

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase Product code : 13119077

Frame : 444/5T	Cooling method : IC411 - TEFC
Insulation class : F	Mounting : F-1
Duty cycle : Cont.(S1)	Rotation <sup>1</sup> : Both (CW and CCW)
Ambient temperature : -20°C to +40°C	Starting method : Direct On Line
Altitude : 1000 m.a.s.l.	Approx. weight <sup>3</sup> : 916 kg
Protection degree : IP55	Moment of inertia (J) : 3.68 kgm <sup>2</sup>
Design : B	

Output [HP]	100	75	75	75
Poles	6	6	6	6
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	242/121	110	108	105
L. R. Amperes [A]	1523/761	745	775	841
LRC [A]	6.3x(Code G)	6.8x(Code H)	7.2x(Code J)	8.0x(Code K)
No load current [A]	92.6/46.3	46.0	49.0	52.0
Rated speed [RPM]	1185	990	990	990
Slip [%]	1.25	1.00	1.00	1.00
Rated torque [kgfm]	61.2	55.0	55.0	55.0
Locked rotor torque [%]	220	240	260	290
Breakdown torque [%]	250	260	320	350
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	68s (cold) 38s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)
Noise level <sup>2</sup>	70.0 dB(A)	66.0 dB(A)	66.0 dB(A)	66.0 dB(A)
Efficiency (%)	25%			
	50%	94.5	93.6	93.0
	75%	95.0	94.1	94.5
	100%	95.0	94.1	94.5
Power Factor	25%			
	50%	0.68	0.63	0.59
	75%	0.78	0.74	0.71
	100%	0.82	0.81	0.78

Losses at normative operating points (speed;torque), in percentage of rated output power

Losses (%)	P1 (0,9;1,0)	5.1	6.1	5.6	5.6
	P2 (0,5;1,0)	4.0	4.7	4.4	4.4
	P3 (0,25;1,0)	3.6	4.3	4.0	4.0
	P4 (0,9;0,5)	2.6	3.1	2.9	2.9
	P5 (0,5;0,5)	1.7	2.0	1.9	1.9
	P6 (0,5;0,25)	1.2	1.4	1.3	1.3
	P7 (0,25;0,25)	0.7	0.9	0.8	0.8

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	NU-219 C3	6316 C3	Max. traction : 1225 kgf
Sealing :	Viton	Viton Seal	Max. compression : 2141 kgf
	Oil Seal		
Lubrication interval :	8864 h	12823 h	
Lubricant amount :	28 g	34 g	
Lubricant type :	Mobil Polyrex EM		

This revision replaces and cancel the previous one, which must be eliminated.

(1) Looking the motor from the shaft end.

(2) Measured at 1m and with tolerance of +3dB(A).

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	30/10/2024		Page 1 / 7	Revision

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Notes  
USABLE @208V 267A SF 1.00 SFA 267A

Rev.	Changes Summary		Performed	Checked	Date
Performed by			Page 2 / 7		Revision
Checked by					
Date	30/10/2024				

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 3 / 7	Revision
Checked by					
Date	30/10/2024				

# LOAD PERFORMANCE CURVE

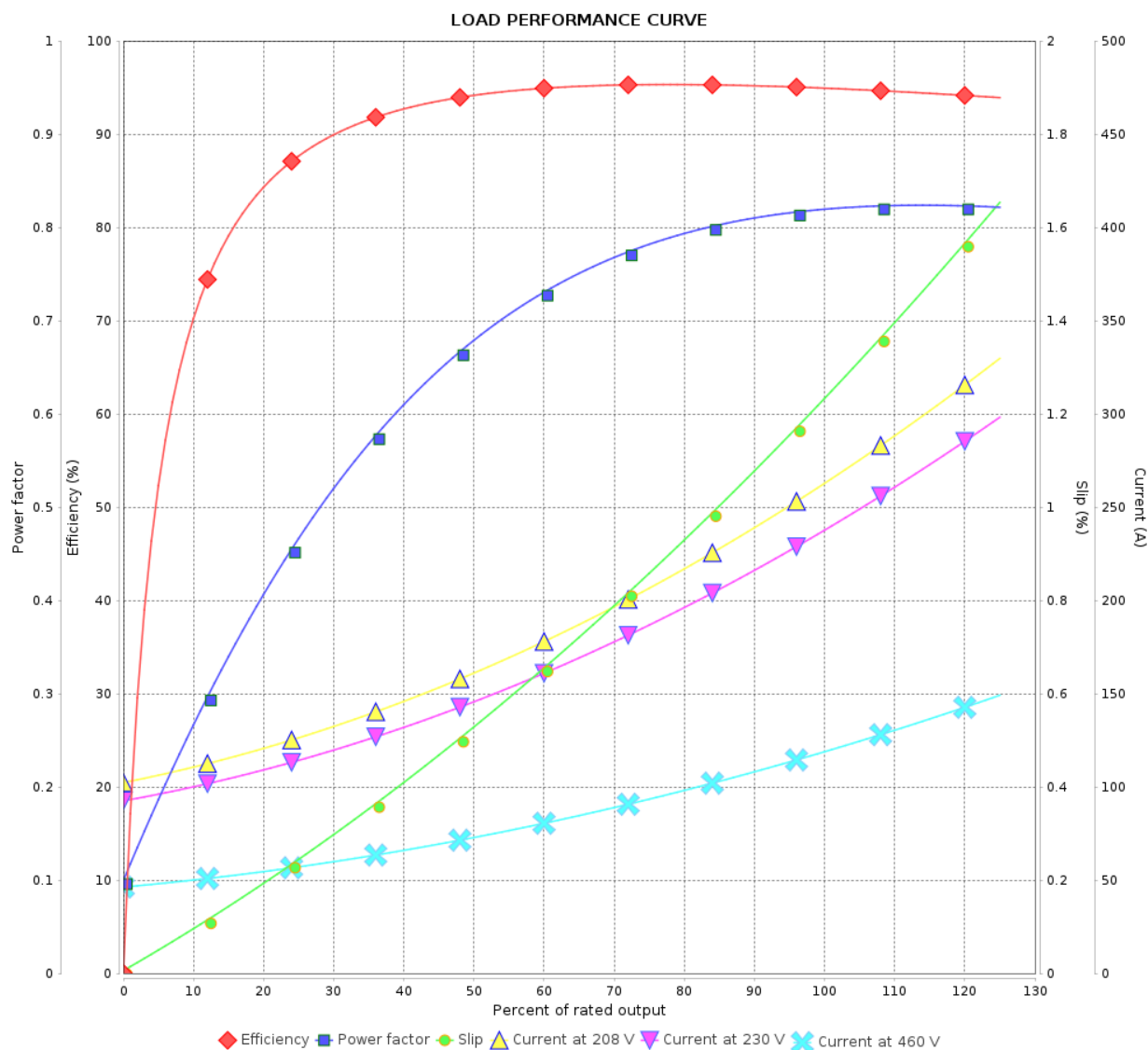
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 13119077



Performance : 230/460 V 60 Hz 6P

Rated current : 242/121 A  
LRC : 6.3  
Rated torque : 61.2 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 250 %  
Rated speed : 1185 rpm

Moment of inertia (J) : 3.68 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 4 / 7	Revision
Checked by					
Date	30/10/2024				

# LOAD PERFORMANCE CURVE

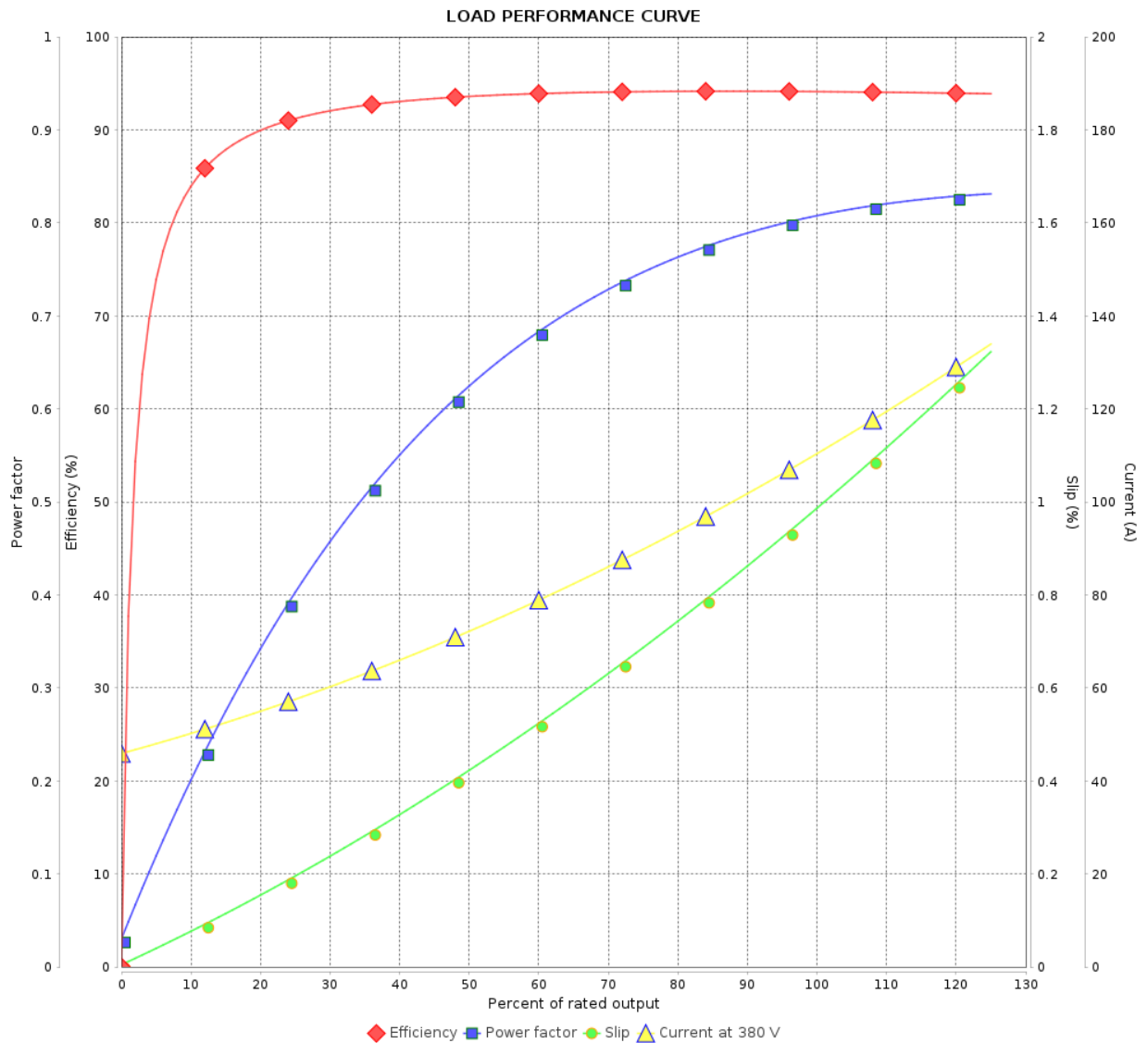
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 13119077



Performance : 380 V 50 Hz 6P IE3

Rated current : 110 A  
LRC : 6.8  
Rated torque : 55.0 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 260 %  
Rated speed : 990 rpm

Moment of inertia (J) : 3.68 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 5 / 7Revision		
Checked by				
Date	30/10/2024			

# LOAD PERFORMANCE CURVE

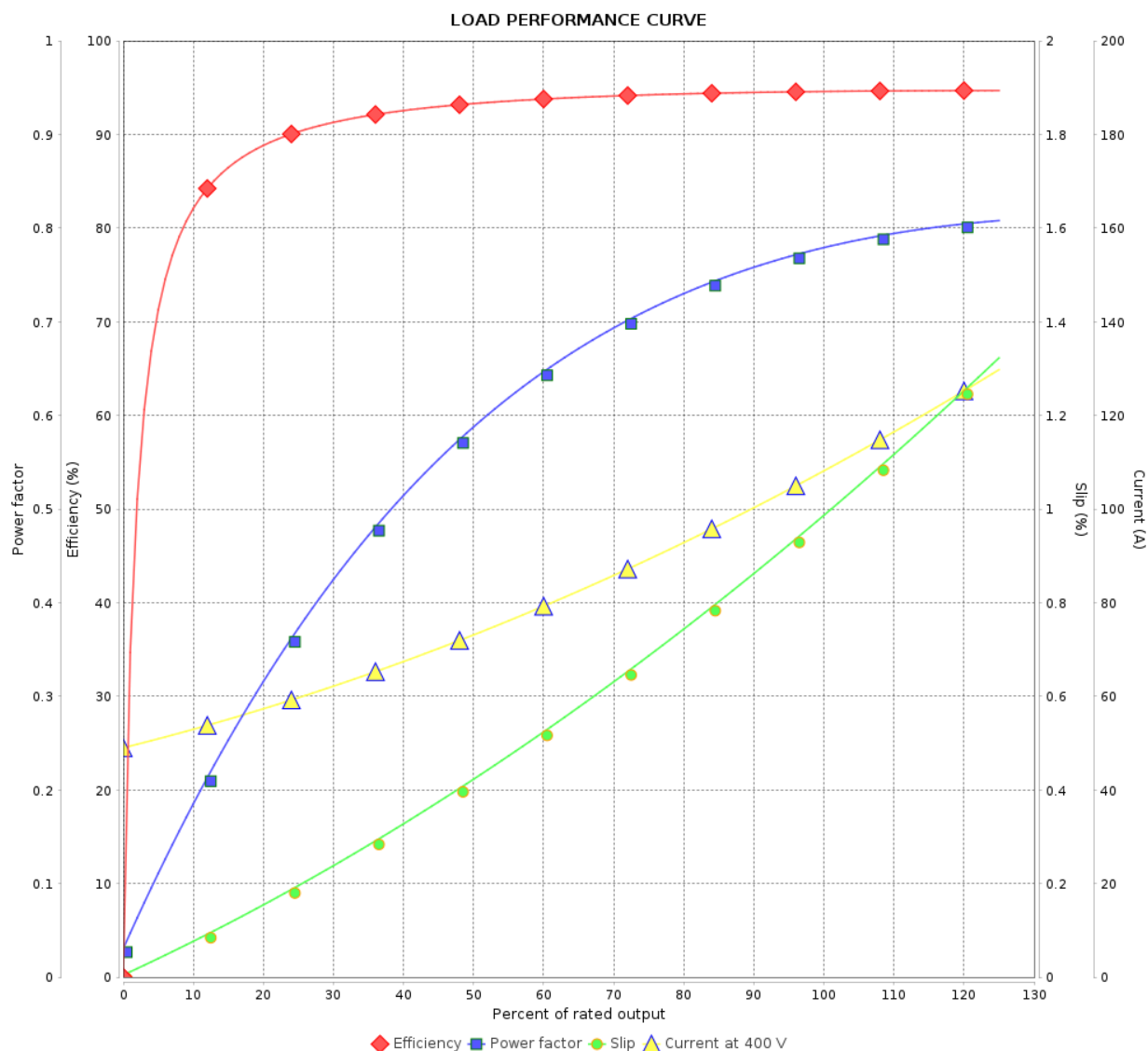
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 13119077



Performance : 400 V 50 Hz 6P IE3

Rated current	: 108 A	Moment of inertia (J)	: 3.68 kgm <sup>2</sup>
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 55.0 kgfm	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 990 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	30/10/2024		Page 6 / 7	Revision

# LOAD PERFORMANCE CURVE

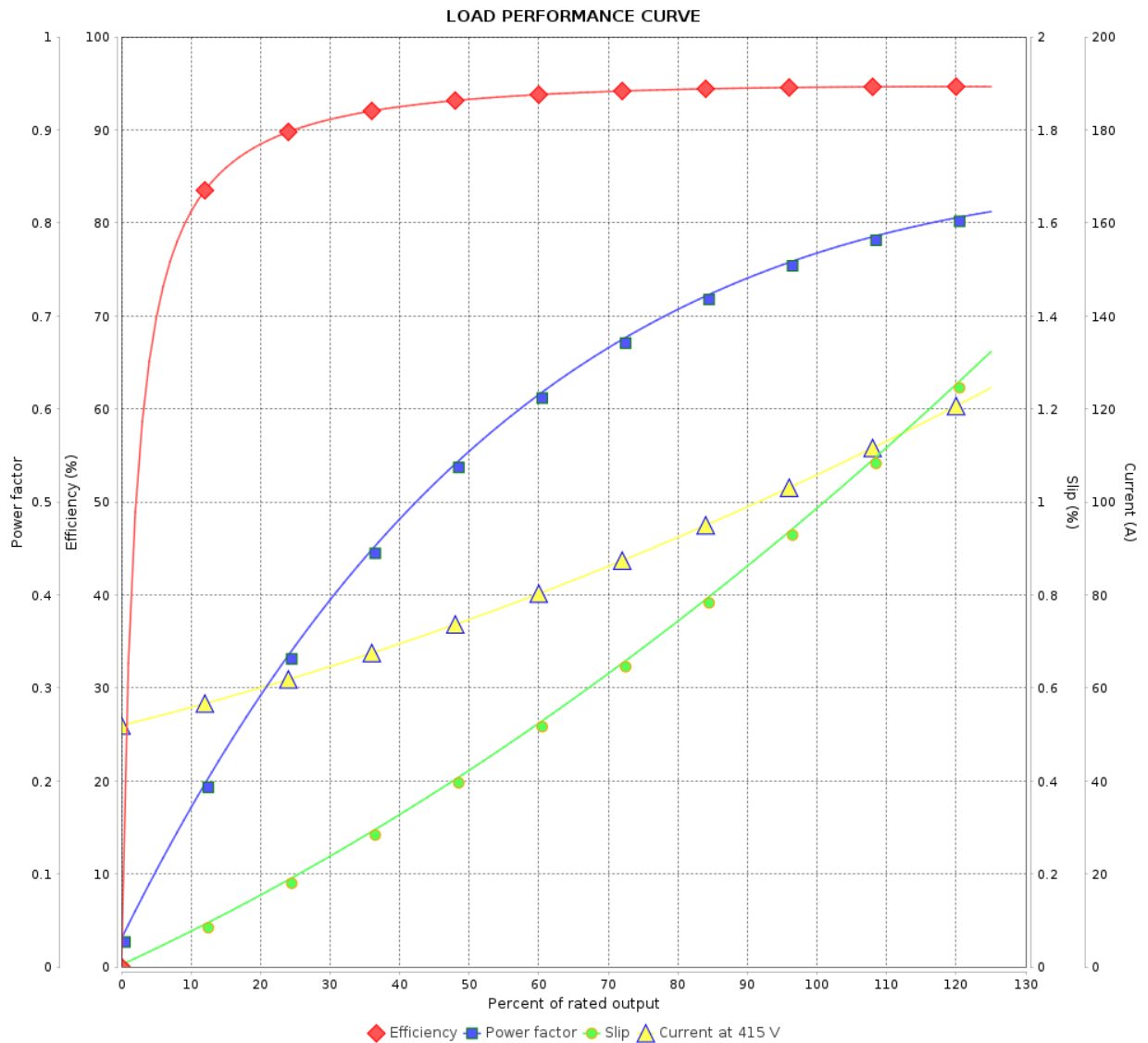
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 13119077



Performance : 415 V 50 Hz 6P IE3

Rated current : 105 A  
LRC : 8.0  
Rated torque : 55.0 kgfm  
Locked rotor torque : 290 %  
Breakdown torque : 350 %  
Rated speed : 990 rpm

Moment of inertia (J) : 3.68 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 7 / 7Revision		
Checked by				
Date	30/10/2024			

</