DATASHEET - DMM-160/4/I5/P-R

Switch-disconnector, DMM, 160 A, 4 pole, Emergency switching off function, With red rotary handle and yellow locking ring, in CI-K5 enclosure

Part no.	**DMM-160/4/I5/P-R**
Catalog No.	**172797**
EL-Nummer (Norway)	**1405715**

Delivery program

Product range			Switch-disconnector Main switch maintenance switch
Part group reference			DMM
Stop Function			Emergency switching off function
			With red rotary handle and yellow locking ring
Information about equipment supplied			auxiliary contact fitted by user.
Notes			in CI-K5 enclosure
Number of poles			4 pole
Auxiliary contacts			
		N/O	0
		N/C	0
Notes			1 padlock, # 5 mm
Locking facility			Lockable in the 0 (Off) position
Degree of Protection			IP65
Design			surface mounting
Switching angle		°	90
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	80
Rated uninterrupted current	I_u	A	160
Note on rated uninterrupted current $!_u$			Rated uninterrupted current I_u is specified for max. cross-section.

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 - +60
Storage	ϑ	°C	-40 - +80
Overvoltage category/pollution degree			III/3
Rated impulse withstand voltage	U_{imp}	kV	6
Rated insulation voltage	U_i	V	1000
Mounting position			As required

Contacts

Mechanical variables			
Number of poles			4 pole
Auxiliary contacts			
		N/O	0
		N/C	0
Electrical characteristics			
Rated operational voltage	U_e	V AC	690
Rated uninterrupted current	I_u	A	160

Note on rated uninterrupted current I_u			Rated uninterrupted current I_u is specified for max. cross-section.
Short-circuit rating			
fuse			160
Rated conditional short-circuit current	Iq	kA	415 V: 30 690 V: 50
Breaking current		kA	13.5
max. let-through energy		kA^2s	86,9
Rated short-time withstand current (1 s current)	I_{cw}	A_{rms}	2500
Note on rated short-time withstand current Icw			Current for a time of 1 second
Heat dissipation per pole, current-dependent	P_{vid}	W	8

Switching capacity

Rated breaking capacity cos φ to IEC 60947-3		A	
400/415 V		A	1080
500 V		A	528
690 V		A	336
Safe isolation to EN 61140			
Current heat loss per contact at I_e		W	7.4
Lifespan, mechanical	Operations		10000
AC			
AC-21A			
Rated operational current switch			
400 V 415 V	I_e	A	160
500 V	I_e	A	160
690 V	I_e	A	160
AC-22A			
Rated operational current switch			
400 V 415 V	I_e	A	160
500 V	I_e	A	160
690 V	I_e	A	160
AC-23A			
Rated operational current switch			
400 V 415 V	I_e	A	140
500 V	I_e	A	66
690 V	I_e	A	42
Motor rating AC-23A, 50 - 60 Hz	P	kW	
400 V 415 V	P	kW	80
500 V	P	kW	45
690 V	P	kW	37

Terminal capacities

Flexible with ferrules to DIN 46228		mm^2	
flexible		mm^2	6 - 70
Stripping length		mm	21
Tightening torque for terminal screw		Nm	7

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	160
Heat dissipation per pole, current-dependent	P_{vid}	W	8
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	40
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		UV resistance only in connection with protective shield.
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 8.0

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		Yes
Version as reversing switch		No
Number of switches		1
Max. rated operation voltage Ue AC	V	690
Rated operating voltage	V	690 - 690
Rated permanent current Iu	A	160
Rated permanent current at AC-23, 400 V	A	140
Rated permanent current at AC-21, 400 V	A	160
Rated operation power at AC-3, 400 V	kW	0
Rated short-time withstand current Icw	kA	2.5
Rated operation power at AC-23, 400 V	kW	80
Switching power at 400 V	kW	0
Conditioned rated short-circuit current Iq	kA	50
Number of poles		4
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	Complete device in housing
Suitable for floor mounting	Yes
Suitable for front mounting 4-hole	No
Suitable for front mounting centre	No
Suitable for distribution board installation	No
Suitable for intermediate mounting	No
Colour control element	Red
Type of control element	Short thumb-grip
Interlockable	Yes
Type of electrical connection of main circuit	Screw connection
Degree of protection (IP), front side	IP65
Degree of protection (NEMA)	12

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