# DATASHEET - DMM-160/4/I5/C-G



Switch-disconnector, 4 pole, 160 A, with grey knob, cylinder lock, surface mounting, in CI-K5 enclosure



DMM-160/4/I5/C-G Part no. Catalog No. 172805

1405712

**EL-Nummer** (Norway)

#### **Delivery program**

Delivery program			
Product range			Switch-disconnector Main switch maintenance switch
Part group reference			DMM
			with grey knob
Information about equipment supplied			auxiliary contact fitted by user.
Notes			in CI-K5 enclosure
Number of poles			4 pole
Auxiliary contacts			
1		N/0	0
<b>7</b>		N/C	0
locking arrangement			cylinder lock
Degree of Protection			IP65
Design			surface mounting
Contact sequence			L1 L2 L3 $ \begin{array}{c c}  & 1 & 3 & 5 \\ \hline  & 1 & 3 & 5 \\ \hline  & 2 & 4 & 6 \\ \hline  & N & 1 & 12 & 13 \\ \hline  & 1 & 2 & 3 & 3 \\ \hline  & 1 & 3 & 3 & 5 \\ \hline  & 1 & 1 & 2 & 3 & 3 \\ \hline  & 1 & 2 & 3 & 3 & 3 \\ \hline  & 1 & 3 & 3 & 3 & 3 \\ \hline  & 1 & 3 $
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	80
Rated uninterrupted current	Iu	Α	160
Note on rated uninterrupted current !u			Rated uninterrupted current $I_{\text{u}}$ 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 <sub>e</sub>	V AC	690
Rated uninterrupted current	Iu	Α	160
Note on rated uninterrupted current ! <sub>u</sub>	·u	^	Rated uninterrupted current $I_{\rm u}$ is specified for max. cross-section.
			nated diffilterrupted current i <sub>d</sub> 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 <sup>2</sup> s	86,9
Rated short-time withstand current (1 s current)	I <sub>cw</sub>	A <sub>rms</sub>	2500
Note on rated short-time withstand current lcw	·cw	· ·rms	Current for a time of 1 second
	D	144	
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	7.4
Switching capacity Rated breaking capacity cos φ to IEC 60947-3		Α	
400/415 V		A	1080
400/415 V 500 V		A	528
690 V		Α	336
Safe isolation to EN 61140			
Current heat loss per contact at I <sub>e</sub>		W	7.4
Lifespan, mechanical	Operations		10000
AC			
AC-21A			
Rated operational current switch			
400 V 415 V	l <sub>e</sub>	Α	160
500 V	l <sub>e</sub>	Α	160
690 V	I <sub>e</sub>	Α	160
AC-22A			
Rated operational current switch			
400 V 415 V	I <sub>e</sub>	Α	160
500 V	I <sub>e</sub>	Α	160
690 V			160
	I <sub>e</sub>	Α	100
AC-23A			
Rated operational current switch			410
400 V 415 V	l <sub>e</sub>	Α	140
500 V	l <sub>e</sub>	Α	66
690 V	I <sub>e</sub>	Α	42
Motor rating AC-23A, 50 - 60 Hz	P	kW	
400 V 415 V	P	kW	80
500 V	Р	kW	45
690 V	P	kW	37
Terminal capacities			
Flexible with ferrules to DIN 46228		$\text{mm}^2$	
flexible		mm <sup>2</sup>	6 - 70
Stripping length		mm	21
Tightening torque for terminal screw		Nm	7
Technical safety parameters:		14111	
Notes			B10 <sub>d</sub> values as per EN ISO 13849-1, table C1

# Design verification as per IEC/EN 61439

Technical data for design verification

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Rated operational current for specified heat dissipation	In	Α	160
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	7.4
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	0
Heat dissipation capacity	P <sub>diss</sub>	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 switch gear must be observed. $\label{eq:constraint}$
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switch gear must be observed. $\label{eq:constraint}$
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

#### **Technical data ETIM 7.0**

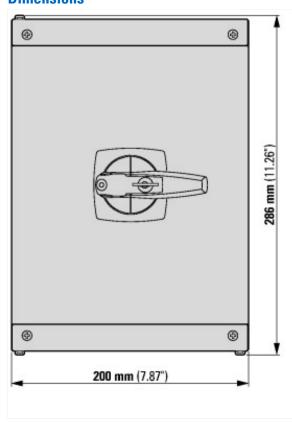
Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)

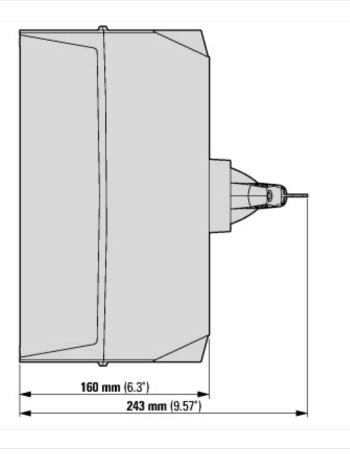
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@ss10.0.1-27-37-14-03 [AKF060013])

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	690
Rated operating voltage	V	690 - 690
Rated permanent current lu	Α	160
Rated permanent current at AC-23, 400 V	Α	140
Rated permanent current at AC-21, 400 V	А	160
Rated operation power at AC-3, 400 V	kW	0
Rated short-time withstand current lcw	kA	2.5
Rated operation power at AC-23, 400 V	kW	0

Switching power at 400 V	kV	W	0
Conditioned rated short-circuit current Iq	kA	A	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 ground 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			Grey
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)			Other

#### **Dimensions**





### **Assets (links)**

**Declaration of CE Conformity** 

00003043

**Instruction Leaflets** 

IL008006ZU2018\_05