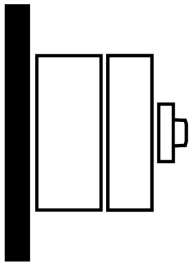
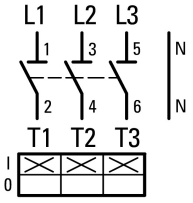
DATASHEET - DCM-40/1

Switch-disconnector, DCM, 40 A, 3P + N (solid), With black rotary handle and drive shaft, Vertical connection

Powering Business Worldwide™

Part no. DCM-40/1
Catalog No. 1314106

Delivery program

Product range			Switch-disconnector Main switch maintenance switch
Part group reference			DCM
			With black rotary handle and drive shaft
Number of poles			3P + N (solid)
Auxiliary contacts			
		N/O	0
		N/C	0
Notes			1 padlock, # 5 mm
Locking facility			Lockable in the 0 (Off) position
Degree of Protection			IP20
Design			surface mounting
			
Contact sequence			
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	20
Rated uninterrupted current	I_u	A	40
Note on rated uninterrupted current $!_u$			Rated uninterrupted current I_u is specified for max. cross-section.
Connection technique			Vertical connection

Technical data

General

Standards			IEC/EN 60947, VDE 0660, IEC/EN 60204 Switch-disconnector according to IEC/EN 60947-3
Certifications			CE, RoHs, KEMA, EAC, Lloyds
Ambient temperature			
Operation	ϑ	°C	-25 - +55
Storage	ϑ	°C	-30 - +80
Overvoltage category/pollution degree			III/3
Rated impulse withstand voltage	U_{imp}	kV	6
Rated insulation voltage	U_i	V	690
Mounting position			As required

Contacts

Mechanical variables			
Number of poles			3P + N (solid)
Auxiliary contacts			
		N/O	0
		N/C	0
Electrical characteristics			
Rated operational voltage	U_e	V AC	415
Rated uninterrupted current	I_u	A	40
Note on rated uninterrupted current I_u			Rated uninterrupted current I_u is specified for max. cross-section.
Short-circuit rating			
fuse			50
Rated conditional short-circuit current	Iq	kA	50
Breaking current		kA	7
max. let-through energy		kA^2s	12
Rated short-time withstand current (1 s current)	I_{cw}	A_{rms}	1000
Note on rated short-time withstand current Icw			Current for a time of 1 second
Rated short-circuit making capacity	I_{cm}	kA_{eff}	2.2
Heat dissipation per pole, current-dependent	P_{vid}	W	3

Switching capacity

Rated breaking capacity cos φ to IEC 60947-3		A	
400/415 V		A	320
Safe isolation to EN 61140			
Current heat loss per contact at I_e		W	3
Lifespan, mechanical	Operations		10000
AC			
AC-21A			
Rated operational current switch			
400 V 415 V	I_e	A	40
AC-22A			
Rated operational current switch			
400 V 415 V	I_e	A	40
AC-23A			
Rated operational current switch			
400 V 415 V	I_e	A	40
Motor rating AC-23A, 50 - 60 Hz	P	kW	
400 V 415 V	P	kW	20

Terminal capacities

Solid		mm^2	2.5 - 16
Flexible with ferrules to DIN 46228		mm^2	
flexible		mm^2	1.5 - 25
Stripping length		mm	14
Tightening torque for terminal screw		Nm	2

Technical safety parameters:

Notes			$B10_d$ values as per EN ISO 13849-1, table C1

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	40
Heat dissipation per pole, current-dependent	P_{vid}	W	3
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	0
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	-25

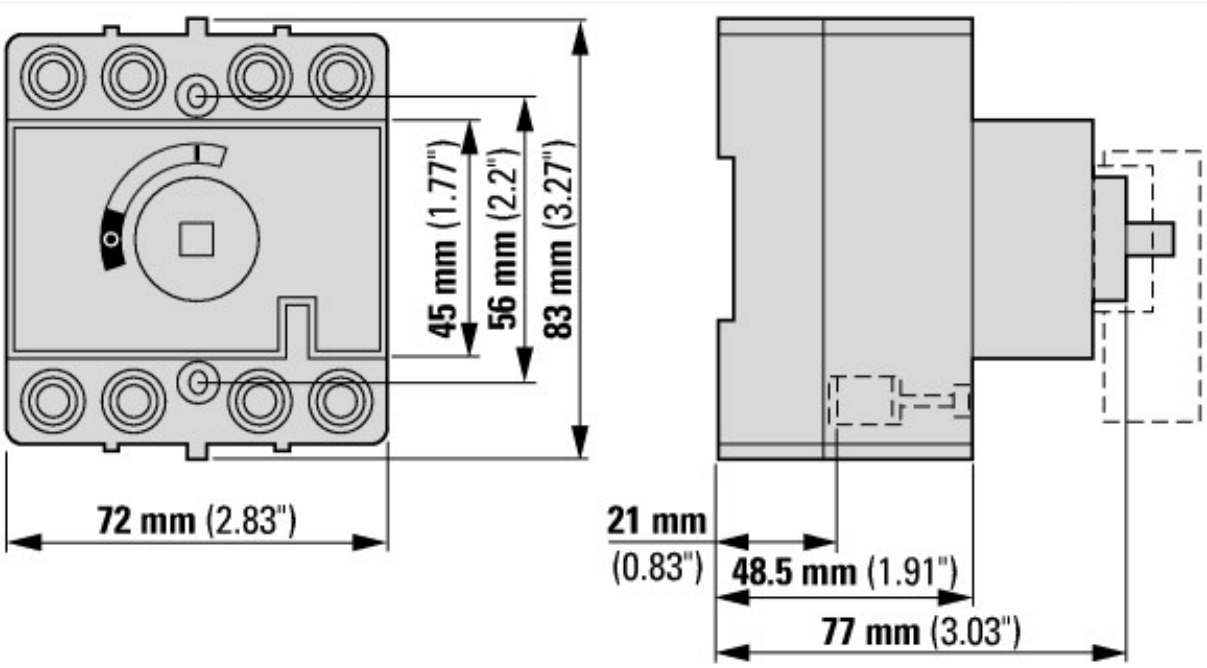
Operating ambient temperature max.	°C	55
IEC/EN 61439 design verification		
10.2 Strength of materials and parts		
10.2.2 Corrosion resistance		Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures		Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat		Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects		Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation		Meets the product standard's requirements.
10.2.5 Lifting		Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact		Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions		Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES		Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances		Meets the product standard's requirements.
10.5 Protection against electric shock		Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components		Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections		Is the panel builder's responsibility.
10.8 Connections for external conductors		Is the panel builder's responsibility.
10.9 Insulation properties		
10.9.2 Power-frequency electric strength		Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage		Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material		Is the panel builder's responsibility.
10.10 Temperature rise		The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating		Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility		Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function		The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)		
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@ss10.0.1-27-37-14-03 [AKF060013])		
Version as main switch		Yes
Version as maintenance-/service switch		Yes
Version as safety switch		No
Version as emergency stop installation		No
Version as reversing switch		No
Number of switches		1
Max. rated operation voltage Ue AC	V	415
Rated operating voltage	V	415 - 415
Rated permanent current Iu	A	40
Rated permanent current at AC-23, 400 V	A	40
Rated permanent current at AC-21, 400 V	A	40
Rated operation power at AC-3, 400 V	kW	0
Rated short-time withstand current Icw	kA	1
Rated operation power at AC-23, 400 V	kW	0
Switching power at 400 V	kW	20
Conditioned rated short-circuit current Iq	kA	0
Number of poles		3
Number of auxiliary contacts as normally closed contact		0
Number of auxiliary contacts as normally open contact		0
Number of auxiliary contacts as change-over contact		0
Motor drive optional		No
Motor drive integrated		No
Voltage release optional		No

Device construction	Built-in device fixed built-in technique
Suitable for ground mounting	Yes
Suitable for front mounting 4-hole	No
Suitable for front mounting centre	No
Suitable for distribution board installation	Yes
Suitable for intermediate mounting	No
Colour control element	Black
Type of control element	Toggle
Interlockable	No
Type of electrical connection of main circuit	Screw connection
Degree of protection (IP), front side	IP20
Degree of protection (NEMA)	Other

Dimensions



Assets (links)

Declaration of CE Conformity

00003056

Instruction Leaflets

IL008025ZU2018_05

Additional product information (links)

IL008025ZU Switch-disconnector DCM, DMM	
IL008025ZU Switch-disconnector DCM, DMM	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL008025ZU2018_12.pdf