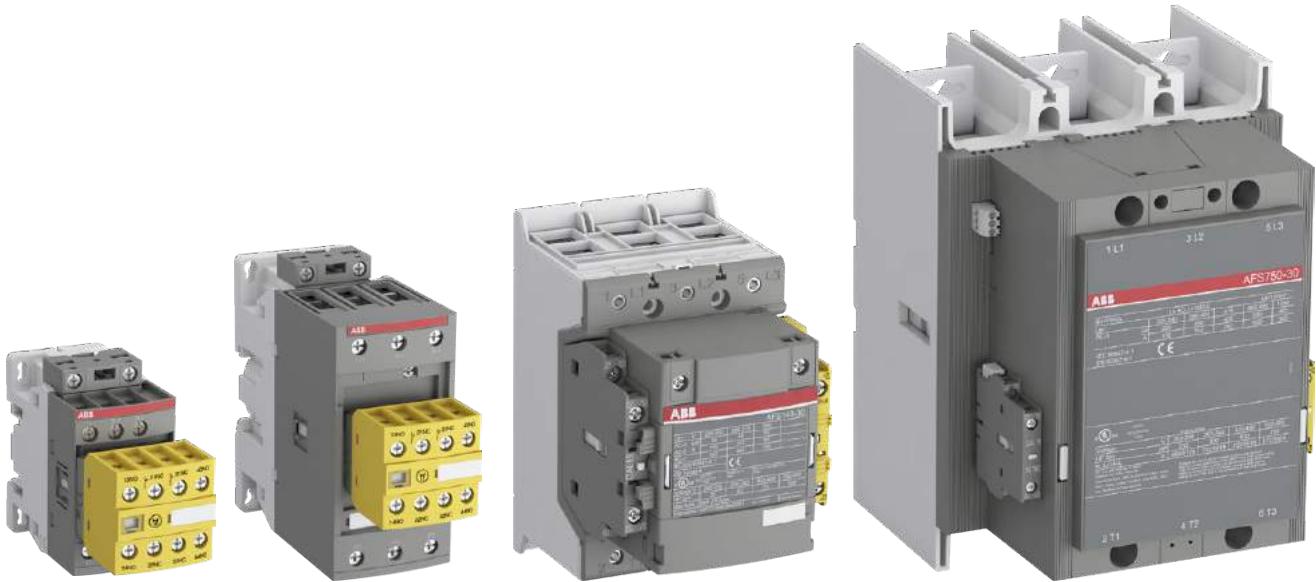


AFS 3-pole contactors

Dedicated for safety applications



Designed for machine safety applications, AFS contactors now complete ABB's safety component portfolio.

With a range stretching from 9 A up to 750 A for motor starting applications and with a design complying with the latest safety standard, the AFS range of contactors is the given choice for any application that puts the users safety first.



Safety and protection

ABB's AFS contactors can be easily integrated in machine manufacturer's systems complying with main standards EN ISO 13849 and EN 62061 - guaranteeing the safe use of your machinery and equipment. An easily identifiable yellow low energy auxiliary contact block ensures the status feedback circuits required in machine safety applications.



Continuous operation

The AFS contactor secures system uptime. Featuring ABB's tested and proven AF technology, AFS contactors are reliable in any network. Direct control by safety PLCs or safety relays ensures the required safety performance.



Speed up your projects

AFS design makes integration easier. With energy efficient coils smaller transformers can be used and panel space more efficiently used. Wide voltage range coils and easily available safety data simplifies product selection. In addition, all the safety data for the AFS contactors is available using common safety design tools.

AFS contactors

Dedicated for safety application



AFS16-30-22

1SBC101536V0014



AFS38-30-22

1SBC101539V0014



AFS65-30-22

1SBC101542V0014



AFS96-30-22

1SBC101544V0014



AFS146-30-12

1SFC101246V0001



AFS146-30-12B

1SFC101244V0001

IEC		UL/CSA		Rated control circuit voltage Uc min. ... Uc max.		Auxiliary contacts fitted	Type	Order code	Weight
Rated operational power	Current θ ≤ 40 °C	3-phase motor rating 480 V	General use rating 600 V AC						
400 V AC-3	AC-1								kg
4	25	5	25	-	24	2 2	AFS09Z-30-22-30	1SBL136082R3022	0.490
				24...60	20...60 (1)	2 2	AFS09-30-22-11	1SBL137082R1122	0.320
				100...250	100...250	2 2	AFS09-30-22-13	1SBL137082R1322	0.320
5.5	28	7.5	28	-	24	2 2	AFS12Z-30-22-30	1SBL156082R3022	0.490
				24...60	20...60 (1)	2 2	AFS12-30-22-11	1SBL157082R1122	0.320
				100...250	100...250	2 2	AFS12-30-22-13	1SBL157082R1322	0.320
7.5	30	10	30	-	24	2 2	AFS16Z-30-22-30	1SBL176082R3022	0.490
				24...60	20...60 (1)	2 2	AFS16-30-22-11	1SBL177082R1122	0.320
				100...250	100...250	2 2	AFS16-30-22-13	1SBL177082R1322	0.320
11	45	15	45	-	24	2 2	AFS26Z-30-22-30	1SBL236082R3022	0.540
				24...60	20...60 (1)	2 2	AFS26-30-22-11	1SBL237082R1122	0.360
				100...250	100...250	2 2	AFS26-30-22-13	1SBL237082R1322	0.360
15	50	20	50	-	24	2 2	AFS30Z-30-22-30	1SBL276082R3022	0.540
				24...60	20...60 (1)	2 2	AFS30-30-22-11	1SBL277082R1122	0.360
				100...250	100...250	2 2	AFS30-30-22-13	1SBL277082R1322	0.360
18.5	50	20	50	-	24	2 2	AFS38Z-30-22-30	1SBL296082R3022	0.540
				24...60	20...60 (1)	2 2	AFS38-30-22-11	1SBL297082R1122	0.360
				100...250	100...250	2 2	AFS38-30-22-13	1SBL297082R1322	0.360
18.5	70	30	60	24...60	20...60 (1)	2 2	AFS40-30-22-11	1SBL347082R1122	1.020
				100...250	100...250	2 2	AFS40-30-22-13	1SBL347082R1322	1.000
22	100	40	80	24...60	20...60 (1)	2 2	AFS52-30-22-11	1SBL367082R1122	1.020
				100...250	100...250	2 2	AFS52-30-22-13	1SBL367082R1322	1.000
30	105	50	90	24...60	20...60 (1)	2 2	AFS65-30-22-11	1SBL387082R1122	1.020
				100...250	100...250	2 2	AFS65-30-22-13	1SBL387082R1322	1.000
37	125	60	105	24...60	20...60 (1)	2 2	AFS80-30-22-11	1SBL397082R1122	1.270
				100...250	100...250	2 2	AFS80-30-22-13	1SBL397082R1322	1.220
45	130	60	115	24...60	20...60 (1)	2 2	AFS96-30-22-11	1SBL407082R1122	1.270
				100...250	100...250	2 2	AFS96-30-22-13	1SBL407082R1322	1.220

For connection with built-in cable clamps

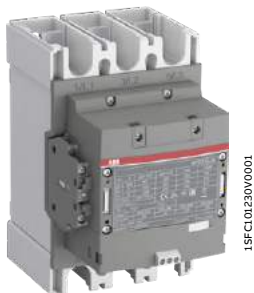
55	160	75	160	24...60	20...60	1 2	AFS116-30-12-11	1SFL427081R1112	1.750
				48...130	48...130	1 2	AFS116-30-12-12	1SFL427081R1212	1.750
				100...250	100...250	1 2	AFS116-30-12-13	1SFL427081R1312	1.750
						1 2	AFS116-30-12-33 (2)	1SFL427081R3312	1.750
				250...500	250...500	1 2	AFS116-30-12-14	1SFL427081R1412	1.750
						1 2	AFS116-30-12-34 (2)	1SFL427081R3412	1.750
75	225	100	200	24...60	20...60	1 2	AFS146-30-12-11	1SFL467081R1112	1.750
				48...130	48...130	1 2	AFS146-30-12-12	1SFL467081R1212	1.750
				100...250	100...250	1 2	AFS146-30-12-13	1SFL467081R1312	1.750
						1 2	AFS146-30-12-33 (2)	1SFL467081R3312	1.750
				250...500	250...500	1 2	AFS146-30-12-14	1SFL467081R1412	1.750
						1 2	AFS146-30-12-34 (2)	1SFL467081R3412	1.750

With bar connections

55	160	75	160	24...60	20...60	1 2	AFS116-30-12B-11	1SFL427082R1112	1.500
				48...130	48...130	1 2	AFS116-30-12B-12	1SFL427082R1212	1.500
				100...250	100...250	1 2	AFS116-30-12B-13	1SFL427082R1312	1.500
						1 2	AFS116-30-12B-33 (2)	1SFL427082R3312	1.500
				250...500	250...500	1 2	AFS116-30-12B-14	1SFL427082R1412	1.500
						1 2	AFS116-30-12B-34 (2)	1SFL427082R3412	1.500
75	225	100	200	24...60	20...60	1 2	AFS146-30-12B-11	1SFL467082R1112	1.500
				48...130	48...130	1 2	AFS146-30-12B-12	1SFL467082R1212	1.500
				100...250	100...250	1 2	AFS146-30-12B-13	1SFL467082R1312	1.500
				250...500	250...500	1 2	AFS146-30-12B-14	1SFL467082R1412	1.500



AFS205-30-12



AFS370-30-12



AFS460-30-12



AFS750-30-12

IEC		UL/CSA		Rated control circuit voltage Uc min. ... Uc max.		Auxiliary contacts fitted	Type	Order code	Weight
Rated operational power	Current θ ≤ 40 °C	3-phase motor rating 480 V	General use rating 600 V AC						
400 V AC-3 kW	AC-1 A	hp	A	V 50/60 Hz	V DC				kg
90	275	125	250	24...60	20...60	1 2	AFS190-30-12-11	1SFL427082R1112	3.000
				48...130	48...130	1 2	AFS190-30-12-12	1SFL427081R1212	3.000
				100...250	100...250	1 2	AFS190-30-12-13	1SFL427081R1312	3.000
				100...250	100...250	1 2	AFS190-30-12-33 (2)	1SFL427081R3312	3.000
				250...500	250...500	1 2	AFS190-30-12-14	1SFL427081R1412	3.000
				250...500	250...500	1 2	AFS190-30-12-34 (2)	1SFL427081R3412	3.000
110	350	150	300	24...60	20...60	1 2	AFS205-30-12-11	1SFL527082R1112	3.000
				48...130	48...130	1 2	AFS205-30-12-12	1SFL527082R1212	3.000
				100...250	100...250	1 2	AFS205-30-12-13	1SFL527082R1312	3.000
				100...250	100...250	1 2	AFS205-30-12-33 (2)	1SFL527082R3312	3.000
				250...500	250...500	1 2	AFS205-30-12-14	1SFL527082R1412	3.000
				250...500	250...500	1 2	AFS205-30-12-34 (2)	1SFL527082R3412	3.000
132	400	200	350	24...60	20...60	1 2	AFS265-30-12-11	1SFL547082R1112	4.675
				48...130	48...130	1 2	AFS265-30-12-12	1SFL547082R1212	4.675
				100...250	100...250	1 2	AFS265-30-12-13	1SFL547082R1312	4.675
				100...250	100...250	1 2	AFS265-30-12-33 (2)	1SFL547082R3312	4.675
				250...500	250...500	1 2	AFS265-30-12-14	1SFL547082R1412	4.675
				250...500	250...500	1 2	AFS265-30-12-34 (2)	1SFL547082R3412	4.675
160	500	250	400	24...60	20...60	1 2	AFS305-30-12-11	1SFL587082R1112	4.675
				48...130	48...130	1 2	AFS305-30-12-12	1SFL587082R1212	4.675
				100...250	100...250	1 2	AFS305-30-12-13	1SFL587082R1312	4.675
				100...250	100...250	1 2	AFS305-30-12-33 (2)	1SFL587082R3312	4.675
				250...500	250...500	1 2	AFS305-30-12-14	1SFL587082R1412	4.675
				250...500	250...500	1 2	AFS305-30-12-34 (2)	1SFL587082R3412	4.675
200	600	300	520	24...60	20...60	1 2	AFS370-30-12-11	1SFL607082R1112	4.675
				48...130	48...130	1 2	AFS370-30-12-12	1SFL607082R1212	4.675
				100...250	100...250	1 2	AFS370-30-12-13	1SFL607082R1312	4.675
				100...250	100...250	1 2	AFS370-30-12-33 (2)	1SFL607082R3312	4.675
				250...500	250...500	1 2	AFS370-30-12-14	1SFL607082R1412	4.675
				250...500	250...500	1 2	AFS370-30-12-34 (2)	1SFL607082R3412	4.675
200	600	350	550	-	24...60	1 2	AFS400-30-12-68	1SFL577081R6812 (3)	4.675
				48...130	48...130	1 2	AFS400-30-12-69	1SFL577081R6912	12.000
				100...250	100...250	1 2	AFS400-30-12-70	1SFL577081R7012	12.000
				250...500	250...500	1 2	AFS400-30-12-71	1SFL577081R7112	12.000
250	700	400	650	-	24...60	1 2	AFS460-30-12-68	1SFL597081R6812 (3)	12.000
				48...130	48...130	1 2	AFS460-30-12-69	1SFL597081R6912	12.000
				100...250	100...250	1 2	AFS460-30-12-70	1SFL597081R7012	12.000
				250...500	250...500	1 2	AFS460-30-12-71	1SFL597081R7112	12.000
315	800	500	750	-	24...60	1 2	AFS580-30-12-68	1SFL617081R6812 (3)	12.000
				48...130	48...130	1 2	AFS580-30-12-69	1SFL617081R6912	12.000
				100...250	100...250	1 2	AFS580-30-12-70	1SFL617081R7012	12.000
				250...500	250...500	1 2	AFS580-30-12-71	1SFL617081R7112	12.000
400	1050	600	900	-	24...60	1 2	AFS750-30-12-68	1SFL637081R6812 (3)	12.000
				48...130	48...130	1 2	AFS750-30-12-69	1SFL637081R6912	12.000
				100...250	100...250	1 2	AFS750-30-12-70	1SFL637081R7012	12.000
				250...500	250...500	1 2	AFS750-30-12-71	1SFL637081R7112	12.000

(1) AFS...-30...-11 for control by transistor outputs of safety PLCs and safety relays use interface relay RA4 1SBN060100R1000.

(2) With built-in PLC interface (coil 33 and 34)

(3) The connection polarities indicated close to the coil terminals must be respected: A1 for the positive pole and A2 for the negative pole.
Note : Accessories available. Please consult the AFS contactors for safety application catalog.

Products safety data for machine manufacturers following harmonized EN standards:

- EN ISO 13849
- EN 62061

B10d - Calculated for 50% of the rated current value Ie at AC-3 / 400 V

AFS09 ... AFS370 : 1.3 million operating cycles

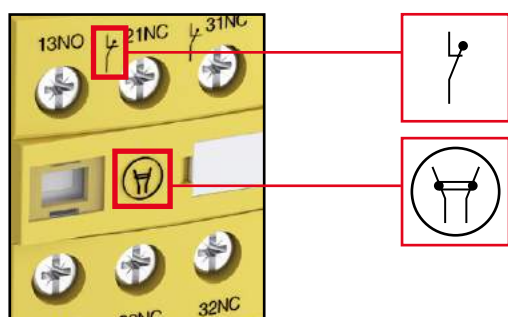
AFS400 ... AFS750 : 0.68 million operating cycles

AFS 3-pole contactors

Dedicated for safety applications

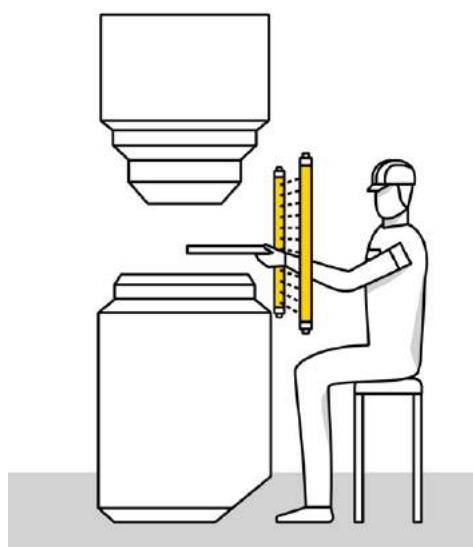
Guaranteed contactor status

ABB's permanently fixed auxiliary contact blocks guarantee the correct contactor status at all times. Mechanically linked and mirror contacts provide the performance required in feedback circuits. This prevents any unexpected state changes of auxiliary contact if main contacts become welded or stuck and ensures an accurate depiction of the safety system status displayed at all times. Mechanically linked and mirror contact symbols are marked on the yellow auxiliary block.



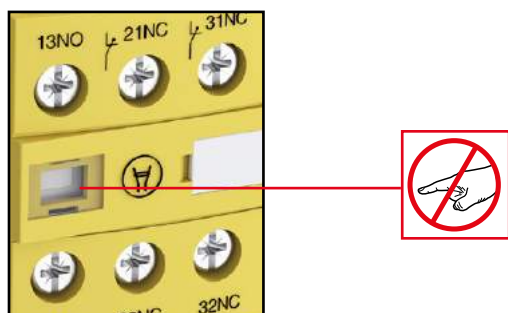
Fast response for increased safety

In safety applications speed is essential to protect operators. AFS contactors feature fast opening times, down to 20 ms for certain PLC controlled contactors, ensuring that when a dangerous failure is detected the operator is kept out of harms way.



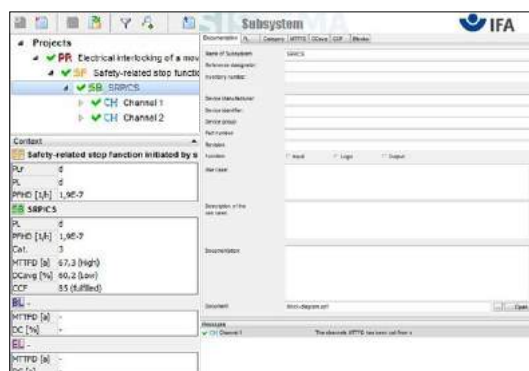
Prevent unexpected operations

Factory fitted auxiliary contact blocks that are permanently fixed protects devices against accidental operation and misuse. A factory-fitted transparent cover on contactors up to 96 A shields the contactor status indicator, providing additional protection from misuse.



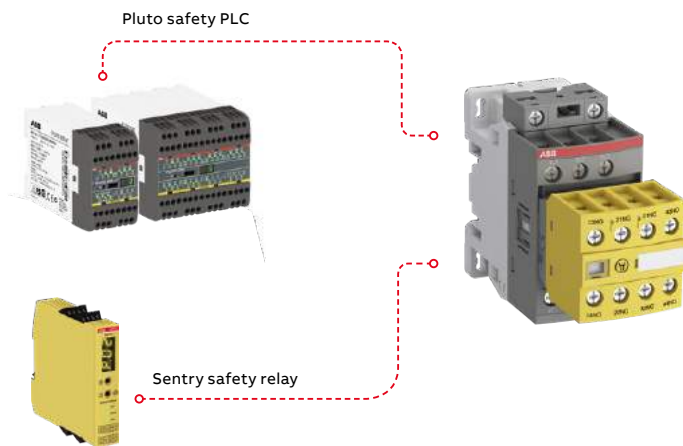
Simplify calculation of your installation safety level

AFS contactor safety data is available in safety design tools Sistema and FSDT, dedicated software for determining the Performance Level (PL) and Safety Integrity Level (SIL) of safety functions and generating technical documentations.



Control by safety PLCs or safety relays

ABB's AFS contactors can be controlled directly by safety PLCs or safety relays, or by a power relay depending on size. AFS contactors is part of the ABB safety family, and selected sizes are tested together with ABB's Pluto safety PLC and the Sentry safety relay. For full coordination please advise ABB. The auxiliary contacts only require a minimum switching capacity of 3 V / 1 mA. They guarantee system status feed-back, making the system safe and reliable.



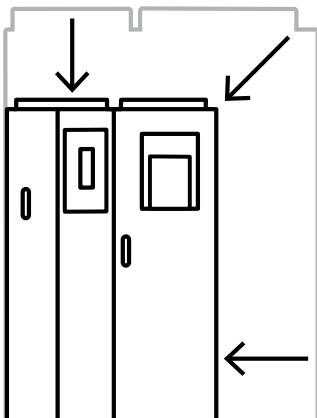
Easy safety chain identification

The yellow housing of ABB's AFS contactors makes identifying the safety product in your panel quicker. During routine maintenance work, ABB's intuitive design saves valuable time.



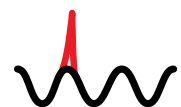
Panel size reduction

Utilizing AF technology, AFS coils need up to 60% less energy than conventional contactor coils. This allows for smaller transformers to be used for contactor control, which in turn allows for more efficient use of panel space. Using AFS contactors saves money and precious space.



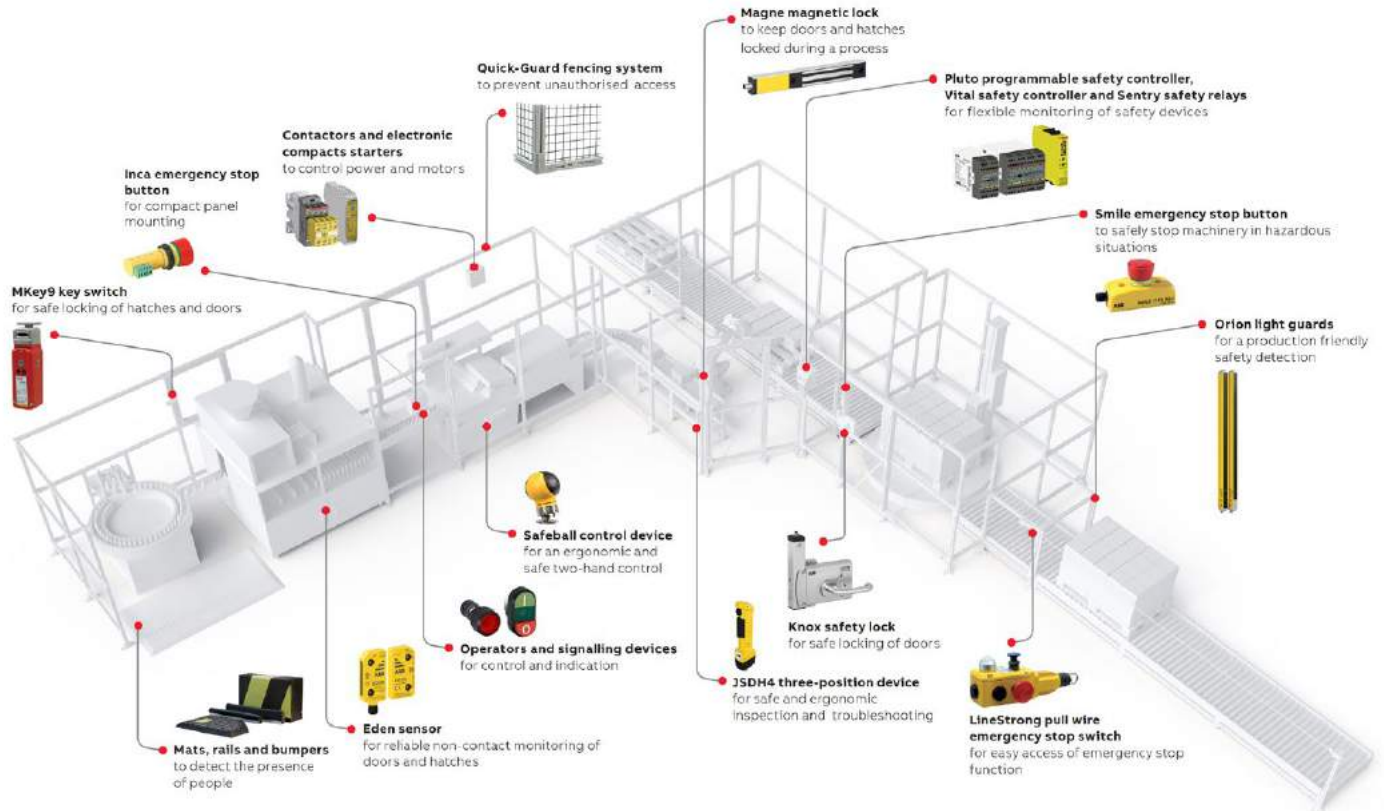
Built-in surge suppression

Unlike conventional contactors, ABB's AFS contactors have built-in surge suppression, preventing surges from ever reaching the control circuit. With no need for the usual external surge suppressor add-ons, ABB's solution means one less device to install and one less complication to manage.



AFS 3-pole contactors

A part of ABB's complete safety solution



<http://new.abb.com/low-voltage/contactors-for-safety-applications>



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