[대외비]

HD HYUNDAI ELECTRIC

Essential for Today
Potential for Tomorrow

Customer :
Project Name :
Project No. :
Revision No. :

SPECIFICATION
for
INDUCTION MOTOR

0		For Bidding			
No.	DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY

www.hd-hyundaielectric.com

AC INDUCTION MOTOR DATA SHEET

Catalog No.	HES1-12-143/5JM	Item No.		Rev. No.	[ ]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION

Frame Size		145JM
Type		PJP
Enclosure(Protection)		Totally Enclosed / IP55
Method of Cooling		IC411(FC)
Rated Frequency		60 Hz
Number of Phases		3
Insulation Class		F
Temp. Rise at full load (by resistance method)		
	at 1.0 S.F	80 deg. C
Motor Location		☐ Indoor ☐ Outdoor
Altitude		Less than 1,000 meter
Relative Humidity		Less than 80 %
Ambient Temp.		40 deg. C (Max.)
Duty Type		Continuous (S1)
Service Factor		1.15
Mounting		B35
Bearing	Type	Anti-Friction
	DE/N-DE	6206ZZC3 / 6204ZZC3
	Lubricant	Grease(Polyrex-EM)
External Thrust		Not applicable
Coupling Method		☑ Direct ☐ V-belt
Shaft Extension		Single
Terminal Box	Main	Cast Iron
	Aux.	No
	Location	Refer to Outline Drawing
Application		
Area classification		Hazardous
Type of Ex-Protection		Class I&II, Division 2
Applicable Standard		NEMA MG1, CSA C390

PERFORMANCE DATA

Rated Output		0.75 kW		1 HP
Number of Poles		6		
Rotor Type		Squirrel Cage		
Starting Method*		D.O.L		
Rated Voltage		575 V	460 V	230 V
Current	Full Load	1.45 A	1.81 A	3.62 A
	Locked-rotor**	800 %	800 %	800 %
Efficiency				
	50% Load	79.5 %		
	75% Load	81.5 %		
	100% Load	82.5 %		
Power Factor(p.u)				
	50% Load	0.480		
	75% Load	0.580		
	100% Load	0.630		
Speed at Full Load		1155 r.p.m		
Torque				
	Full Load	4.57 lb.ft		
	Locked-rotor**	180 %		
	Breakdown**	275 %		
Moment of Inertia (J)				
	Load(Max.)	21.753 lb.ft2		
	Motor	0.083 lb.ft2		
Sound Pressure Level (No-load & mean value at 1m from motor)		55 dB(A)		
Vibration		3.8 mm/s (peak)		
Permissible number of consecutive starts		Cold 3 times		
		Hot 2 times		
Paint	Munsell No.	4.0PB5.4/5.5(VL-451)		

ACCESSORIES

SPARE PARTS

SUBMITTAL DRAWING

Outline Dimension Drawing	\ Motor Weight(Approx.)	
B35	LM-T2145C4MLV25	65 lb.

REMARK

1. Premium efficiency according to NEMA MG1
2. Inverter Duty @ 1.0 Service Factor & F Temperature rise
   -. 10:1 VT (20:1 VT at 50% load)
   -. 10:1 CT
   -. CHP up to 1.5 times base speed, NEMA MG1 Part31
3. CSA Certification
   -. Class I, Division 2, Group A, B, C & D
   -. Class II, Division 2 Group E, F & G (Group E : up to 320Fr.)
4. Service Factor 1.15 and Temperature rise B are applicable under the condition of sine wave power.
5. Service Factor 1.25 is applicable to motors of 100HP or less with temperature rise F & Non-Hazardous.
6. Temp. code : T3C(160°C) at sine wave

Date	DSND	CHKD	CHKD	APPD
2025-09-19	S.H. LEE	I.K. KIM	R.G. KIM	S.W. KIM

[Note] Others not mentioned in this data sheet shall be in accordance with maker standard.
Above technical data are only design values and shall be guaranteed with tolerance of applicable standard.
Inspection and performance test shall be done according to maker standard, if not mentioned.

* In case of Inverter-Fed Motor, performance data is based on sine wave tests. It may be different from test data of Inverter combined motor.

** Data is based on rated voltage & frequency and is expressed as a percentage of full-load value.

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

▣ MAIN NAMEPLATE

3.94

1.57

CROWN TRITON G2 Premium Efficiency AC 3 Phase Motor — Cat. No. HES1-12-143/5JM

1HP	6P	230/460V	Amps	3.62/1.81A	Type	HLS	Amb. 40°C
Frame	145JM	Duty CONT	Encl.	TEFC	Model	HLS145PR335V	NEMA Nom. Eff. 82.5%
RPM	1155	Hertz 60Hz	S.F.	1.15	INS. Class	F HD-F1	3/4 Eff. 81.5%
Bearing		Drive 6206ZZC3	S.F.1.25 (When 100HP or less,Temp Rise F & Non-Hazardous)				NEMA Design B
		Opp. 6204ZZC3	S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)				Code L
Usable at		50Hz 1HP 380V 2.42A 945rpm S.F.: 1.15 Eff.: 79.9% Code: H					
		50Hz 1HP 400/415V 2.47/2.54A 950/955rpm S.F.: 1.15 Eff.: 80.0/80.0% Code: J/K					
CSA Certified for		Model -			Type PJP	Temp. Code (Sine Wave)	Frame 140~320FR
		CLASS I, Div. 2, Gr. A, B, C & D	CLASS II, Div. 2, Gr. E, F & G				Amb.40°C T3C (160°C)
		CLASS I, Zone 2, Gr. IIA, IIB & IIC	(Gr. E : up to 320FR)				Amb.55°C T3A (180°C)
No. -			Date -		Weight 65 lb		

4M-137664
MARINE DUTY IEEE45

Made in Vietnam H4
Designed By HYUNDAI, Korea

CC038A

HD HYUNDAI ELECTRIC

▣ WIRING DIAGRAM

D.O.L (INVERTER & SOFT STARTER)	WYE-DELTA (Y-D)
WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES. LOW VOLTAGE: T4 T5 T6 / T7 T8 T9 / T1 T2 T3 — L1 L2 L3 INTERNAL CONNECTIONS: T1 T4 T5 T2 / T7 T8 / T9 / T6 / T3 HIGH VOLTAGE: T4 T5 T6 / T7 T8 T9 / T1 T2 T3 — L1 L2 L3 KEEP FINGERS AND FOREIGN OBJECTS AWAY FROM OPENINGS AND ROTATING PARTS DISCONNECT ALL POWER SOURCES BEFORE TOUCHING INTERNAL PARTS TO AVOID ELECTRICAL SHOCK. 4M-128845	N/A

APPD BY	S.Y.KIM	UNIT	INCH
CHKD BY	I.K.KIM	SCALE	NONE
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle
DSND BY	S.H.LEE	DATE	2024.06.07

SUBJECT	CSA Class I, Division2 Severe Duty (HES, JM/JP, 143-215)	DWG SIZE	A4 (1:1)
TITLE	NAMEPLATE DRAWING		
REF. NO	4M-137664 / 4M-128845	Sheet No.	of
DWG NO	NP-HES1-12-143/5JM	Revision No.	0

HD HYUNDAI ELECTRIC

[대외비]

HYUNDAI ELECTRIC

PERFORMANCE CURVE

CURVE NO.

PC-HES1-12-143/5JM

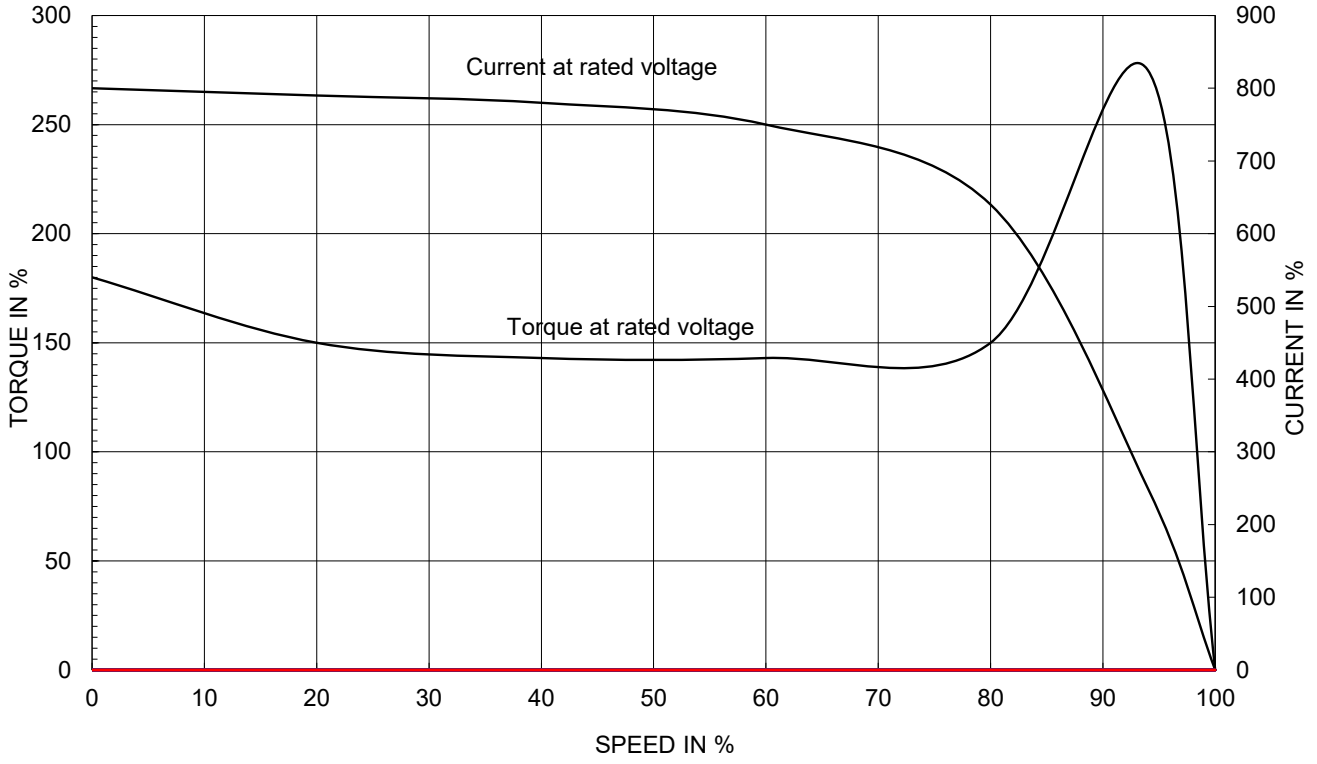
Type :	PJP	
Full Load Torque :	4.57	lb.ft
Load moment of Inertia (J) :	21.753	lb.ft2
Motor moment of Inertia (J) :	0.083	lb.ft2

0.75kW 1HP 6 P 60 Hz

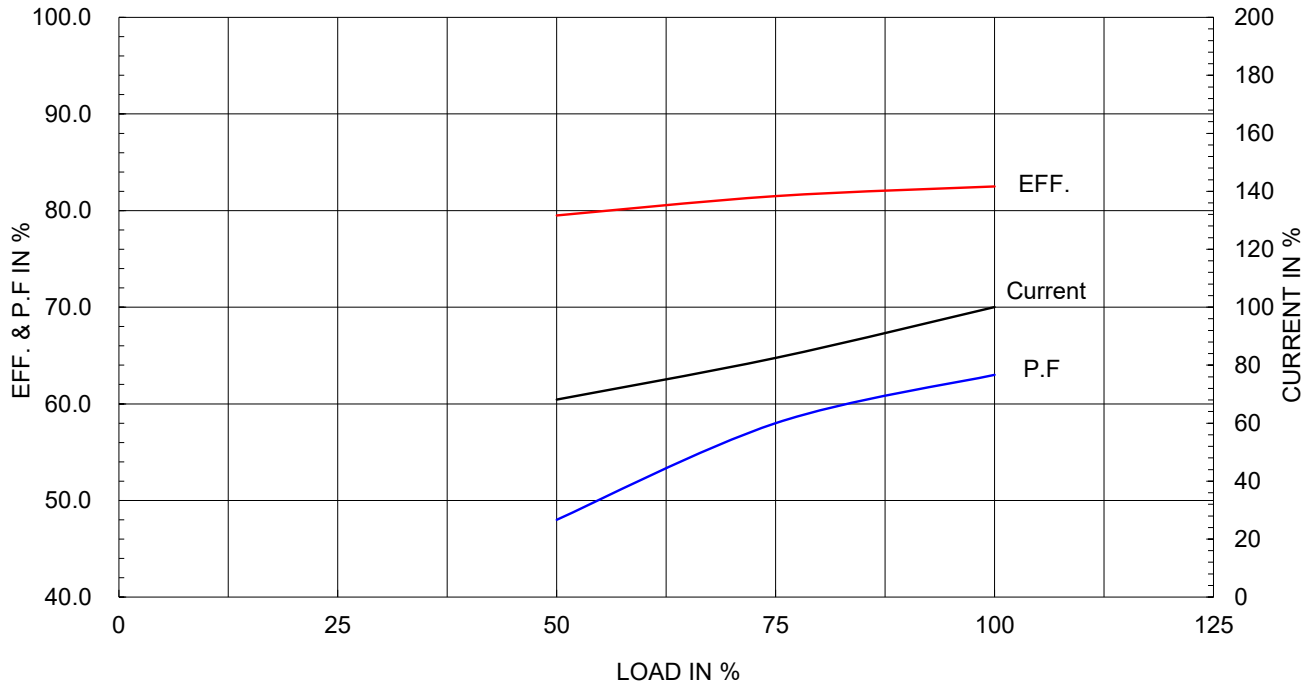
Speed at Full Load : 1155 RPM

Rated Voltage	575V	460V	230V
Full Load Current	1.45A	1.81A	3.62A

SPEED VS TORQUE & CURRENT CURVE



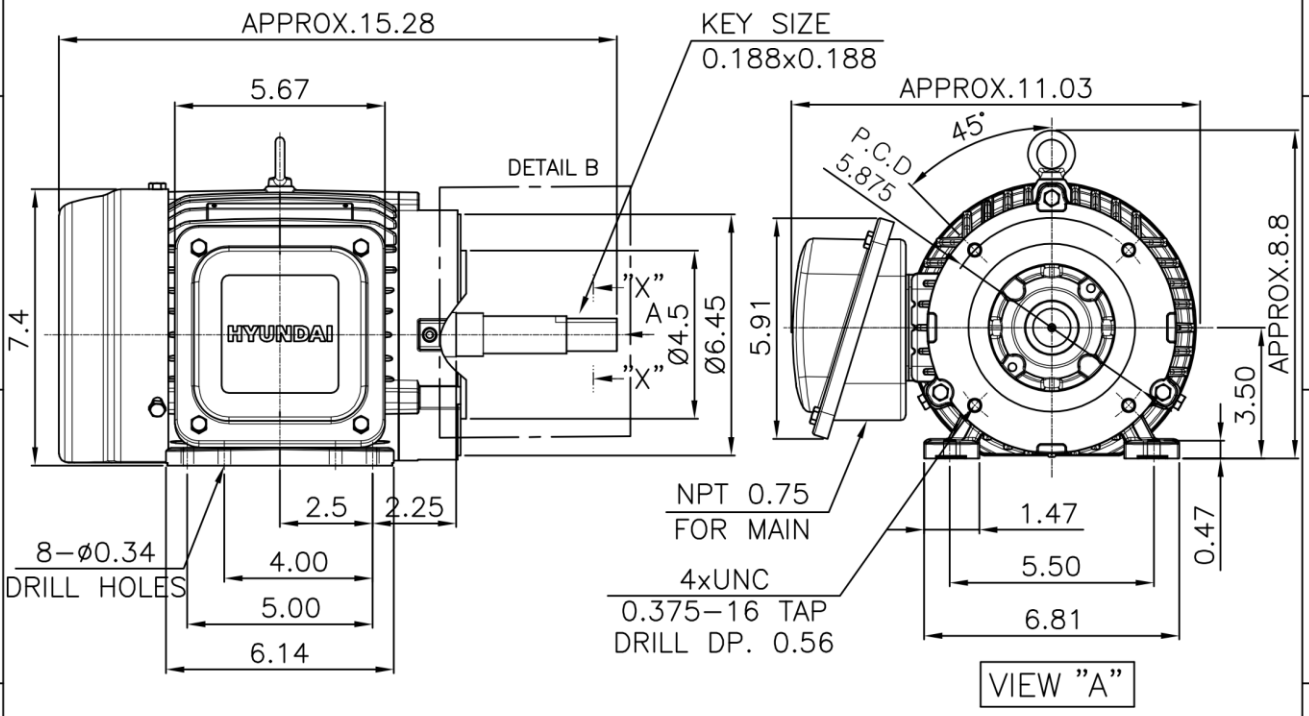
OUTPUT VS EFF., P.F & CURRENT CURVE

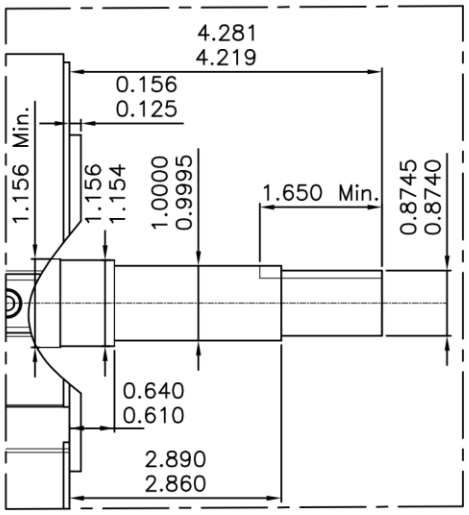


A4(210mm x 297mm)

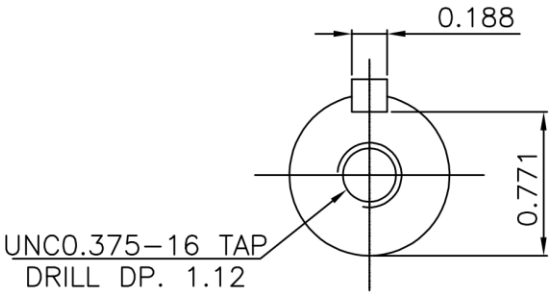
[대외비]

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY





DETAIL - B



SECTION "X-X"
SCALE 5/6

NOTE

[TOLERANCE]

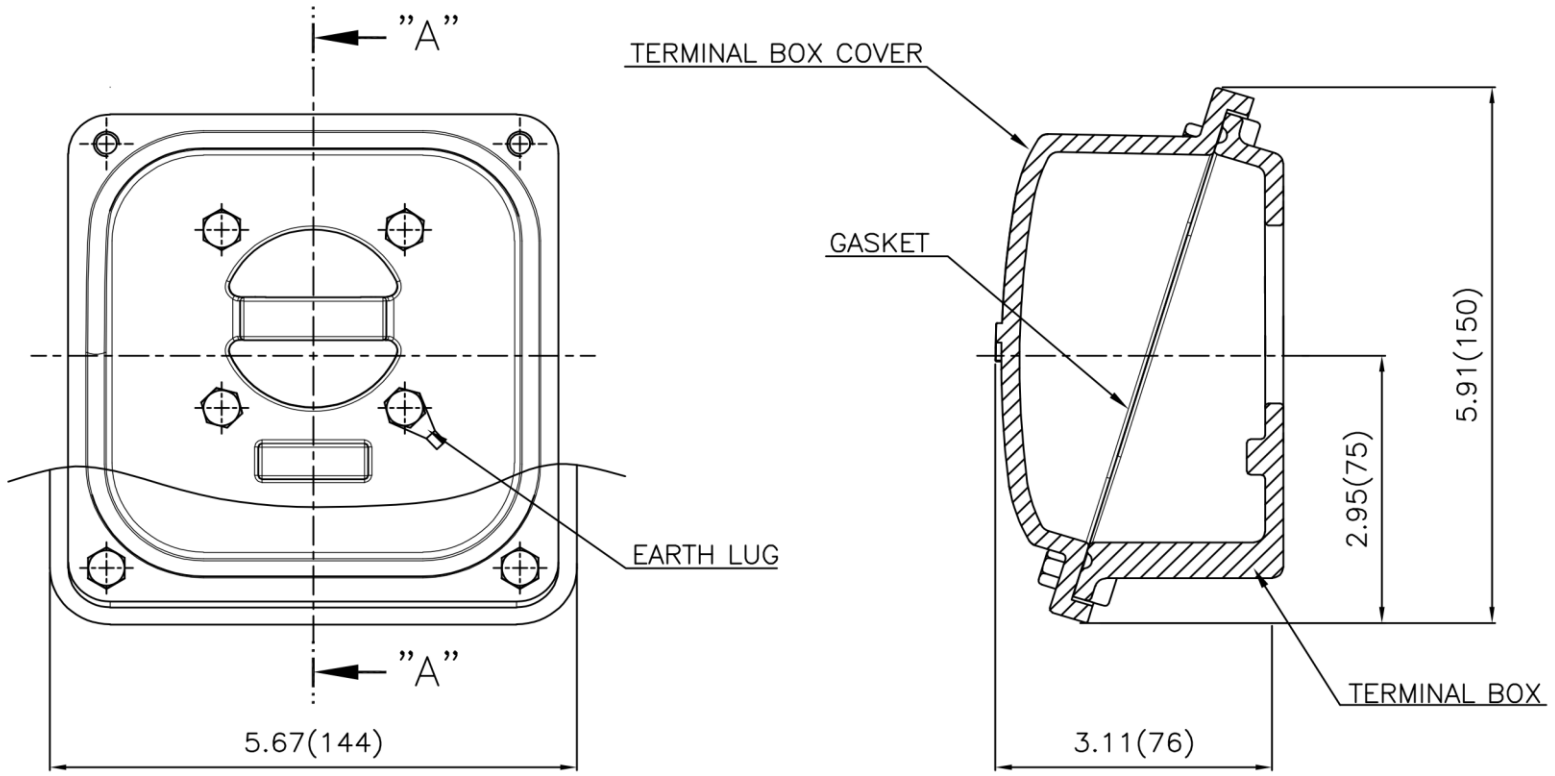
1. CENTER HEIGHT : +0.00inch - 0.03inch
2. SHAFT DIAMETER : +0.000inch - 0.0005inch
3. KEYWAY DEPTH : +0.000inch - 0.015inch

APPD BY	S.W.KIM	UNIT	INCH
CHKD BY	R.G.KIM	SCALE	1/5
CHKD BY		PROJEC'N	3rd Angle
DSND BY	S.H.LEE	DATE	2025-01-09

SUBJECT	NEMA 143/5TC (JM) (Dual hole)	DWG SIZE A4 (1:5)
TITLE	OUTLINE	
REF. NO		Sheet No. of
DWG NO	LM-T2145C4MLV25	Revision No. 1

HD HYUNDAI ELECTRIC

Cls. I&II, Div. 2
IEEE 841



SEC. "A"–"A"

▽	50S
▽▽	12.5S
▽▽▽	3.2S
▽▽▽▽	0.4S

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

일반가공공차		일반제관공차	
1–4	±0.1	6–30	±0.5
4–18	±0.2	30–120	±0.8
18–63	±0.3	120–315	±1.2
63–250	±0.5	315–1000	±2.0
250–	±0.8	1000–	±3.0

Q'TY	DESCRIPTION	MATERIAL	DIMENSION	WEIGHT	PART NO.	REMARK	NO.

APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR. 140–180 (CAST IRON)
CHKD BY		SCALE	1/1.5		
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	TITLE	TERMINAL BOX ASS'Y
DSND BY	배슬희	DATE	2023–10–19	REF. NO	
				DWG NO	3M–248456

DWG SIZE: A3 (1:1.5)

Sheet No. of

Revision No. 0

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