



## Function

Contactors are electromechanically controlled switches used to control single or multi-phase (high) power loads while the control itself can be (very) low power.

Dimensions ● pg D.43

## Contactors

### Contax

### Applications



Switching of lighting, heating-equipment, motors for pumps and fans, ... Day and night contactors are used mainly in combination with dual-tariff applications to allow high-energy-loads (i.e. electrical water heaters, accumulation heaters) only to consume energy during the low-tariff period. A forced-on, forced-off, auto-switch allows to overrule the normal operation of the DN-contactor at all times.

### Features

Except for the 20A version, all contactors have DC coils, resulting in an absolutely noise-free, real silent operation: 50 or 60Hz noise generation by the contactor is impossible. As all DC coil contactors have an internal diode rectifier bridge, they all can be operated by both DC and AC power supplies. The built-in varistor protects the coil against an overvoltage of up to 5kV. The switch position of the contactor is visualised through an indicator flag. The loss-proof safety terminals are equipped with Pozidriv screws and have IP20 protection degree. Add-on auxiliary contacts as well as spacers and sealing pieces are available.

### Standards











IEC 60947-4-1, BS EN 60947-4-1, IEC 61095, BS EN 61095. Approval VDE.

## Performance



Rated switching capacity	20A	24A	40A	63A
<b>Contacts</b>				
Switching capacity for different loads				
Rated insulation voltage	400V	500V	500V	500V
Rated operational voltage	250V	440V	440V	440V
Switching-on capacity				
$\cos \varphi = 0.65$ at 380-400V 3phase	-	90A	220A	300A
$\cos \varphi = 0.95$ at 220-230V 1phase	100A	-	-	-
Switching-off capacity				
$\cos \varphi = 0.65$ at 380-400V 3phase	-	72A	176A	240A
$\cos \varphi = 0.95$ at 220-230V 1phase	80A	-	-	-
Fuse type GL for short-circuit protection	20A	35A	63A	80A
Ohmic loss per contact at $I_n$	10W	1.5W	3.0W	6.0W
Maximum switching frequency AC1 / AC7a	300/h	300/h	300/h	300/h
Maximum switching frequency AC3 / AC7b	600/h	600/h	600/h	600/h
Mechanical service life	$10^6$	$10^6$	$10^6$	$10^6$
Electrical service life AC1 / AC7a	150000	150000	150000	150000
Electrical service life AC3 / AC7b	150000	500000	170000	240000
<b>Screws</b>				
Terminal capacity: min	1x1 mm <sup>2</sup>	1x1 mm <sup>2</sup>	1x1.5 mm <sup>2</sup>	1x1.5 mm <sup>2</sup>
max	1x10mm <sup>2</sup> or 2x4 mm <sup>2</sup>	1x10mm <sup>2</sup> or 2x4 mm <sup>2</sup>	1x25mm <sup>2</sup> or 2x10 mm <sup>2</sup>	1x25mm <sup>2</sup> or 2x10 mm <sup>2</sup>
<b>Magnetic control system</b>				
Control voltage range	85 ... 110% $\times$ Un	85 ... 110% $\times$ Un	85 ... 110% $\times$ Un	85 ... 110% $\times$ Un
Rated operating frequency	50 or 60Hz	DC, 40 ... 450Hz	DC, 40 ... 450Hz	DC, 40 ... 450Hz
Operating temperature range	-25 ... +55°C <sup>(1)</sup>	-25 ... +55°C <sup>(1)</sup>	-25 ... +55°C <sup>(1)</sup>	-25 ... +55°C <sup>(1)</sup>
Maximum pull-in coil power loss	8.0VA / 5.0W	4VA / 4W	5VA / 5W	6.5VA / 6.5W
Maximum holding coil power loss	3.2VA / 1.2W	4VA / 4W	5VA / 5W	4.2VA / 4.2W
Switching-on delay	9 ... 12 ms	< 40 ms	< 40 ms	< 40 ms
Switching-off delay	10 ... 12 ms	< 40 ms	< 40 ms	< 40 ms
<b>Screws</b>				
Terminal capacity: min	1x1 mm <sup>2</sup>	1x1 mm <sup>2</sup>	1x1 mm <sup>2</sup>	1x1 mm <sup>2</sup>
max	1x4mm <sup>2</sup> or 2x2.5 mm <sup>2</sup>	1x4mm <sup>2</sup> or 2x2.5 mm <sup>2</sup>	1x4mm <sup>2</sup> or 2x2.5 mm <sup>2</sup>	1x4mm <sup>2</sup> or 2x2.5 mm <sup>2</sup>

(1) Remark: If several contactors are mounted next to each-other and the time of operation exceeds 1 hour and the ambient temperature rises above 40°C, a 1/2-module spacer must be added every second contactor (i.e. contactor contactor spacer contactor contactor spacer contactor contactor etc.).



## Contax - Contactors

		Nominal current	Contact combination	Coil voltage	AC/DC	Number of modules	Cat. No.	Ref. No.	Pack.
	<b>Contactor</b> 	20A	1NO 1NC	24V	AC	1	CTX 20 11 024 A	<b>666127</b>	12
		20A	1NO 1NC	230V	AC	1	CTX 20 11 230 A	<b>666126</b>	12
		20A	2NC	24V	AC	1	CTX 20 02 024 A	<b>666129</b>	12
		20A	2NC	230V	AC	1	CTX 20 02 230 A	<b>666128</b>	12
		20A	2NO	12V	AC	1	CTX 20 20 012 A	<b>666130</b>	12
		20A	2NO	24V	AC	1	CTX 20 20 024 A	<b>666133</b>	12
		20A	2NO	48V	AC	1	CTX 20 20 048 A	<b>666134</b>	12
		20A	2NO	230V	AC	1	CTX 20 20 230 A	<b>666131</b>	12
		20A	2NO	240V	AC	1	CTX 20 20 240 A	<b>666132</b>	12
		2 NO							
	<b>2 NO</b> 	24A	2NO 2NC	24V	AC/DC	2	CTX 24 22 024 U	<b>666136</b>	5
		24A	2NO 2NC	230V	AC/DC	2	CTX 24 22 230 U	<b>666135</b>	5
		24A	3NO	24V	AC/DC	2	CTX 24 30 024 U	<b>666138</b>	5
		24A	3NO	230V	AC/DC	2	CTX 24 30 230 U	<b>666137</b>	5
		24A	4NC	24V	AC/DC	2	CTX 24 04 024 U	<b>666140</b>	5
		24A	4NC	230V	AC/DC	2	CTX 24 04 230 U	<b>666139</b>	5
		24A	4NO	12V	AC/DC	2	CTX 24 40 012 U	<b>666141</b>	5
		24A	4NO	24V	AC/DC	2	CTX 24 40 024 U	<b>666144</b>	5
		24A	4NO	48V	AC/DC	2	CTX 24 40 048 U	<b>666145</b>	5
		24A	4NO	230V	AC/DC	2	CTX 24 40 230 U	<b>666142</b>	5
	<b>2 NO 2 NC</b> 	24A	4NO	240V	AC/DC	2	CTX 24 40 240 U	<b>666143</b>	5
		40A	2NC	230V	AC/DC	3	CTX 40 02 230 U	<b>666170</b>	3
		40A	2NO	230V	AC/DC	3	CTX 40 20 230 U	<b>666146</b>	3
		40A	3NO	24V	AC/DC	3	CTX 40 30 024 U	<b>666149</b>	3
		40A	3NO	230V	AC/DC	3	CTX 40 30 230 U	<b>666148</b>	3
		40A	4NO	12V	AC/DC	3	CTX 40 40 012 U	<b>666150</b>	3
		40A	4NO	24V	AC/DC	3	CTX 40 40 024 U	<b>666153</b>	3
		40A	4NO	48V	AC/DC	3	CTX 40 40 048 U	<b>666154</b>	3
		40A	4NO	230V	AC/DC	3	CTX 40 40 230 U	<b>666151</b>	3
		40A	2NO	24V	AC/DC	3	CTX 40 20 024 U	<b>666147</b>	3
	<b>4 NO</b> 	40A	4NO	240V	AC/DC	3	CTX 40 40 240 U	<b>666152</b>	3
		63A	4NO	24V	AC/DC	3	CTX 63 40 024 U	<b>666158</b>	3
		63A	4NO	230V	AC/DC	3	CTX 63 40 230 U	<b>666156</b>	3
		63A	2NO	230V	AC/DC	3	CTX 63 20 230 U	<b>666155</b>	3
		63A	4NO	240V	AC/DC	3	CTX 63 40 240 U	<b>666157</b>	3
	<b>Contactor Day and Night</b> 	20A	2NO	230V	AC	1	CTX DN 20 20 230 A	<b>666164</b>	12
		24A	3NO	230V	AC/DC	2	CTX DN 24 30 230 U	<b>666165</b>	5
		24A	4NO	230V	AC/DC	2	CTX DN 24 40 230 U	<b>666166</b>	5
		40A	2NO	230V	AC/DC	3	CTX DN 40 20 230 U	<b>666167</b>	3
		40A	3NO	230V	AC/DC	3	CTX DN 40 30 230 U	<b>666168</b>	3
		40A	4NO	230V	AC/DC	3	CTX DN 40 40 230 U	<b>666169</b>	3

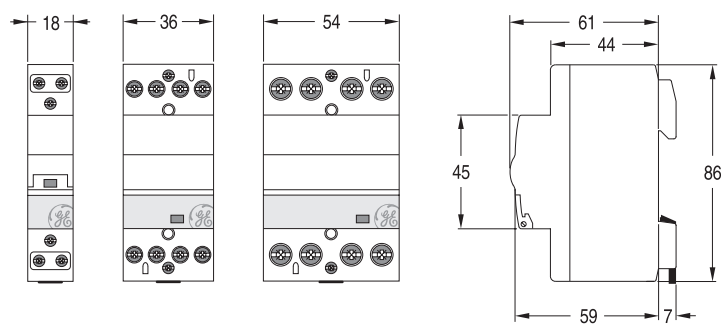
## Add-on auxiliary contact for 24-40-63A contactors

	Left mounting	Nominal current	Contact combination			Number of modules	Cat. No.	Ref. No.	Pack.
		6A	1NO 1NC	-	-	0.5	CTX 06 11	<b>666162</b>	5
		6A	2NO	-	-	0.5	CTX 06 20	<b>666163</b>	5

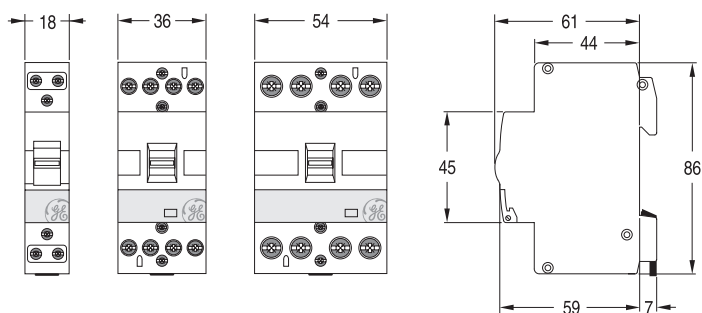
## Accessories

					Number of modules	Cat. No.	Ref. No.	Pack.
	<b>Sealing piece</b>				2	CTX TS 2	<b>666160</b>	3
					3	CTX TS 3	<b>666159</b>	3
	<b>Spacer</b>				0.5	PLS + / CTX + SP	<b>686069</b>	50

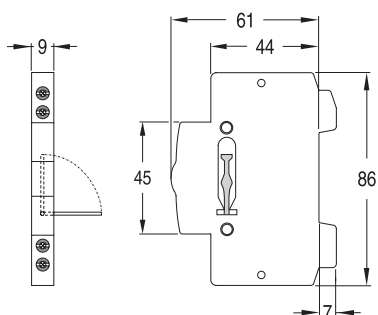
### Contactors - Contax



### Contactors Day and Night - Contax



### Contactors - Auxiliary contact



### Contactors - Spacer

