CATALOG

DME60 D

eRCBO 1P+N 1M with flying neutral leads



- Electronic RCBO 1P+N in 1M
- Supply from the bottom, load from the top
- Presence of flying neutral leads (black colour)
- 6kA breaking capacity up to 40A

ABB is the world's leading provider of products for electrical installation in buildings.
A comprehensive domain knowledge, global experience and continous innovation enable us to provide optimal solutions for residential, commercial as well as industrial environments.
Our solutions help to make your buildings safer, more energy efficient and equipped for the future.

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DME60 D

The details make the difference.
A range designed to ensure efficiency and protection.



Load connection
Load from the top side.

Neutral Flying lead
The neutral is supplied from the top via solid cable. Black or blue color depending by the different country installation habits. Presence of functional earth cable (white) ensures protection against earth leakage in case of loss of supply of the neutral

Printed information
Main technical information are printed on the front side, visible also when the device is installed

Easy to install
Supply from the bottom, for a quick installation in chassis distribution board and DIN-Rail.

Guaranteed security
Contact position indicator (CPI) to show the contact status



DME60 D is specifically designed to protect people and sites, both commercial and industrial, from overloads, short-circuits and earth-fault currents.

DME60 D

Ordering codes



DME60 D

Function: protection and control of the circuits against overloads and short-circuits; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contact and additional protection against direct contact (IΔn = 30 mA). The neutral is unswitched.
Available with neutral cable in blue and black color.

Applications: residential, commercial, industrial in DIN-Rail and chassis distribution board.

Standard: IEC 61009-1; IEC 61009-2-2; AS/NZS 61009.1

Black neutral cable codes

N. poles	Breaking capacity	Type	Sensitivity IΔn mA	Tripping Char.	Rated Current In A	EAN	Type code	Order code	Weight 1 piece kg	Weight 1 piece kg
1+N	6kA	A	30	C	6	4022903030669	DME60 D C6 A30	2CDB362501R1064	0.235	1
					10	4022903030676	DME60 D C10 A30	2CDB362501R1104	0.235	1
					16	4022903030683	DME60 D C16 A30	2CDB362501R1164	0.235	1
					20	4022903030690	DME60 D C20 A30	2CDB362501R1204	0.235	1
					25	4022903030706	DME60 D C25 A30	2CDB362501R1254	0.235	1
					32	4022903030713	DME60 D C32 A30	2CDB362501R1324	0.235	1
					40	4022903030720	DME60 D C40 A30	2CDB362501R1404	0.235	1
		AC	30	C	6	4022903030591	DME60 D C6 AC30	2CDB362500R1064	0.235	1
					10	4022903030607	DME60 D C10 AC30	2CDB362500R1104	0.235	1
					16	4022903030614	DME60 D C16 AC30	2CDB362500R1164	0.235	1
					20	4022903030621	DME60 D C20 AC30	2CDB362500R1204	0.235	1
					25	4022903030638	DME60 D C25 AC30	2CDB362500R1254	0.235	1
					32	4022903030645	DME60 D C32 AC30	2CDB362500R1324	0.235	1
					40	4022903030652	DME60 D C40 AC30	2CDB362500R1404	0.235	1

DME60 D

Technical datasheet

				DME60 D
Electrical features	Standards			IEC 61009-1; IEC 61009-2-2; AS/NZS 61009.1
	Type (wave form of the earth leakage sensed)			A, AC
	Number of poles			1P+N
	Number od modules			1M
	Rated sensitivity IΔn		mA	30
	Tripping Characteristic			C
	Rated current In		A	6 ≤ In ≤ 40
	Rated voltage Ue		V AC	230/240
	Insulation voltage Ui		V	440
	Overvoltage category			III
	Pollution degree			2
	Rated frequency		Hz	50/60
	Min. operating voltage for protection against IΔn residual sinusoidal alternating currents		V AC	100
	Max operating voltage		V AC	264
	Operating voltage of circuit test		V AC	195-264
	Rated breaking capacity acc. to IEC 61009-1	Icn	A	6000
	Rated breaking capacity acc. to IEC 60947-2 (only referring to internal short circuit test)	ultimate Icu	A	10000
		service Ics	A	6000
	Rated residual breaking capacity IΔm to IEC 61009-1	IΔm	A	6000
	Rated impulse withstand voltage (1.2/50) Uimp		kV	6 kV (test voltage 6.2 kV at sea level, 5 kV at 2000 m)
	Dielectric test voltage at ind. freq. for 1 min.		kV	2.5 kV (50 / 60Hz, 1 min.)
	Energy limiting class			3
	Thermomagnetic release - characteristic	B: 3 In ≤ Im ≤ 5 In		■
		C: 5 In ≤ Im ≤ 10 In		■
Mechanical features	Housing			Insulation group II, RAL 7035
	Toggle			Insulation group II, Black RAL 7024
	Contact position indicator			Green/Red on toggle
	Electrical life		operations	10000
	Mechanical life		operations	20000
	Protection degree acc. to EN 60529	housing		IP40
		terminals		IP20
	"Environmental conditions (damp heat) acc. to IEC/EN 60068-2-30"		°C/RH	28 cycles with 55°C/90-96% and 25°C/95-100%
	Reference temperature for setting of thermal element		°C	30
	Ambient temperature (with daily average ≤ +35 °C)		°C	-5...+55
	Storage temperature		°C	-25...+70
Installation	Terminal type			Bottom with failsafe; top wihtout failsafe
	Terminal size for cables	top / bottom	mm^2	16/25 flexible; 25/35 rigid
	Terminal size for busbars	top	mm^2	only for wire connection
		bottom	mm^2	10
	Tightening torque (Maximum)	top / bottom	Nm	3/4.5
	Stripping length of the cable	top / bottom	mm	13/13
	Mounting			on DIN rail EN 60715 (35mm) by means of mounting clip and on distribution board
	Neutral Cable	Lenght	mm	1200
		Section	mm^2	$4mm^2$ up to 25A; 6mm2 32A and 40A
		Color		Black / Blue
				Vertical & Horizontal
	Supply from			Bottom terminal (Phase) and Neutral wire
Dimensions and weight	Dimensions (H x D x W)		mm	125 x 70 x 17.8
	Weight		g	235

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Additional technical information



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Derating in temperature

Max operating current depending on the ambient temperature of an RCBO in load circuit of characteristics type C. Daily average ambient temperature is intended to be ≤ +35 °C.

	0 °C	10 °C	20 °C	30 °C	40 °C	50 °C	55 °C
6 A	6,8	6,7	6,3	6,0	5,7	5,5	5,3
10 A	12,3	11,6	10,8	10,0	9,2	8,5	8,1
16 A	18,7	17,8	16,9	16,0	15,1	14,2	13,8
20 A	23,3	22,2	21,1	20,0	18,9	17,8	17,2
25 A	29,2	27,8	26,4	25,0	23,6	22,2	21,5
32 A	37,3	35,6	33,8	32,0	30,2	28,5	27,6
40 A	46,7	44,4	42,2	40,0	37,8	35,6	34,5

Power loss, internal resistance and voltage drop

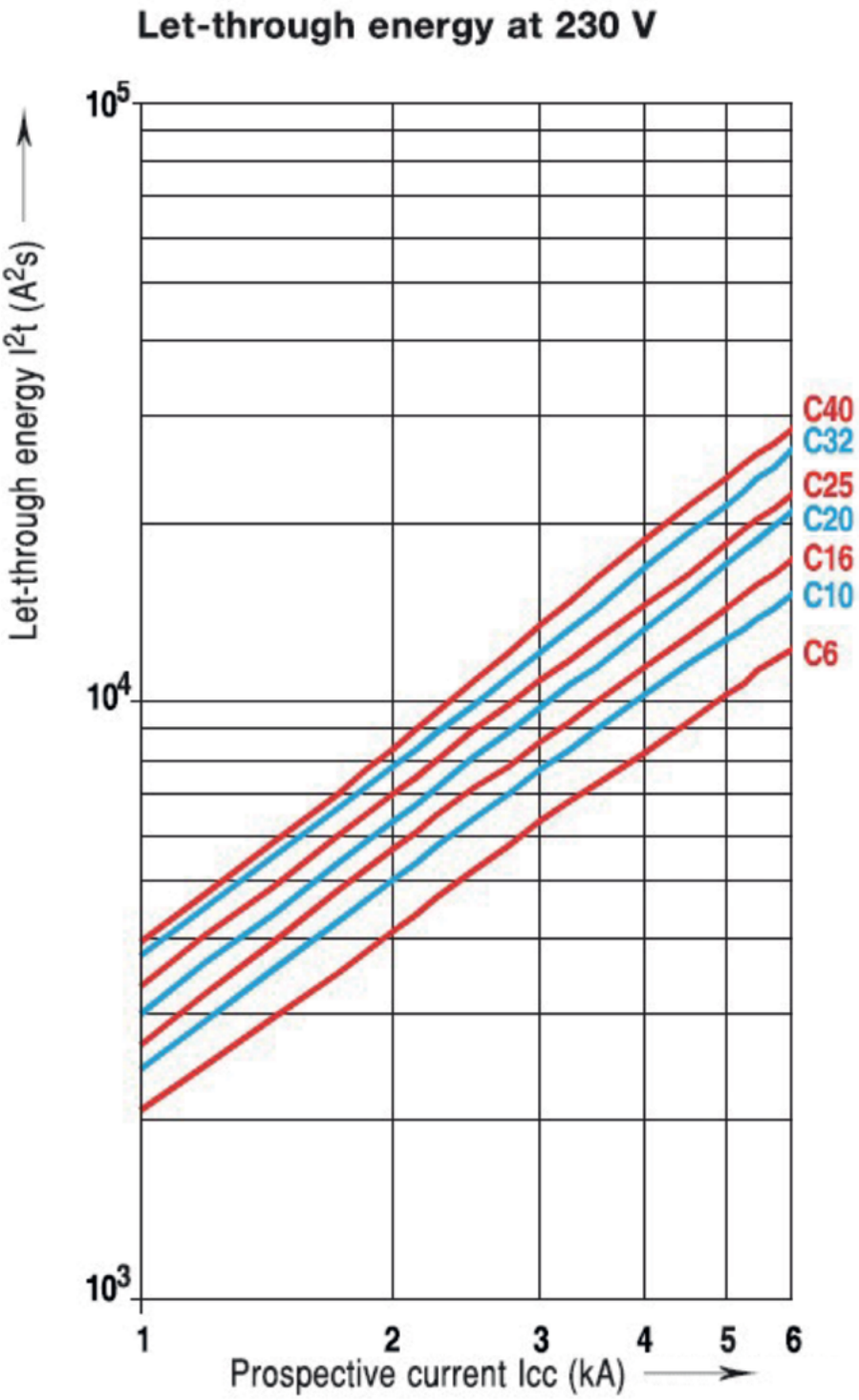
Rated current In [A]	Power loss [W]	Internal resistance [mΩ]	Voltage drop [V]
6 A	1,57	43,6	0,26
10 A	1,56	15,6	0,16
16 A	2,57	10,1	0,16
20 A	2,76	6,9	0,14
25 A	3,19	5,1	0,13
32 A	3,19	3	0,1
40 A	4	2,5	0,1

Influence of adjacent devices

Number of devices	Correction facor
2 and 3	0,9
4 and 5	0,8
6 to 9	0,7
10 and above	0,6

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Let-through energy for C tripping characteristic



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Tripping characteristics

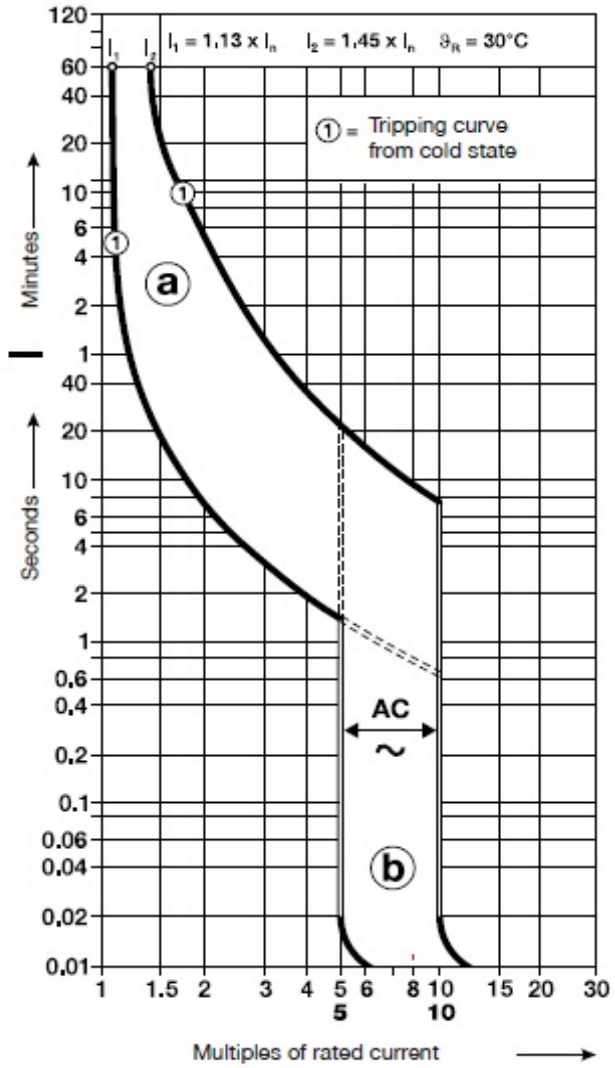
			Thermal relase ②			Electromagnetic relase ①		
Acc.to	**Tripping characteristic and reted current**		**Current:**		**Tripping time**	**Currents:**		**Tripping time**
			conventional non-tripping current	conventional tripping current		hold current surges	trip at least at	
IEC/EN **61009-1**	C	6 to 40 A	1.13 - In	-	> 1 h	5 - In	-	> 0.1 s
				1.45 - In	> 1 h		10 - In	> 0.1 s

① The indicated electromagnetic tripping values apply to a frequency range of 16 2/3...60 Hz. For different network frequencies or direct current the valuec change according to the multiplier in the table below.

② The thermal releases are calibrated to a nominal reference ambient temperature; for Z and K, the value is 20°C, for B and C = 30°C. In the case of higher ambient temperatures, the current values fall by ca. 6% for each 10 K temperature rise.

Characteristic C

IEC/EN 61009-1

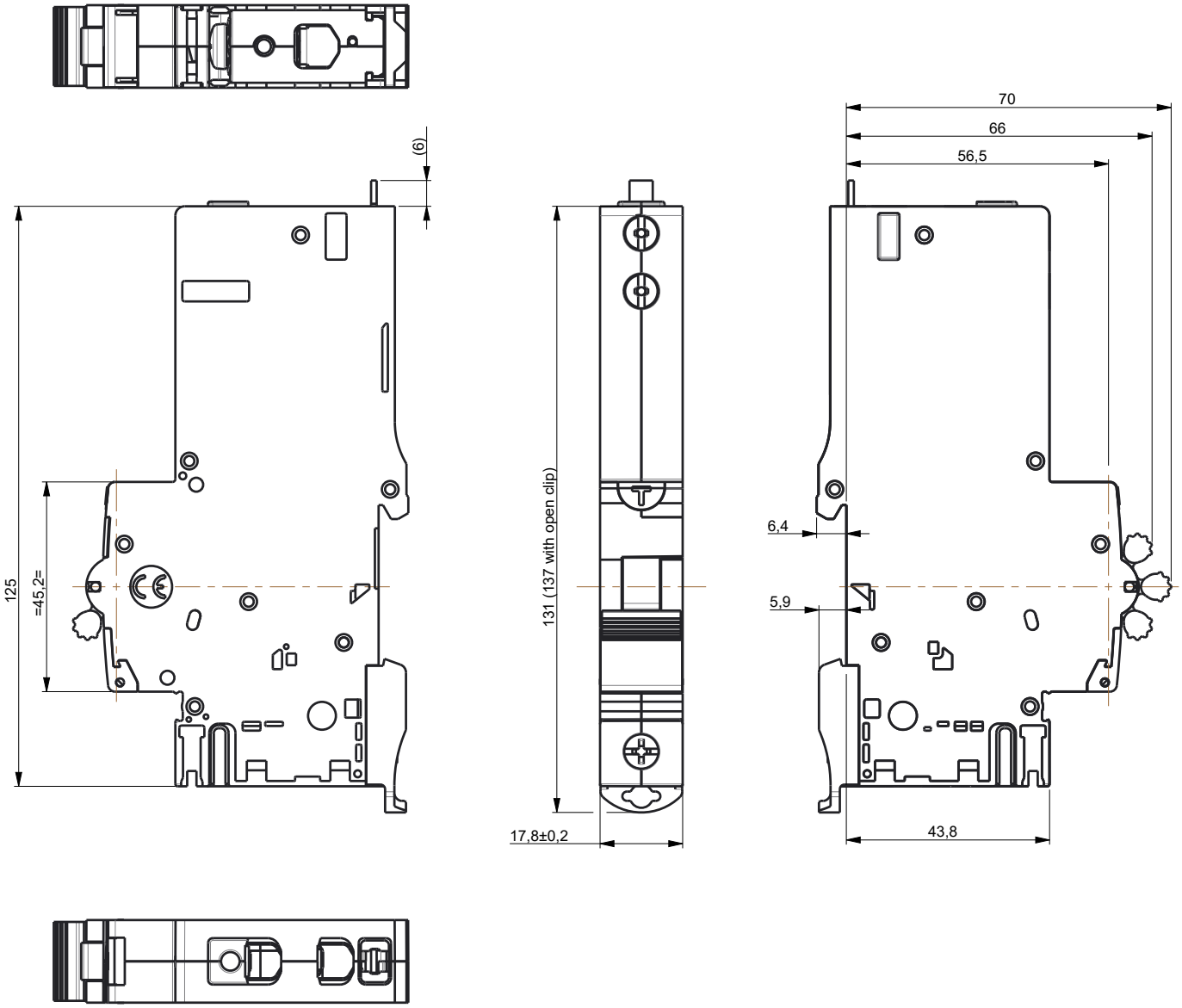


ⓐ Thermal trip.

ⓑ Electromagnetic trip.

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Dimensions



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Coordination tables: back-up

Technology					MCCB														
	Technology				PR					Tmax XT									
	Series	Series			XT1					XT2					XT4				
		Char	Version		B	C	N	S	H	N	S	H	L	V	N	S	H	L	V
			Icu (kA)	Icu (kA)	18	25	36	50	70	36	50	70	120	150	36	50	70	120	150
RCD	DME60D			In(A)	16..160	16..160	16..160	16..160	16..160	6.3..160	6.3..160	6.3..160	6.3..160	6.3..160	16..250	16..250	16..250	16..250	16..250
		C	6	6…40	16	22	22	22	22	25	25	25	25	25	25	25	25	25	25

		Icc max. 100 kA (80 kA, 400V with 10x38 cartridge fuses)		
		Supply side		Fuse gG
Load side	Char	Icu [kA]	In[A]	In[A]
DME60D	C	6	6…16	80
			20…40	100

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Coordination tables: selectivity

Technology																										
Technology					MCCB																					
PR					Tmax XT																					
Series		Series			XT1											XT1										
Series	Char	Version			B,C											N,S,H										
		Release			TM											TM										
		Icu (kA)	Icu (kA)		18,25											36,50,70										
			In (A)		16	20	25	32	40	50	63	80	100	125	160	16	20	25	32	40	50	63	80	100	125	160
RCD	DME60D	C	6	6	0,16	0,2	0,25	0,32	0,6	2,5	6	6	T	T	T	0,16	0,2	0,25	0,32	T	T	T	T	T	T	T
				10	--	0,2	0,25	0,32	0,6	2,5	6	6	T	T	T	--	0,2	0,25	0,32	T	T	T	T	T	T	T
				16	--	--	--	0,32	0,6	2,5	6	6	T	T	T	--	--	--	0,32	T	T	T	T	T	T	T
				20	--	--	--	--	0,6	2,5	3	6	8	T	T	--	--	--	--	3,5	T	T	T	T	T	T
				25	--	--	--	--	--	0,8	1,2	6	6	T	T	--	--	--	--	1,6	3,5	T	T	T	T	T
				32	--	--	--	--	--	--	1,2	3	6	8	8	--	--	--	--	--	--	6	T	T	T	T
				40	--	--	--	--	--	--	--	3	4	6	6	--	--	--	--	--	--	--	T	T	T	T

Technology					MCCB																					
PR					Tmx XT																					
Series		Series			XT2											XT4										
Series	Char	Version			N,S,H,L				N,S,H,L,V							N,S,H,L,V										
		Release			EL				TM							TM										
		Icu (kA)	Icu (kA)		36,50,70,120				36,50,70,120,150							36,50,70,120,150										
			In (A)		25	63	100	160	25	32	40	50	63	80	100	125	160	25	32	40	50	63	80	100	125	160	250
RCD	DME100M	C, B	10	6	6	T	T	T	0,2	0,26	0,32	0,5	6	6	T	T	T	0,2	0,26	0,32	0,5	6	6	T	T	T	T
				10	6	T	T	T	0,2	0,26	0,32	0,5	6	6	T	T	T	0,2	0,26	0,32	0,5	6	6	T	T	T	T
				16	6	T	T	T	--	0,26	0,32	0,5	6	6	T	T	T	--	0,26	0,32	0,5	6	6	T	T	T	T
				20	--	T	T	T	--	--	0,32	0,5	6	6	T	T	T	--	--	0,32	0,5	6	6	T	T	T	T
				25	--	T	T	T	--	--	--	0,5	1,2	6	T	T	T	--	--	--	0,5	1,2	6	T	T	T	T
				32	--	T	T	T	--	--	--	--	1,2	6	T	T	T	--	--	--	--	1,2	6	T	T	T	T
				40	--	T	T	T	--	--	--	--	1,2	6	T	T	T	--	--	--	--	1,2	6	T	T	T	T

Technology					Fuse							
PR					NH							
Series		Series			0							
Series	Char	Version			gG							
		Icu (kA)	In (A)		25	32	50	63	80	100	125	160
RCD	DME60D	C	6	6	0,6	1,5	2,9	4,6	7,5	T	T	T
				10	--	1,4	2,5	4	6,2	T	T	T
				16	--	--	2,3	3,6	5,4	7,3	T	T
				20	--	--	--	3,2	4,6	6,8	T	T
				25	--	--	--	--	4,3	5,8	T	T
				32	--	--	--	--	3,7	5,1	9	T
				40	--	--	--	--	--	--	8,5	T

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