DATASHEET - DILA-XHI31-PI

Auxiliary contact module, 4 pole, Ith= 16 A, 3 N/O, 1 NC, Front fixing, Push in terminals, DILA, DILM7 - DILM38

Part no.	**DILA-XHI31-PI**
Catalog No.	**199318**
Alternate Catalog No.	**XTREXFABPI31**

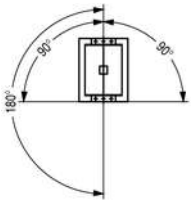
Delivery program

Accessories			Auxiliary contact modules
Description			with interlocked opposing contacts
Function			for standard applications
Number of poles			4 pole
Connection technique			Push in terminals
Rated operational current			
Conventional free air thermal current, 1 pole			
Open			
at 60 °C	I_{th}	A	16
AC-15			
220 V 230 V 240 V	I_e	A	4
380 V 400 V 415 V	I_e	A	4
Contacts			
N/O = Normally open			3 N/O
N/C = Normally closed			1 NC
Mounting type			Front fixing
Contact sequence			
For use with			DILA…-PI DILM7…-PI DILM9…-PI DILM12…-PI DILM15…-PI DILM17…-PI DILM25…-PI DILM32…-PI DILM38…-PI DILMP20…-PI DILMP32…-PI DILMP45…-PI DILM8…-PI DILM11…-PI DILM14…-PI
Type			Front mounting auxiliary contact
Instructions			Interlocked opposing contacts according to IEC/EN 60947-5-1 appendix L, inside the auxiliary contact modules, also for the integrated auxiliary contacts of the DILM 7 - DILM32 Auxiliary contacts used as mirror contacts according to IEC/EN 60947-4-1 Appendix F (not N/C late open)

Technical data

General

Standards			IEC/EN 60947, VDE 0660, UL, CSA
Component lifespan			
at U_e = 230 V, AC-15, 3 A	Operations	x 10^6	1.3
Maximum operating frequency	Operations/h		9000
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Open		°C	-25 - +60
Enclosed		°C	- 25 - 40
Ambient temperature, storage		°C	- 40 - 80
Mounting position			

Mounting position			
Mechanical shock resistance (IEC/EN 60068-2-27)			
Half-sinusoidal shock, 10 ms			
Basic unit with auxiliary contact module		g	
N/O contact		g	7
N/C contact		g	5
Degree of Protection			IP20
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Weight		kg	0.05
Terminal capacities		mm^2	
Push-in terminals			
Solid		mm^2	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
flexible		mm^2	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
flexible with ferrules		mm^2	1 x (0,5 - 1,5) 2 x (0,5 - 1,5)
flexible with ultrasonic welded busbar end		mm^2	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
flexible with uninsulated wire end ferrule		mm^2	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
Solid or stranded		AWG	20 - 14
Stripping length		mm	10
Standard screwdriver			3.0 x 0.5

Contacts

Interlocked opposing contacts within an auxiliary contact module (to IEC 60947-5-1 Annex L)			yes
N/C contact (not late-break contact) suitable as a mirror contact (to IEC/EN 60947-4-1 Annex F)			DILM7 - DILM32
Rated impulse withstand voltage	U_{imp}	V AC	6000
Overvoltage category/pollution degree			III/3
Rated insulation voltage	U_i	V AC	690
Rated operational voltage	U_e	V AC	500
Safe isolation to EN 61140			
between coil and auxiliary contacts		V AC	400
between the auxiliary contacts		V AC	400
Rated operational current		A	
Conventional free air thermal current, 1 pole			
at 60 °C	I_{th}	A	16
AC-15			
220 V 230 V 240 V	I_e	A	4
380 V 400 V 415 V	I_e	A	4
500 V	I_e	A	1.5
DC current			
			Switch-on and switch-off conditions based on DC-13, time constant as specified.
DC L/R ≦ 15 ms			
Contacts in series:		A	
1	24 V	A	10
1	60 V	A	6
2	60 V	A	10
1	110 V	A	3
3	110 V	A	6
1	220 V	A	1

3	220 V	A	5
DC L/R ≦ 50 ms			
Contacts in series:		A	
3	24 V	A	2.5
3	60 V	A	1
3	110 V	A	0.5
3	220 V	A	0.25
DC-13 (6xP)			
24 V	I_e	A	2.5
60 V	I_e	A	1
110 V	I_e	A	0.5
220 V	I_e	A	0.25
Control circuit reliability	Failure rate	λ	$<10^{-8}$, < one failure at 100 million operations (at U_e = 24 V DC, U_{min} = 17 V, I_{min} = 5.4 mA)
Short-circuit rating without welding			
Short-circuit protection maximum fuse			
500 V		A gG/gL	10
Current heat loss at I_{th}			
AC operated		W	2.6
DC operated		W	2.6
Current heat loss per auxiliary circuit at I_e (AC-15/230 V)		CO	0.16

Rating data for approved types

Auxiliary contacts			
Pilot Duty			
AC operated			A600
DC operated			P300
General Use			
AC		V	600
AC		A	10
DC		V	250
DC		A	1

Design verification as per IEC/EN 61439

Technical data for design verification			
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	60

Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Auxiliary contact block (EC000041)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Component for low-voltage switching technology / Auxiliary switch block (ecl@ss10.0.1-27-37-13-02 [AKN342013])			
Number of contacts as change-over contact			0
Number of contacts as normally open contact			3
Number of contacts as normally closed contact			1
Number of fault-signal switches			0
Rated operation current Ie at AC-15, 230 V		A	4
Type of electric connection			Spring clamp connection
Model			Top mounting
Mounting method			Front fastening
Lamp holder			None

Approvals

Product Standards			IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.			E29184
UL Category Control No.			NKCR

CSA File No.	012528
CSA Class No.	3211-03
North America Certification	UL listed, CSA certified
Specially designed for North America	No

Dimensions

Additional product information (links)

Motor starters and "Special Purpose Ratings" for the North American market	http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.pdf
Switchgear of Power Factor Correction Systems	http://www.moeller.net/binary/ver_techpapers/ver934en.pdf
X-Start - Modern Switching Installations Efficiently Fitted and Wired Securely	http://www.moeller.net/binary/ver_techpapers/ver938en.pdf
Mirror Contacts for Highly-Reliable Information Relating to Safety-Related Control Functions	http://www.moeller.net/binary/ver_techpapers/ver944en.pdf
Effect of the Cabel Capacitance of Long Control Cables on the Actuation of Contactors	http://www.moeller.net/binary/ver_techpapers/ver949en.pdf
Switchgear for Luminaires	http://www.moeller.net/binary/ver_techpapers/ver955en.pdf
Standard Compliant and Functionally Safe Engineering Design with Mechanical Auxiliary Contacts	http://www.moeller.net/binary/ver_techpapers/ver956en.pdf
The Interaction of Contactors with PLCs	http://www.moeller.net/binary/ver_techpapers/ver957en.pdf
Busbar Component Adapters for modern Industrial control panels	http://www.moeller.net/binary/ver_techpapers/ver960en.pdf

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