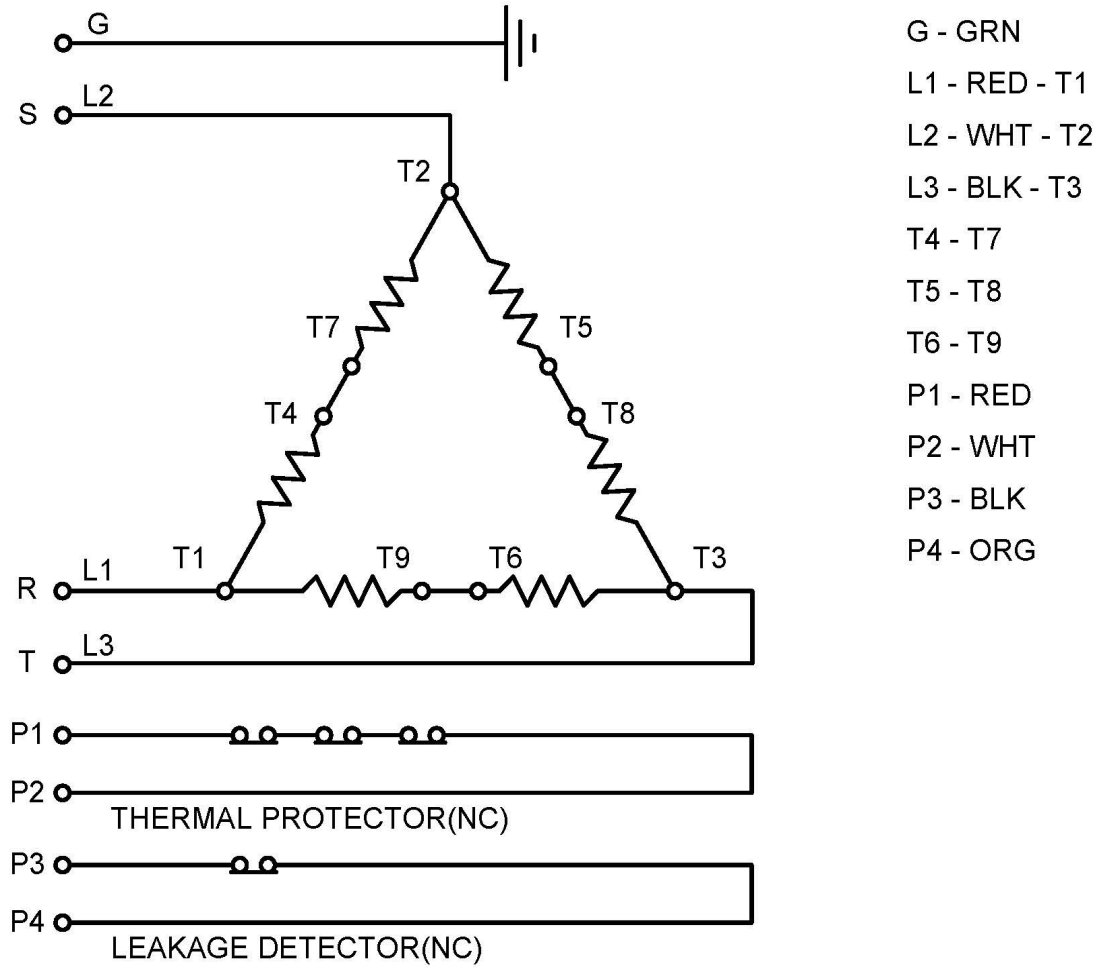


- G - GRN
- L1 - RED - T1 - T6 - T7
- L2 - WHT - T2 - T4 - T8
- L3 - BLK - T3 - T5 - T9
- P1 - RED
- P2 - WHT
- P3 - BLK
- P4 - ORG



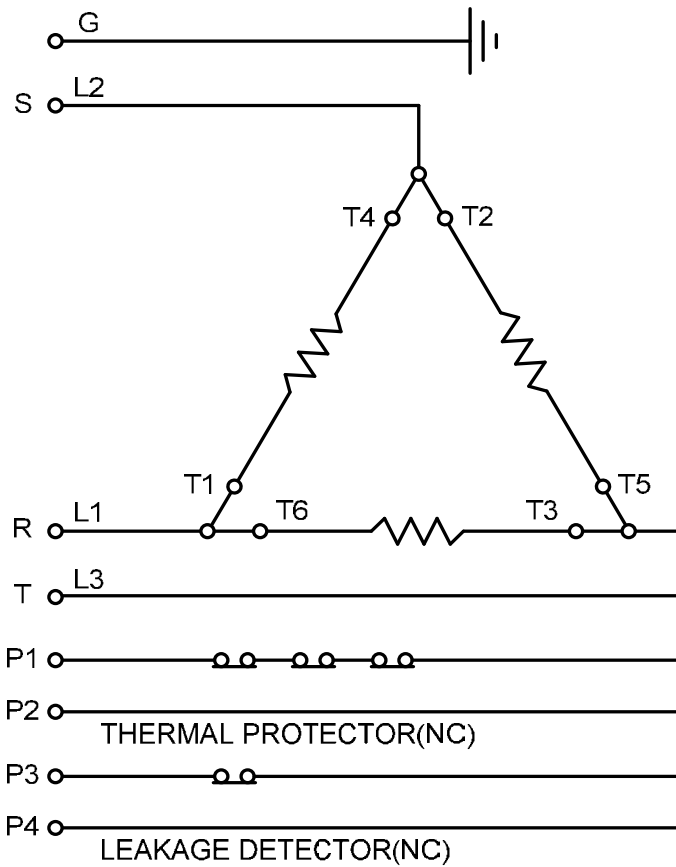
Motor Data

Winding Connection - Output 15 to 30HP - 460V



Motor Data

Winding Connection - Output 40 to 60HP - 460V

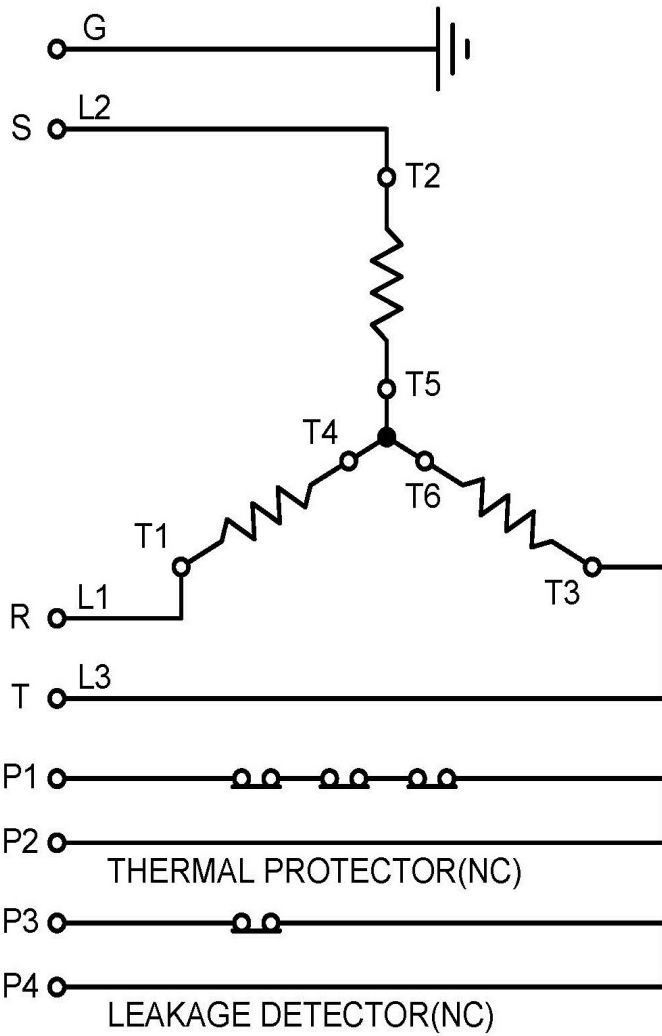


- G - GRN
- L1 - RED - T1 - T6
- L2 - WHT - T2 - T4
- L3 - BLK - T3 - T5
- P1 - RED
- P2 - WHT
- P3 - BLK
- P4 - ORG



Motor Data

Winding Connection - Output 2 to 10HP - 575V

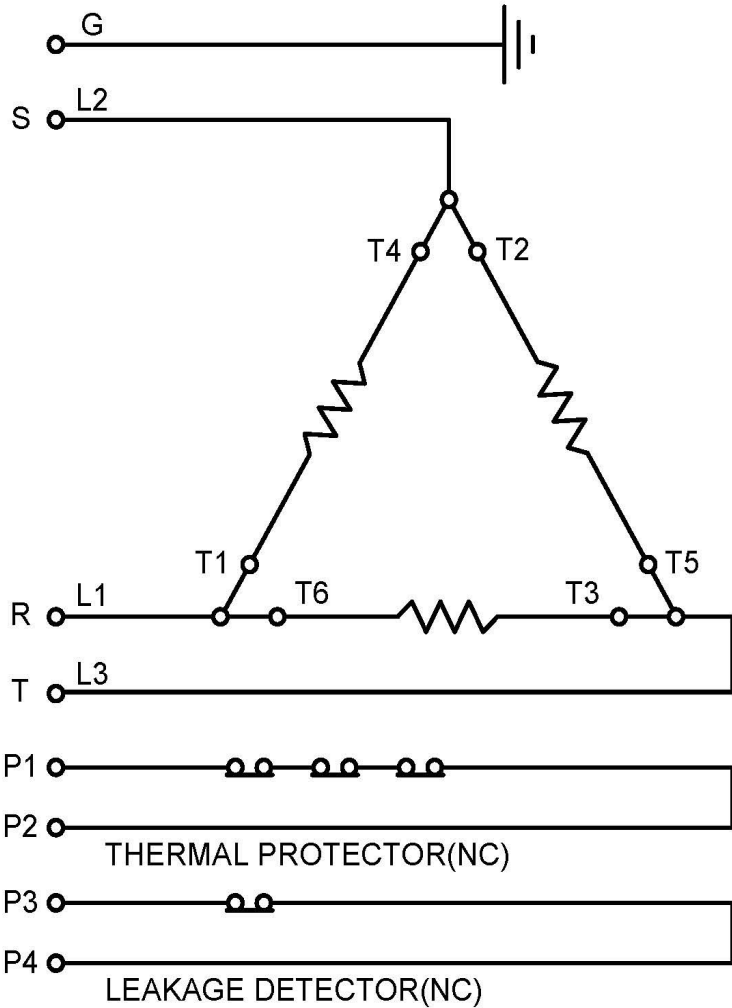


- G - GRN
- L1 - RED - T1
- L2 - WHT - T2
- L3 - BLK - T3
- P1 - RED
- P2 - WHT
- P3 - BLK
- P4 - ORG



Motor Data

Winding Connection - Output 15 to 60HP - 575V



- G - GRN
- L1 - RED - T1 - T6
- L2 - WHT - T2 - T4
- L3 - BLK - T3 - T5
- P1 - RED
- P2 - WHT
- P3 - BLK
- P4 - ORG



Motor Data

Thermal Protection

The motor shall be equipped with a protector such as an automatic cut-off device and thermal protector. The motors described below shall incorporate Miniature Thermal Protectors (MTP) embedded in the windings.

When the temperature of the winding rises and reaches the MTP acting point, the motor protection circuit is activated to protect the motor from overheating.

1. Applicable Model:

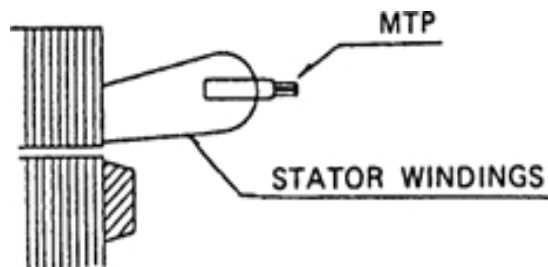
Model: DKE(X)U, DL3F(X)U

2. MTP Specifications:

Model:	9700K 66-215
Type of Contact:	Normally Closed (b-contact)
Acting Temperature:	140°±5°C
Reset Temperature:	85°±10°C
Contact Rating:	AC 115V/230V x 18A/12A (max)
Cable Terminal ID:	P1 & P2

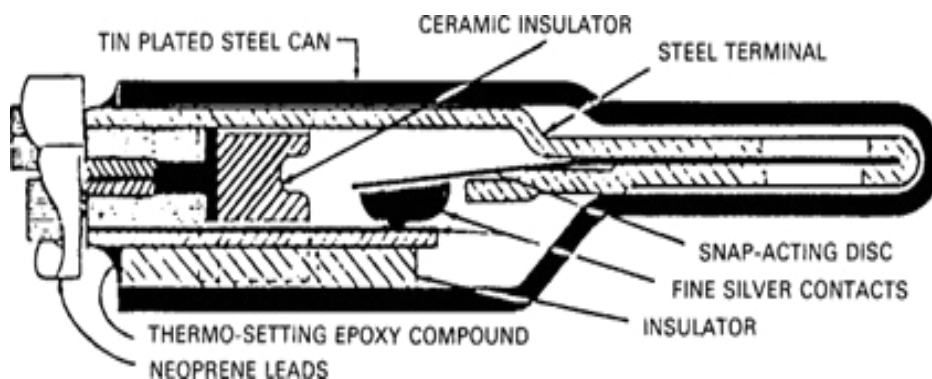
3. Installation:

MTP shall be embedded between each phase of the stator windings, as shown below.



4. Construction:

Construction of the MTP is as shown below.



Motor Data

Leakage Detector (2 to 30HP)

1. **Applicable Model:**

Model: DKE(X)U, DL3F(X)U

2. **Construction:**

Each switch has a float incorporating a magnet, which senses the liquid level and magnetically actuates the dry reed switch encapsulated within a stem. The switch opens on the rise of liquid within the seal chamber.

3. **Specifications:**

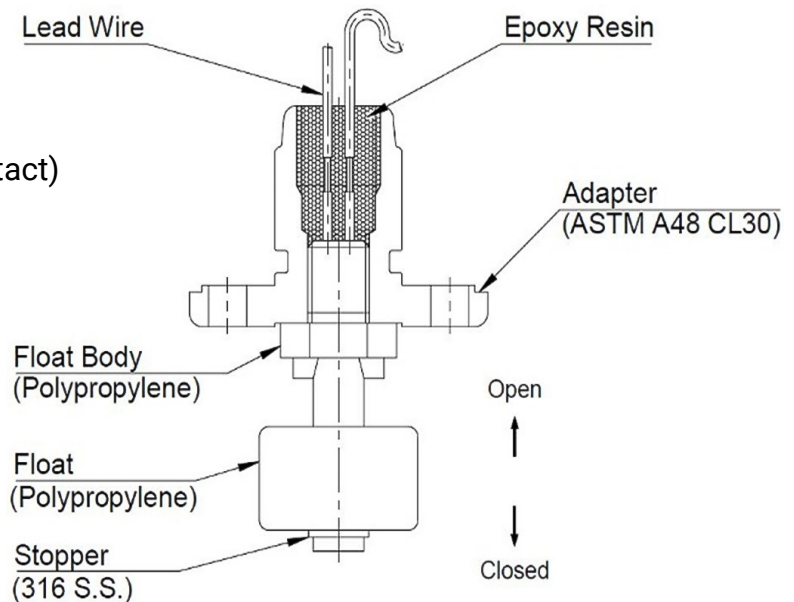
3.1. **Type: LS11R-1A**

Applied model: ZXDL 2-30hp

Contact Rating: AC 300V x 0.5A (max)

Contact Type: Normally Closed (b-contact)

Cable Terminal ID: P3 & P4



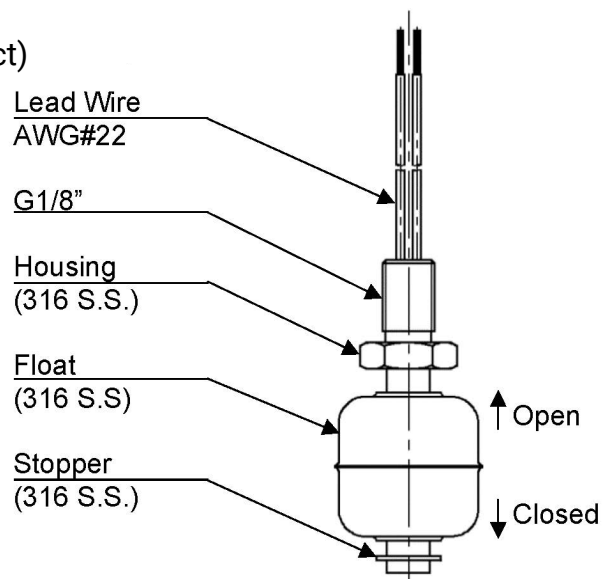
3.2. **Type: OLV-5**

Applied model: ZXDL 40-60hp

Contact Rating: AC 300V x 0.5A (max)

Contact Type: Normally Closed (b-contact)

Cable Terminal ID: P3 & P4

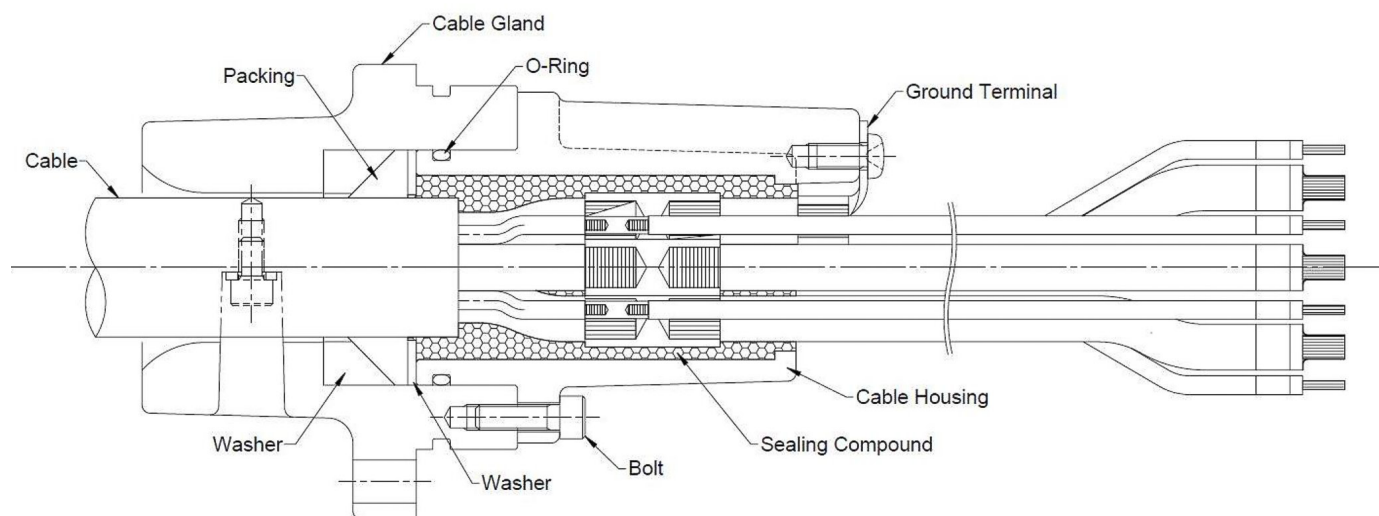


Motor Data

Cable Entry

The cable entry system shall comprise primary, secondary, and tertiary sealing methods.

1. The primary seal shall be achieved by an NBR tapered elastomeric grommet (packing) compressed between the cable gland, cable housing, and a set of 304SS washers.
2. Secondary sealing is accomplished with a compressed O-ring made of NBR material. Compression and subsequent sealing shall preclude specific torque requirements.
3. The system shall also include tertiary sealing to prevent leakage into the motor housing due to capillary action through the insulation if the cable is damaged or cut.



Motor			Cable Data		O.D.		Tag & Color	
Model	kW	HP	Size	Qty	mm	mils	Power	Control
ZXDL	1.5	2	#14x4C+#14x4C	1	19.2	755	L1: RED L2: White L3: BLACK G: GREEN	P1: RED P2: WHITE P3: BLACK P4: ORANGE
	2.2	3						
	3.7	5						
	5.5	7.5	#10x4C+#14x4C		25.1	990		
	7.5	10	#6x4C+#14x4C		29.3	1154		
	11	15						
	15	20	#3x4C+#14x4C		32.5	1280		
	18.5	25						
	22	30	#6x4C+#14x4C		29.3	1154		
	30	40						
	37	50	#3x4C+14x4C		32.5	1280		
45	60							

