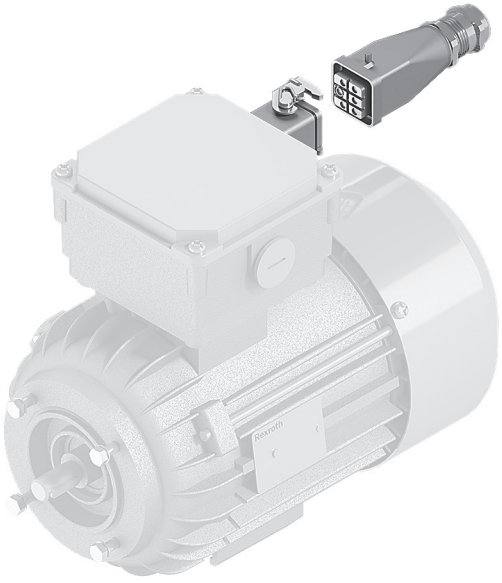
Motor data

Electrical connection requirements:
Connection to a 3-phase, 5-wire system (L1, L2, L3, N, PE); a connection plan is included in the terminal box.
All motors are equipped with a thermal contact*, which has to be connected to an overload switch-off.

All of the motors have an IP 55 rating.

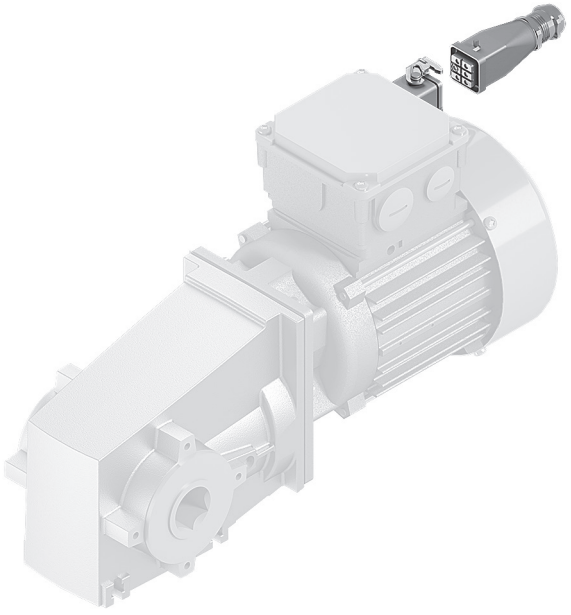
* Bi-metal thermal contact, tripping at 150 °C ± 5 °C

Motor types without Index b



Motor connection with plug (AT = S) and 3A metal industrial plug-in connector for motor types without Index b, e.g., 734

Motor types with Index b



Motor connection with plug (AT = S) and 3A metal industrial plug-in connector for motor types without Index b, e.g., 734b

Motor data

Performance data

Note: Values are typical. Subject to change. See motor type plate for official data. Please note the country assignment.

Voltage class	**A**	**A**	**B**	**D**
Circuit	**Δ**	**Y**	**Y**	**Y**
Voltage U at f = 50 Hz	200 V ±10%		400 V ±10%	
	200 V ±10%		400 V +10...-12%	
Voltage U at f = 60 Hz	220 V ±10%	400 V ±10%	460 V ±10%	575 V ±10%
	220 V ±10%	400 V ±10%	460 V +10...-12%	575 V ±10%

			Current consumption at rated power				**Power factor**	**Power output at**	
	Motor type	**IE3**	**I_N** (A)	**I_N** (A)	**I_N** (A)	**I_N** (A)	**cos** φ	**(50Hz) P** (kW)	**(60Hz) P** (kW)
	524	x	0.65	0.35	0.32	0.24	0.6	0.09	0.1
	614b	–	–	–	0.49	–	0.56	0.12	0.14
	624	x	1.15	0.65	0.55	0.45	0.66	0.18	0.22
	634	x	1.65	0.9	0.85	0.65	0.6	0.25	0.29
	644b	–	–	–	–	0.75	0.6	0.25	0.29
	714b	–	1.75	1	0.8	–	0.64	0.25	0.3
	716b	–	1.45	0.85	0.6	0.55	0.66 ... 0.68	0.18	0.22
	716	x	1.3	0.75	0.6	0.62	0.68	0.18	0.22
	734b	–	2.3	1.35	0.95	0.95	0.72 ... 0.77	0.37	0.45
	734	x	1.9	1.05	0.95	0.72	0.74	0.37	0.42
	734a	x	2.5	1.4	1.3	1	0.66	0.45	0.52
	738b	–	1.4	0.8	0.55	0.5	0.60 ... 0.63	0.12	0.14
	744b	–	–	–	1.4	–	0.77	0.55	0.68
	814b	–	3	1.75	–	1.27	0.68 ... 0.69	0.55	0.64
	814	x	3.1	1.7	1.45	1.1	0.69	0.55	0.63
	824	x	4.1	2.25	2	1.6	0.66	0.75	0.86

Suitable for continuous operation, start-stop operation with an operating time of up to 70% and frequency converter operation.

Certification for the motor, cable and plug components:

IE3 motors: CE, cURURS, CCC

Motors with Index b: CE/CCC (50 Hz), CE/cURUS (60 Hz)

< 40	1[1]
45	0.95
50	0.90
55	0.85
60	0.8

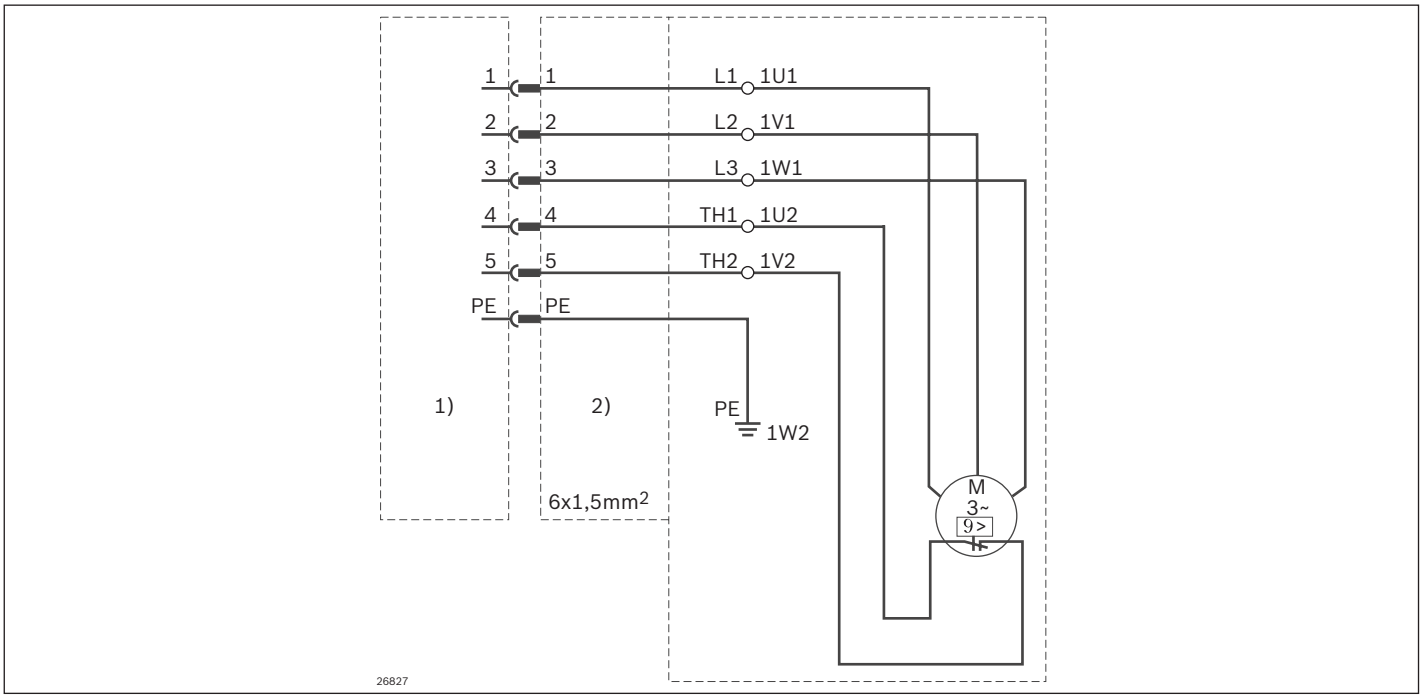
[1] Rated motor power (0.37; 0.25; 0.12 kW)

Rated motor power

The ambient operating temperature T_U influences the rated power P_N of the gear motors.

Motor connection

Motor connection with cable/plug (AT = 1), circuit diagram

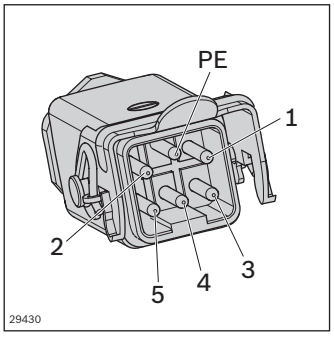


1 Connection cable side
2 Motor side

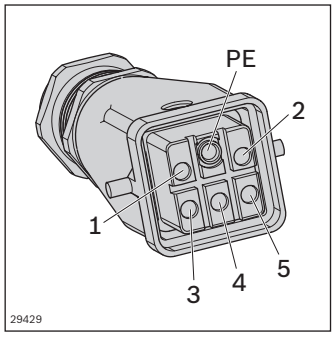
The plug connection consists of UL components.

Connection list

3~ motor connection terminals	Pin no.	Code
U1	1	L1
V1	2	L2
W1	3	L3
TW1	4	Th1
TW2	5	Th2
	PE	PE



Motor side



Connection cable side

Motor protection switch

Motor type	50 Hz			60 Hz			Motor protection switch	
	Rated output	Voltage Δ (V)	Y (V)	Rated output	Voltage Δ (V)	Y (V)	Δ (A)	Y (A)
524	0.09	200	N/A	0.10	220	400	0.75	0.43
		N/A	400		N/A	460	N/A	0.37
		N/A	N/A		N/A	575	N/A	0.30
624	0.18	200	N/A	0.22	220	400	1.30	0.75
		N/A	400		N/A	460	N/A	0.65
		N/A	N/A		N/A	575	N/A	0.55
634	0.25	200	N/A	0.29	220	400	1.90	1.10
		N/A	400		N/A	460	N/A	1.00
		N/A	N/A		N/A	575	N/A	0.80
734	0.37	200	N/A	0.42	220	400	2.15	1.25
		N/A	400		N/A	460	N/A	1.10
		N/A	N/A		N/A	575	N/A	0.90
734a	0.45	200	N/A	0.52	220	400	2.75	1.60
		N/A	400		N/A	460	N/A	1.40
		N/A	N/A		N/A	575	N/A	1.15
814	0.55	200	N/A	0.63	220	400	3.30	1.95
		N/A	400		N/A	460	N/A	1.70
		N/A	N/A		N/A	575	N/A	1.30
824	0.75	200	N/A	0.86	220	400	4.40	2.55
		N/A	400		N/A	460	N/A	2.25
		N/A	N/A		N/A	575	N/A	1.90
716	0.18	200	N/A	0.22	220	400	1.50	0.85
		N/A	400		N/A	460	N/A	0.70
		N/A	N/A		N/A	575	N/A	0.60

Country applicability

	Europe	Switzerland	USA	Canada	Brazil	Australia	New Zealand	South Korea	China	India
Line voltage (3x....)	400 V	400 V	480 V	480 V 575 V	220 V 380 V 440 V	400 V 415 V	400 V 415 V	220 V 380 V 440 V	380 V	415 V
Line voltage tolerance	±10%	±10%	±10%	±10%	±10%	±5%	±5%			±5%
Line frequency	50 Hz	50 Hz	60 Hz	60 Hz	60 Hz	50 Hz	50 Hz	60 Hz	50 Hz	50 Hz

Transportation and nominal speeds v_N

Modular unit	v_N (m/min)	50 Hz v [m/min]	Motor type	60 Hz v [m/min]	Motor type
AS 2/B–150	18	18.5	734a	18.9	734
	15	15.7	734	13.4	734
	12	11.2	734	13.4	734
	9	8.5	734	10.2	734
	6	5.7	716	6.8	716
AS 2/B–250	18	18.5	824	18.9	824
	15	15.7	824	15.7	824
	12	10.9	824	11.1	814
	9	9.2	814	8.9	734
	6	5.9	734	5.9	716
AS 2/C–100	18	18.5	634	16.6	624
BS 2/C–100	15	13.9	624	13.3	624
CS/C	12	11.1	624	11.1	624
AS 2/R–300	9	9.2	624	8.3	624
BS 2/R–300	6	5.5	624	6.7	624
KU 2/90					
KU 2/180					
BS 2/C–H	18	16.8	744b[1]/814b[2]	15.8	734b
AS 2/C–400	15	13.2	734b	15.8	734b
BS 2/R–H	12	10.4	734b	12.5	734b
AS 2/R–1200	9	8.1	714b	9.8	714b
	6	5.4	716b	6.5	716b
AS 2/C–700	18	16.8	824	17.2	824
AS 2/R–2200	15	14.4	824	14.3	824
	12	11.9	824	12.0	824
	9	8.4	814	8.1	734
	6	5.4	734	6.5	734
AS 2/C–250	18	18.5	734b	17.5	734b
BS 2/C–250	15	14.6	734b	14.5	734b
AS 2/R–700	12	12.0	734b	11.5	734b
BS 2/R–700	9	9.6	734b	9.0	734b
	6	5.9	734b	5.5	714b
BS 2	18	18.0	634	18.0	634
BS 2/M, BS 2/M	15	15.0	634	14.4	634
BS 2/T, BS 2/TE	12	12.0	634	10.8	624
CU 2/90	9	9.0	624	8.7	624
BS 2/K	6	6.0	624	5.4	624
EQ 2/T, EQ 2/TE					
EQ 2/M					
BS 2/130					

v_N = nominal speed
v = conveyor medium speed
[1] For voltage class: B (see p. 11-25)
[2] For voltage class: A, D (see p. 11-25)

Transportation and nominal speeds v_N

Modular unit	v_N (m/min)	50 Hz v [m/min]	Motor type	60 Hz v [m/min]	Motor type
HQ 2/U	18	15.8	524	19.0	524
	15	13.2	524	15.8	524
	12	10.6	524	12.7	524
	9	8.3	524	10.0	524
	6	5.7	524	6.8	524
KE 2	18	18.0	524	18.0	524
EQ 2/TR, EQ 2/TR-90	15	15.0	524	14.4	524
	12	12.0	524	10.8	524
	9	9.0	524	9.0	524
HQ 2/S, HQ2/U2	6	6.0	524	5.7	524
HQ 2/C-H	18	18.5	634	16.6	624
	15	13.9	624	13.3	624
	12	11.1	624	11.1	624
	9	9.2	624	8.3	624
	6	5.5	624	6.7	624
HQ 2/U-H	18	16.7	624	20.4	624
	15	16.7	624	15.3	624
	12	12.5	624	10.2	624
	9	8.4	624	7.6	624
	6	6.3	624	6.1	624

v_N = nominal speed
v = conveyor medium speed

Modular unit	v_N (m/min)	50 Hz v [m/min]	50 Hz v_T (m/min)	Motor type	60 Hz v [m/min]	60 Hz v_T (m/min)	Motor type
BS 2/R–V–1200	18	16.8	42.0	744b[1]/814b[2]	–	–	–
AS 2/R–V–1200	15	13.2	33.0	734b	15.8	39.5	734b
	12	10.4	26.0	734b	12.5	31.3	734b
	9	8.1	20.3	714b	9.8	24.5	714b
	6	5.4	13.5	716b	6.5	16.3	716b
AS 2/R–V–2200	18	16.8	42.0	824	17.2	43.0	824
	15	14.4	36.0	824	14.3	35.8	824
	12	11.9	29.8	824	12.0	30.0	824
	9	8.4	21.0	814	8.1	20.3	734
	6	5.4	13.5	734	6.5	16.3	734

v_N = nominal speed
v = conveyor medium speed
v_T = max. transportation speed
[1] For voltage class: B (see p. 11-25)
[2] For voltage class: A, D (see p. 11-25)