

Electrical Features

CE Motors acc. to EN 60034 (resp DIN ICE 34)

Grade of protection	IP55
Type of insulation	F

60 Hz	230 V Υ Υ 460 V Υ	440 V – 480 V Υ	440 V – 480 V Δ
up to 7.4 HP	Standard ●	●	●
10 HP – 13.4 HP	Standard ●	●	●
15 HP and higher	–	–	Standard

The voltage tolerance is $\pm 5\%$ in keeping with DIN EN 60034-1.

Available as a special design, e. g.:

60 Hz	200 V Δ	265 V Δ 460 V Υ	400 V Υ	400 V Δ	575 V Υ	575 V Δ
up to 7.4 HP	●	●	●	●	●	●
10 HP – 13.4 HP	●	●	●	●	●	●
15 HP and higher	–	□	□	□	□	□

50 Hz	200 V Δ	220 V – 240 V Δ 380 V – 420 V Υ	400 V Υ	400 V Δ	380 V – 420 V Δ	500 V Υ	500 V Δ
up to 7.4 HP	●	●	●	●	●	●	●
10 HP – 13.4 HP	●	●	●	●	●	●	●
15 HP and higher	–	–	□	●	●	□	●

- Available
- Upon request

Other voltages upon request.

Models for one voltage and dual 50 Hz and 60 Hz cycles, i. e. for transformer applications, are available upon request.

For example:

3 x 400 V, $\pm 5\%$, 50 – 60 Hz.

Motors of 10 HP (7.5 kW)

Motor design available for Υ/Δ -starting.

Υ/Δ -starting is not mandatory for centrifugal pumps. Screw-spindle pumps when using Υ/Δ at start-up must be started without pressure.

Soft-starting devices are an alternative to Υ/Δ -starting.

Motor cycle time

Motors less 4.0 HP (3 kW):
up to 200 times per hour.

Motors from 4.0 HP (3 kW) to 7.4 HP (5.5 kW):
up to 40 times per hour.

Motors from 10 HP (7.5 kW) to 13.4 HP (10 kW):
up to 20 times per hour.

Motors 15 HP (11 kW) and higher:
up to 15 times per hour.

UL/CSA Certification

Motors up to 13.4 HP (10 kW) and up to max. 600 V are available as special designs with cUL-certification.

Approval testing is carried out by the Underwriters Laboratories Inc. according to the UL 1004 Electric Motors Standard. The motor's name plate bears the identification:



„Recognized Component Mark for Canada and the United States“.

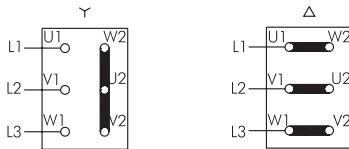
Motors larger than 13.4 HP (10 kW) are available upon request with approval testing.

Electrical Features

Circuits

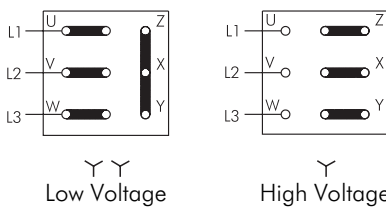
on request

Υ (Star Connection) up to 7.4 HP (5.5 kW)
 Δ (Delta Connection) 10 and 13.4 HP (7.5 and 10 kW)



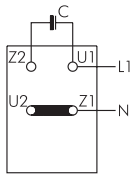
Υ 440 V – 480 V, 60 Hz Δ 440 V – 480 V, 60 Hz

Voltage changing 1 : 2 $\Upsilon/\Upsilon/\Upsilon$
 e. g. 230 / 460 V, 60 Hz



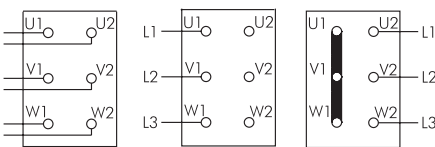
Low Voltage High Voltage

Connection to single-phase
 e. g. 1 x 110 V, 60 Hz



Optional

Pole-changing motor 4/2 poles $\Upsilon/\Upsilon/\Upsilon$
 for 50 % reduction of speed can be chosen

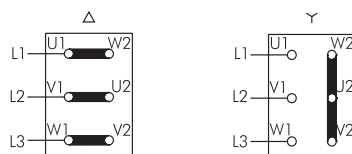


Dahlander circ. (n = 1700 RPM) (n = 3400 RPM)

$\Upsilon/\Upsilon/\Upsilon$ 4 poles with polechanger Υ 2 poles without polechanger

Voltage changing Δ / Υ

e. g. 220 V – 240 V / 380 V – 420 V, 50 Hz
 Δ (Delta Connection) Υ (Star Connection)

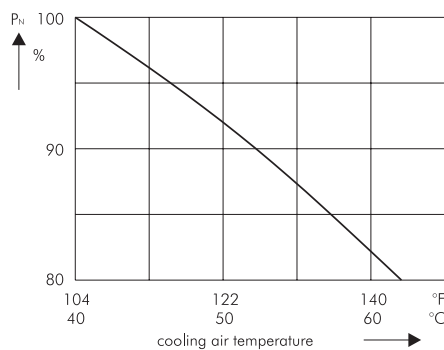
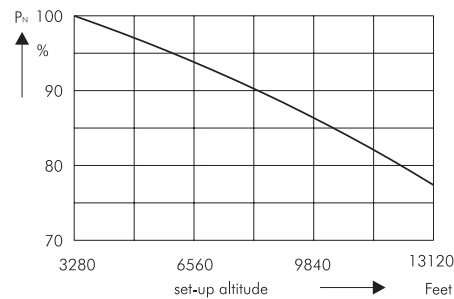


Δ 220 V – 240 V, 50 Hz Υ 380 V – 420 V, 50 Hz

Set-up altitude and coolant temperature

The specified power ratings (P_N) and operating values for the motors apply to operating mode S 1 according to EN 60034-1 (continuous operation) at a frequency of 60 Hz, rated voltage, a cooling air temperature (KT) of max. 104 °F (40 °C) and a set-up altitude of up to 3280 ft (1000 m) above sea level. The motors can also be used at a cooling air temperature above 104 °F (40 °C) up to max. 140 °F (60 °C) or set-up altitude above 3280 ft (1000 m) above sea level. In such cases the power rating must be reduced according to the diagrams, or an appropriately larger motor version or higher heat class has to be selected. However, a deviation from the specified data is necessary when the cooling air temperature is reduced according to table simultaneously at set-up altitudes higher than 3280 ft (1000 m) above sea level.

Set-up altitude feet	Maximum cooling air temperature for heat class F °F °C
0 up to 3280	104 40
3280 up to 6560	86 30
6560 up to 9840	66 19
9540 up to 13120	48 9



DESINA

DESINA – DEcentral and Standardized INstAllation technology

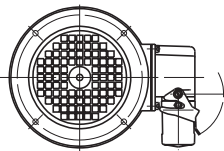
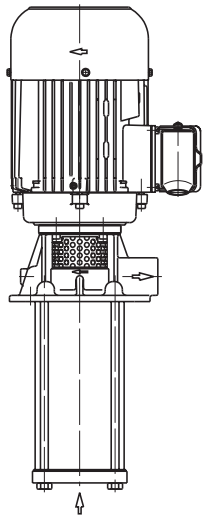
DESINA includes a complete concept for standardization and decentralization of the electronic and fluid technical installation of machine tool OEMs, the automotive industry and its suppliers. The specifications for the required components were defined in cooperation

between the machine construction, automotive and supplier industry.

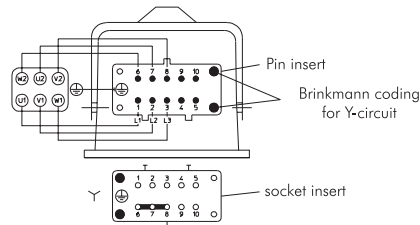
DESINA considers proven solutions such as open bus systems, industrial standards for connectors, etc.

By standardizing components, interfaces and connection elements it is possible to realize highly varying field bus systems on a common physical basis.

Pin assignment for HAN 10-pin connector for pumps with motors up to 7.4 HP (5.5 kW)

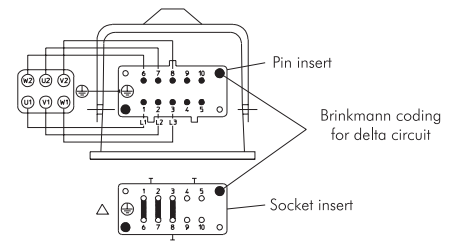


Star circuit



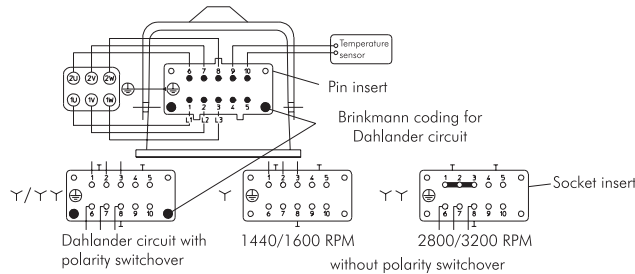
Jumper inserted into counter connector.

Delta circuit



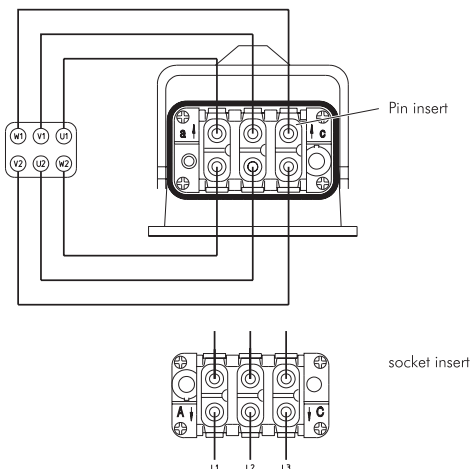
Jumps inserted into counter connector.

Dahlander circuit



Jumper inserted into counter connector.

Assignment for HAN modular plug connector for pumps with motors from 10 HP to 13.4 HP (7.5 kW to 10 kW)



Insert jumper in the counter plug for delta connection.
Please ask for special make with PTC resistor.