

CERTIFICATE OF COMPLIANCE

Certificate Number 20170410-E60645
Report Reference E60645-20090919
Issue Date 2017-APRIL-10

Issued to: ABB France
Activite Raccordement
3 Rue Jean Perrin, CS90009
69687 Chassieu Cedex France

**This is to certify that
representative samples of** COMPONENT - TERMINAL BLOCKS
SEE ADDENDUM PAGES

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: Terminal Blocks, UL1059 & Terminal Blocks, CAN/CSA
C22.2 No. 158-10

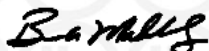
Additional Information: See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's
Certification and Follow-Up Service.

The UL Recognized Component Mark generally consists of the manufacturer's identification and catalog
number, model number or other product designation as specified under "Marking" for the particular
Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products
that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark:
 may be used in conjunction with the required Recognized Marks. The Recognized Component Mark is
required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual
recognitions.

Recognized components are incomplete in certain constructional features or restricted in performance
capabilities and are intended for use as components of complete equipment submitted for investigation rather
than for direct separate installation in the field. The final acceptance of the component is dependent upon its
installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

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This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

PRODUCT COVERED:

USR and CNR Recognized Component - Terminal Blocks Series ZS, Cat. Nos. ZS followed by 4, 6, 10, 16, 35 or 70, may be followed by -PE, -SF, -SF-T2, -SF1, -SF1-T2, -S, -S-T2, -S-T2.3, -SP, -SP-T2, -R1, -SF-R1, -SF-R2, -SF-R3, -SF-R4, -SF1-R1, -SF1-R2, -SF1-R3, -SF1-R4, -S-R1, -S-T2-R1, -S-T2.3-R1, -SP-R1, -SP-T2-R1, -S-R2, -S-R3, -D1, -D2 or blank, followed by BL, OR, YL, GN, RD, PR, BR, WH, BK or blank.

USR and CNR Recognized Component - Terminal Blocks Series ZS, Cat. Nos. ZS followed by 4, followed by D-CH-UD or D-CH-DU, followed by BL, OR, YL, GN, RD, PR, BR, WH, BK or blank.

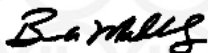
USR and CNR Recognized Component - Terminal Blocks Series ZS, Cat. No. ZS95-PE.

*USR - Terminal Blocks Series ZS, Cat. Nos. ZS6-S, ZS10-S, ZS10-SP, ZS35-PE and ZS95, followed by BL, OR, YL, GN, RD, PR, BR, WH, BK or blank.

USR – Terminal Blocks Series ZS6, Cat. Nos. ZS6-D1-PE and ZS6-D2-PE.

USR Recognized Component - Terminal Blocks Series ZS, Cat. Nos. ZS followed by 10 followed by -ST, -ST-1, -ST-T4, -PE-R1, -R1, followed by BL, OR, YL, GN, RD, PR, BR, WH, BK or blank.

USR Recognized Component – Terminal blocks Series ZS, Cat. Nos. ZS followed by 10 followed by –SF, -SF-R1, SF-R3, S-R2, followed by BL, OR, YL, GN, RD, PR, BR, WH, BK or blank



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Cat.No.	1 conductor Wire Range AWG	2 conductors Wire Range AWG	Wire Type, Cu +	F W	Torque Nm	Voltage V	1 conductor or Current A	2 conductors Current A	UG	CA
ZS4	24-12	24-16	SOL/STR	2	0.5-0.7	600	20	20	B,C	2(105),4,6
ZS6	24-10	24-14	SOL/STR	2	0.7-1.0	600	30	30	B,C	2(105),4,6
ZS10	24-6	20-12	SOL/STR	2	1.0-1.6	600	42	40	B,C	2(105),4,6
ZS10-SF, ZS10-SF-R1, ZS10-SF-R3, ZS10-S-R2	24-6	20-12	SOL/STR	2	1.0-1.6	600 (2)	22	22	B,C	2(105),4
ZS16	24-4	20-10	SOL/STR	2	1.6-2.4	600	67	60	B,C	2(105),4,6
ZS35	10-1/0	10-6	SOL/STR	2	2.8-3.0	600	150	130	B,C	2(105),4,6
ZS4-PE	24-12	N/A	SOL/STR	2	0.5-0.7	-	-	-	B,C	2(105),4
ZS6-PE	24-10	N/A	SOL/STR	2	0.7-1.0	-	-	-	B,C	2(105),4
ZS10-PE	24-6	N/A	SOL/STR	2	1.0-1.6	-	-	-	B,C	2(105),4
ZS16-PE	24-4	N/A	SOL/STR	2	1.6-2.4	-	-	-	B,C	2(105),4
ZS35-PE	10-2	N/A	SOL/STR	2	2.8	-	-	-	B,C	2(105),4
ZS4-SF	24-10	24-16	SOL/STR	2	0.5-0.7	150	10	10	A,B,C	2(105),4
						300	10	10	D	
ZS4-SF-R1, ZS4-SF-R2	24-10	24-16	SOL/STR	2	0.5-0.7	150 (1)	10	10	A,B,C	2(105),4

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						300 (1)	10	10	D	
ZS4-SF-R3, ZS4-SF-R4	24-10	24-16	SOL/ST R	2	0.5-0.7	150	10	10	A,B, C	2(105),4
						300	10	10	D	
ZS4-SF-T2	24-10	24-16	SOL/ST R	2	0.5-0.7	150	10	10	A,B, C	2(105),4
						300	10	10	D	
ZS4-SF1	24-10	24-16	SOL/ST R	2	0.5-0.7	300	10	10	B,C	2(105),4
						600	5	5	D	
ZS4-SF1- R1, ZS4- SF1-R2	24-10	24-16	SOL/ST R	2	0.5-0.7	300 (1)	10	10	B,C	2(105),4
						600 (1)	5	5	D	
ZS4-SF1- R3, ZS4- SF1-R4	24-10	24-16	SOL/ST R	2	0.5-0.7	300	10	10	B,C	2(105),4
						600	5	5	D	
ZS4-SF1-T2	24-10	24-16	SOL/ST R	2	0.5-0.7	300	10	10	B,C, D	2(105),4
						600	5	5	D	
ZS4-S	24-10	24-16	SOL/ST R	2	0.5-0.7	150	25	20	B,C	2(105),4
						300	10	10	D	
ZS6-S	24-10	24-14	SOL/ST R	2	0.7-1.0	300	25	25	B,C	2(105),4
						600	5	5	D	
ZS10-S	24-6	20-12	SOL/ST R	2	1.0-1.6	300	25	25	B,C	2(105),4
						600	5	5	D	

Table con't

Cat.No.	1 conduct or Wire Range AWG	2 conducto rs Wire Range AWG	Wire Type, Cu +	F W	Torque Nm	Voltage V	1 conduct or Current A	2 conducto rs Current A	UG	CA
ZS10-ST, ZS10-ST-1, ZS10-ST- T4	24-6	20-12	SOL/S TR	2	1.0-1.6	300	53	40	B,C	2(105),4
						600	5	5	D	

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ZS10-R1	24-6	20-12	SOL/S TR	2	1.0-1.6	300	62	40	B,C	2(105),4
						600	5	5	D	
ZS10-ST, ZS10-ST-1, ZS10-ST- T4	24-6	20-12	SOL/S TR	2	1.0-1.6	600 (3)	53	40	B,C	2(105),4
ZS10-R1	24-6	20-12	SOL/S TR	2	1.0-1.6	600 (3)	62	40	B,C	2(105),4
ZS10-PE- R1	24-6	20-12	SOL/S TR	2	1.0-1.6	-	-	-	B,C, D	2(105),4
ZS4-S-T2	24-10	24-16	SOL/S TR	2	0.5-0.7	150	25	20	B,C	2(105),4
						300	10	10	D	
ZS4-S-T2.3	24-10	24-16	SOL/S TR	2	0.5-0.7	150	25	20	B,C	2(105),4
						300	10	10	D	

Table con't

Cat.No.	1 conductor Wire Range AWG	2 conductors wire Range AWG	Wire Type, Cu +	FW	Torque Nm	Voltage V	1 conductor Current A	2 conductors Current A	UG	CA
ZS4- SP	24-10	24-16	SOL/STR	2	0.5-0.7	150	18	18	B,C	2(105),4
						300	10	10	D	
ZS10- SP	24-6	20-12	SOL/STR	2	1.0-1.6	300	18	18	B,C	2(105),4
						600	5	5	D	
ZS4- SP-T2	24-10	24-16	SOL/STR	2	0.5-0.7	150	18	18	B,C	2(105),4
						300	10	10	D	
ZS4- R1	24-10	24-16	SOL/STR	2	0.5-0.7	300	26	20	B,C	2(105),4
ZS4-S- R1	24-10	24-16	SOL/STR	2	0.5-0.7	150	26	20	B,C	2(105),4
						300	10	10	D	
ZS4-S- T2-R1	24-10	24-16	SOL/STR	2	0.5-0.7	150	26	20	B,C	2(105),4
						300	10	10	D	
ZS4-S-	24-10	24-16	SOL/STR	2	0.5-0.7	150	26	20	B,C	2(105),4

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T2.3-R1						300	10	10	D	
ZS4-SP-R1	24-10	24-16	SOL/STR	2	0.5-0.7	150	20	20	B,C	2(105),4
						300	10	10	D	
ZS4-SP-T2-R1	24-10	24-16	SOL/STR	2	0.5-0.7	150	20	20	B,C	2(105),4
						300	10	10	D	
ZS4-S-R2	24-10	24-16	SOL/STR	2	0.5-0.7	150	13	13	A,B,C	2(105),4
						300	10	10	D	
ZS4-S-R3	24-10	24-16	SOL/STR	2	0.5-0.7	300	18	18	B,C	2(105),4
ZS4-D1, ZS4-D-CH-UD, ZS4-D-CH-DU	24-12	24-16	SOL/STR	2	0.5-0.7	300	20	20	B,C	2(105),4
						600	5	5	D	
ZS4-D2	24-12	24-16	SOL/STR	2	0.5-0.7	300	20	20	B,C	2(105),4
						600	5	5	D	
ZS6-D1	24-10	24-14	SOL/STR	2	0.7-1.0	300	30	30	B,C	2(105),4
						600	5	5	D	
ZS6-D2	24-10	24-14	SOL/STR	2	0.7-1.0	300	30	30	B,C	2(105),4
						600	5	5	D	
ZS6-D1-PE	24-10	N/A	SOL/STR	2	0.7-1.0	-	-	-	B,C	2(105),4
ZS6-D2-PE (Upper termial)	24-10	24-14	SOL/STR	2	0.7-1.0	300	30	30	B,C	2(105),4
						600	5	5	D	

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Table con't

Cat.No.	1 conductor Wire Range AWG	2 conductors wire Range AWG	Wire Type, Cu +	FW	Torque Nm	Voltage V	1 conductor Current A	2 conductors Current A	UG	CA
ZS6-D2-PE (Lower terminal)	24-10	N/A	SOL/STR	2	0.7-1.0	-	-	-	B,C	2(105),4
ZS70	4-2/0	4-2	STR	2	6.0-7.0	600	159	159	B,C	2(105),4
						1000			E	2(105),4
ZS70-PE	4-2/0	N/A	STR	2	6.0-7.0	-	-	-	B,C	2(105),4
ZS95	2-4/0	4-2	STR	2	9.0-9.5	600	230	230	B,C	2(105),4
						1000			E	2(105),4
ZS95-PE	2-4/0	N/A	STR	2	9.0-9.5	-	-	-	B,C	2(105),4

Note + - max SOL wire is 10AWG.

Note ++ - 2 conductors may only be combined with the same size. For example 20AWG can only be combined with 20AWG. Each conductor can flow maximum current appropriate with this size.

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Note D - These limited ratings are applicable to a terminal block for use in or with industrial control equipment whereby the load on any single circuit of the terminal block does not exceed 15 A at 51-150 V, 10 A at 151-300 V, or 5 A at 301-600 V, or the maximum ampere rating, whichever is less.

(1) – Models ZS4-SF-R1, ZS4-SF-R2, ZS4-SF1-R1 and ZS4-SF1-R2 will be used under 110V maximum because electronic element is 24-110V rated.

(2) – Model ZS10-SF-R1 will be used under 110V maximum because electronic element is 24-110V rated and Model ZS10-SF-R3 will be used under 250V maximum because electronic element is 115-250V rated.

(3) - Models ZS10-ST, ZS10-ST-1, ZS10-ST-T4 and ZS10-R1 are rated 600 V when provided with spacer Cat. No. ES10-ST.

The terminal blocks tabulated below have optional single-phase short circuit current ratings. The Terminal Blocks must be protected by the max ampere and Class of overcurrent protective device noted below.

Cat. No.	Wire Range kcmil/AWG Line Load	Overcurrent Protection Fuse Required Class/Max Amp Rating						Torque Nm	SCCR, RMS Sym A (single phase only)	Volts Max ac
		J	T	RK1	RK5	G	CC			
ZS4	14 – 12 STR	50	50	-	-	50	30	0.5 – 0.7	100000	600
ZS6	14 – 10 STR	110	110	100	30	60	30	0.7 – 1.0	100000	600
ZS10	14 – 6 STR	110	110	100	30	60	30	1.0 - 1.6	100000	600
ZS16	14 – 4 STR	150	150	100	30	60	30	1.6 – 2.4	100000	600
ZS35	10 – 1/0 STR	250	250	200	100	60	30	2.8-3.0	100000	600
ZS70	4 – 2/0 STR	250	250	200	100	60	30	6.0 – 7.0	100000	600
ZS95	2 – 4/0 STR	350	350	200	100	60	30	9.0 – 9.5	100000	600
ZS4-D2	14 – 12 STR	50	50	-	-	50	30	0.5 – 0.7	100000	600
ZS6-D2	14 – 10 STR	110	110	100	30	60	30	0.7 – 1.0	100000	600

For SCCR ratings, enclosure size employed for tests is 80 x 130 x 100 mm for Cat. Nos. ZS4, ZS6, ZS10, ZS16, ZS35 and 80 x 130 x 125 mm for Cat. Nos. ZS70, ZS95, ZS4-D2 and ZS6-D2

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Report Reference E60645-20121221
Issue Date 2016-AUGUST-11

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

USR Recognized Component - Terminal Blocks, Series ZS:

Cat. No(s). ZS followed by 4 may be followed by -D2-S-T2, -D2-S, -T3, -T3-R1, -D2-SF1, -D2-SF1-R1, -D2-SF1-R3, followed by BL, OR, YL, GN, RD, PR, BR, WH, BK or blank.

Cat. No. ZS followed by 50 may be followed by BL, OR, YL, GN, RD, PR, BR, WH, BK or blank.

Cat. No(s). ZS followed by 6 may be followed by -3S, -4S, -S-4S-T2, followed by BL, OR, YL, GN, RD, PR, BR, WH, BK or blank.

USR, CNR Recognized Component - Terminal Blocks, Series ZS: Cat. No(s). ZS4-R2, ZS25, followed by BL, OR, YL, GN, RD, PR, BR, WH, BK or blank.

USR, CNR Recognized Component – Protective Conductor Terminal Blocks, Series ZS: Cat. No(s). ZS4-PE-R2, ZS25-PE.

USR Recognized Component - Protective Conductor Terminal Blocks, Series ZS: Cat. No(s). ZS6-3S-PE, ZS6-4S-PE, ZS50-PE.

Ratings:

Cat.No.	1 conductor Wire Range AWG	2 conductors Wire Range AWG	Wire Type, Cu (1)	F W	Torque Nm	Voltage V	1 conductor Current A	2 conductors Current A	UG	CA
ZS4-D2-S-T2	24-10	24-16	SOL/STR	2	0.5-0.7	300	27	20	B,C	2(105),4
						600	5	5	D#	
ZS4-D2-S	24-10	24-16	SOL/STR	2	0.5-0.7	300	27	20	B,C	2(105),4
						600	5	5	D#	
ZS4-T3	24-12	24-16	SOL/STR	2	0.5-0.7	300	20	20	B,C	2(105),4
						600	5	5	D#	
ZS4-T3-R1	24-10	24-16	SOL/STR	2	0.5-0.7	300	30	20	B,C	2(105),4
						600	5	5	D#	

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ZS4-R2	24-10	24-16	SOL/ST R	2	0.5-0.7	300	30	20	B,C	2(105),4
						600	5	5	D#	
ZS4-PE-R2	24-10	24-16	SOL/ST R	2	0.5-0.7	N/A	N/A	N/A	B,C	2(105),4
ZS4-D2-SF1	24-10	24-16	SOL/ST R	2	0.5-0.7	300	12/30(3)	12/20(3)	B,C	2(105),4
						600	5	5	D#	
ZS4-D2-SF1-R1	24-10	24-16	SOL/ST R	2	0.5-0.7	300	12/30(3,4)	12/20(3,4)	B,C	2(105),4
						600	5	5	D#	
ZS4-D2-SF1-R3	24-10	24-16	SOL/ST R	2	0.5-0.7	300	12/30(3,4)	12/20(3,4)	B,C	2(105),4
						600	5	5	D#	
ZS6-3S	24-10	24-14	SOL/ST R	2	0.7-1.0	600	30	20	B,C	2(105),4
ZS6-4S	24-10	24-14	SOL/ST R	2	0.7-1.0	600	30	20	B,C	2(105),4
ZS6-S-4S-T2	24-10	24-14	SOL/ST R	2	0.7-1.0	300	28	20	B,C	2(105),4
						600	5	5	D#	
ZS6-3S-PE	24-10	24-14	SOL/ST R	2	0.7-1.0	N/A	N/A	N/A	B,C	2(105),4
ZS6-4S-PE	24-10	24-14	SOL/ST R	2	0.7-1.0	N/A	N/A	N/A	B,C	2(105),4

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Ratings:

Cat.No.	1 conduct or Wire Range AWG	2 conduct ors Wire Range AWG	Wire Type, Cu (1)	F W	Torque Nm	Voltage V	1 conduct or Current A	2 conduct ors Current A	UG	CA
ZS25	24-3	20-10	SOL/ST R	2	1.6-2.0	600	100	60	B,C	2(105),4
						1000 (5)			E	2(105),4
ZS25-PE	24-3	20-10	SOL/ST R	2	1.6-2.0	N/A	N/A	N/A	B,C	2(105),4
ZS50	18-1/0	18-4	SOL/ST R	2	2.5-3.5	600	140	140	A(6), B,C	2(105),4
						1000	140	140	E	2(105),4
ZS50-PE	18-1/0	18-4	SOL/ST R	2	2.5-3.5	N/A	N/A	N/A	B,C, E	2(105),4

Note 1 - max SOL wire is 10AWG.

Note 2 - 2 conductors may only be combined with the same size. For example 20AWG can only be combined with 20AWG. Each conductor can flow maximum current appropriate with this size.

Note # - These limited ratings are applicable to a terminal block for use in or with industrial control equipment whereby the load on any single circuit of the terminal block does not exceed 15 A at 51-150 V, 10 A at 151-300 V, or 5 A at 301-600 V, or the maximum ampere rating, whichever is less.

Note 3 – The following terminal blocks, Cat. No(s): ZS4-D2-SF1, ZS4-D2-SF1-R1 and ZS4-D2-SF1-R3 have two current ratings. Upper Level current rating for one conductor is 12A. Upper Level current rating for two conductors is 12A. Lower Level current rating for one conductor is 30A. Lower Level current rating for two conductors is 20A.

Note 4. Model No. ZS4-D2-SF1-R1 will be used under 110V maximum because electronic element is 24-110V rated and Model No ZS4-D2-SF1-R3 will be used under 250V maximum because electronic element is 115-250V rated.

Note 5. For voltage rating 1000V Model No. ZS25 shall be used together with spacer Model No. CS-R1.

Note 6. For voltage rating 600V in Usage Group A, Model No. ZS50 shall be used together with spacer Model No. BAM 4.

B. Mahlen

Bruce Mahlenholz, Director North American Certification Program

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CERTIFICATE OF COMPLIANCE

Certificate Number 20160811-E60645
Report Reference E60645-20121221
Issue Date 2016-AUGUST-11

Cat. No.	Wire Range kcmil/AWG Line, Load	Overcurrent Protection Fuse Required Class/Max Amp Rating						Torque [Nm]	SCCR, RMS Sym A (single phase only)	Volts Max AC
		RK1	RK5	J	T	G	CC			
ZS6-3S	10 AWG STR/SOL	100	60	175	175	60	30	0.7 – 1.0	100000	600
ZS6-4S	10 AWG STR/SOL	100	60	175	175	60	30	0.7 – 1.0	100000	600
ZS25	10-3 AWG STR	200	100	250	250	60	30	1.6 - 2.0	100000	600
	10AWG SOL									
ZS50	10-1/0 STR	200	100	250	250	60	30	2.5 - 3.5	100000	600
	10AWG SOL									

For SCCR ratings, enclosure size employed for tests is 80 x 130 x 100 mm for Cat. Nos. ZS6-3S, ZS6-4S, ZS25 and ZS50

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CERTIFICATE OF COMPLIANCE

Certificate Number 20170410-E60645
Report Reference E60645-20160802
Issue Date 2017-APRIL-10

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

USR and CNR Recognized Component - Screw Type Terminal Blocks, Series ZS: Cat. No(s): ZS150 and ZS240 followed by BL, OR, YL, GN, RD, PR, BR, WH, BK or blank.

Cat. No.	Wire Range AWG/kcmil	Wire Type, Cu/Al	F W	Torque [N·m]	Current A	Voltage V	UG	CA
ZS150	Main circuit: 2AWG-350kcmil	Cu STR	2	20	310	600 1000	B,C E	2(105),4,6
	Auxiliary circuit: 20AWG-8AWG	Cu STR		1.2-1.4	50			
	Auxiliary circuit: 20AWG-10AWG	Cu SOL		1.2-1.4	30			
ZS240	Main circuit: 1/0AWG-500kcmil	Cu STR	2	25	380	600 1000	B,C E	2(105),4,6
	Main circuit: 1/0AWG-500kcmil	Al STR		25	271			
	Auxiliary circuit: 20AWG-8AWG	Cu STR		1.2-1.4	50			
	Auxiliary circuit: 20AWG-10AWG	Cu SOL		1.2-1.4	30			

Note 1 - max SOL wire is 10AWG.

The terminal blocks tabulated below have optional single-phase short circuit current ratings. The Terminal Blocks must be protected by the max ampere and Class of overcurrent protective device noted below.

Cat. No.	Wire Range kcmil/AWG Line Load (Main circuit)	Overcurrent Protection Fuse Required Class/Max Amp Rating						Torque Nm	SCCR, RMS Sym A (single phase only)	Volts Max ac
		J	T	RK1	RK5	G	CC			
ZS150	2AWG-350kcmil STR	600	600	400	200	60	30	20	100000	600
ZS240	1/0AWG-500kcmil STR	800	800	400	200	60	30	25	100000	600

For SCCR ratings, enclosure size employed for tests is 130 x 160 x 180 mm for Cat. Nos. ZS150, ZS240

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