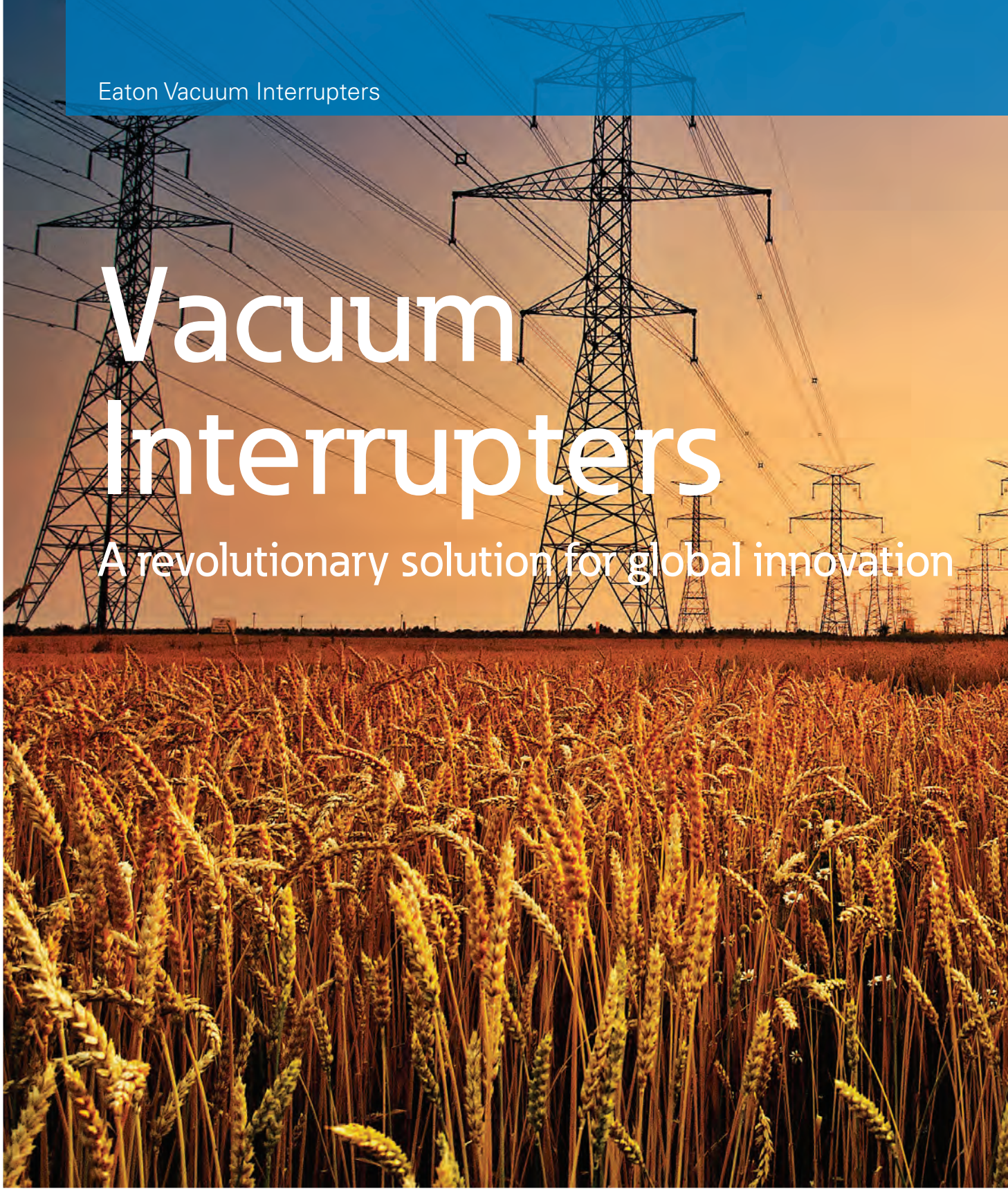
Eaton Vacuum Interrupters

Vacuum Interrupters

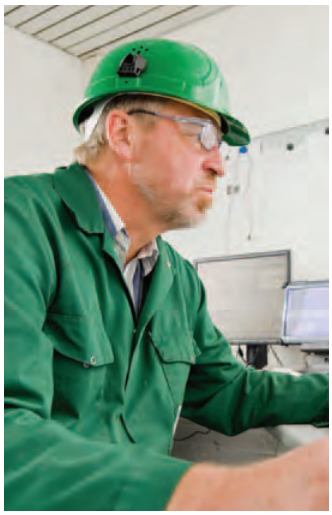
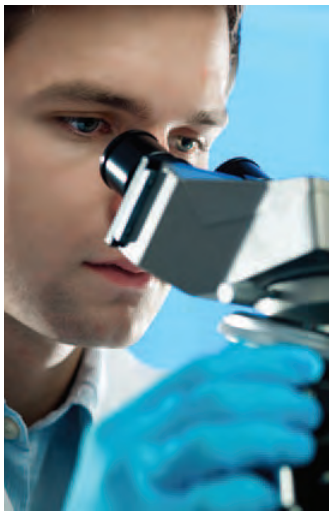
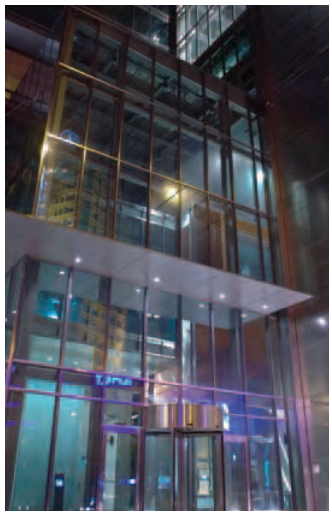
A revolutionary solution for global innovation



EATON

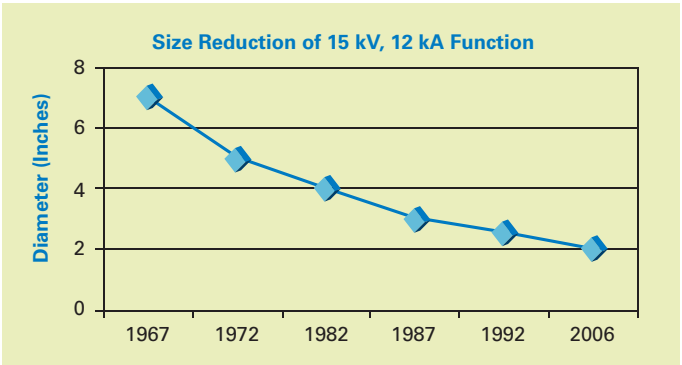
Powering Business Worldwide

A single-source provider for low, medium and high voltage technology

Leading the power switching industry

- Since the first developments to build an efficient and economic vacuum interrupter over 100 years ago, Eaton has been on the forefront of vacuum interruption technology
- Using 3-D solid modeling, finite element analysis and two high-power test labs, Eaton creates many of the highest interrupting applications with the smallest envelopes in the industry
- Eaton, as one of the few worldwide leaders in vertical manufacturing integration, is able to implement an easy transition from designing components to assemblies
- With unsurpassed expertise, we are able to design housing and circuit breaker compartments to vacuum interrupters, circuit breakers, bus systems and fuses
- By promoting application-oriented relationships, confidential research and development partnerships, responsive testing, and certification, we are able to achieve outstanding global innovation
- Our heritage, strengthened by acquisitions such as Westinghouse® DCBU, Cutler-Hammer,® and Holec,® has resulted in breakthrough medium voltage technologies and numerous international patents over the years



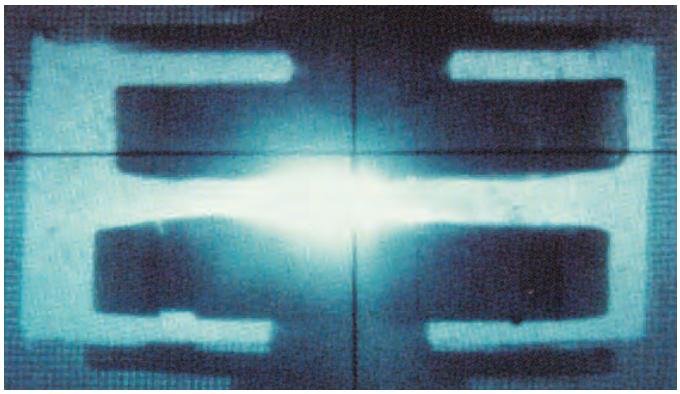
EVI evolution

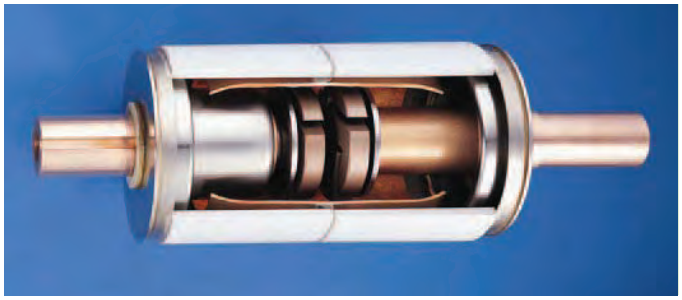
	2013	Phoenix, 40 kA–2000A, TMF VI
	2011	New tap changer VIs introduced
	2005	Created an 80 kA VI
	2004	VIs in service for backup breakers at KEMA Powertest lab in Chalfont, PA
	2003	Designed a 63 kA VI successfully tested at 5000A VI
	2002	Built VI manufacturing plant in Suzhou, China
	2002	VIs used for 15 and 38 kV backup circuit breakers at CESI test lab in Milano, Italy
2000	2001	Developed generator breaker VI
	1999	Introduced wave ceramic VIs for China market
	1995	Implemented a dedicated VI contactor line
1990		
	1988	Pioneered 40 kA AMF VI
	1986	Launched 38 kV AMF VI
	1985	Started producing contactors 1.5 kV 320A
	1982	First encapsulated VI assembly certified
1980		
	1977	Development and testing of 72 kV VI
	1970	Engineered an LBS for 15 kV
1970	1970	Designed initial AMF contact structure
	1968	Pioneered Cu-Cr contact material
	1968	Created a VI for recloser applications
	1967	Shipped first commercially produced VIs for medium voltage
	1965	Originated batch manufacturing process for VIs
1960		
1940	1940	Developed long life vacuum technology
1930	1930	Initiated the first research on vacuum arc

Vacuum interruption technology

Eaton's vacuum interruption technology is used for repetitive switching, motor inrush current interruption, fault protection, and overcurrent and short-circuit protection. Eaton's environmentally friendly medium voltage interrupters are capable of reliably switching high-stress currents robustly and carrying their rated continuous current without forced cooling.

- Controlled contact erosion results in long life and maintenance-free operation
- Hard contact material minimizes contact sticking in a vacuum and is ideal for high-current applications
- Atmospheric contact contamination is eliminated because oxides and corrosion layers cannot form on the contacts
- Noise and flash free: All arcing is confined in the vacuum interrupter
- Environmentally friendly: Unlike other solutions that use SF_6 (a highly hazardous gas) for insulation, Eaton's vacuum interrupters feature current interruption that occurs in a vacuum and does not emit greenhouse or toxic gasses
- Low average chopping current results in a minimal induced transient voltage spike; therefore, suppressors are often not required
- Vacuum dielectric permits contacts to be arranged closer together, allowing circuit interruptions to be designed in a smaller envelope
- Solid insulation increases external dielectric performance

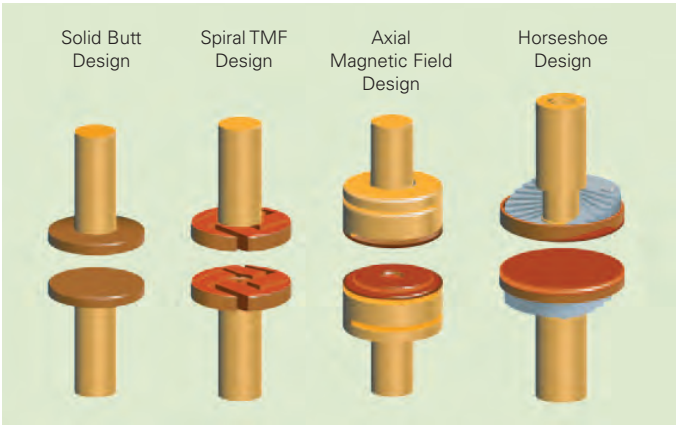




Internal view of a vacuum interrupter

The industry standard in quality

- Each Eaton vacuum interrupter is tested throughout the manufacturing process and once again before packaging
- A dielectric withstand test and a vacuum assurance test are performed on every interrupter
- Additionally, Eaton also incorporates a sequential bar code that allows us to track material lots, as well as the operators involved with building each interrupter in a database
- With well over three million Eaton vacuum interrupters in service around the world, our customers testify that our vacuum interrupters are one of the most critical and reliable components



Contact types used in vacuum interrupters

State-of-the-art testing

Using our two high-power test labs, a single-phase development lab in the United States and a three-phase KEMA®-certified lab in Europe, Eaton systematically tests new designs before certification by the customer.

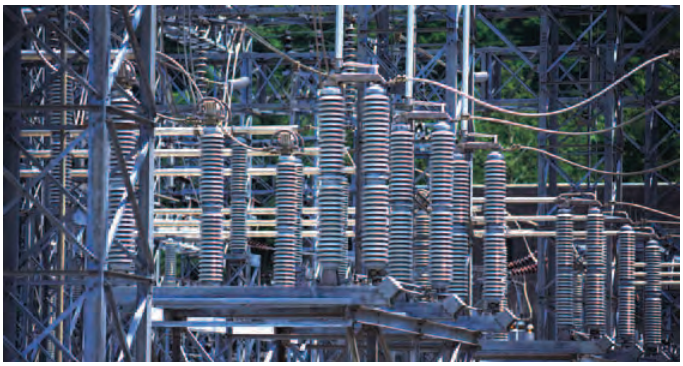
A team of scientists and design engineers creates our vacuum interrupters to meet customer specifications, many of which push the limits of industry standards. Some distinguishing features include:

- Solid dielectric encapsulation
- Customer-specific terminal designs
- Features for ease of assembly
- Custom internal and external threads
- Anti-twist bushings
- Custom contact design: butt contacts, transverse magnetic field (TMF) contacts, axial magnetic field (AMF) contacts of the coil and horseshoe styles

Major vacuum interrupter applications

Circuit breakers

Eaton vacuum interrupters are used in circuit breakers in the most demanding electrical circuit protection applications to minimize damage caused by electrical overloads or short circuits.



Load break switches

Eaton vacuum interrupters are used in load break switches to connect and disconnect electrical load currents providing limited load switch capacity.

Reclosers

Eaton vacuum interrupters are used in reclosers to automatically open and close distribution circuits in response to transient overload and fault conditions.

Contactors

Eaton vacuum interrupters are used in contactors in demanding applications that require a high number of operations switching a power circuit in electric motors, lighting and heating devices, capacitor banks, and the like.

Tap changers

Eaton vacuum interrupters are used in tap changers inside transformers to change the winding connections to deliver the required voltage.

Railway circuit breakers

Eaton vacuum interrupters are installed in the circuit breakers on top of this special locomotive to supply electrical energy to railway locomotives' electric drive motors.

Series-8 Vacuum Interrupters

Same Height 215mm

Through advancements in technology, the new Series-8 product line provides unparalleled benefits.

Global citizen

Series-8 meets the highest common denominators of global specifications and certifications, making it a "global citizen." This lowers risk and investment barriers for those looking to expand into global markets because you can leverage this technology to serve customers across the globe.

Plug & play

The breadth of multiple ratings all fall within a standard height and scalable fit, allowing for "plug and play" capabilities. Therefore, you can upgrade to higher ratings within the same dimensions without having to make revisions to the physical design. In addition, Series-8 Vacuum Interrupters allow for accelerated product development and testing, as well as shorter lead times and reduced inventory costs.

Dual manufacturing

Most vacuum interrupters are sourced regionally from manufacturers with one production or distribution location. If that plant experiences production, delivery or quality control issues, there is no alternate source of supply. Eaton alleviates these concerns with dual manufacturing sources in both North America and China, providing you with two constant supply sources, which greatly enhances supplier reliability.

Competitive pricing

Now you can forego the current practice of designing, testing and manufacturing customized vacuum interrupters for each application. With the standardized design of Series-8 Vacuum Interrupters, it is easier and less expensive to develop standard medium voltage breaker and switchgear product lines that encompass a broad range of performance and safety ratings. While taking advantage of the competitive pricing of Series-8 Vacuum Interrupters, you can also feel confident that as part of a line of Eaton products, it will have the same high-quality standards you have come to expect.

Overview

VCB-Visa8	Standard	Voltage	Rating	Breaking Capacity	Option	Insulation	Page
WL-41143	GB/IEC/IEEE	12/15/17.5KV	1250A	25kA	A/E/S	AIR/EPU/SF6	7
WL-41145	GB/IEC/IEEE	12/15/17.5KV	2000A	25kA	A/E/S	AIR/EPU/SF6	9
WL-41153	GB/IEC/IEEE	12/15/17.5KV	1250A	31.5kA	A/E/S	AIR/EPU/SF6	11
WL-41156	GB/IEC/IEEE	12/15/17.5KV	2500A	31.5kA	A/E/S	AIR/EPU/SF6	13
WL-41163	GB/IEC/IEEE	12/15/17.5KV	1250A	40kA	A/E/S	AIR/EPU/SF6	15
WL-41165	GB/IEC/IEEE	12/15/17.5KV	2000A	40kA	A/E/S	AIR/EPU/SF6	17
WL-41167	GB/IEC/IEEE	12/15/17.5KV	3150A	40kA	A/E/S	AIR/EPU/SF6	19
WL-41173	GB/IEC/IEEE	12/15/17.5KV	1250A	50kA	A/E/S	AIR/EPU/SF6	21
WL-41175	GB/IEC/IEEE	12/15/17.5KV	2000A	50kA	A/E/S	AIR/EPU/SF6	23
WL-41177	GB/IEC/IEEE	12/15/17.5KV	3150A	50kA	A/E/S	AIR/EPU/SF6	25
WL-41243	IEC	24KV	1250A	25kA	E/S	EPU/SF6	27
WL-41245	IEC	24KV	2000A	25kA	E/S	EPU/SF6	29
WL-41253	IEC	24KV	1250A	31.5kA	E/S	EPU/SF6	31
WL-41256	IEC	24KV	2500A	31.5kA	E/S	EPU/SF6	33
WL-41263	IEC	24KV	1250A	40kA	E/S	EPU/SF6	35
WL-41265	IEC	24KV	2000A	40kA	E/S	EPU/SF6	37
WL-41267	IEC	24KV	3150A	40kA	E/S	EPU/SF6	39
WL-41333	IEC/IEEE	36/38KV	1250A	20kA	A/E/S	EPU/SF6	41
WL-41343	IEC/IEEE	36/38KV	1250A	25kA	A/E/S	EPU/SF6	43
WL-41346	IEC/IEEE	36/38KV	2000A	25kA	A/E/S	EPU/SF6	45
WL-41355	IEC/IEEE	36/38KV	2000A	31.5kA	A/E/S	EPU/SF6	47
WL-41357	IEC/IEEE	36/38KV	3150A	31.5kA	A/E/S	EPU/SF6	49
WL-41365	IEC/IEEE	36/38KV	2000A	40kA	A/E/S	EPU/SF6	51
WL-41367	IEC/IEEE	36/38KV	3150A	40kA	A/E/S	EPU/SF6	53
WL-41701	GB/DL	40.5KV	1600A	25kA	E/S	EPU/SF6	55
WL-41702	GB/DL	40.5KV	2000A	25kA	E/S	EPU/SF6	57
WL-41703	GB/DL	40.5KV	1600A	31.5kA	E/S	EPU/SF6	59
WL-41704	GB/DL	40.5KV	2000A	31.5kA	E/S	EPU/SF6	61
WL-41705	GB/DL	40.5KV	2500A	31.5kA	E/S	EPU/SF6	63
WL-41706	GB/DL	40.5KV	3150A	31.5kA	E/S	EPU/SF6	65

RMU	Standard	Voltage	Rating	Breaking Capacity	Option	Insulation	Page
WL-41907	IEC	12/17.5KV	630A	20kA	NA	AIR/EPU/SF6	67
WL-36193	IEC	12/17.5KV	630A	21kA	NA	AIR/EPU/SF6	69
WL-36193A	IEC	24KV	630A	20kA	NA	EPU/SF6	71
WL-41915	IEC	12/17.5KV	1250A	25kA	NA	AIR/EPU/SF6	73
WL-41908	IEC	12/17.5KV	1250A	31.5kA	NA	AIR/EPU/SF6	75
WL-41908A	IEC	24KV	1250A	25kA	NA	EPU/SF6	77

LBS	Standard	Voltage	Rating	Breaking Capacity	Option	Insulation	Page
WL-39080	IEC/IEEE	12/15/17.5KV	630A	25kA	NA	AIR/EPU/SF6	79
WL-41090	IEC	12KV	630A	20kA	NA	AIR/EPU/SF6	81
WL-41092	IEC	24KV	630A	20kA	NA	EPU/SF6	83
WL-41093	IEC/IEEE	36/38KV	630A	20kA	NA	EPU/SF6	85

Contactor	Standard	Voltage	Rating	Breaking Capacity	Option	Insulation	Page
WL-41909	IEC	12KV	400A	4kA	NA	AIR/EPU/SF6	87

Remark: A-IEEE Version, E-Silicon Version, S-Siliver Plated Version

For customized VI, please mail to CustomizedVI@eaton.com.

Vacuum Interrupter Data-Sheet

Specification	WL41143 GB/IEC/IEEE VCB 17.5kV-25kA-1250A

Interrupter, part #: WL-41143 (E)(S)(ES) [6.]

Application in circuit-breakers according to GB & DL/T, IEC,IEEE stds [5.]

Dimensional drawing: 150-41143 (E)(S)(ES)

Electrical Ratings [1., 2.], 3-Phase Symmetrical Rating

Rated Voltage	Ur	12/15.5/17.5	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	48	kV_{rms}
Rated Frequency	fr	50 / 60	Hz
Rated Impulse Withstand Voltage	Up	75/85/95	kV_{peak}
Rated Normal Current	Ir	1250	A_{rms}
Contact Resistance: @2200N added contact force	Rc	<17	μΩ
Rated Short-Time withstand current	Ik	25	kA_{rms}
Rated peak withstand current	Ip	63/65	kA_{peak}
Rated Duration of Short-Time current	tk	4	s
Rated short-circuit breaking current:			
Rated short-circuit current	Isc	25	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	63/65	kA_{peak}

Mechanical data [3.]:

Interrupter Weight, approx	minterrupter	2.3	kg
Moving Part Weight, approx	mmovable-part	0.67	kg
Contact Force from Atmospheric Pressure	Fa	90	N

Mechanical requirements:

Nominal Contact Stroke	snom	8.5±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.0-1.3	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required : @ Ip	Flp	2200	N

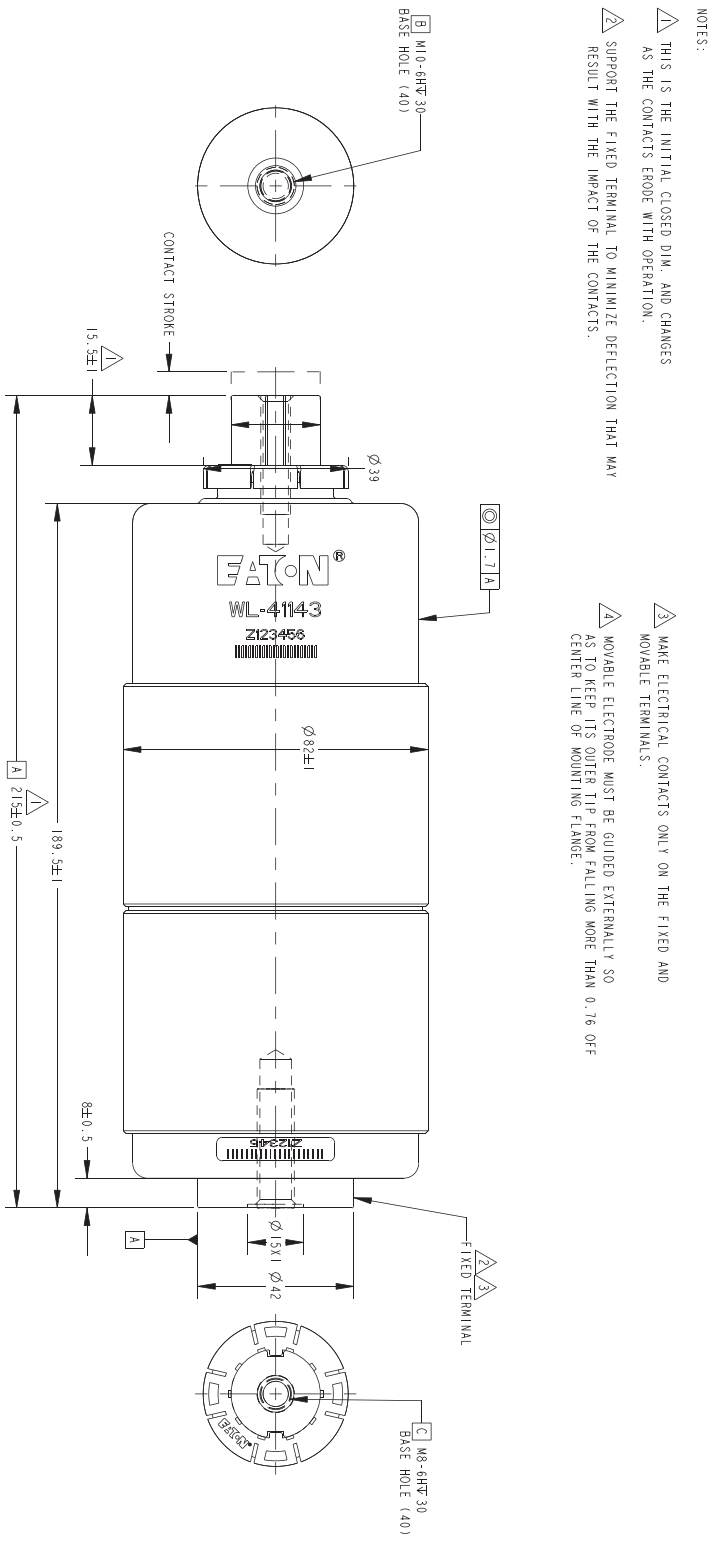
Life

Mechanical Life: @ snom	nmech.	50,000	operations
Contact Erosion Limit	derosion	3	mm
Storage Life		20	years [4.]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
4.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
5.) Meets or exceeds the electrical endurance requirements of a class E2 for autoreclosing duty per GB1984-2003 and DL/T 402-2007 or IEC 62271-100
6.) Optional, E-External insulation applied, S-Silver plating on both electrodes end surface.

150-41143


NOTES:
1. THIS IS THE INITIAL CLOSED DIM. AND CHANGES AS THE CONTACTS ERODE WITH OPERATION.
2. SUPPORT THE FIXED TERMINAL TO MINIMIZE DEFLECTION THAT MAY RESULT WITH THE IMPACT OF THE CONTACTS.
3. MAKE ELECTRICAL CONTACTS ONLY ON THE FIXED AND MOVABLE TERMINALS.
4. MOVABLE ELECTRODE MUST BE GUIDED EXTERNALLY SO AS TO KEEP ITS OUTER TIP FROM FALLING MORE THAN 0.76 OFF CENTER LINE OF MOUNTING FLANGE.
B M10-6H▽30 BASE HOLE (40)
CONTACT STROKE
15.5±1
Ø39
Ø1.7 A
EATON®
WL-41143
Z123456
Ø82±1
A
215±0.5
189.5±1
8±0.5
Ø15X1
Ø42
2 3 FIXED TERMINAL
C M8-6H▽30 BASE HOLE (40)

Interrupter, part #: WL-41145 (E)(S)(ES) [6.)]

Application in circuit-breakers according to GB & DL/T, IEC, IEEE stds [5.)]

Dimensional drawing: 150-41145 (E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	12/15.5/17.5	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	48	kV_{rms}
Rated Frequency	fr	50 / 60	Hz
Rated Impulse Withstand Voltage	Up	75/85/95	kV_{peak}
Rated Normal Current	Ir	2000	A_{rms}
Contact Resistance: @2200N added contact force	Rc	<10	μΩ
Rated Short-Time withstand current	Ik	25	kA_{rms}
Rated peak withstand current	Ip	63/65	kA_{peak}
Rated Duration of Short-Time current	tk	4	s
Rated short-circuit breaking current:			
Rated short-circuit current	Isc	25	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	63/65	kA_{peak}

Mechanical data [3.)]:

Interrupter Weight, approx	minterrupter	2.9	kg
Moving Part Weight, approx	mmovable-part	1.1	kg
Contact Force from Atmospheric Pressure	Fa	140	N

Mechanical requirements:

Nominal Contact Stroke	snom	8.5±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.0-1.3	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required : @ Ip	Flp	2200	N

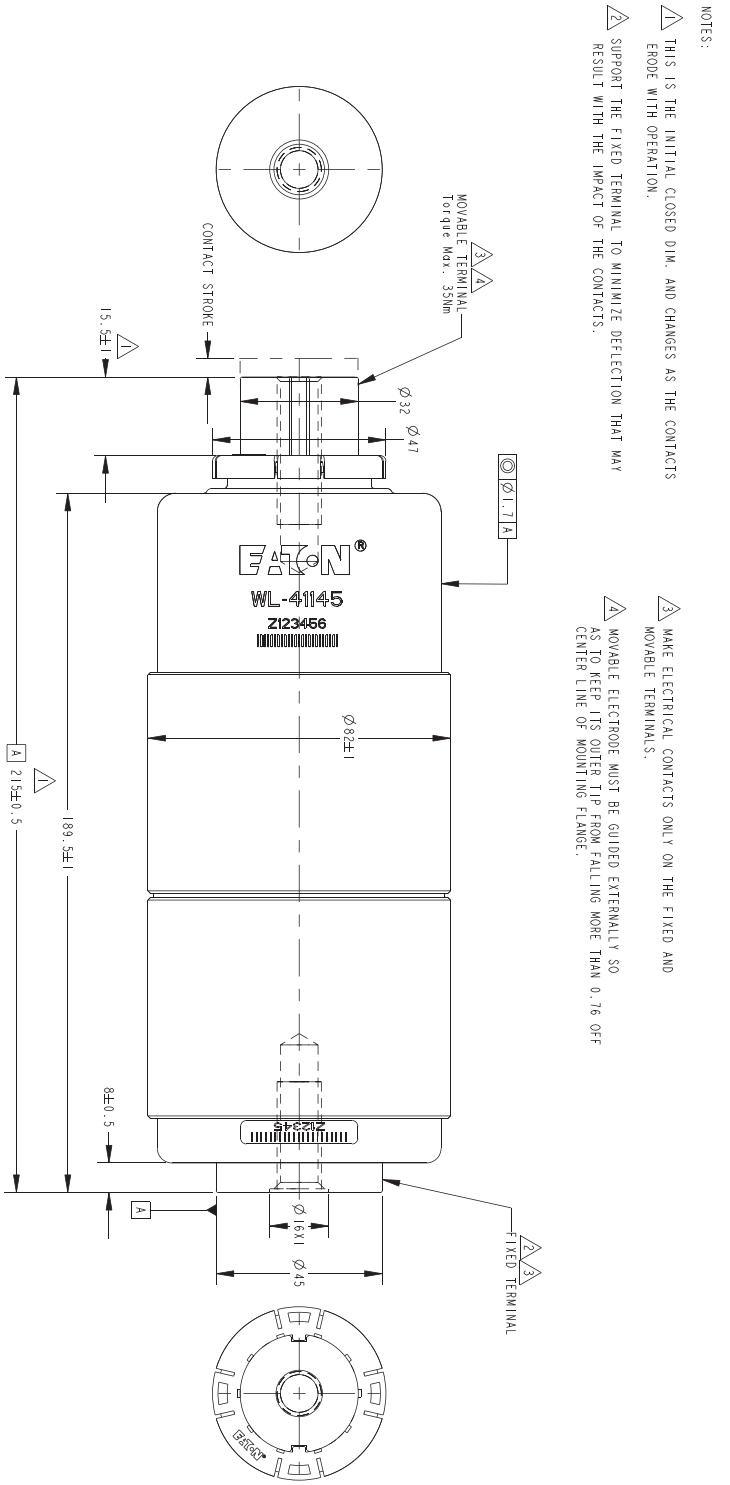
Life

Mechanical Life: @ snom	nmech.	50,000	operations
Contact Erosion Limit	derosion	3	mm
Storage Life		20	years [4.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
4.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
5.) Meets or exceeds the electrical endurance requirements of a class E2 for autoreclosing duty per GB1984-2003 and DL/T 402-2007 or IEC 62271-100;
6.) Optional, E-External insulation applied, S-Silver plating on both electrodes end surface.

150-41145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MOVABLE TERMINAL
Torque Max. 35Nm
CONTACT STROKE
15.5±1
Ø32
Ø47
Ø1.7 A
EATON®
WL-41145
Z123456
Ø82±1
215±0.5
189.5±1
8±0.5
Z12345
A
Ø16X1
Ø45
FIXED TERMINAL

Interrupter, part #: WL-41153 (E)(S)(ES) [6.)]

Application in circuit-breakers according to GB & DL/T, IEC,IEEE stds [5.)]

Dimensional drawing: 150-41153 (E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	12/15.5/17.5	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	48	kV_{rms}
Rated Frequency	fr	50 / 60	Hz
Rated Impulse Withstand Voltage	Up	75/85/95	kV_{peak}
Rated Normal Current	Ir	1250	A_{rms}
Contact Resistance: @ 3000N added contact force	Rc	<15	μΩ
Rated Short-Time withstand current	Ik	31.5	kA_{rms}
Rated peak withstand current	Ip	80/82	kA_{peak}
Rated Duration of Short-Time current	tk	4	s
Rated short-circuit breaking current:			
Rated short-circuit current	Isc	31.5	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	80/82	kA_{peak}

Mechanical data [3.)]:

Interrupter Weight, approx	minterrupter	2.7	kg
Moving Part Weight, approx	mmovable-part	0.7	kg
Contact Force from Atmospheric Pressure	Fa	90	N

Mechanical requirements:

Nominal Contact Stroke	snom	8.5±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.0-1.4	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required : @ Ip	Flp	3000	N

Life

Mechanical Life: @ snom	nmech.	50,000	operations
Contact Erosion Limit	derosion	3	mm
Storage Life		20	years [4.)]

Notes:

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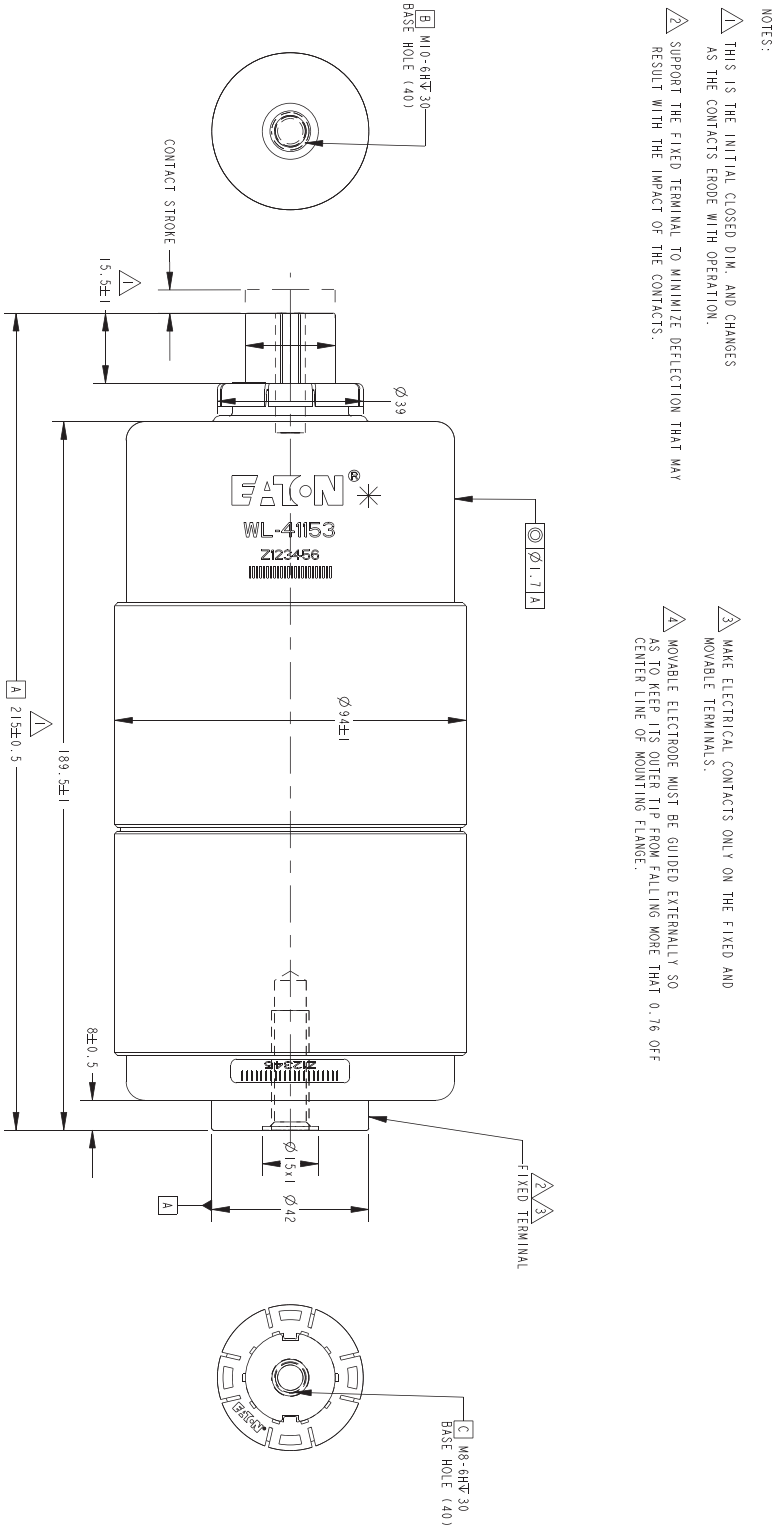
150-41153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B M10-6H↧30 BASE HOLE (40)
CONTACT STROKE
15.5±1
Ø39
EATON
WL-41153
Z123456
Ø1.7 A
Ø94±1
A 215±0.5
189.5±1
8±0.5
Ø15±1
A
Ø42
2 3 FIXED TERMINAL
C M8-6H↧30 BASE HOLE (40)

Interrupter, part #: WL-41156 (E)(S)(ES) [6.)]

Application in circuit-breakers according to GB & DL/T, IEC,IEEE stds [5.)]

Dimensional drawing: 150-41156 (E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	12/15.5/17.5	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	48	kV_{rms}
Rated Frequency	fr	50 / 60	Hz
Rated Impulse Withstand Voltage	Up	75/85/95	kV_{peak}
Rated Normal Current	Ir	2500	A_{rms}
Contact Resistance: @3000N added contact force	Rc	<10	μΩ
Rated Short-Time withstand current	Ik	31.5	kA_{rms}
Rated peak withstand current	Ip	80/82	kA_{peak}
Rated Duration of Short-Time current	tk	4	s
Rated short-circuit breaking current:			
Rated short-circuit current	Isc	31.5	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	80/82	kA_{peak}

Mechanical data [3.)]:

Interrupter Weight, approx	minterrupter	3.9	kg
Moving Part Weight, approx	mmovable-part	1.47	kg
Contact Force from Atmospheric Pressure	Fa	180	N

Mechanical requirements:

Nominal Contact Stroke	snom	8.5±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.1-1.4	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required : @ Ip	Flp	3000	N

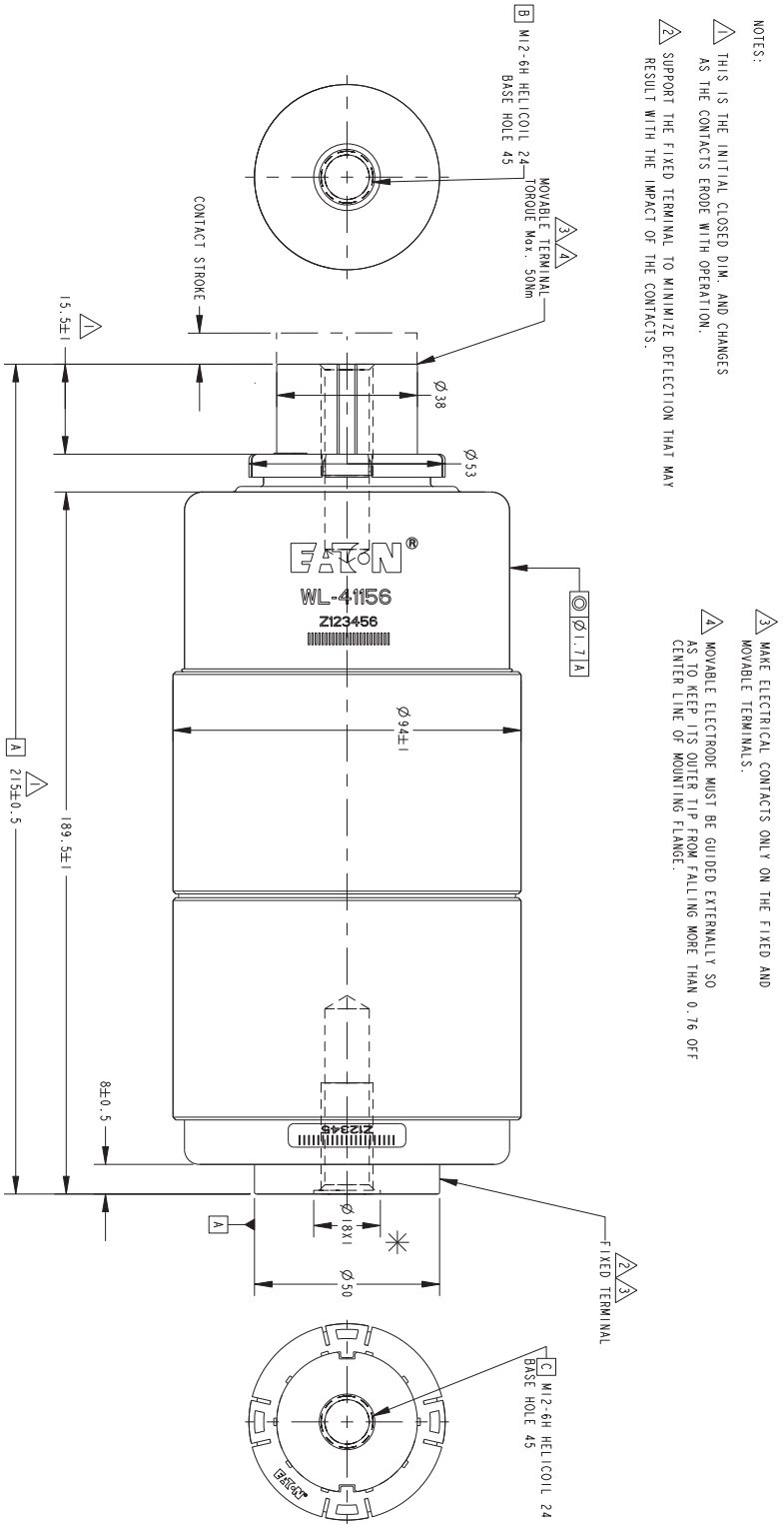
Life

Mechanical Life: @ snom	nmech.	50,000	operations
Contact Erosion Limit	derosion	3	mm
Storage Life		20	years [4.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
4.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
5.) Meets or exceeds the electrical endurance requirements of a class E2 for autoreclosing duty per GB1984-2003 and DL/T 402-2007 or IEC 62271-100;
6.) Optional, E-External insulation applied, S-Silver plating on both electrodes end surface.

150-41156


NOTES:
1 THIS IS THE INITIAL CLOSED DIM. AND CHANGES AS THE CONTACTS ERODE WITH OPERATION.
2 SUPPORT THE FIXED TERMINAL TO MINIMIZE DEFLECTION THAT MAY RESULT WITH THE IMPACT OF THE CONTACTS.
3 MAKE ELECTRICAL CONTACTS ONLY ON THE FIXED AND MOVABLE TERMINALS.
4 MOVABLE ELECTRODE MUST BE GUIDED EXTERNALLY SO AS TO KEEP ITS OUTER TIP FROM FALLING MORE THAN 0.76 OFF CENTER LINE OF MOUNTING FLANGE.
B M12-6H HELICOIL 24 BASE HOLE 45
MOVABLE TERMINAL TORQUE Max. 50Nm
CONTACT STROKE
15.5±1
Ø38
Ø53
EATON
WL-41156
Z123456
Ø1.7 A
Ø94±1
A 215±0.5
189.5±1
8±0.5
Z12345
A
Ø18X1
Ø50
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE 45

Interrupter, part #: WL-41163 (E)(S)(ES) [6.)]

Application in circuit-breakers according to GB & DL/T, IEC,IEEE stds [5.)]

Dimensional drawing: 150-41163 (E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	12/15.5/17.5	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	48	kV_{rms}
Rated Frequency	fr	50 / 60	Hz
Rated Impulse Withstand Voltage	Up	75/85/95	kV_{peak}
Rated Normal Current	Ir	1250	A_{rms}
Contact Resistance: @4400N added contact force	Rc	<15	μΩ
Rated Short-Time withstand current	Ik	40	kA_{rms}
Rated peak withstand current	Ip	102	kA_{peak}
Rated Duration of Short-Time current	tk	4	s
Rated short-circuit breaking current:			
Rated short-circuit current	Isc	40	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	102	kA_{peak}

Mechanical data [3.)]:

Interrupter Weight, approx	minterrupter	3.7	kg
Moving Part Weight, approx	mmovable-part	1.1	kg
Contact Force from Atmospheric Pressure	Fa	145	N

Mechanical requirements:

Nominal Contact Stroke	snom	8.5±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.0-1.4	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required : @ Ip	FIp	4400	N

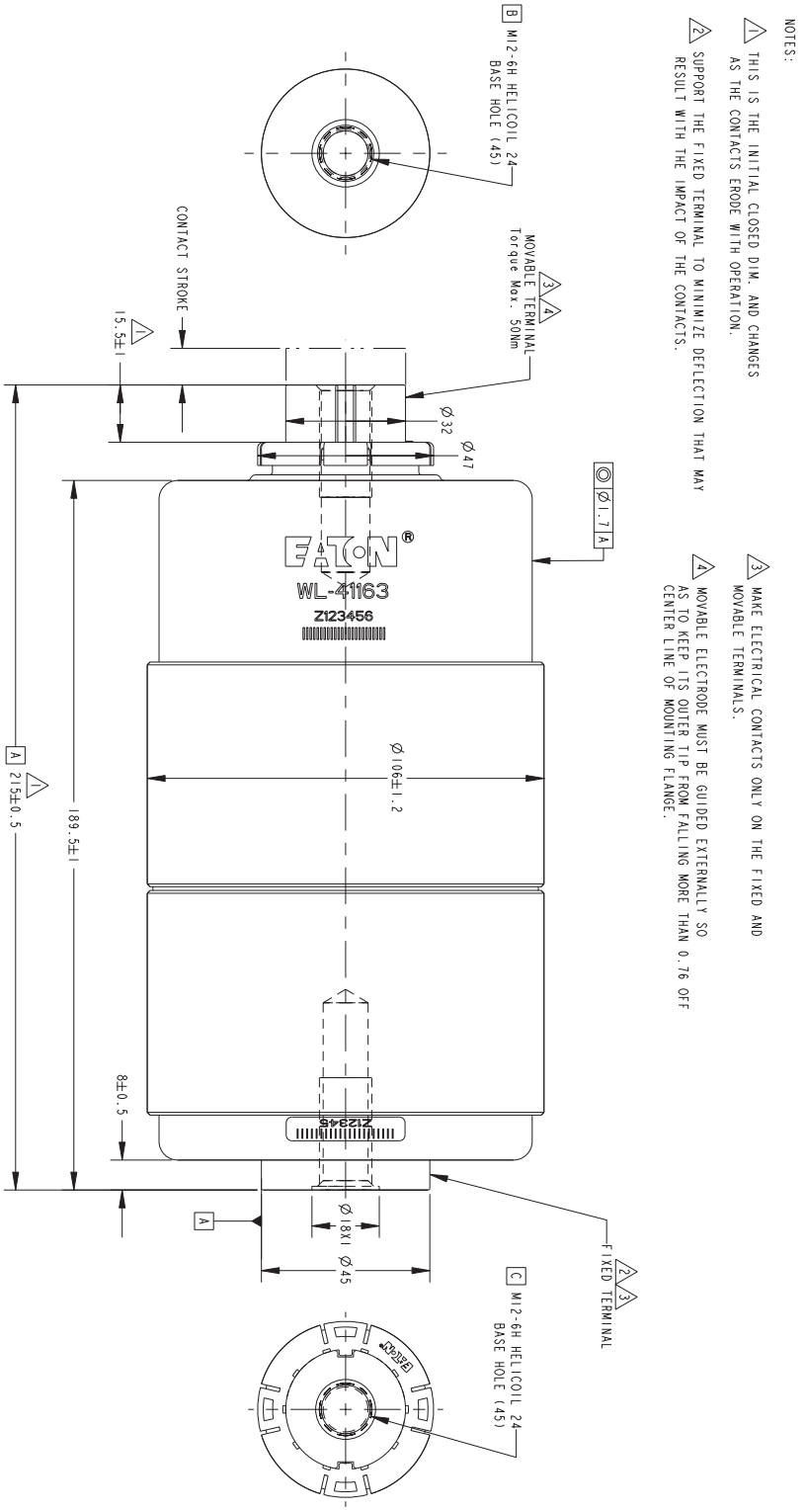
Life

Mechanical Life: @ snom	nmech.	50,000	operations
Contact Erosion Limit	derosion	3	mm
Storage Life		20	years [4.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
4.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
5.) Meets or exceeds the electrical endurance requirements of a class E2 for autoreclosing duty per GB1984-2003 and DL/T 402-2007 or IEC 62271-100;
6.) Optional, E-External insulation applied, S-Silver plating on both electrodes end surface.

150-41163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B M12-6H HELICOIL 24 BASE HOLE (45)
CONTACT STROKE
15.5±1
MOVABLE TERMINAL Torque Max. 50Nm
Ø32
Ø47
Ø1.7 A
EATON®
WL-41163
Z123456
A 215±0.5
189.5±1
Ø106±1.2
8±0.5
Ø18X1
Ø45
A
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41165 (E)(S)(ES) [6.)]

Application in circuit-breakers according to GB & DL/T, IEC,IEEE stds [5.)]

Dimensional drawing: 150-41143 (E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	12/15.5/17.5	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	48	kV_{rms}
Rated Frequency	fr	50 / 60	Hz
Rated Impulse Withstand Voltage	Up	75/85/95	kV_{peak}
Rated Normal Current	Ir	2000	A_{rms}
Contact Resistance: @ 4400N added contact force	Rc	<10	μΩ
Rated Short-Time withstand current	Ik	40	kA_{rms}
Rated peak withstand current	Ip	102	kA_{peak}
Rated Duration of Short-Time current	tk	4	s
Rated short-circuit breaking current:			
Rated short-circuit current	Isc	40	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	102	kA_{peak}

Mechanical data [3.)]:

Interrupter Weight, approx	minterrupter	3.7	kg
Moving Part Weight, approx	mmovable-part	1.1	kg
Contact Force from Atmospheric Pressure	Fa	145	N

Mechanical requirements:

Nominal Contact Stroke	snom	8.5±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.0-1.4	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required : @ Ip	Flp	4400	N

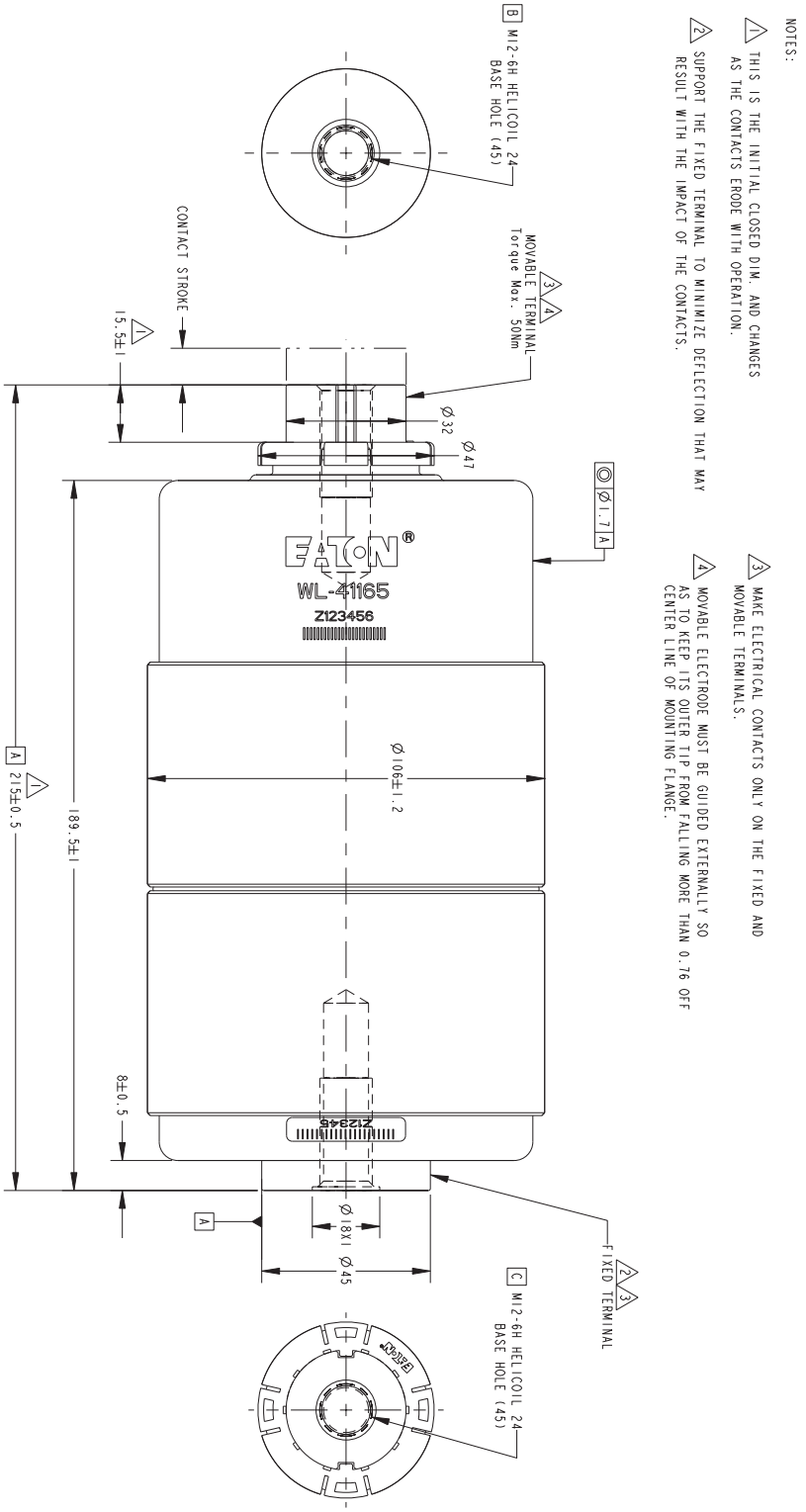
Life

Mechanical Life: @ snom	nmech.	50,000	operations
Contact Erosion Limit	derosion	3	mm
Storage Life		20	years [4.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
4.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
5.) Meets or exceeds the electrical endurance requirements of a class E2 for autoreclosing duty per GB1984-2003 and DL/T 402-2007 or IEC 62271-100;
6.) Optional, E-External insulation applied, S-Silver plating on both electrodes end surface.

150-41165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B M12-6H HELICOIL 24 BASE HOLE (45)
MOVABLE TERMINAL Torque Max. 50Nm
CONTACT STROKE
15.5±1
Ø32
Ø47
Ø0.7 A
EATON®
WL-41165
Z123456
Ø106±1.2
A 215±0.5
189.5±1
8±0.5
A
Ø18X1
Ø45
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41167(E)(S)(ES) [8.)]

Application in circuit breakers according to GB/IEC/IEEE stds [7.)]

Dimensional drawing: 150-41167(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	12/15/17.5	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	28/38/48	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	75/85/95	kV_{peak} [3.)]
Rated Frequency	fr	50/60	Hz
Rated Normal Current	Ir	3150	A_{rms}
Rated Short-Circuit Breaking Current	Isc	40	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	40	%
Rated Short-Time Withstand Current	Ik	40	kA_{rms}
Rated Duration of Short Circuit	tk	4	s
Rated Peak Withstand Current	Ip	100/104	kA_{peak}

Interrupter data [4.)]:

Contact Resistance: @ 4400N Added Contact Force	Rc	<10	µΩ
Interrupter Weight	m	4.8	kg
Moving Part Weight	mm	1.7	kg
Contact Force from Atmospheric Pressure	Fa	245	N

Mechanical requirements:

(Nominal) Contact Stroke	s	8.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.0-1.4	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.0	m/s
Overshoot During Opening, Max.	do	1	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	4400	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

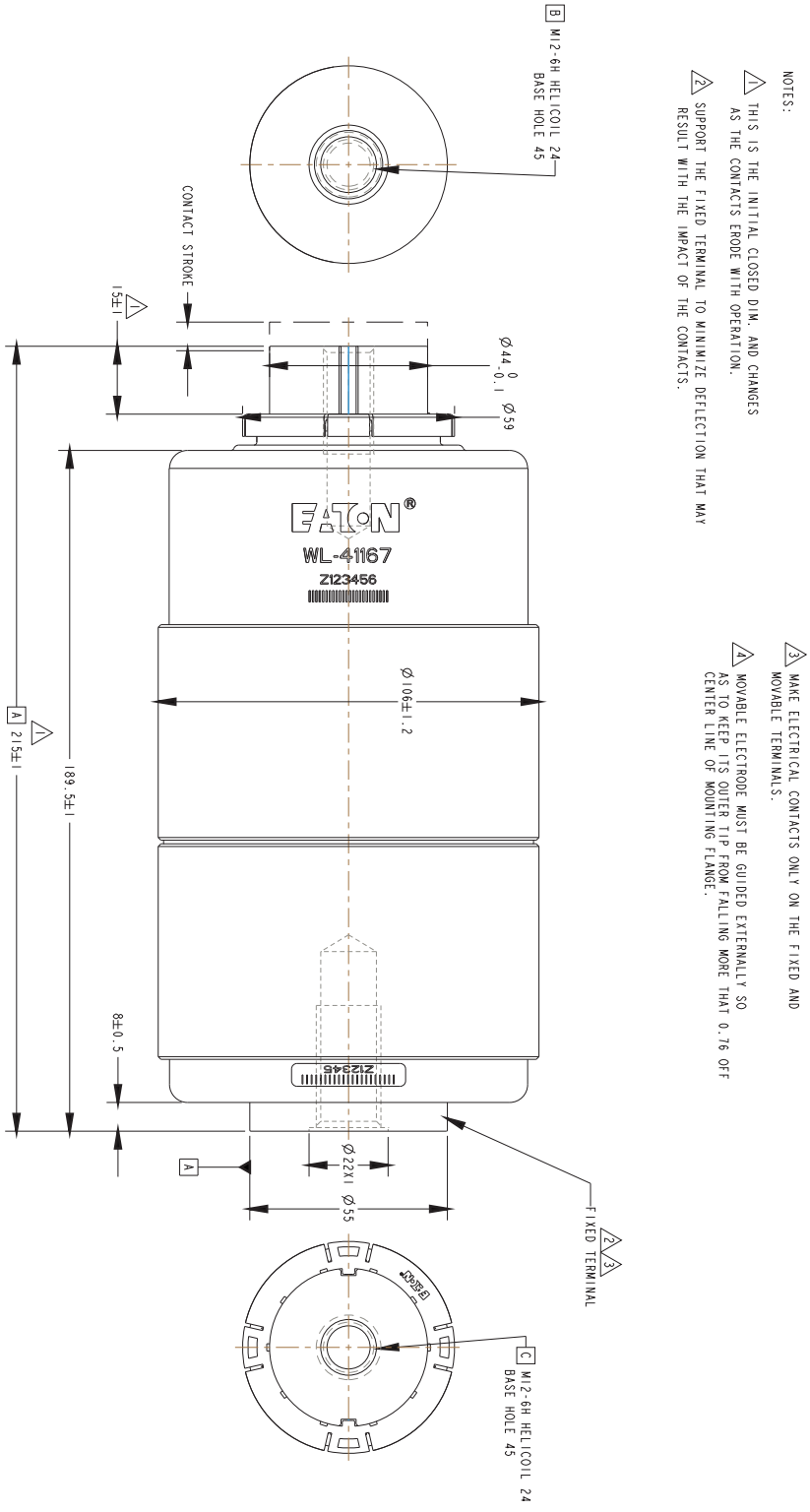
Life

Mechanical Life: @ snom	n	50,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air (not applicable for E-version);
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per IEC 62271-100;
8.) E-version: Silicon sleeve applied ; S-version: Silver plating on both electrodes end surface.

150-41167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B M12-6H HELICOIL 24 BASE HOLE 45
CONTACT STROKE
15±1
Ø44 0 -0.1
Ø59
EATON®
WL-41167
Z123456
Ø106±1.2
A 215±1
189.5±1
8±0.5
Z12345
A
Ø22±1
Ø55
FIXED TERMINAL
2 3
C M12-6H HELICOIL 24 BASE HOLE 45

Interrupter, part #: WL-41173 (E)(S)(ES) [6.)]

Application in circuit-breakers according to GB & DL/T, IEC,IEEE stds [5.)]

Dimensional drawing: 150-41173 (E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	12/15.5/17.5	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	48	kV_{rms}
Rated Frequency	fr	50 / 60	Hz
Rated Impulse Withstand Voltage	Up	75/85/95	kV_{peak}
Rated Normal Current	Ir	1250	A_{rms}
Contact Resistance: @ 6200N added contact force	Rc	<15	μΩ
Rated Short-Time withstand current	Ik	50	kA_{rms}
Rated peak withstand current	Ip	128	kA_{peak}
Rated Duration of Short-Time current	tk	4	s
Rated short-circuit breaking current:			
Rated short-circuit current	Isc	50	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	128	kA_{peak}

Mechanical data [3.)]:

Interrupter Weight, approx	minterrupter	4.5	kg
Moving Part Weight, approx	mmovable-part	1.2	kg
Contact Force from Atmospheric Pressure	Fa	145	N

Mechanical requirements:

Nominal Contact Stroke	snom	8.5±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.0-1.4	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required : @ Ip	Flp	6200	N

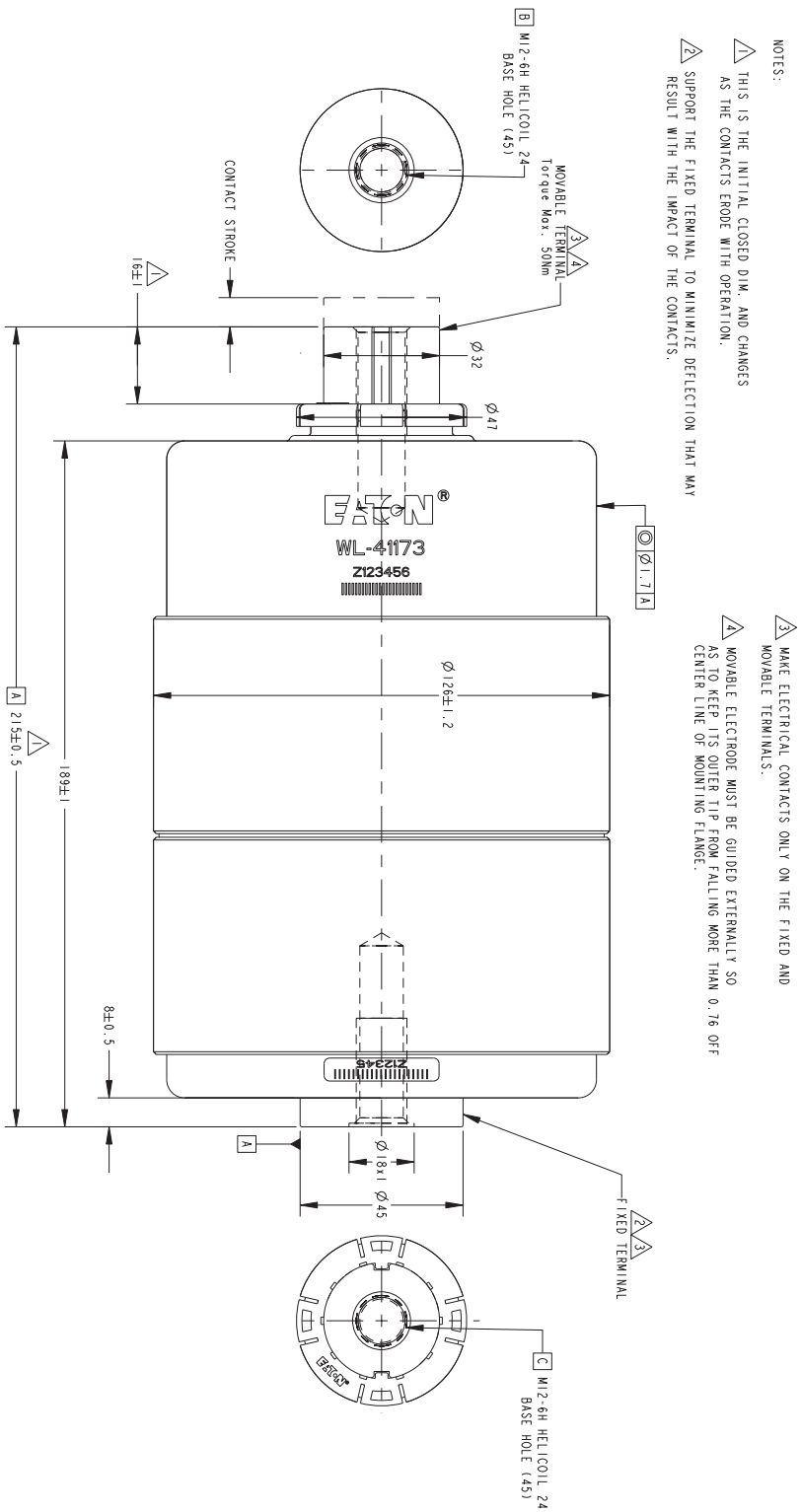
Life

Mechanical Life: @ snom	nmech.	50,000	operations
Contact Erosion Limit	derosion	3	mm
Storage Life		20	years [4.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
4.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
5.) Meets or exceeds the electrical endurance requirements of a class E2 for autoreclosing duty per GB1984-2003 and DL/T 402-2007 or IEC 62271-100;
6.) Optional, E-External insulation applied, S-Silver plating on both electrodes end surface.

150-41173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B M12-6H HELICOIL 24 BASE HOLE (45)
MOVABLE TERMINAL Torque Max. 50Nm
CONTACT STROKE
16±1
Ø32
Ø47
EATON®
WL-41173
Z123456
Ø0.7 A
Ø126±1.2
A 215±0.5
189±1
8±0.5
A
Ø18±1
Ø45
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41175 (E)(S)(ES) [6.)]

Application in circuit-breakers according to GB & DL/T, IEC,IEEE stds [5.)]

Dimensional drawing: 150-41175 (E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	12/15.5/17.5	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	48	kV_{rms}
Rated Frequency	fr	50 / 60	Hz
Rated Impulse Withstand Voltage	Up	75/85/95	kV_{peak}
Rated Normal Current	Ir	2000	A_{rms}
Contact Resistance: @ 6200N added contact force	Rc	<10	μΩ
Rated Short-Time withstand current	Ik	50	kA_{rms}
Rated peak withstand current	Ip	128	kA_{peak}
Rated Duration of Short-Time current	tk	4	s
Rated short-circuit breaking current:			
Rated short-circuit current	Isc	50	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	128	kA_{peak}

Mechanical data [3.)]:

Interrupter Weight, approx	minterrupter	4.5	kg
Moving Part Weight, approx	mmovable-part	1.2	kg
Contact Force from Atmospheric Pressure	Fa	145	N

Mechanical requirements:

Nominal Contact Stroke	snom	8.5±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.0-1.4	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required : @ Ip	Flp	6200	N

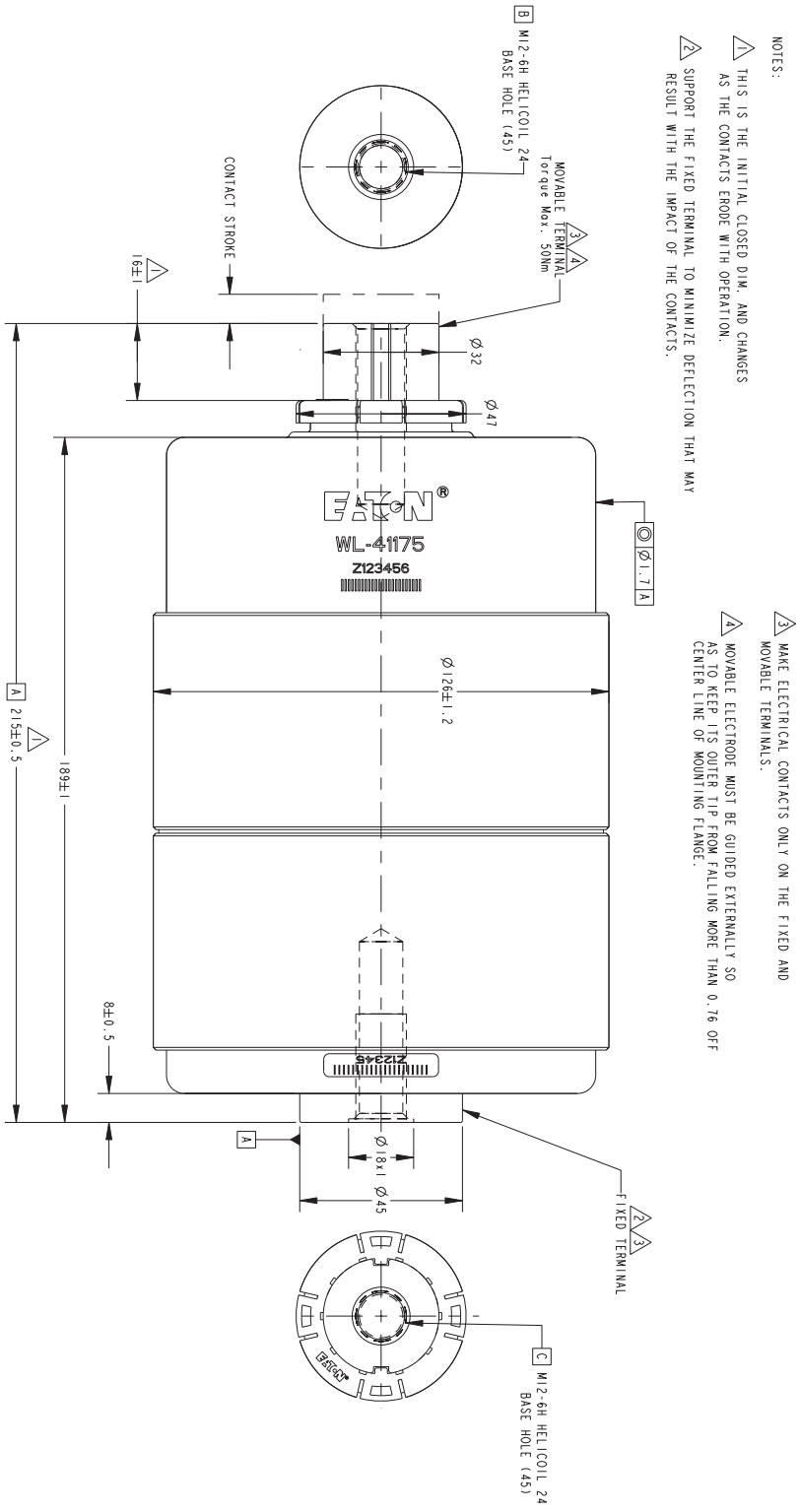
Life

Mechanical Life: @ snom	nmech.	50,000	operations
Contact Erosion Limit	derosion	3	mm
Storage Life		20	years [4.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
4.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
5.) Meets or exceeds the electrical endurance requirements of a class E2 for autoreclosing duty per GB1984-2003 and DL/T402-2007 or IEC 62271-100;
6.) Optional, E-External insulation applied, S-Silver plating on both electrodes end surface.

150-41175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MOVABLE TERMINAL Torque Max. 50Nm
CONTACT STROKE
16±1
Ø32
Ø47
WL-41175
Z123456
Ø1.7 A
Ø126±1.2
215±0.5
189±1
8±0.5
Ø18.1
Ø45
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41177 (E)(S)(ES) [6.)]

Application in circuit-breakers according to GB & DL/T, IEC,IEEE stds [5.)]

Dimensional drawing: 150-41177 (E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	12/15.5/17.5	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	48	kV_{rms}
Rated Frequency	fr	50 / 60	Hz
Rated Impulse Withstand Voltage	Up	75/85/95	kV_{peak}
Rated Normal Current	Ir	3150	A_{rms}
Contact Resistance: @ 6200N added contact force	Rc	<8	μΩ
Rated Short-Time withstand current	Ik	50	kA_{rms}
Rated peak withstand current	Ip	128	kA_{peak}
Rated Duration of Short-Time current	tk	4	s
Rated short-circuit breaking current:			
Rated short-circuit current	Isc	50	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	128	kA_{peak}

Mechanical data [3.)]:

Interrupter Weight, approx	minterrupter	5.7	kg
Moving Part Weight, approx	mmovable-part	1.8	kg
Contact Force from Atmospheric Pressure	Fa	245	N

Mechanical requirements:

Nominal Contact Stroke	snom	8.5±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.0-1.4	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required : @ Ip	Flp	6200	N

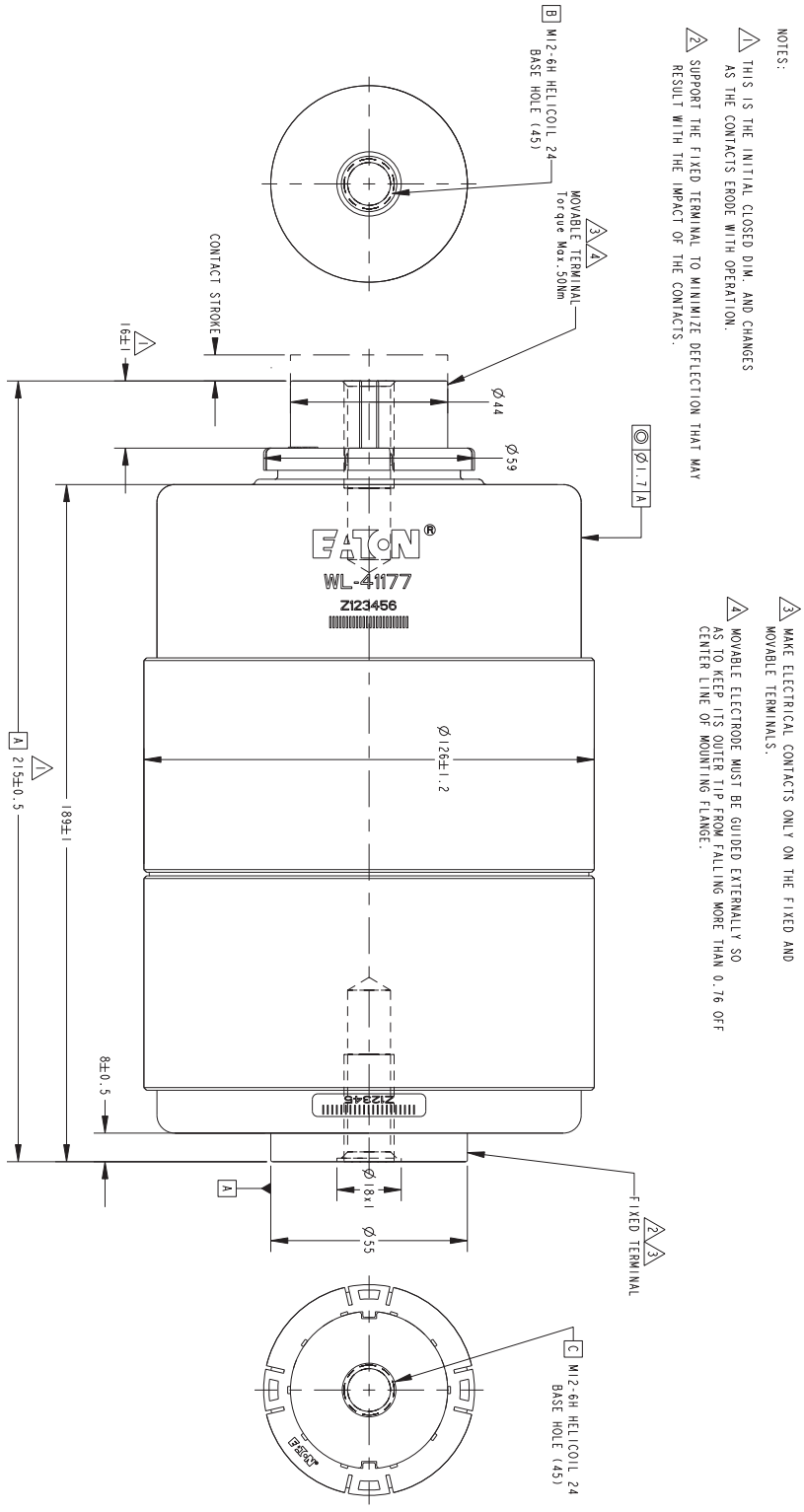
Life

Mechanical Life: @ snom	nmech.	50,000	operations
Contact Erosion Limit	derosion	3	mm
Storage Life		20	years [4.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
4.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
5.) Meets or exceeds the electrical endurance requirements of a class E2 for autoreclosing duty per GB1984-2003 and DL/T402-2007 or IEC 62271-100;
6.) Optional, E-External insulation applied, S-Silver plating on both electrodes end surface.

150-41177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2 SUPPORT THE FIXED TERMINAL TO MINIMIZE DEFLECTION THAT MAY RESULT WITH THE IMPACT OF THE CONTACTS.
3 MAKE ELECTRICAL CONTACTS ONLY ON THE FIXED AND MOVABLE TERMINALS.
4 MOVABLE ELECTRODE MUST BE GUIDED EXTERNALLY SO AS TO KEEP ITS OUTER TIP FROM FALLING MORE THAN 0.76 OFF CENTER LINE OF MOUNTING FLANGE.
B M12.6H HELICOIL 24 BASE HOLE (45)
MOVABLE TERMINAL Torque Max.50Nm
CONTACT STROKE
16±1
Ø44
Ø59
Ø1.7 A
EATON®
WL-41177
Z123456
Ø126±1.2
A 215±0.5
189±1
8±0.5
Ø18±1
A
Ø55
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41243(E)(S)(ES) [8.)]

Application in circuit breakers according to IEC 62271-100 [7.)]

Dimensional drawing: 150-41243(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	24	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	50	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	125	kV_{peak} [3.)]
Rated Frequency	fr	50/60	Hz
Rated Normal Current	Ir	1250	A_{rms}
Rated Short-Circuit Breaking Current	Isc	25	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	40	%
Rated Short-Time Withstand Current	Ik	25	kA_{rms}
Rated Duration of Short Circuit	tk	3	s
Rated Peak Withstand Current	Ip	63	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	31.5	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 2200N Added Contact Force	Rc	<15	µΩ
Interrupter Weight	m	2.3	kg
Moving Part Weight	mm	0.7	kg
Contact Force from Atmospheric Pressure	Fa	90	N

Mechanical requirements:

(Nominal) Contact Stroke	s	10.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.1-1.4	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.0	m/s
Overshoot During Opening, Max.	do	1	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	2200	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

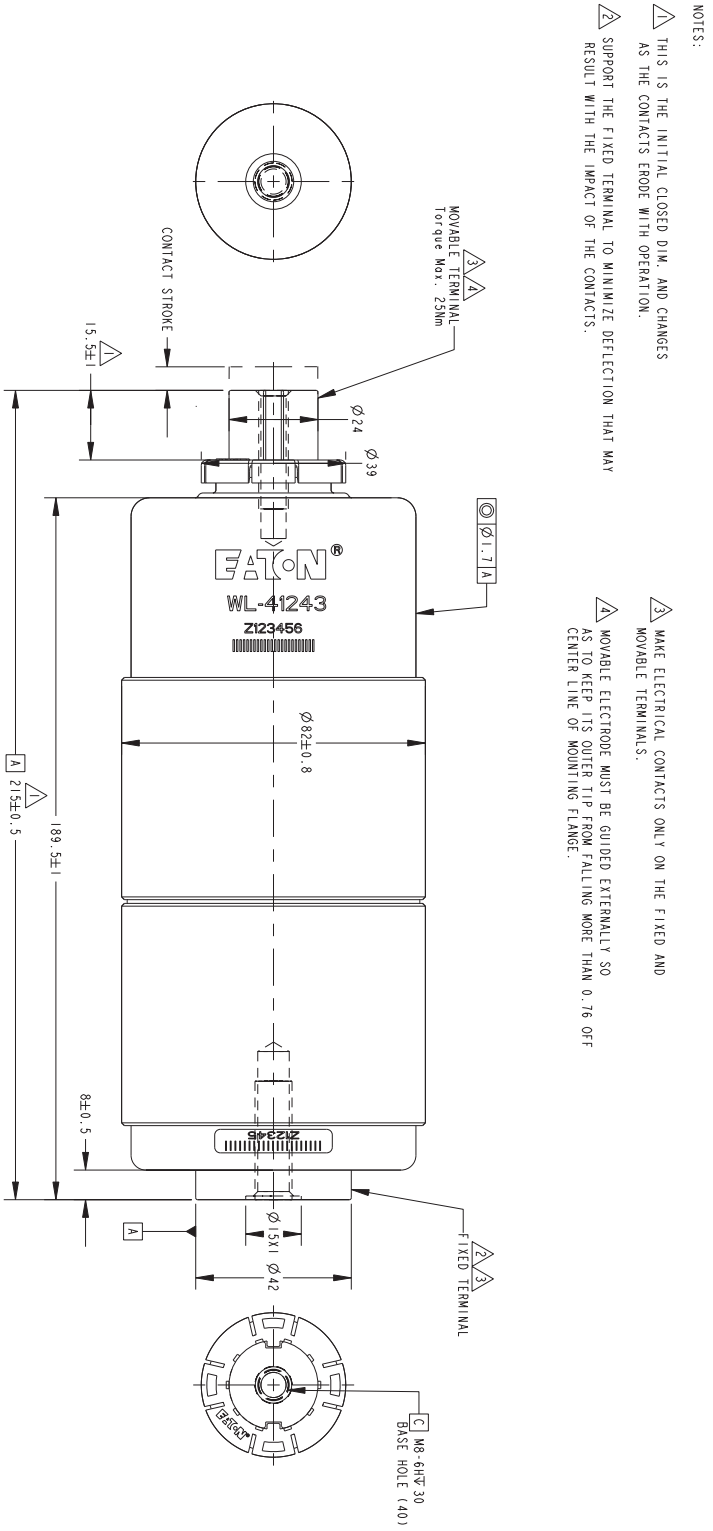
Life

Mechanical Life: @ snom	n	30,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air (not applicable for E-version);
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per IEC 62271-100;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41243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4 MOVABLE ELECTRODE MUST BE GUIDED EXTERNALLY SO AS TO KEEP ITS OUTER TIP FROM FALLING MORE THAN 0.76 OFF CENTER LINE OF MOUNTING FLANGE.
CONTACT STROKE
15.5±1
MOVABLE TERMINAL
Torque Max. 25Nm
Ø24
Ø39
Ø1.7 A
EATON®
WL-41243
Z123456
Ø82±0.8
215±0.5
189.5±1
8±0.5
Ø15X1
Ø42
FIXED TERMINAL
C M8-6HT 30
BASE HOLE (40)

Interrupter, part #: WL-41245(E)(S)(ES) [8.)]

Application in circuit breakers according to IEC62271-100 [7.)]

Dimensional drawing: 150-41245(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	24	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	50	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	125	kV_{peak} [3.)]
Rated Frequency	fr	50/60	Hz
Rated Normal Current	Ir	2000	A_{rms}
Rated Short-Circuit Breaking Current	Isc	25	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	40	%
Rated Short-Time Withstand Current	Ik	25	kA_{rms}
Rated Duration of Short Circuit	tk	3	s
Rated Peak Withstand Current	Ip	63/65	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	31.5	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 2200N Added Contact Force	Rc	<10	µΩ
Interrupter Weight	m	2.9	kg
Moving Part Weight	mm	1.05	kg
Contact Force from Atmospheric Pressure	Fa	140	N

Mechanical requirements:

(Nominal) Contact Stroke	s	10.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.1-1.4	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.0	m/s
Overshoot During Opening, Max.	do	1	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	2200	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

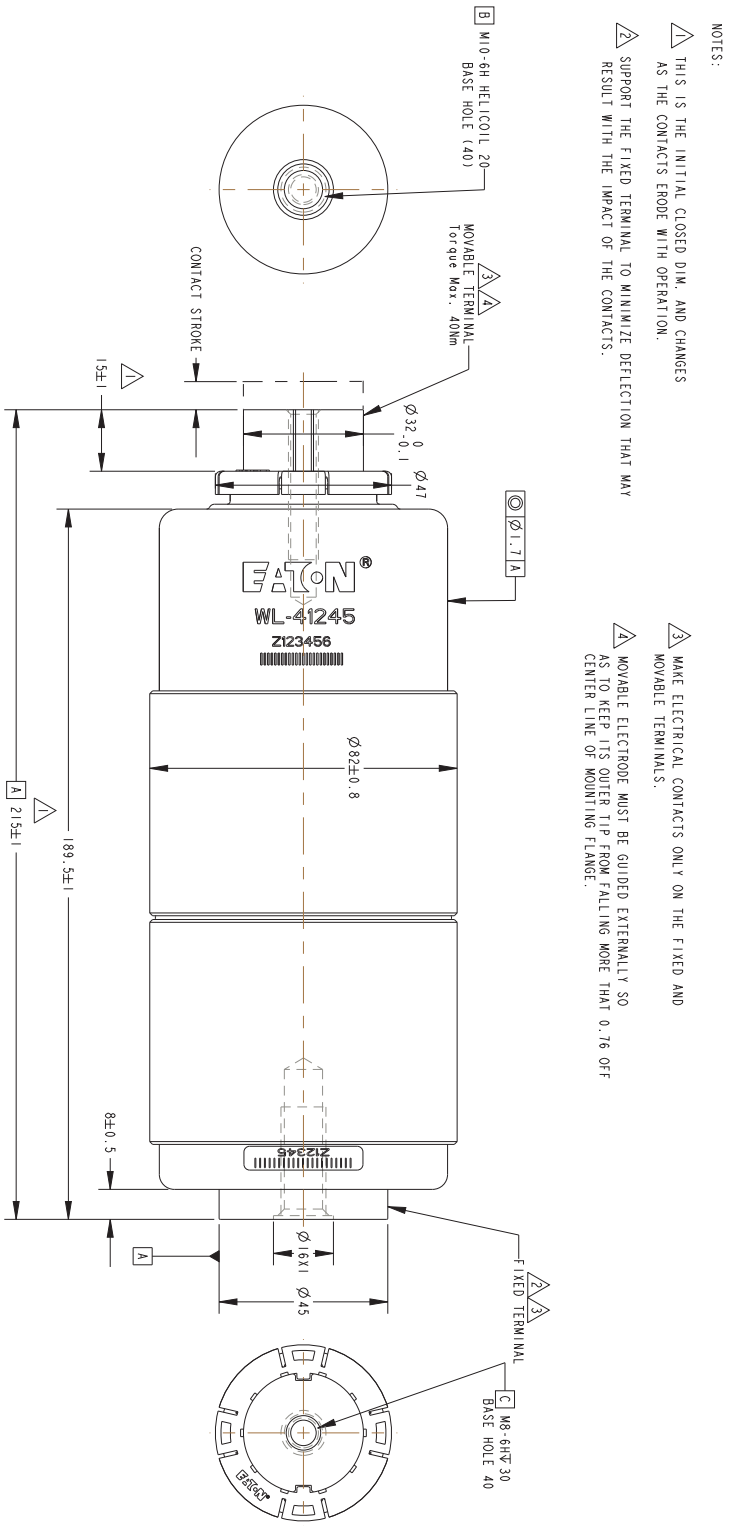
Life

Mechanical Life: @ snom	n	30,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air;
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per IEC 62271-100;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41245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3. MAKE ELECTRICAL CONTACTS ONLY ON THE FIXED AND MOVABLE TERMINALS.
4. MOVABLE ELECTRODE MUST BE GUIDED EXTERNALLY SO AS TO KEEP ITS OUTER TIP FROM FALLING MORE THAT 0.76 OFF CENTER LINE OF MOUNTING FLANGE.
B M10-6H HELICOIL 20 BASE HOLE (40)
MOVABLE TERMINAL Torque Max. 40Nm
CONTACT STROKE
15±1
Ø32 0 -0.1
Ø47
Ø0.1 A
EATON®
WL-41245
Z123456
Ø82±0.8
215±1
189.5±1
8±0.5
Z12345
A
Ø16X1
Ø45
FIXED TERMINAL
C M8-6H↧30 BASE HOLE 40

Interrupter, part #: WL-41253(E)(S)(ES) [8.)]

Application in circuit breakers according to IEC 62271-100 [7.)]

Dimensional drawing: 150-41253(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	24	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	50	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	125	kV_{peak} [3.)]
Rated Frequency	fr	50/60	Hz
Rated Normal Current	Ir	1250	A_{rms}
Rated Short-Circuit Breaking Current	Isc	31.5	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	40	%
Rated Short-Time Withstand Current	Ik	31.5	kA_{rms}
Rated Duration of Short Circuit	tk	3	s
Rated Peak Withstand Current	Ip	80	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	31.5	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 3300N Added Contact Force	Rc	<15	µΩ
Interrupter Weight	m	2.7	kg
Moving Part Weight	mm	0.7	kg
Contact Force from Atmospheric Pressure	Fa	110	N

Mechanical requirements:

(Nominal) Contact Stroke	s	10.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.1-1.4	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.0	m/s
Overshoot During Opening, Max.	do	1	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	3300	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

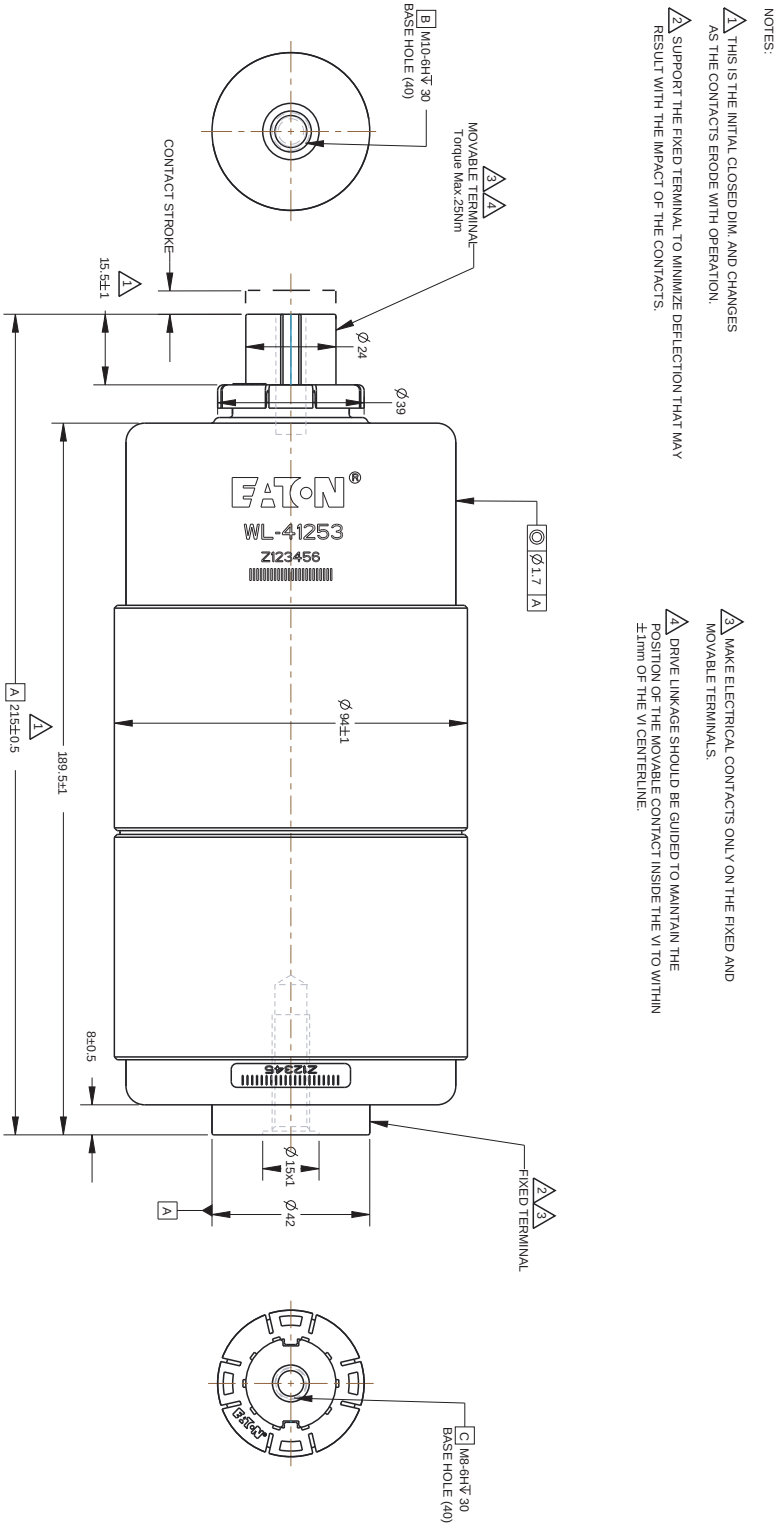
Life

Mechanical Life: @ snom	n	30,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air (not applicable for E-version);
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per IEC 62271-100;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41253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4 DRIVE LINKAGE SHOULD BE GUIDED TO MAINTAIN THE POSITION OF THE MOVABLE CONTACT INSIDE THE VI TO WITHIN ±1mm OF THE VI CENTERLINE.
B M10-6H↧ 30 BASE HOLE (40)
MOVABLE TERMINAL Torque Max.25Nm
CONTACT STROKE
15.5±1
Ø 24
Ø 39
WL-41253
Z123456
Ø 1.7 A
Ø 94±1
215±0.5
189.5±1
8±0.5
Ø 15±1
Ø 42
FIXED TERMINAL
C M8-6H↧ 30 BASE HOLE (40)

Interrupter, part #: WL-41256(E)(S)(ES) [8.)]

Application in circuit breakers according to IEC 62271-100 [7.)]

Dimensional drawing: 150-41256(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	24	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	50	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	125	kV_{peak} [3.)]
Rated Frequency	fr	50/60	Hz
Rated Normal Current	Ir	2500	A_{rms}
Rated Short-Circuit Breaking Current	Isc	31.5	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	40	%
Rated Short-Time Withstand Current	Ik	31.5	kA_{rms}
Rated Duration of Short Circuit	tk	3	s
Rated Peak Withstand Current	Ip	80	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	31.5	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 3300N Added Contact Force	Rc	<10	µΩ
Interrupter Weight	m	3.9	kg
Moving Part Weight	mm	1.47	kg
Contact Force from Atmospheric Pressure	Fa	180	N

Mechanical requirements:

(Nominal) Contact Stroke	s	10.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.1-1.4	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.0	m/s
Overshoot During Opening, Max.	do	1	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	3300	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

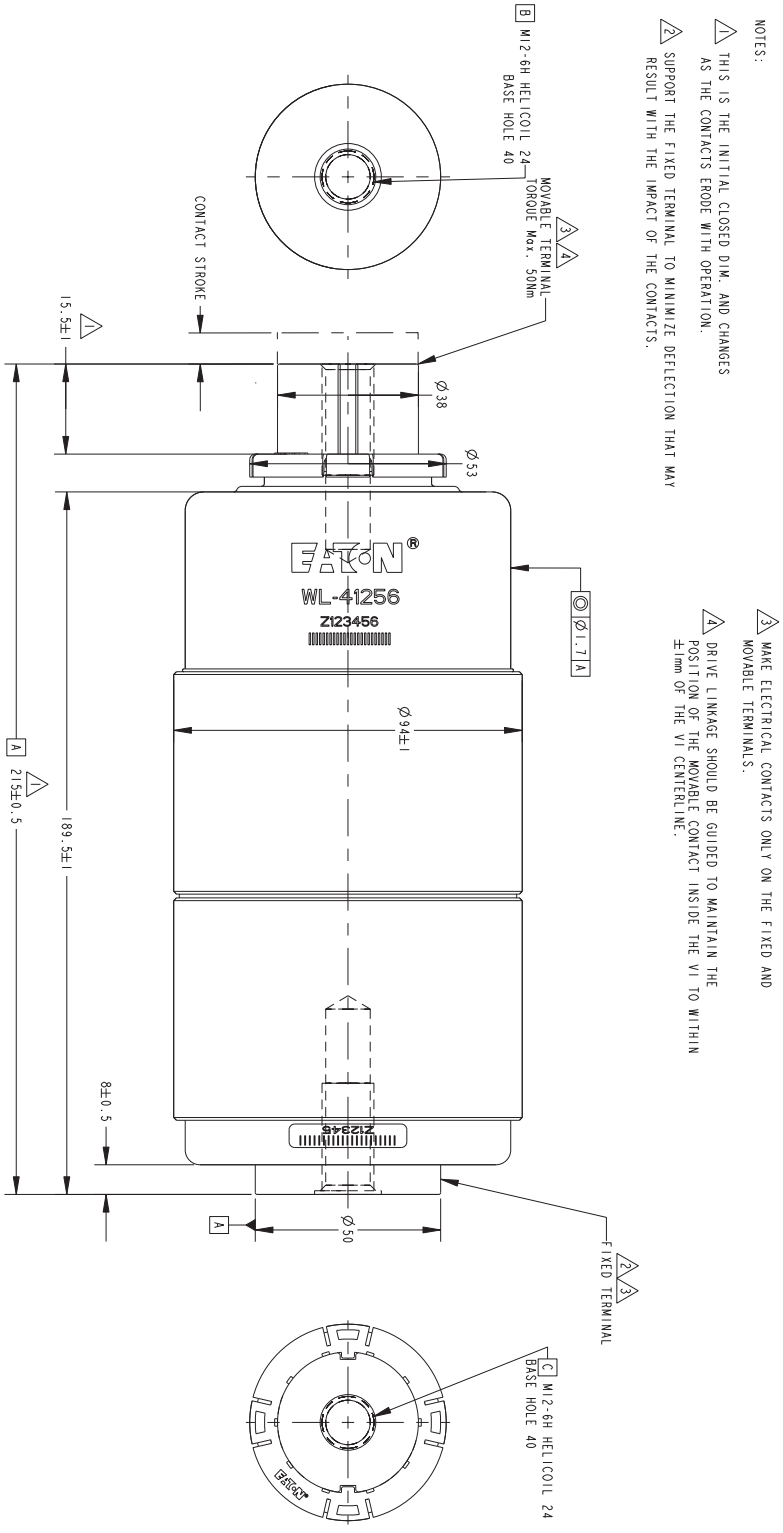
Life

Mechanical Life: @ snom	n	30,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air (not applicable for E-version);
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per IEC 62271-100;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41256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B M12-6H HELICOIL 24 BASE HOLE 40
MOVABLE TERMINAL TORQUE Max. 50Nm
CONTACT STROKE
15.5±1
Ø38
Ø53
EATON®
WL-41256
Z123456
Ø0.7 A
Ø94±1
215±0.5
189.5±1
8±0.5
Ø50
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE 40

Interrupter, part #: WL-41263(E)(S)(ES) [8.)]

Application in circuit breakers according to IEC 62271-100 [7.)]

Dimensional drawing: 150-41263(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	24	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	50	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	125	kV_{peak} [3.)]
Rated Frequency	fr	50/60	Hz
Rated Normal Current	Ir	1250	A_{rms}
Rated Short-Circuit Breaking Current	Isc	40	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	40	%
Rated Short-Time Withstand Current	Ik	40	kA_{rms}
Rated Duration of Short Circuit	tk	3	s
Rated Peak Withstand Current	Ip	102	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	31.5	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 4400N Added Contact Force	Rc	<13	µΩ
Interrupter Weight	m	3.7	kg
Moving Part Weight	mm	1.1	kg
Contact Force from Atmospheric Pressure	Fa	145	N

Mechanical requirements:

(Nominal) Contact Stroke	s	10.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.1-1.4	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.0	m/s
Overshoot During Opening, Max.	do	1	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	4400	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

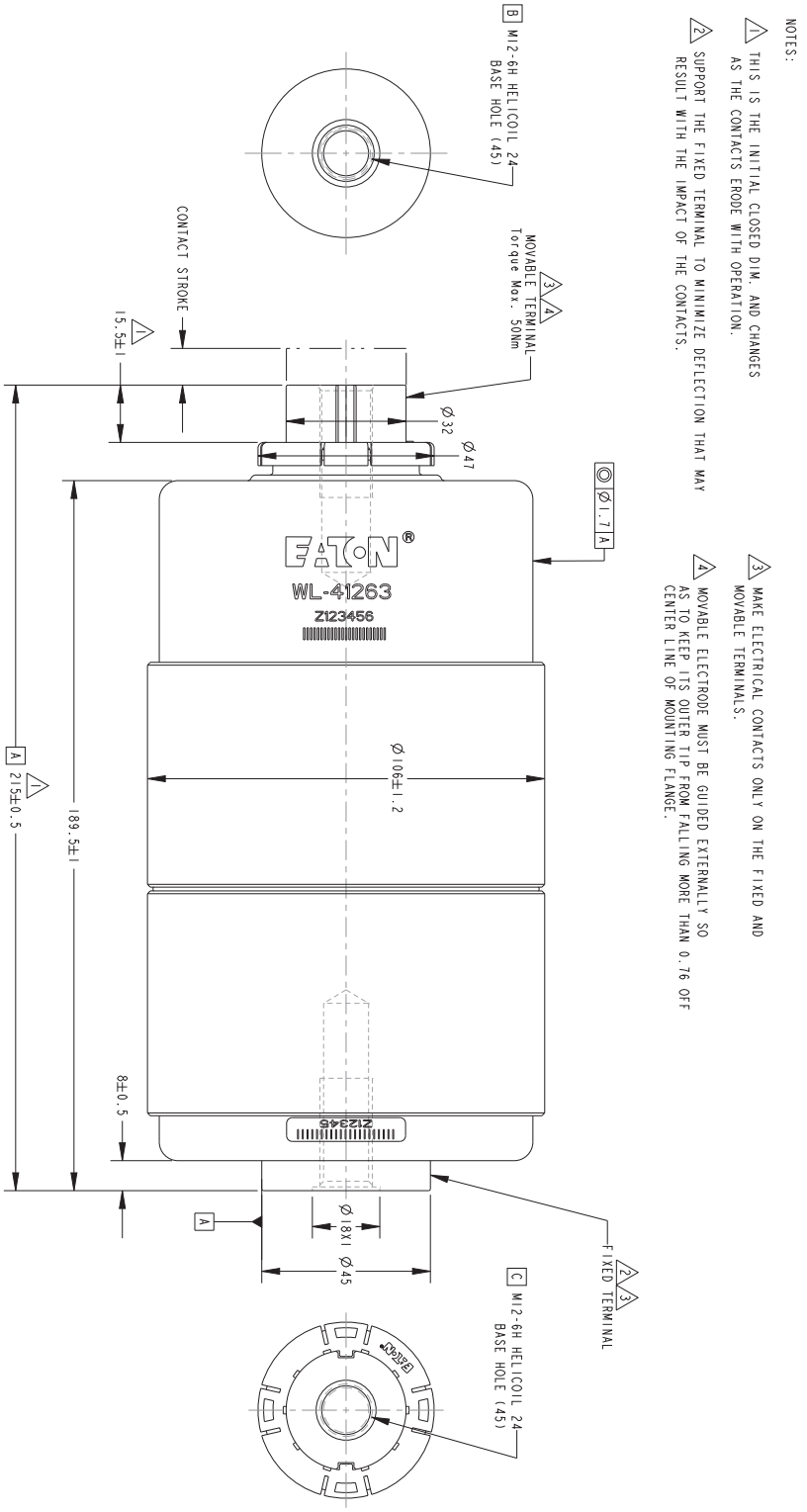
Life

Mechanical Life: @ snom	n	30,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air;
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per IEC 62271-100;
8.) E,S optional. E-Silicon insulation applied; S-Silver plating on both electrodes end surface.

150-41263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B M12-6H HELICOIL 24 BASE HOLE (45)
CONTACT STROKE
15.5±1
MOVABLE TERMINAL Torque Max. 50Nm
Ø32
Ø47
Ø1.7 A
EATON®
WL-41263
Z123456
Ø106±1.2
215±0.5
189.5±1
8±0.5
Z12345
A
Ø18X1
Ø45
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41265(E)(S)(ES) [8.)]

Application in circuit breakers according to IEC 62271-100 [7.)]

Dimensional drawing: 150-41265(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	24	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	50	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	125	kV_{peak} [3.)]
Rated Frequency	fr	50/60	Hz
Rated Normal Current	Ir	2000	A_{rms}
Rated Short-Circuit Breaking Current	Isc	40	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	40	%
Rated Short-Time Withstand Current	Ik	40	kA_{rms}
Rated Duration of Short Circuit	tk	3	s
Rated Peak Withstand Current	Ip	102	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	31.5	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 4400N Added Contact Force	Rc	<10	µΩ
Interrupter Weight	m	3.7	kg
Moving Part Weight	mm	1.1	kg
Contact Force from Atmospheric Pressure	Fa	145	N

Mechanical requirements:

(Nominal) Contact Stroke	s	10.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.1-1.4	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.0	m/s
Overshoot During Opening, Max.	do	1	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	4400	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

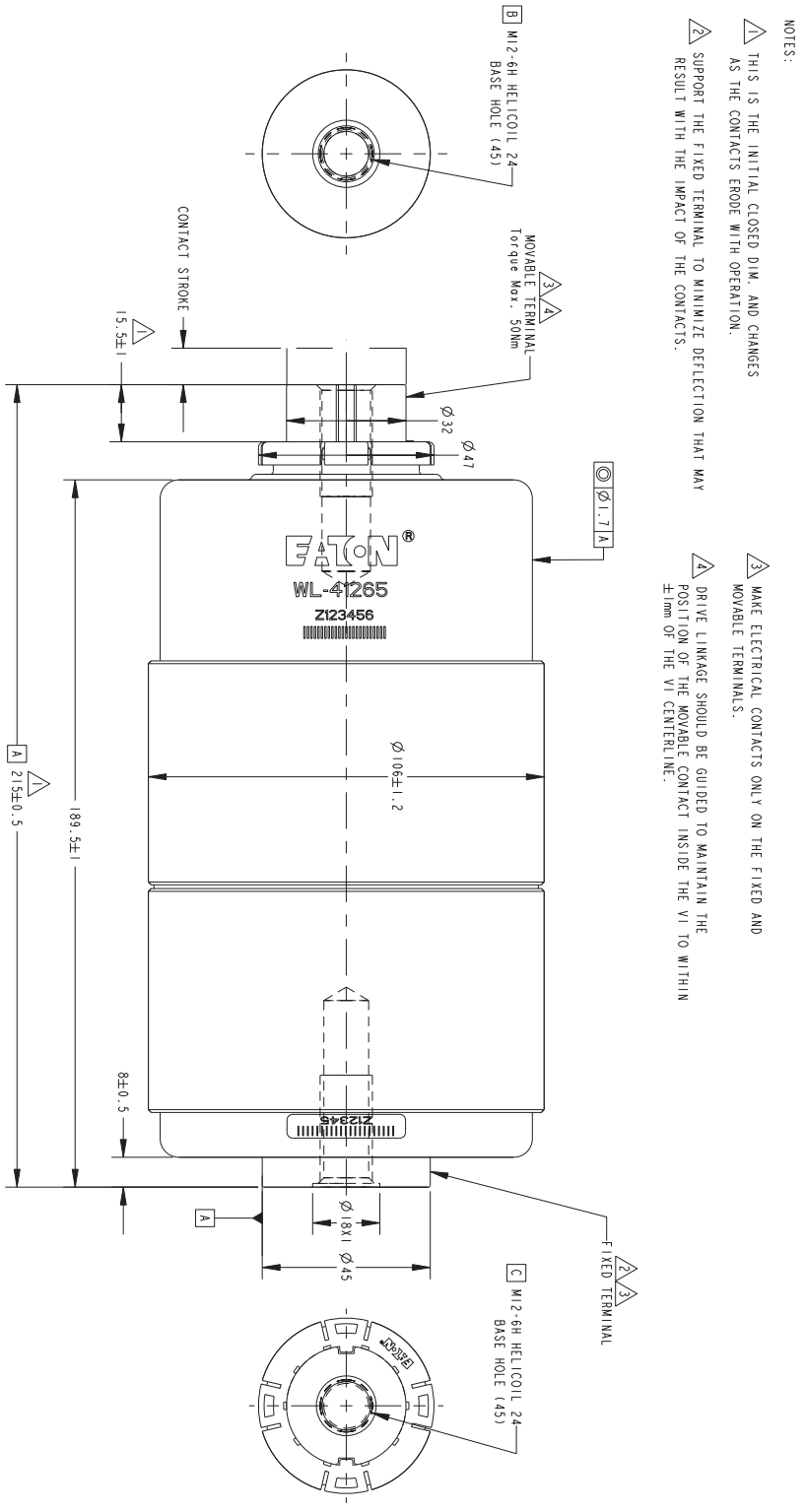
Life

Mechanical Life: @ snom	n	30,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air;
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per IEC 62271-100;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41265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B M12-6H HELICOIL 24 BASE HOLE (45)
CONTACT STROKE
15.5±1
MOVABLE TERMINAL
Torque Max. 50Nm
Ø32
Ø47
Ø1.7 A
EATON®
WL-41265
Z123456
Ø106±1.2
A 215±0.5
189.5±1
8±0.5
Z12345
Ø18X1
Ø45
A
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41267(E)(S)(ES) [8.)]

Application in circuit breakers according to IEC 62271-100 [7.)]

Dimensional drawing: 150-41267(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	24	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	50	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	125	kV_{peak} [3.)]
Rated Frequency	fr	50/60	Hz
Rated Normal Current	Ir	3150	A_{rms}
Rated Short-Circuit Breaking Current	Isc	40	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	40	%
Rated Short-Time Withstand Current	Ik	40	kA_{rms}
Rated Duration of Short Circuit	tk	3	s
Rated Peak Withstand Current	Ip	104	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	31.5	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 4400N Added Contact Force	Rc	<10	µΩ
Interrupter Weight	m	4.8	kg
Moving Part Weight	mm	1.7	kg
Contact Force from Atmospheric Pressure	Fa	245	N

Mechanical requirements:

(Nominal) Contact Stroke	s	10.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.1-1.4	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.0	m/s
Overshoot During Opening, Max.	do	1	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	0.9-1.1	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	4400	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

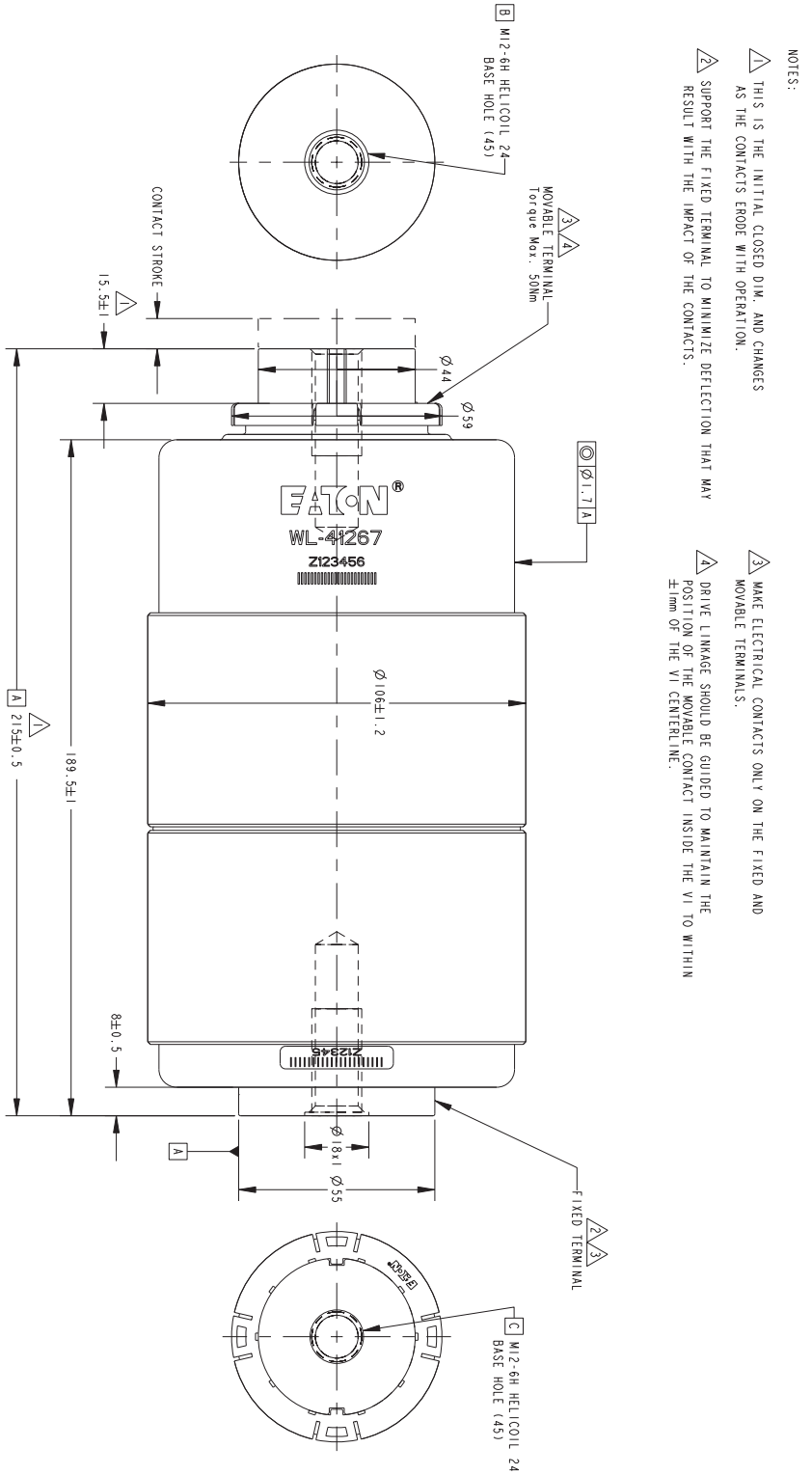
Life

Mechanical Life: @ snom	n	30,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air (not applicable for E-version);
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per IEC 62271-100;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41267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B M12-6H HELICOIL 24 BASE HOLE (45)
3 4 MOVABLE TERMINAL Torque Max. 50Nm
CONTACT STROKE
1 15.5±1
Ø44
Ø59
Ø1.7 A
EATON®
WL-41267
Z123456
Ø106±1.2
A 215±0.5
189.5±1
8±0.5
Ø18±1
Ø55
A
FIXED TERMINAL
2 3
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41333(E)(S)(ES) [8.)]

Application in circuit breakers according to IEC 62271-100 [7.)]

Dimensional drawing: 150-41333(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	36/38	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	70/80	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	170	kV_{peak} [3.)]
Rated Frequency	fr	50/60	Hz
Rated Normal Current	Ir	1250	A_{rms}
Rated Short-Circuit Breaking Current	Isc	20	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	50	%
Rated Short-Time Withstand Current	Ik	25	kA_{rms}
Rated Duration of Short Circuit	tk	3	s
Rated Peak Withstand Current	Ip	52	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	50	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 1600N Added Contact Force	Rc	<20	µΩ
Interrupter Weight	m	2.3	kg
Moving Part Weight	mm	0.7	kg
Contact Force from Atmospheric Pressure	Fa	90	N

Mechanical requirements:

(Nominal) Contact Stroke	s	14.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.6-2.0	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.5	m/s
Overshoot During Opening, Max.	do	1	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	1.4-1.6	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	1600	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

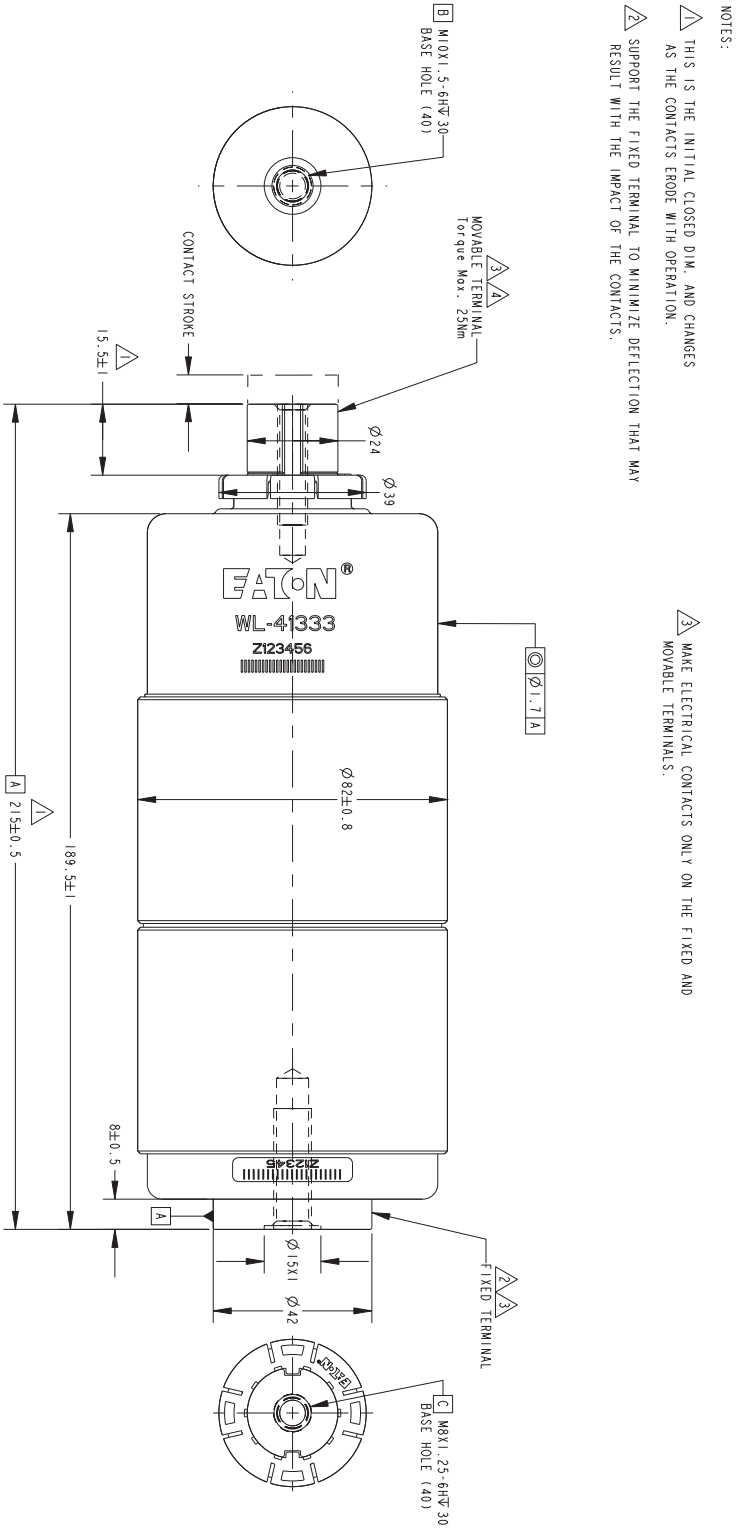
Life

Mechanical Life: @ snom	n	10,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air (not applicable for E-version);
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per IEC 62271-100;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41333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B M10X1.5-6H▽30 BASE HOLE (40)
MOVABLE TERMINAL Torque Max. 25Nm
CONTACT STROKE
15.5±1
Ø24
Ø39
EATON®
WL-41333
Z123456
Ø82±0.8
215±0.5
189.5±1
8±0.5
Ø15X1
Ø42
FIXED TERMINAL
C M8X1.25-6H▽30 BASE HOLE (40)

Interrupter, part #: WL-41343(E)(S)(ES) [8.)]

Application in circuit breakers according to IEC 62271-100 [7.)]

Dimensional drawing: 150-41343(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	36/38	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	70/80	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	170	kV_{peak} [3.)]
Rated Frequency	fr	50/60	Hz
Rated Normal Current	Ir	1250	A_{rms}
Rated Short-Circuit Breaking Current	Isc	25	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	40	%
Rated Short-Time Withstand Current	Ik	25	kA_{rms}
Rated Duration of Short Circuit	tk	3	s
Rated Peak Withstand Current	Ip	65	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	50	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 2200N Added Contact Force	Rc	<15	µΩ
Interrupter Weight	m	2.7	kg
Moving Part Weight	mm	0.7	kg
Contact Force from Atmospheric Pressure	Fa	110	N

Mechanical requirements:

(Nominal) Contact Stroke	s	14.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.6-2.0	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.5	m/s
Overshoot During Opening, Max.	do	1	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	1.4-1.6	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	2200	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

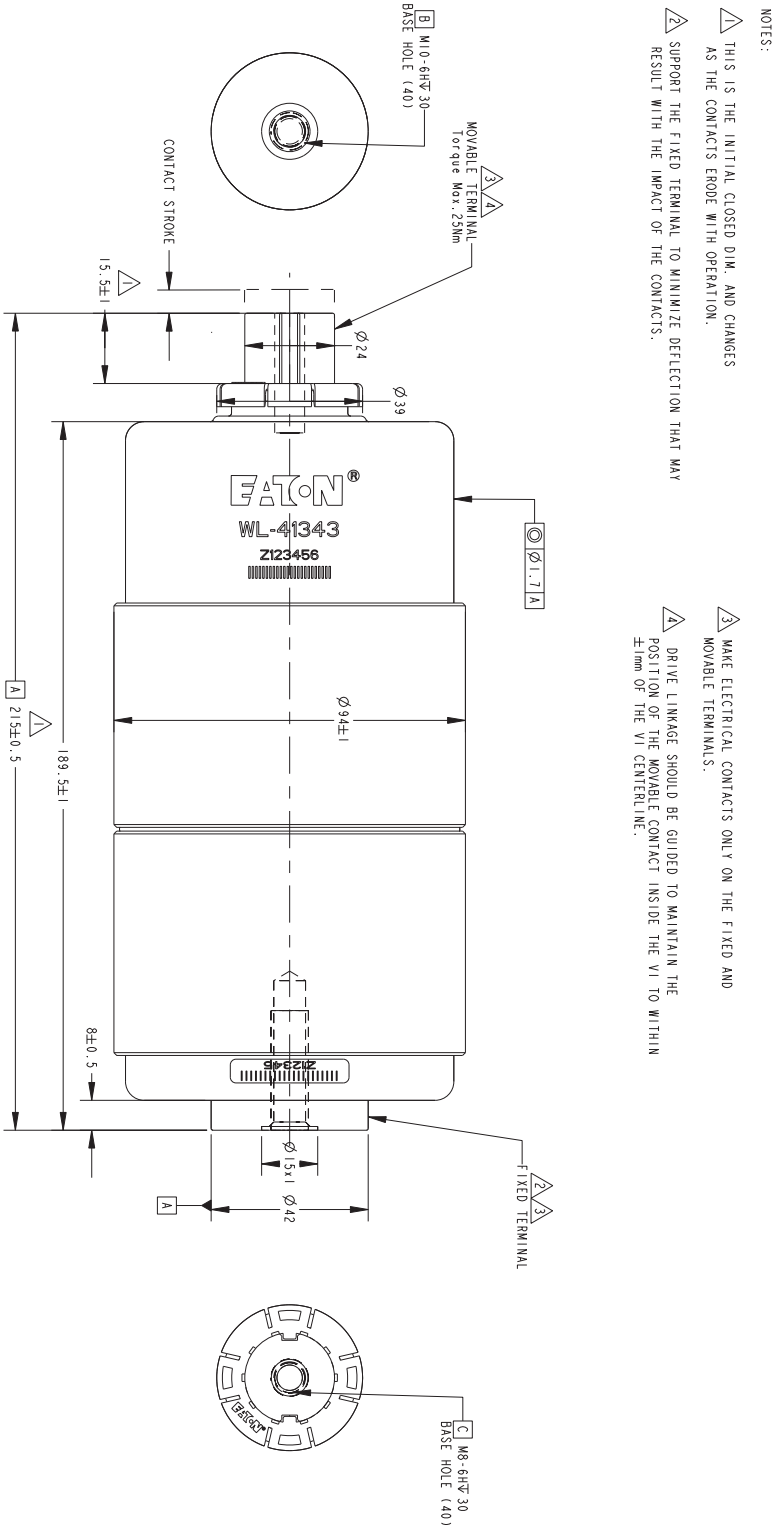
Life

Mechanical Life: @ snom	n	10,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air (not applicable for E-version);
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per IEC 62271-100;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41343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B M10-6H▽30 BASE HOLE (40)
MOVABLE TERMINAL Torque Max.25Nm
CONTACT STROKE
15.5±1
Ø24
Ø39
EATON®
WL-41343
Z123456
Ø1.7 A
Ø94±1
215±0.5
189.5±1
8±0.5
Ø15±1
Ø42
A
FIXED TERMINAL
C M8-6H▽30 BASE HOLE (40)

Interrupter, part #: WL-41346(E)(S)(ES) [8.)]

Application in circuit breakers according to IEC 62271-100 [7.)]

Dimensional drawing: 150-41346(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	36/38	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	70/80	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	170	kV_{peak} [3.)]
Rated Frequency	fr	50/60	Hz
Rated Normal Current	Ir	2500	A_{rms}
Rated Short-Circuit Breaking Current	Isc	25	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	40	%
Rated Short-Time Withstand Current	Ik	25	kA_{rms}
Rated Duration of Short Circuit	tk	3	s
Rated Peak Withstand Current	Ip	65	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	50	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 2200N Added Contact Force	Rc	<13	µΩ
Interrupter Weight	m	3.9	kg
Moving Part Weight	mm	1.47	kg
Contact Force from Atmospheric Pressure	Fa	180	N

Mechanical requirements:

(Nominal) Contact Stroke	s	14.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.6-2.0	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.2	m/s
Overshoot During Opening, Max.	do	1.5	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	1.2-1.6	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	2200	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

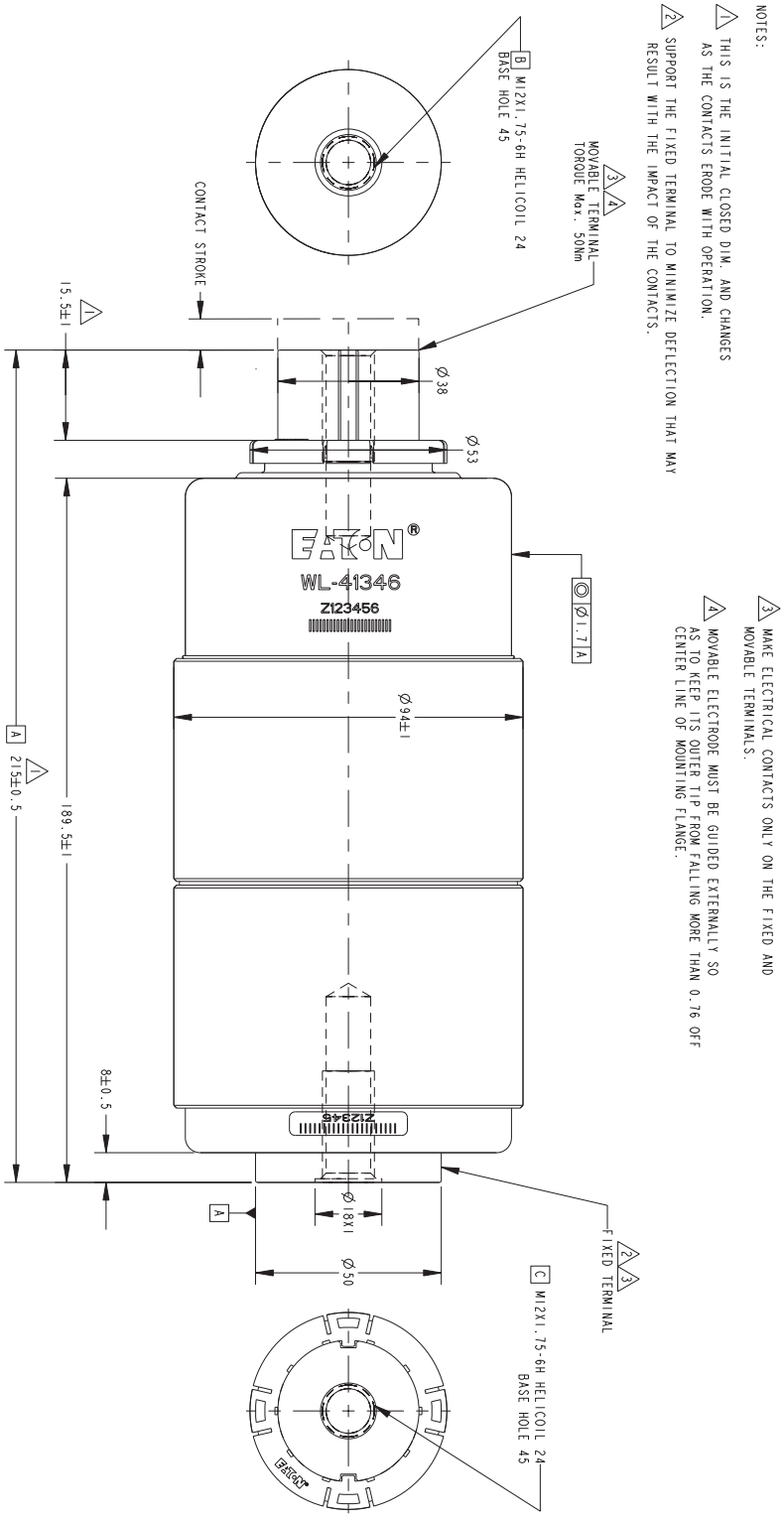
Life

Mechanical Life: @ snom	n	10,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air (not applicable for E-version);
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per IEC 62271-100;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41346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4 MOVABLE ELECTRODE MUST BE GUIDED EXTERNALLY SO AS TO KEEP ITS OUTER TIP FROM FALLING MORE THAN 0.76 OFF CENTER LINE OF MOUNTING FLANGE.
B M12X1.75-6H HELICOIL 24 BASE HOLE 45
3 4 MOVABLE TERMINAL TORQUE Max. 50Nm
CONTACT STROKE
15.5±1
Ø38
Ø53
EATON®
WL-41346
Z123456
Ø.1 A
Ø94±1
A
215±0.5
189.5±1
8±0.5
Z123456
A
Ø18X1
Ø50
2 3 FIXED TERMINAL
C M12X1.75-6H HELICOIL 24 BASE HOLE 45
EATON

Interrupter, part #: WL-41355(E)(S)(ES) [8.)]

Application in circuit breakers according to IEC 62271-100 [7.)]

Dimensional drawing: 150-41355(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	36	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	70	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	170	kV_{peak} [3.)]
Rated Frequency	fr	50/60	Hz
Rated Normal Current	Ir	2000	A_{rms}
Rated Short-Circuit Breaking Current	Isc	31.5	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	40	%
Rated Short-Time Withstand Current	Ik	31.5	kA_{rms}
Rated Duration of Short Circuit	tk	3	s
Rated Peak Withstand Current	Ip	80	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	50	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 3400N Added Contact Force	Rc	<10	μΩ
Interrupter Weight	m	3.7	kg
Moving Part Weight	mm	1.1	kg
Contact Force from Atmospheric Pressure	Fa	210	N

Mechanical requirements:

(Nominal) Contact Stroke	s	14.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.6-2.0	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.2	m/s
Overshoot During Opening, Max.	do	1	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	1.4-1.6	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	3400	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

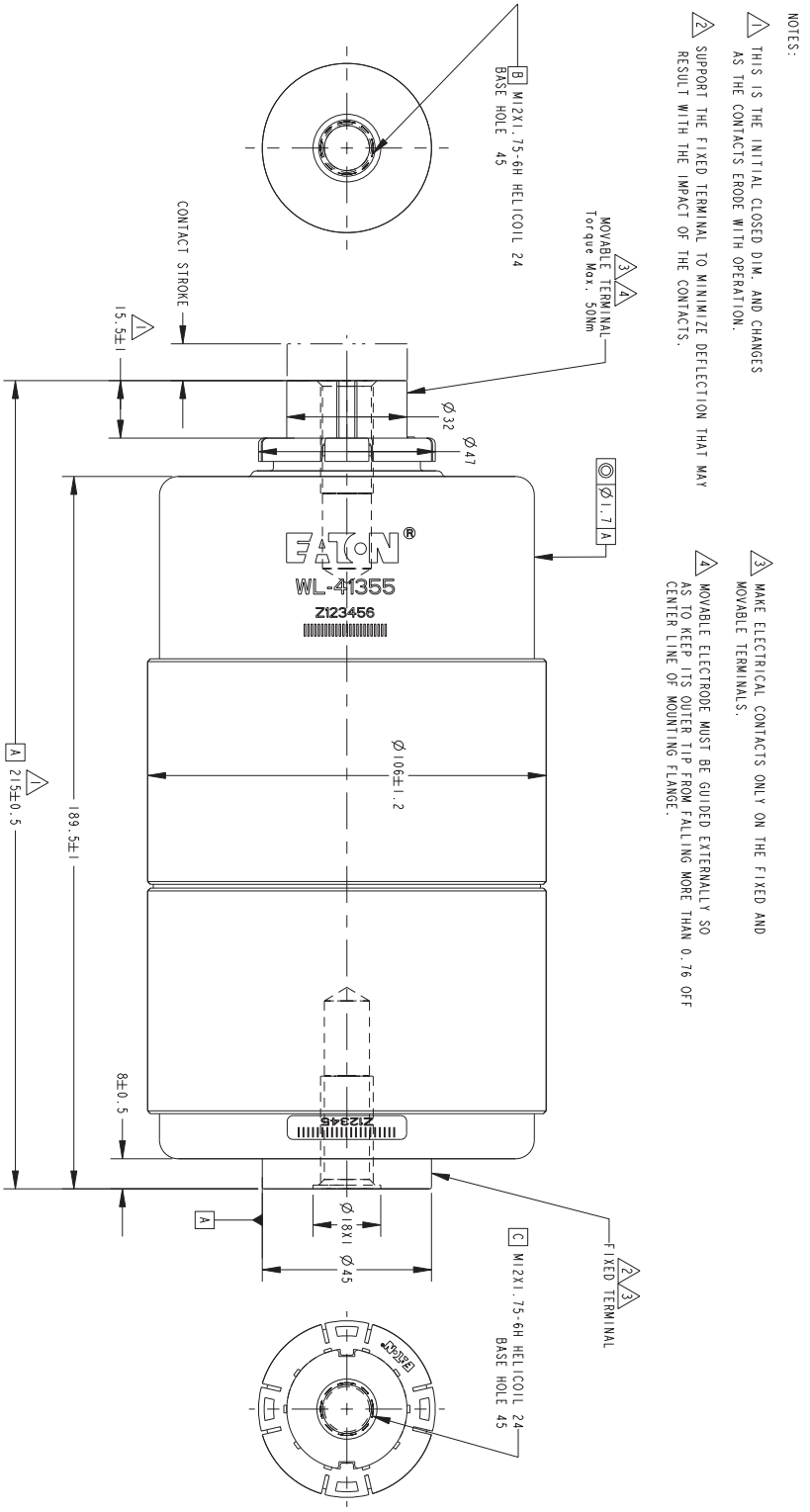
Life

Mechanical Life: @ snom	n	10,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air (not applicable for E-version);
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per IEC 62271-100;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41355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B M12X1.75-6H HELICOIL 24 BASE HOLE 45
MOVABLE TERMINAL Torque Max. 50Nm
CONTACT STROKE
15.5±1
Ø32
Ø47
Ø0.1 A
EATON®
WL-41355
Z123456
Ø106±1.2
215±0.5
189.5±1
8±0.5
Ø18X1
Ø45
A
C M12X1.75-6H HELICOIL 24 BASE HOLE 45
FIXED TERMINAL

Specification	WL41357 IEC VCB 36kV-31.5kA-3150A

Interrupter, part #: WL-41357(E)(S)(ES) [8.)]

Application in circuit breakers according to IEC 62271-100 [7.)]

Dimensional drawing: 150-41357(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	36	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	70	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	170	kV_{peak} [3.)]
Rated Frequency	fr	50/60	Hz
Rated Normal Current	Ir	3150	A_{rms}
Rated Short-Circuit Breaking Current	Isc	31.5	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	40	%
Rated Short-Time Withstand Current	Ik	31.5	kA_{rms}
Rated Duration of Short Circuit	tk	3	s
Rated Peak Withstand Current	Ip	80	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	50	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 3400N Added Contact Force	Rc	<10	μΩ
Interrupter Weight	m	4.8	kg
Moving Part Weight	mm	1.7	kg
Contact Force from Atmospheric Pressure	Fa	245	N

Mechanical requirements:

(Nominal) Contact Stroke	s	14.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.6-2.0	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.2	m/s
Overshoot During Opening, Max.	do	1	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	1.4-1.6	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	3400	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

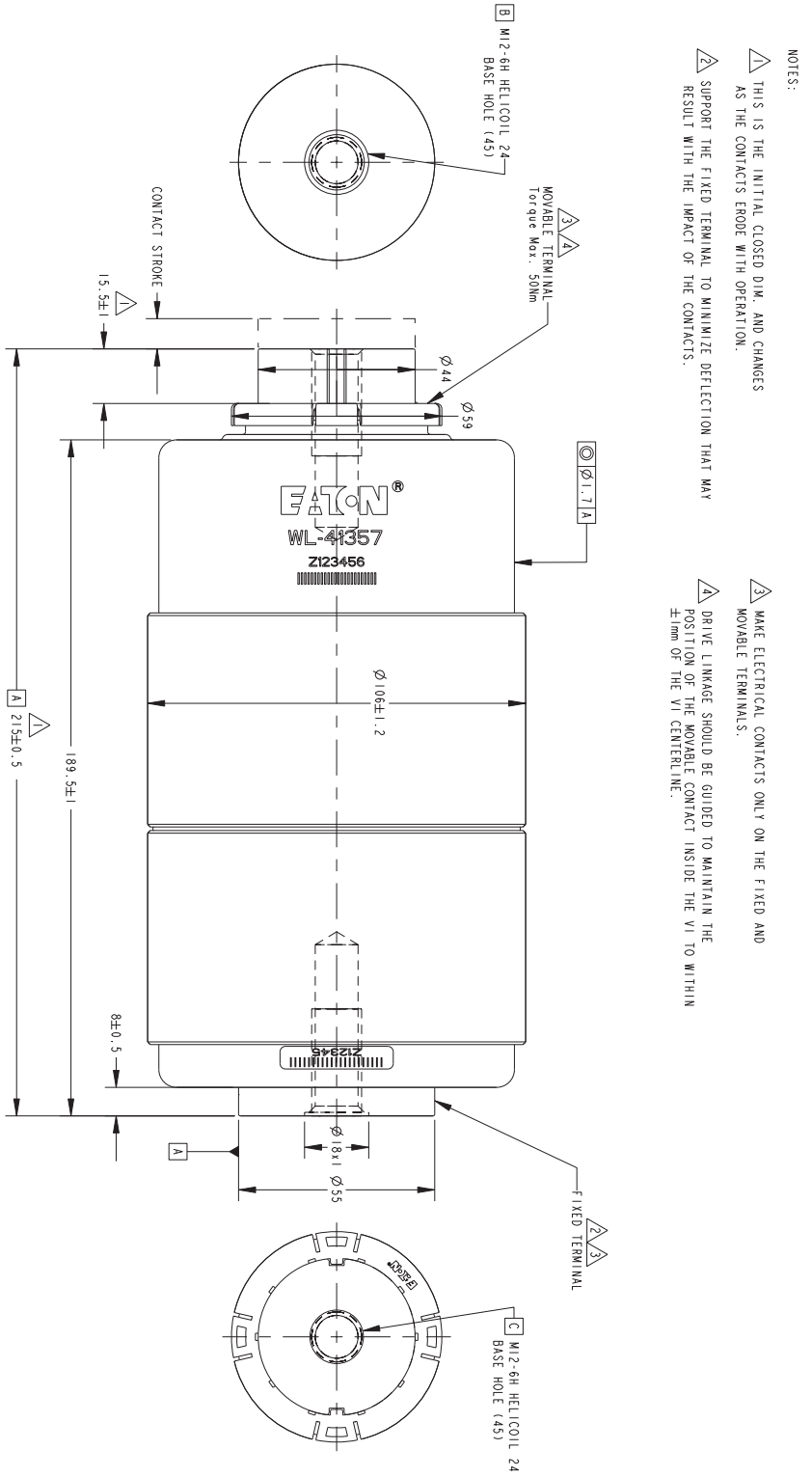
Life

Mechanical Life: @ snom	n	10,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air (not applicable for E-version);
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per IEC 62271-100;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41357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MOVABLE TERMINAL Torque Max. 50Nm
CONTACT STROKE
15.5±1
Ø44
Ø59
Ø0.7 A
EATON®
WL-41357
Z123456
Ø106±1.2
215±0.5
189.5±1
8±0.5
Ø18±1
Ø55
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41365 (E)(S)(ES) [8.)]

Application in circuit-breakers according to IEC 62271-100

Dimensional drawing: 150-41365 (E)(S)(ES)

Electrical Ratings [1., 2., 3.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	36	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage[4.)]	Ud	70	kV_{rms}
Rated Frequency	fr	50 / 60	Hz
Rated Impulse Withstand Voltage[4.)]	Up	170	kV_{peak}
Rated Normal Current	Ir	2000	A_{rms}
Contact Resistance: @ 4800N added contact force	Rc	<10	µΩ
Rated Short-Time withstand current	Ik	40	kA_{rms}
Rated peak withstand current	Ip	104	kA_{peak}
Rated Duration of Short-Time current	tk	3	s
Rated short-circuit breaking current:			
Rated short-circuit current	Isc	40	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	104	kA_{peak}
Rated cable-charging breaking current [5.)]	Ic	50	A_{rms}

Mechanical data [6.)]:

Interrupter Weight, approx.	minterrupter	4.5	kg
Moving Part Weight, approx.	mmovable-part	1.2	kg
Contact Force from Atmospheric Pressure	Fa	145	N

Mechanical requirements:

Nominal Contact Stroke	snom	14.5±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.6-2.0	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	1.6-1.8	m/s
Contact Bounce Duration, Max.	tbounce	2	ms
Added Contact Force Required min: @ Ip	Flp	4800	N

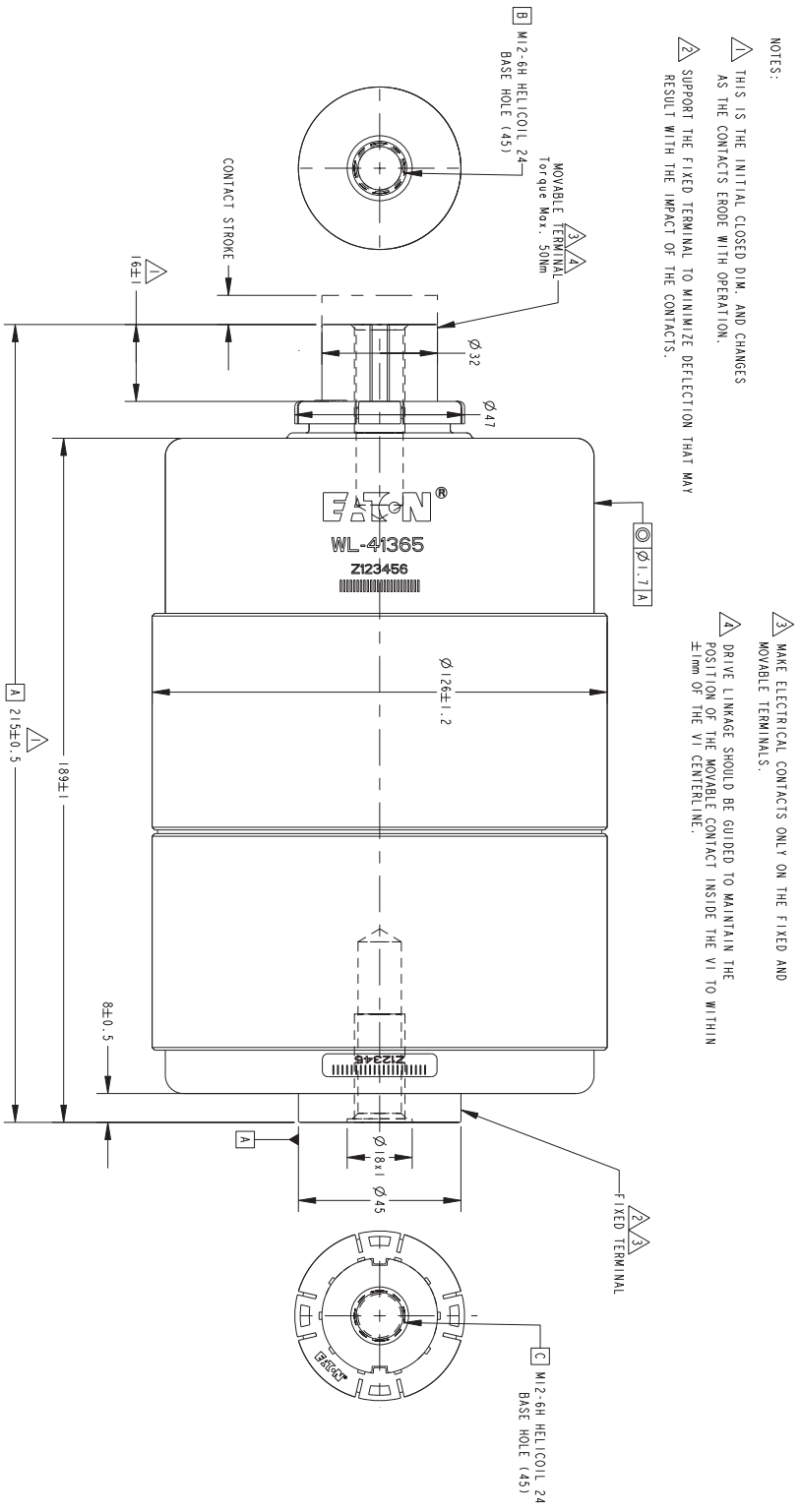
Life

Mechanical Life: @ snom	nmech.	10,000	operations
Contact Erosion Limit	derosion	3	mm
Storage Life		20	years [7.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) Interrupter intended for Class S1 Circuit-Breakers for cable systems;
4.) External insulation required for application in atmospheric air;
5.) Cable-charging switching capability Class C2;
6.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
7.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
8.) E, S, ES is optional. E-External silicon sleeve applied, S-Silver plating on both electrodes end surface.

150-41365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B M12-6H HELICOIL 24 BASE HOLE (45)
MOVABLE TERMINAL Torque Max. 50Nm
CONTACT STROKE
16±1
Ø32
Ø47
EATON®
WL-41365
Z123456
Ø1.7 A
Ø126±1.2
A 215±0.5
189±1
8±0.5
Ø18x1
Ø45
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41367 (E)(S)(ES) [8.)]

Application in circuit breakers according to IEC 62271-100

Dimensional drawing: 150-41367 (E)(S)(ES)

Electrical Ratings [1., 2., 3.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	36	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage[4.)]	Ud	70	kV_{rms}
Rated Frequency	fr	50 / 60	Hz
Rated Impulse Withstand Voltage[4.)]	Up	170	kV_{peak}
Rated Normal Current	Ir	3150	A_{rms}
Contact Resistance: @ 4800N added contact force	Rc	<10	µΩ
Rated Short-Time withstand current	Ik	40	kA_{rms}
Rated peak withstand current	Ip	104	kA_{peak}
Rated Duration of Short-Time current	tk	3	s
Rated short-circuit breaking current:			
Rated short-circuit current	Isc	40	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	104	kA_{peak}
Rated cable-charging breaking current [5.)]	Ic	50	A_{rms}

Mechanical data [6.)]:

Interrupter Weight, approx	minterrupter	5.7	kg
Moving Part Weight, approx	mmovable-part	1.8	kg
Contact Force from Atmospheric Pressure	Fa	245	N

Mechanical requirements:

Nominal Contact Stroke	snom	14.5±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.6-2.0	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	1.6-1.8	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required min: @ Ip	Flp	4800	N

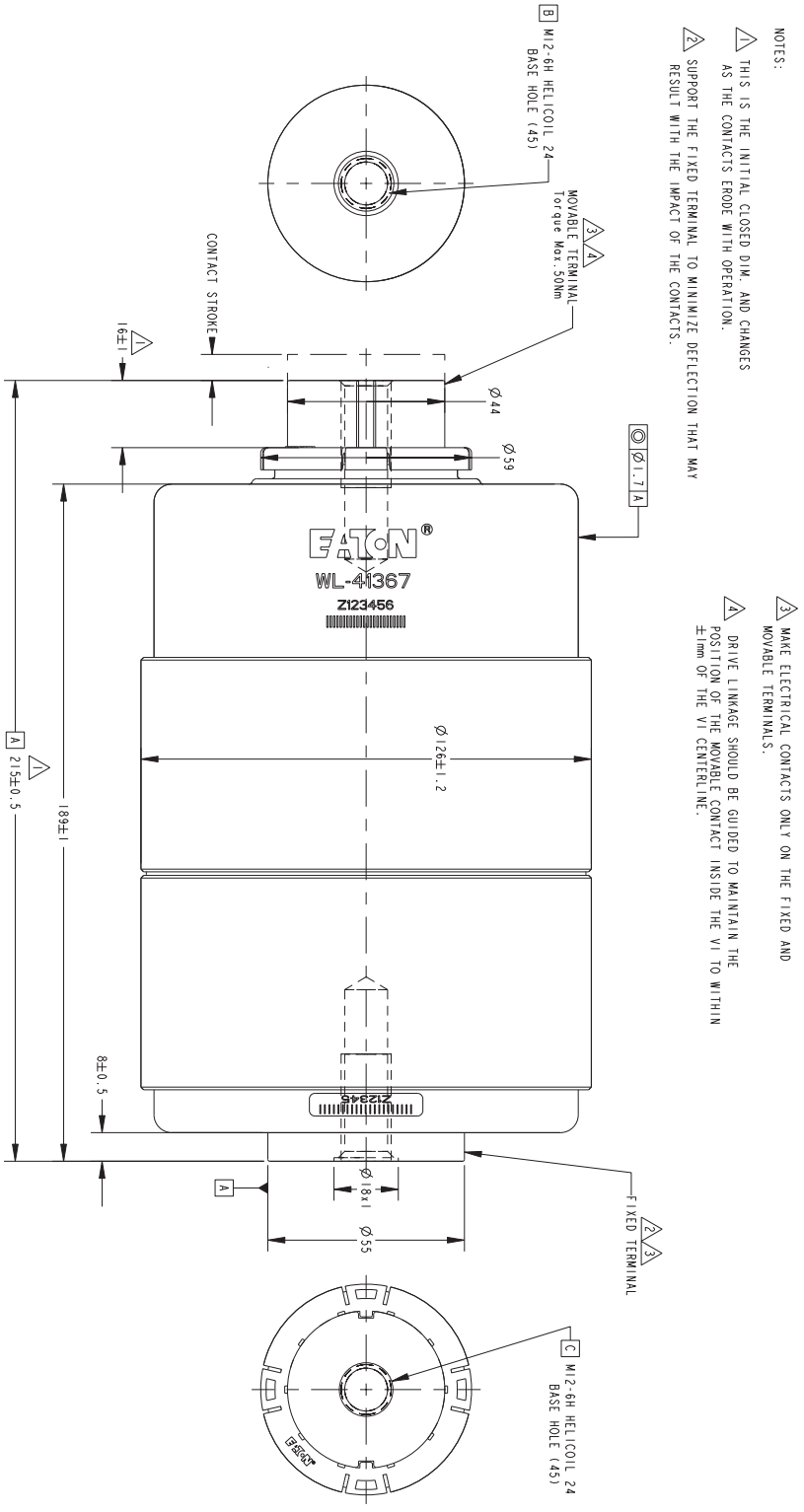
Life

Mechanical Life: @ snom	nmech.	10,000	operations
Contact Erosion Limit	derosion	3	mm
Storage Life		20	years [7.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) Interrupter intended for Class S1 Circuit-Breakers for cable systems;
4.) External insulation required for application in atmospheric air;
5.) Cable-charging switching capability Class C2;
6.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
7.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
8.) E, S, ES is optional. E-External silicon sleeve applied, S-Silver plating on both electrodes end surface.

150-41367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MOVABLE TERMINAL Torque Max.50Nm
CONTACT STROKE
16±1
Ø44
Ø59
Ø1.7 A
EATON®
WL-41367
Z123456
Ø126±1.2
215±0.5
189±1
8±0.5
Ø18±1
Ø55
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41701(E)(S)(ES) [8.)]

Application in circuit breakers according to GB1984 or DL402 [7.)]

Dimensional drawing: 150-41701(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	40.5	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	118	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	215	kV_{peak} [3.)]
Rated Frequency	fr	50	Hz
Rated Normal Current	Ir	1600	A_{rms}
Rated Short-Circuit Breaking Current	Isc	25	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	50	%
Rated Short-Time Withstand Current	Ik	25	kA_{rms}
Rated Duration of Short Circuit	tk	4	s
Rated Peak Withstand Current	Ip	63	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	50	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 2200N Added Contact Force	Rc	<15	µΩ
Interrupter Weight	m	5	kg
Moving Part Weight	mm	1.4	kg
Contact Force from Atmospheric Pressure	Fa	150	N

Mechanical requirements:

(Nominal) Contact Stroke	s	19±1	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 50% of nominal stroke	vo	1.6-2.2	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.4	m/s
Overshoot During Opening, Max.	do	1.5	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	1.4-1.8	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	2200	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

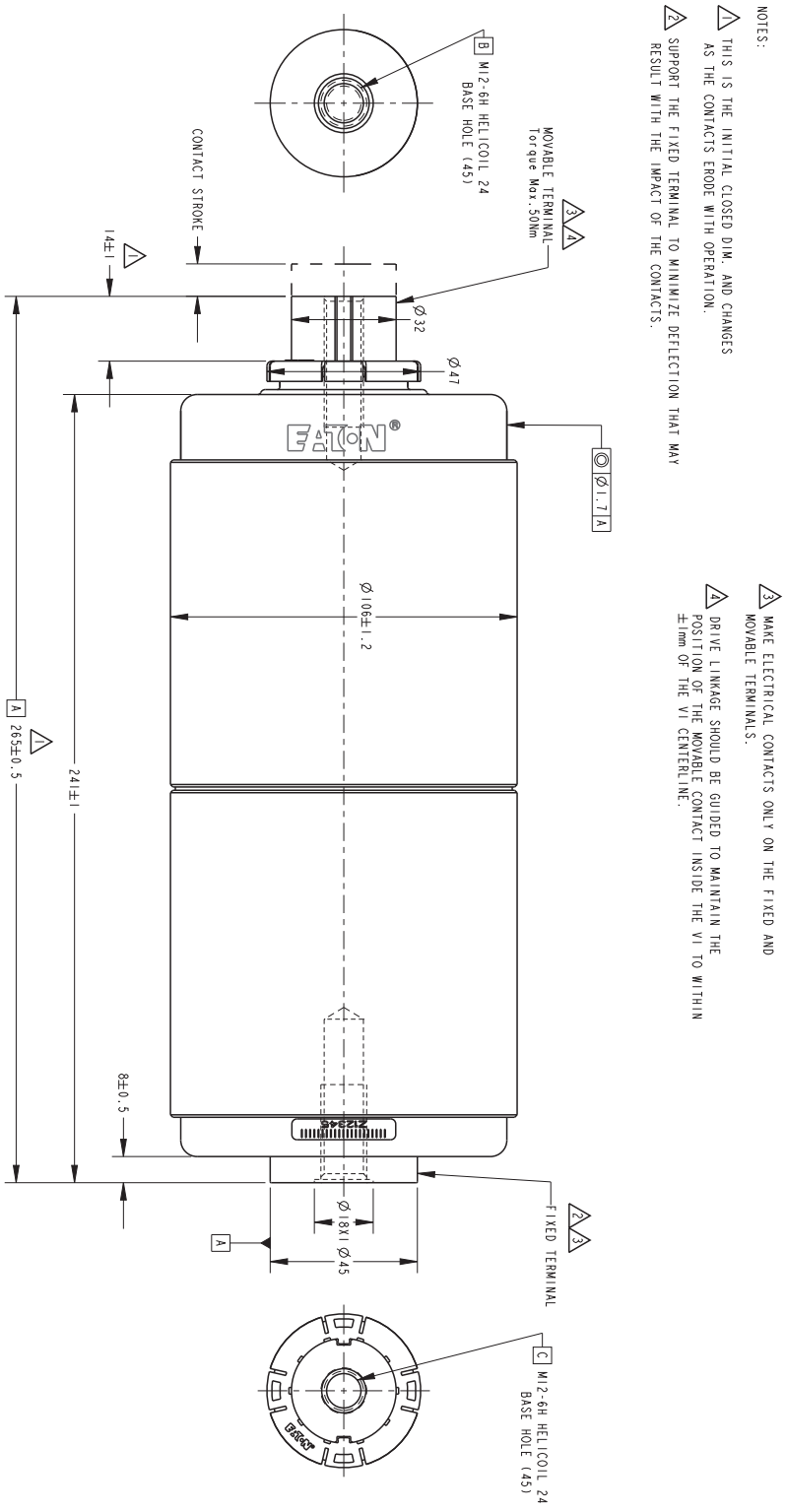
Life

Mechanical Life: @ snom	n	10,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air;
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per GB-1984;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41701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MOVABLE TERMINAL Torque Max. 50Nm
CONTACT STROKE
14±1
Ø32
Ø47
Ø1.7 A
Ø106±1.2
A 265±0.5
241±1
8±0.5
Ø18X1
Ø45
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41702(E)(S)(ES) [8.)]

Application in circuit breakers according to GB1984 or DL402 [7.)]

Dimensional drawing: 150-41702(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	40.5	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	118	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	215	kV_{peak} [3.)]
Rated Frequency	fr	50	Hz
Rated Normal Current	Ir	2000	A_{rms}
Rated Short-Circuit Breaking Current	Isc	25	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	50	%
Rated Short-Time Withstand Current	Ik	25	kA_{rms}
Rated Duration of Short Circuit	tk	4	s
Rated Peak Withstand Current	Ip	63	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	50	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 2200N Added Contact Force	Rc	<12	μΩ
Interrupter Weight	m	5	kg
Moving Part Weight	mm	1.4	kg
Contact Force from Atmospheric Pressure	Fa	150	N

Mechanical requirements:

(Nominal) Contact Stroke	s	19±1	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 50% of nominal stroke	vo	1.6-2.2	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.4	m/s
Overshoot During Opening, Max.	do	1.5	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	1.4-1.8	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	2200	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

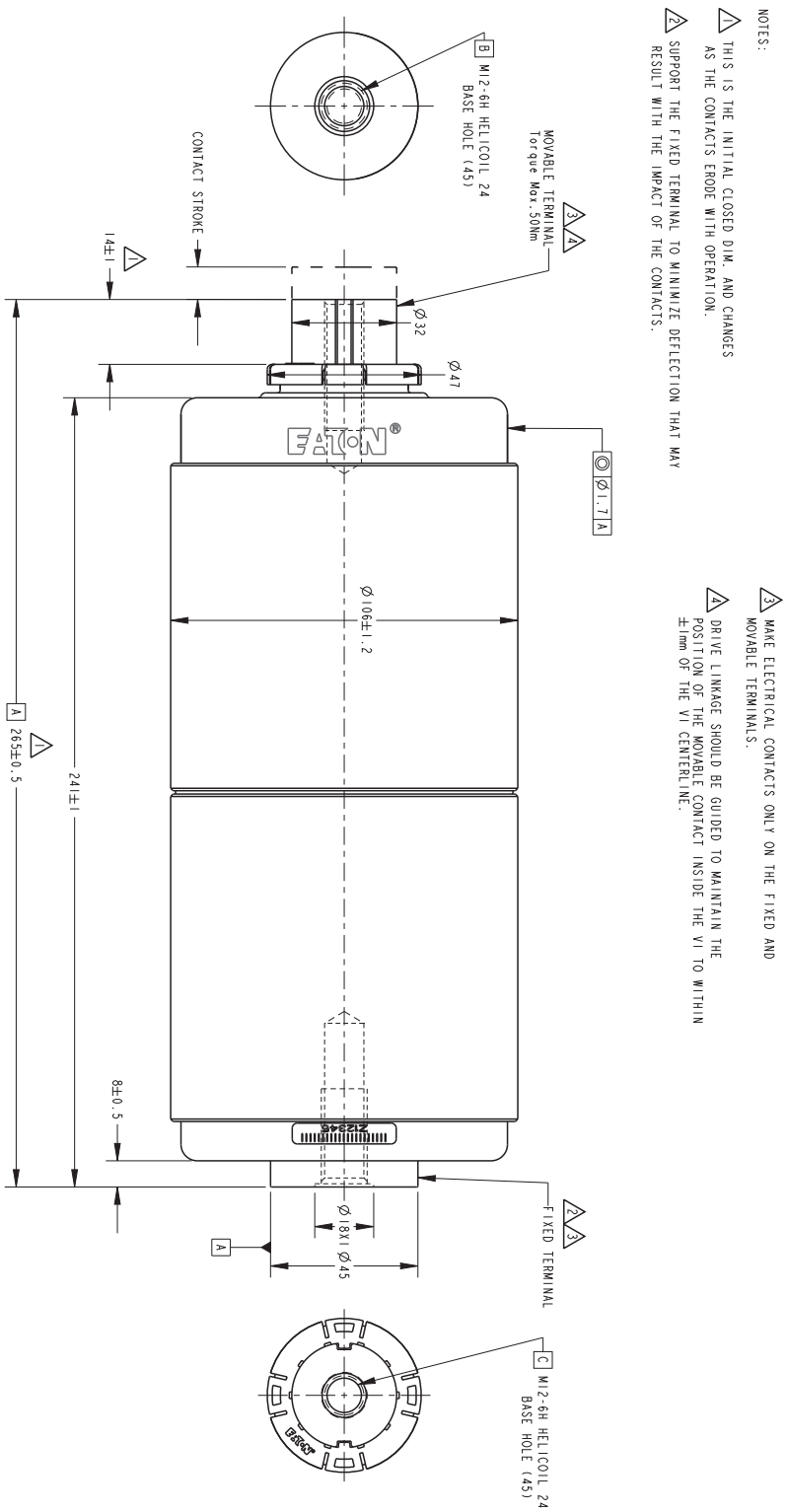
Life

Mechanical Life: @ snom	n	10,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air;
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per GB-1984;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41702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MOVABLE TERMINAL Torque Max.50Nm
CONTACT STROKE
14±1
Ø32
Ø47
Ø1.7 A
Ø106±1.2
A 265±0.5
241±1
8±0.5
Ø18X1
Ø45
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41703(E)(S)(ES) [8.)]

Application in circuit breakers according to GB1984 or DL402 [7.)]

Dimensional drawing: 150-41703(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	40.5	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	118	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	215	kV_{peak} [3.)]
Rated Frequency	fr	50	Hz
Rated Normal Current	Ir	1600	A_{rms}
Rated Short-Circuit Breaking Current	Isc	31.5	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	50	%
Rated Short-Time Withstand Current	Ik	31.5	kA_{rms}
Rated Duration of Short Circuit	tk	4	s
Rated Peak Withstand Current	Ip	80	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	50	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 3300N Added Contact Force	Rc	<15	μΩ
Interrupter Weight	m	5.5	kg
Moving Part Weight	mm	1.5	kg
Contact Force from Atmospheric Pressure	Fa	150	N

Mechanical requirements:

(Nominal) Contact Stroke	s	19±1	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 50% of nominal stroke	vo	1.6-2.2	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.4	m/s
Overshoot During Opening, Max.	do	1.5	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	1.4-1.8	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	3300	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

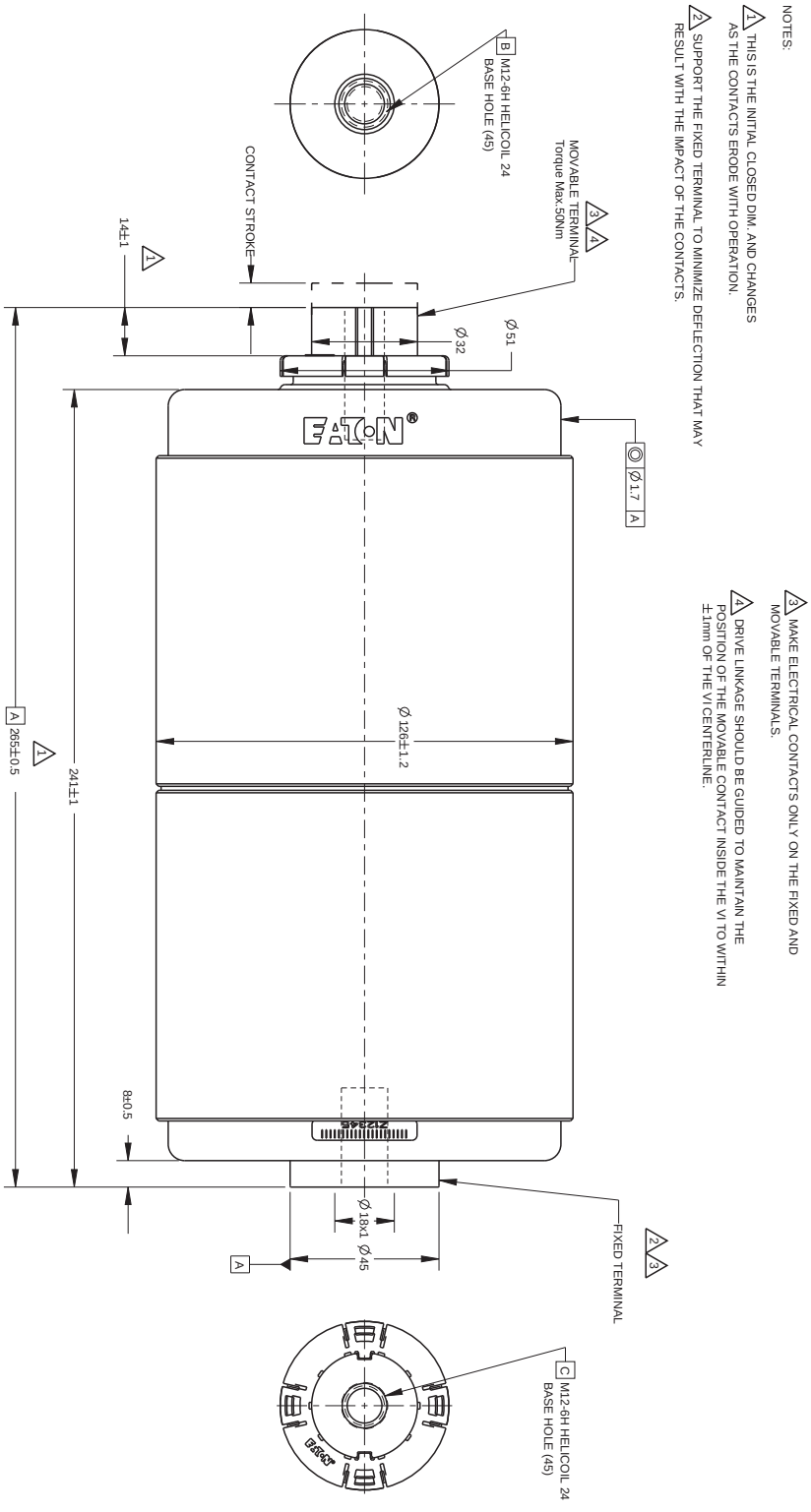
Life

Mechanical Life: @ snom	n	10,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air;
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per GB-1984;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41703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B M12-6H HELICOIL 24 BASE HOLE (45)
MOVABLE TERMINAL Torque Max.50Nm
CONTACT STROKE
14±1
Ø 32
Ø 51
Ø 1.7 A
Ø 126±1.2
A 265±0.5
241±1
8±0.5
Ø 18x1
Ø 45
A
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41704(E)(S)(ES) [8.)]

Application in circuit breakers according to GB1984 or DL402 [7.)]

Dimensional drawing: 150-41704(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	40.5	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	118	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	215	kV_{peak} [3.)]
Rated Frequency	fr	50	Hz
Rated Normal Current	Ir	2000	A_{rms}
Rated Short-Circuit Breaking Current	Isc	31.5	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	50	%
Rated Short-Time Withstand Current	Ik	31.5	kA_{rms}
Rated Duration of Short Circuit	tk	4	s
Rated Peak Withstand Current	Ip	80	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	50	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 3300N Added Contact Force	Rc	<12	μΩ
Interrupter Weight	m	5.5	kg
Moving Part Weight	mm	1.5	kg
Contact Force from Atmospheric Pressure	Fa	150	N

Mechanical requirements:

(Nominal) Contact Stroke	s	19±1	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 50% of nominal stroke	vo	1.6-2.2	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.4	m/s
Overshoot During Opening, Max.	do	1.5	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	1.4-1.8	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	3300	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

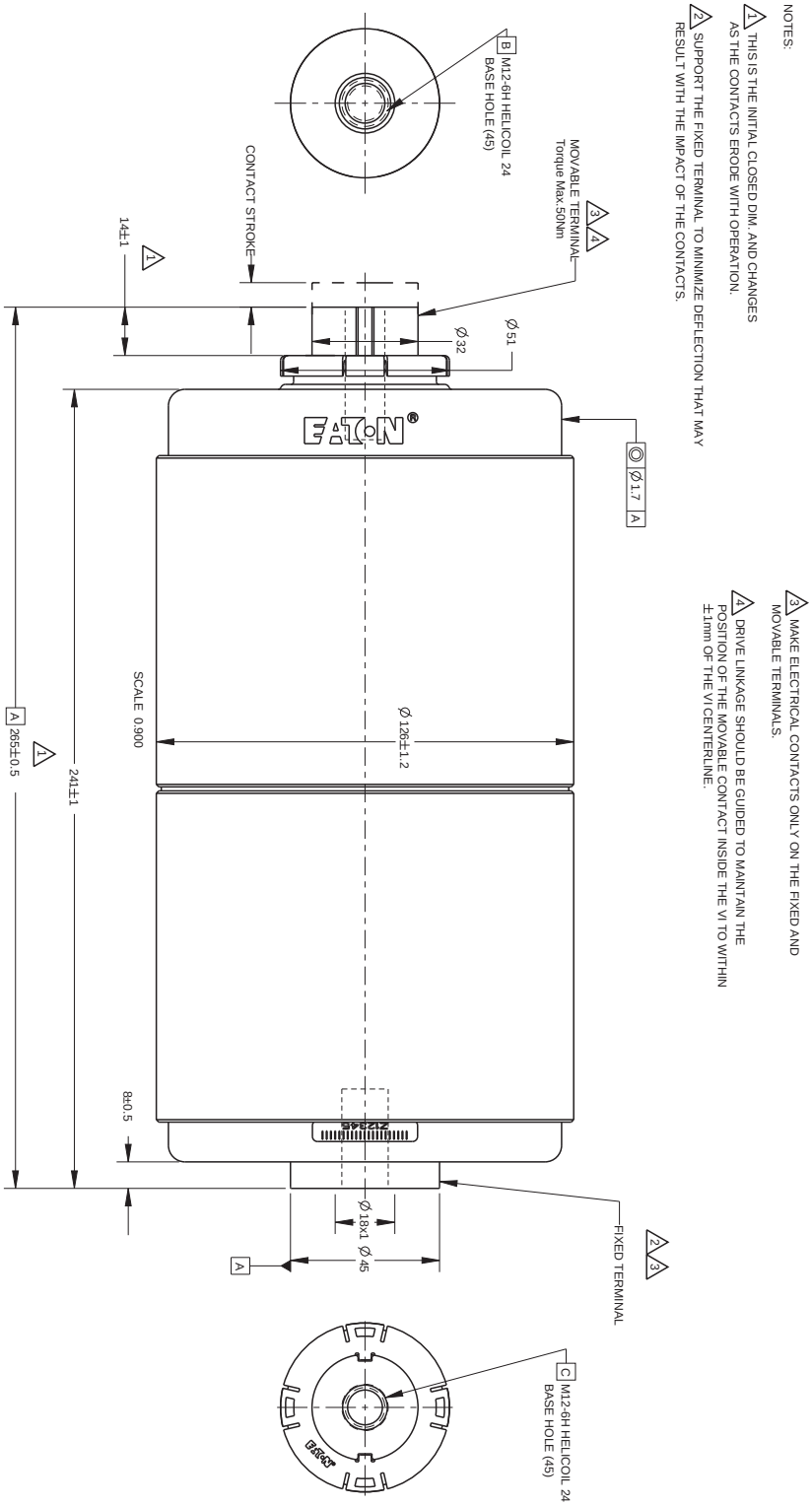
Life

Mechanical Life: @ snom	n	10,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air;
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per GB-1984;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41704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MOVABLE TERMINAL Torque Max. 50Nm
CONTACT STROKE
14±1
Ø 32
Ø 51
Ø1.7 A
SCALE 0.900
Ø 126±1.2
265±0.5
241±1
8±0.5
Ø 18x1
Ø 45
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41705(E)(S)(ES) [8.)]

Application in circuit breakers according to GB1984 or DL402 [7.)]

Dimensional drawing: 150-41705(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	40.5	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	118	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	215	kV_{peak} [3.)]
Rated Frequency	fr	50	Hz
Rated Normal Current	Ir	2500	A_{rms}
Rated Short-Circuit Breaking Current	Isc	31.5	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	50	%
Rated Short-Time Withstand Current	Ik	31.5	kA_{rms}
Rated Duration of Short Circuit	tk	4	s
Rated Peak Withstand Current	Ip	80	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	50	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 3300N Added Contact Force	Rc	<10	μΩ
Interrupter Weight	m	6.8	kg
Moving Part Weight	mm	2.3	kg
Contact Force from Atmospheric Pressure	Fa	240	N

Mechanical requirements:

(Nominal) Contact Stroke	s	19±1	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 50% of nominal stroke	vo	1.6-2.2	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.4	m/s
Overshoot During Opening, Max.	do	1.5	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	1.4-1.8	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	3300	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

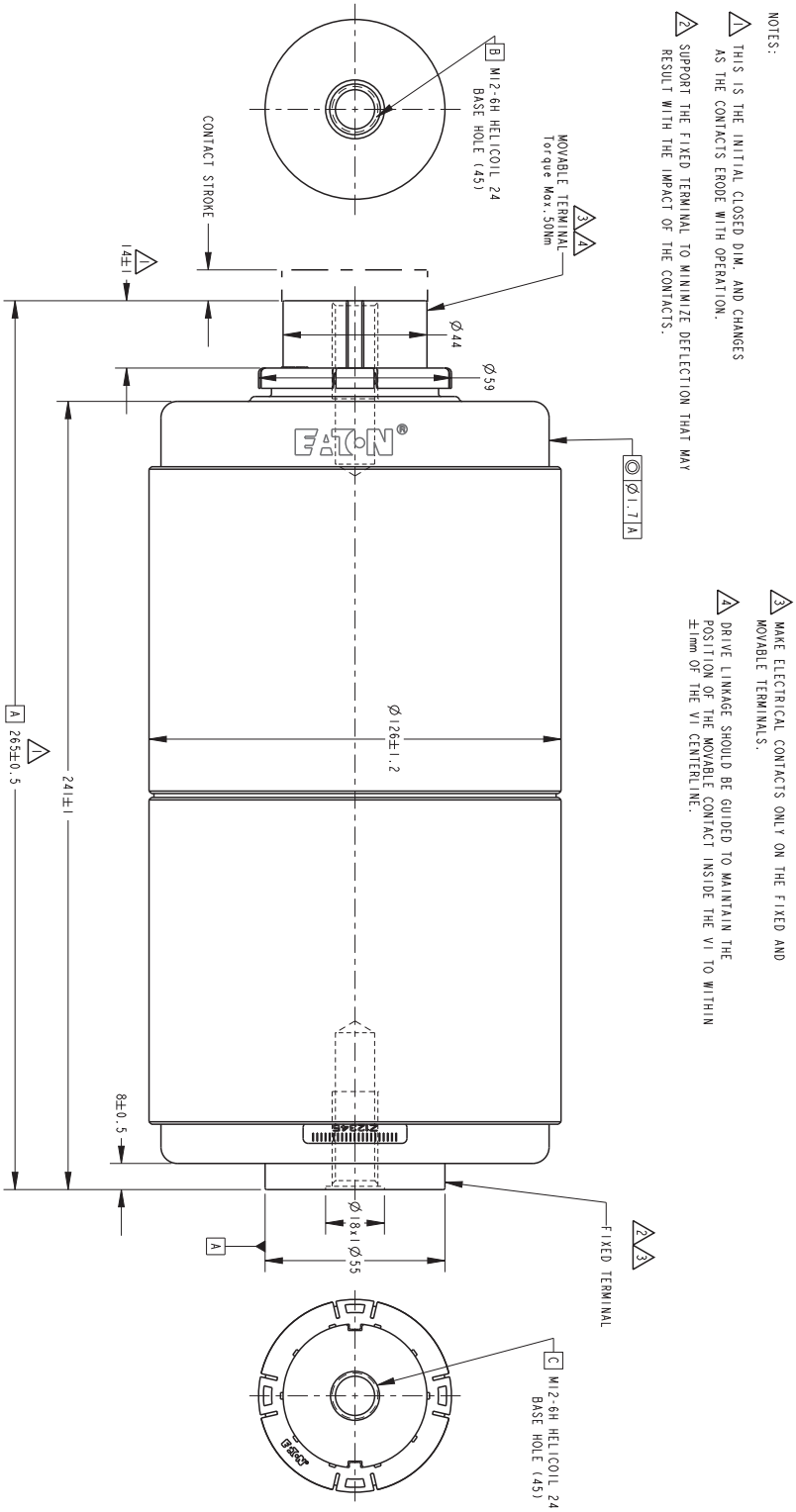
Life

Mechanical Life: @ snom	n	10,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air;
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per GB-1984;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41705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3 MAKE ELECTRICAL CONTACTS ONLY ON THE FIXED AND MOVABLE TERMINALS.
4 DRIVE LINKAGE SHOULD BE GUIDED TO MAINTAIN THE POSITION OF THE MOVABLE CONTACT INSIDE THE VI TO WITHIN ±1mm OF THE VI CENTERLINE.
B M12-6H HELICOIL 24 BASE HOLE (45)
CONTACT STROKE
14±1
MOVABLE TERMINAL Torque Max. 50Nm
Ø44
Ø59
Ø1.7 A
Ø126±1.2
265±0.5
241±1
8±0.5
Ø18x1
Ø55
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41706(E)(S)(ES) [8.)]

Application in circuit breakers according to GB1984 or DL402 [7.)]

Dimensional drawing: 150-41706(E)(S)(ES)

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	40.5	kV_{rms}
Rated Power-Frequency Withstand Voltage	Ud	118	kV_{rms} [3.)]
Rated Lighting Impulse Withstand Voltage	Up	215	kV_{peak} [3.)]
Rated Frequency	fr	50	Hz
Rated Normal Current	Ir	3150	A_{rms}
Rated Short-Circuit Breaking Current	Isc	31.5	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	50	%
Rated Short-Time Withstand Current	Ik	31.5	kA_{rms}
Rated Duration of Short Circuit	tk	4	s
Rated Peak Withstand Current	Ip	80	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	50	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 3300N Added Contact Force	Rc	<10	μΩ
Interrupter Weight	m	6.8	kg
Moving Part Weight	mm	2.3	kg
Contact Force from Atmospheric Pressure	Fa	240	N

Mechanical requirements:

(Nominal) Contact Stroke	s	19±1	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 50% of nominal stroke	vo	1.6-2.2	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.4	m/s
Overshoot During Opening, Max.	do	1.5	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	1.4-1.8	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	3300	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

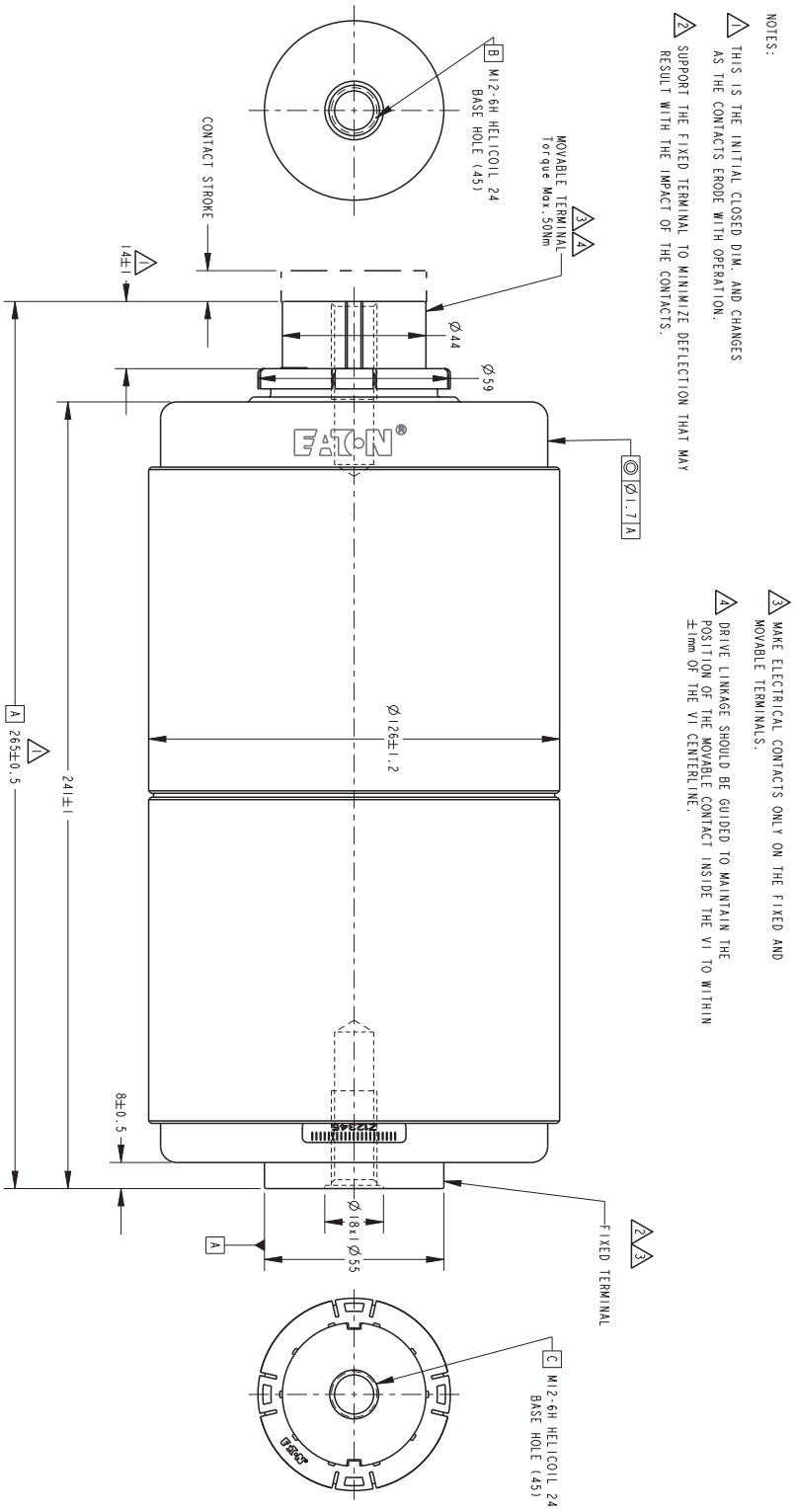
Life

Mechanical Life: @ snom	n	10,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmospheric air;
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (mm) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per GB-1984;
8.) E-version: Silicon sleeve applied; S-version: Silver plating on both electrodes end surface.

150-41706


NOTES:
1. THIS IS THE INITIAL CLOSED DIM. AND CHANGES AS THE CONTACTS ERODE WITH OPERATION.
2. SUPPORT THE FIXED TERMINAL TO MINIMIZE DEFLECTION THAT MAY RESULT WITH THE IMPACT OF THE CONTACTS.
3. MAKE ELECTRICAL CONTACTS ONLY ON THE FIXED AND MOVABLE TERMINALS.
4. DRIVE LINKAGE SHOULD BE GUIDED TO MAINTAIN THE POSITION OF THE MOVABLE CONTACT INSIDE THE VI TO WITHIN ±1mm OF THE VI CENTERLINE.
B M12-6H HELICOIL 24 BASE HOLE (45)
MOVABLE TERMINAL Torque Max. 50Nm
CONTACT STROKE
14±1
Ø44
Ø59
Ø1.7 A
Ø126±1.2
265±0.5
241±1
8±0.5
Ø18x1
Ø55
A
FIXED TERMINAL
C M12-6H HELICOIL 24 BASE HOLE (45)

Interrupter, part #: WL-41907

Application in circuit-breakers according to IEC 62271-100 [6.]

Dimensional drawing: 150-41907

Electrical Ratings [1., 2.], 3-Phase Symmetrical Rating

Rated Voltage	Ur	12/17.5	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	28/38	kV_{rms} [3.]
Rated Frequency	fr	50/60	Hz
Rated Impulse Withstand Voltage	Up	75/95	kV_{peak} [3.]
Rated Normal Current	Ir	630	A_{rms}
Contact Resistance: @1600N added contact force	Rc	<20	µΩ
Rated Short-Time withstand current	Ik	20	kA_{rms}
Rated peak withstand current	Ip	50	kA_{peak}
Rated Duration of Short-Time current	tk	3	s
Rated short-circuit breaking current:			
Rated short-circuit current	Isc	20	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	50	kA_{peak}
Rated cable-charging breaking current	Ic	31.5	A_{rms}

Mechanical data [4.]:

Interrupter Weight, approx	minterrupter	1.3	kg
Moving Part Weight, approx	mmovable-part	0.3	kg
Contact Force from Atmospheric Pressure	Fa	75	N

Mechanical requirements:

Nominal Contact Stroke	snom	9.0±1.0	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.0-1.3	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.7-1.1	m/s
Contact Bounce Duration, Max	tbounce	1	ms
Added Contact Force Required min: @ Ip	Flp	1600	N

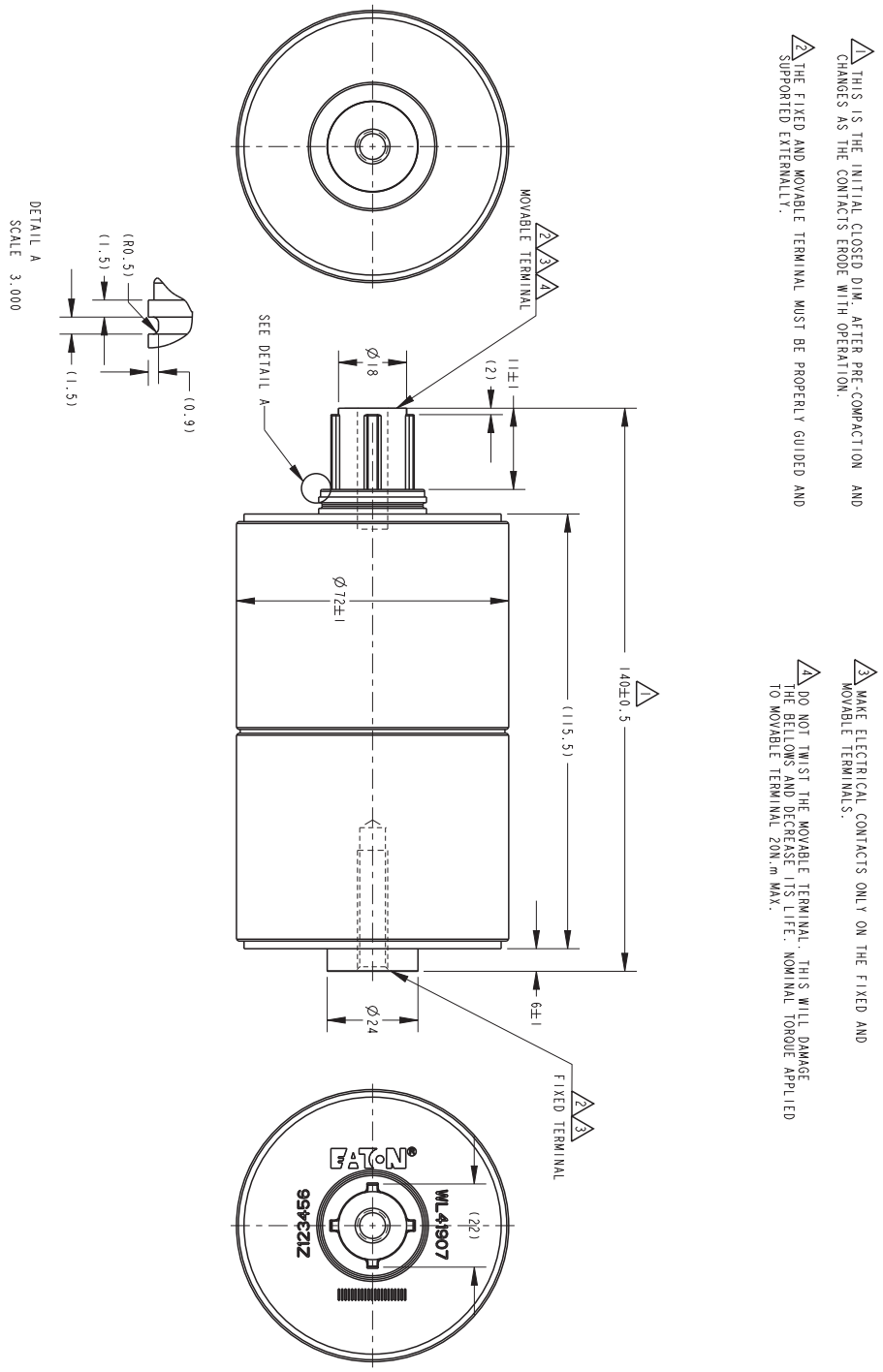
Life

Mechanical Life: @ snom	nmech.	30,000	operations
Contact Erosion Limit	derosion	3	mm
Storage Life		20	years [5.]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation is required for application in air;
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
6.) Meets or exceeds the electrical endurance requirements of a class E2 for autoreclosing duty per IEC 62271-100

150-41907


1 THIS IS THE INITIAL CLOSED DIM. AFTER PRE-COMPACTION AND CHANGES AS THE CONTACTS ERODE WITH OPERATION.
2 THE FIXED AND MOVABLE TERMINAL MUST BE PROPERLY GUIDED AND SUPPORTED EXTERNALLY.
3 MAKE ELECTRICAL CONTACTS ONLY ON THE FIXED AND MOVABLE TERMINALS.
4 DO NOT TWIST THE MOVABLE TERMINAL. THIS WILL DAMAGE THE BELLOWS AND DECREASE ITS LIFE. NOMINAL TORQUE APPLIED TO MOVABLE TERMINAL 20N.m MAX.
DETAIL A
SCALE 3.000
(R0.5)
(1.5)
(1.5)
(0.9)
SEE DETAIL A
MOVABLE TERMINAL
2 3 4
11±1
(2)
Ø18
Ø72±1
140±0.5
1
(115.5)
6±1
Ø24
FIXED TERMINAL
2 3
EATON
Z123456
WL49807
(22)

Interrupter, part #: WL-36193

Application in circuit breakers according to IEC 62271-100 [7.)]

Dimensional drawing: 150-36193

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	17.5	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	38	kV_{rms}
Rated Frequency	fr	50/60	Hz
Rated Impulse Withstand Voltage	Up	95	kV_{peak} [3.)]
Rated Normal Current	Ir	630	A_{rms}
Rated Short-Circuit Breaking Current	Isc	21	kA_{rms}
DC-component of the Rated Short-Circuit Breaking Current	%dc	40	%
Rated Short-Time Withstand Current	Ik	21	kA_{rms}
Rated Duration of Short Circuit	tk	3	s
Rated Peak Withstand Current	Ip	54	kA_{peak}
Rated Cable-Charging Interrupting Current	Ic	31.5	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 1800N added contact force	Rc	<20	µΩ
Interrupter Weight	m	1.4	kg
Moving Part Weight	mm	0.3	kg
Contact Force from Atmospheric Pressure	Fa	75	N

Mechanical requirements:

(Nominal) Contact Stroke	s	8.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 50% of nominal stroke	vo	1.0-1.3	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.0	m/s
Overshoot During Opening, Max.	do	1	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	0.8-1.1	m/s
Contact Bounce Duration, Max.	tb	2	ms
Added Contact Force Required : @ Ip	Flp	1800	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

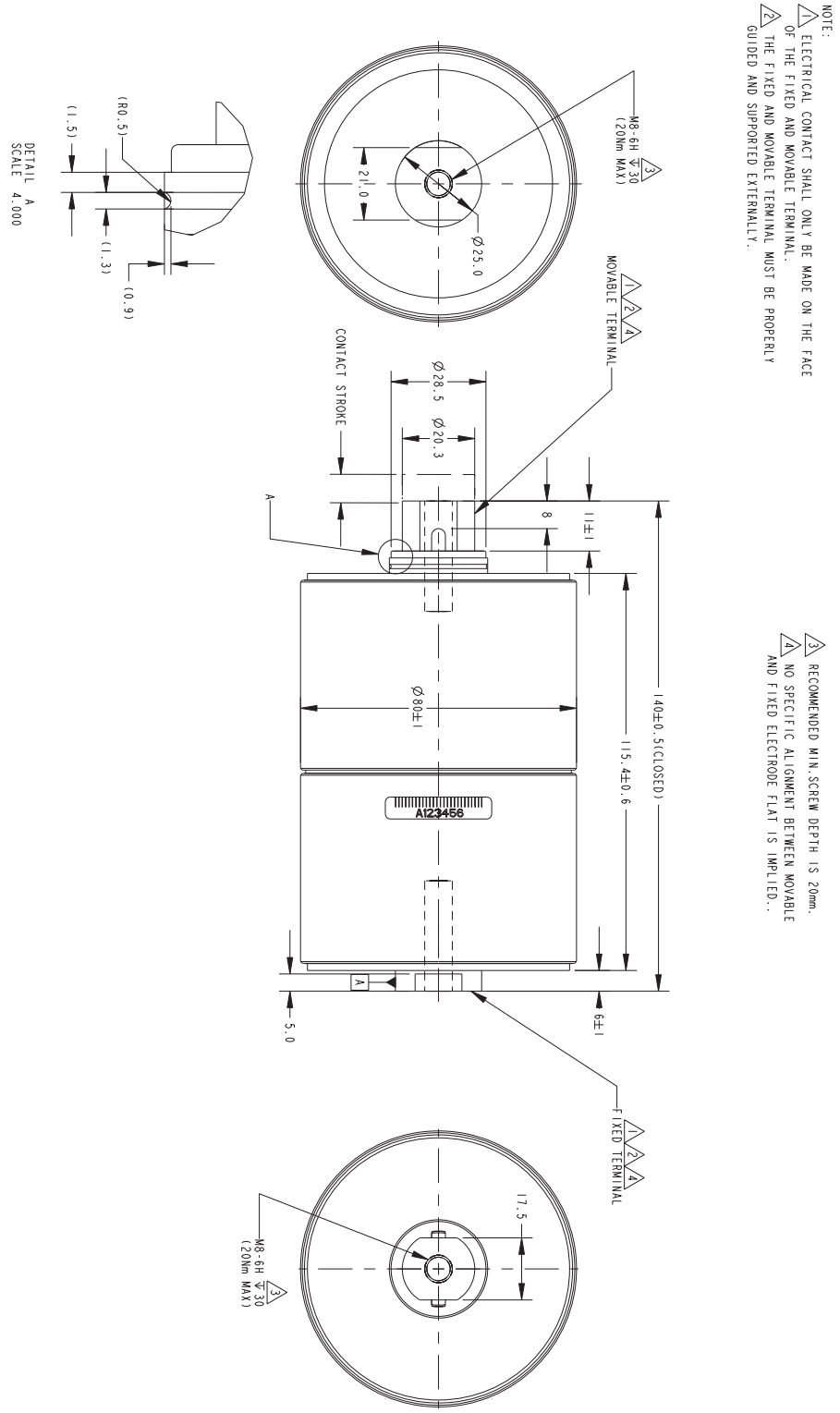
Life

Mechanical Life: @ snom	n	30,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required for application in atmosperic air;
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass (ma) is defined as the interrupter moving part weight (m m) plus any other equivalent component weight located between the interruper movable electrode and contact pressure spring. For optimum weld breaking efficiency the contact pressure spring should be located as close as possible to the movable electrode;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
7.) Meets or exceeds the electrical endurance requirement of a class E2 breaker for autoreclosing duty per IEC 62271 -100;

150-36193


NOTE:
1. ELECTRICAL CONTACT SHALL ONLY BE MADE ON THE FACE OF THE FIXED AND MOVABLE TERMINAL.
2. THE FIXED AND MOVABLE TERMINAL MUST BE PROPERLY GUIDED AND SUPPORTED EXTERNALLY.
3. RECOMMENDED MIN.SCREW DEPTH IS 20mm.
4. NO SPECIFIC ALIGNMENT BETWEEN MOVABLE AND FIXED ELECTRODE FLAT IS IMPLIED..
M8-6H ↧30 (20Nm MAX)
Ø25.0
21.0
MOVABLE TERMINAL
CONTACT STROKE
Ø28.5
Ø20.3
8
11±1
Ø80±1
140±0.5(CLOSED)
115.4±0.6
A123456
5.0
6±1
FIXED TERMINAL
17.5
M8-6H ↧30 (20Nm MAX)
DETAIL A
SCALE 4.000
(R0.5)
(1.5)
(1.3)
(0.9)

Interrupter, part #: WL-36193A

Application in circuit-breakers according to IEC 62271-100 [6.)]

Dimensional drawing: 150-36193A

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	24	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	50	kV_{rms} [3.)]
Rated Short-Duration Power-Frequency Withstand Voltage(in air)	fr	42	kV_{rms}
Rated Frequency	Up	50/60	Hz
Rated Impulse Withstand Voltage		125	kV_{peak} [3.)]
Rated Impulse Withstand Voltage (in air)	Ir	95	kV_{peak}
Rated Normal Current	Rc	630	A_{rms}
Contact Resistance: @1600N added contact force	Ik	<20	µΩ
Rated Short-Time withstand current	Ip	20	kA_{rms}
Rated peak withstand current	tk	50/52	kA_{peak}
Rated Duration of Short-Time current		3	s
Rated short-circuit breaking current	Isc	20	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	50/52	kA_{peak}

Mechanical data [4.)]:

Interrupter Weight, approx	minterrupter	1.4	kg
Moving Part Weight, approx	mmovable-part	0.3	kg
Contact Force from Atmospheric Pressure	Fa	75	N

Mechanical requirements:

Nominal Contact Stroke	snom	10±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.0-1.3	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.8-1.1	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required : @ Ip	FIp	1600	N

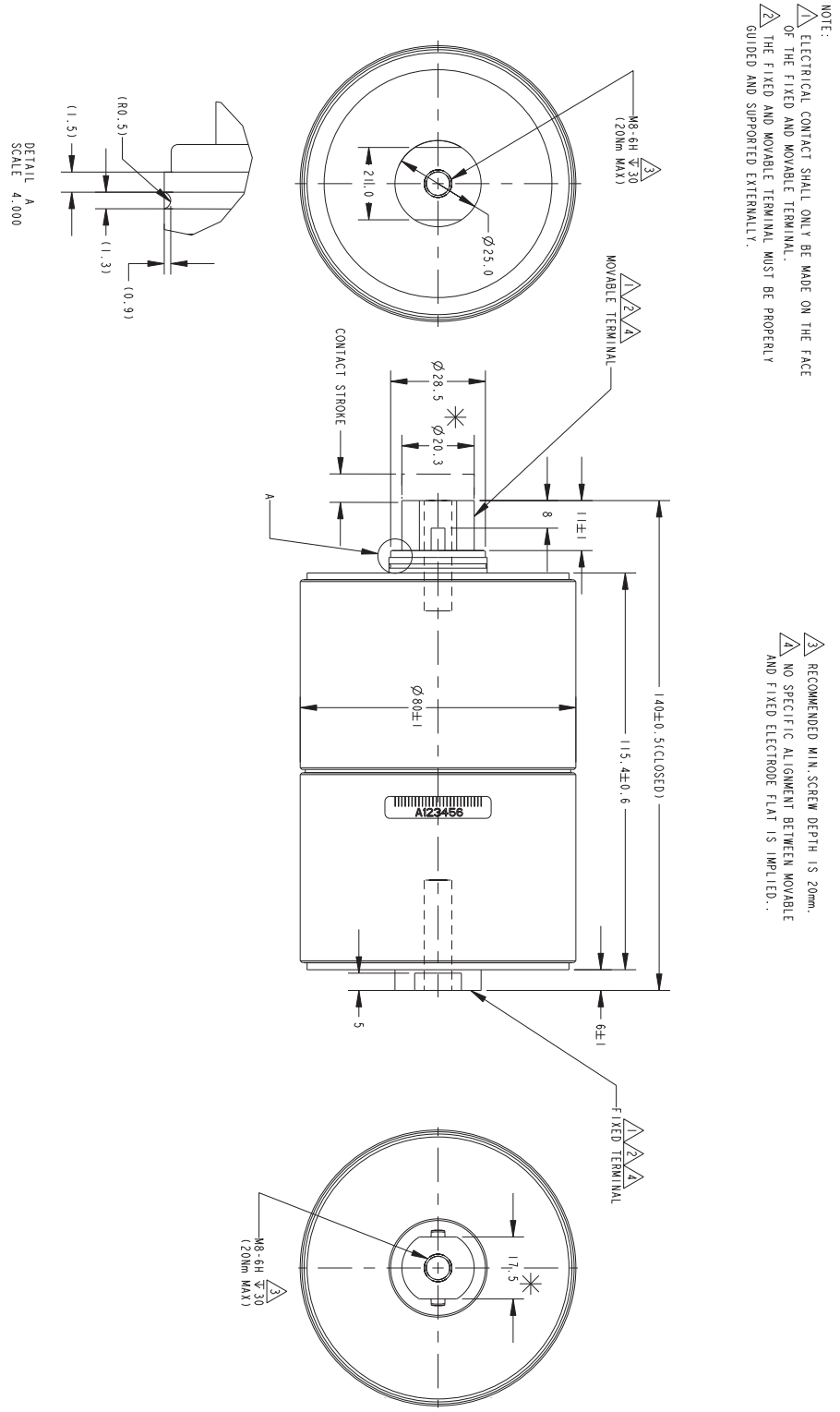
Life

Mechanical Life: @ snom	nmech.	30,000	operations
Contact Erosion Limit	derosion	3	mm
Shelf life (estimated) [5.)]		>30	years

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) External insulation required;
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) Harsh environmental conditions could impair estimated shelf life;
6.) Meets or exceeds the electrical endurance requirements of a class E2 for autoreclosing duty per IEC 62271-100.

150-36193A


NOTE:
1. ELECTRICAL CONTACT SHALL ONLY BE MADE ON THE FACE OF THE FIXED AND MOVABLE TERMINAL.
2. THE FIXED AND MOVABLE TERMINAL MUST BE PROPERLY GUIDED AND SUPPORTED EXTERNALLY.
3. RECOMMENDED MIN.SCREW DEPTH IS 20mm.
4. NO SPECIFIC ALIGNMENT BETWEEN MOVABLE AND FIXED ELECTRODE FLAT IS IMPLIED..
M8-6H ↧30 (20Nm MAX)
Ø25.0
21.0
MOVABLE TERMINAL
CONTACT STROKE
Ø28.5
Ø20.3
8
11±1
140±0.5(CLOSED)
115.4±0.6
Ø80±1
A123456
5
6±1
FIXED TERMINAL
17.5
DETAIL A
SCALE 4.000
(1.5)
(R0.5)
(1.3)
(0.9)

Interrupter, Part #: WL-41915

Application in circuit-breakers according to IEC62271-100 [5.)]

Dimensional drawing: 150-41915

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	Ur	12	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	28	kV_{rms}
Rated Frequency	fr	50/60	Hz
Rated Impulse Withstand Voltage	Up	75	kV_{peak}
Rated Normal Current	Ir	1250	A_{rms}
Contact Resistance: @2200N added contact force	Rc	<20	µΩ
Rated Short-Time withstand current	Ik	25	kA_{rms}
Rated peak withstand current	Ip	63	kA_{peak}
Rated Duration of Short-Time current	tk	3	s
Rated short-circuit breaking current	Isc	25	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	63	kA_{peak}
Rated cable-charging breaking current	Icable	25	A_{rms}

Mechanical data :

Interrupter Weight, approx	minterrupter	2.3	kg
Moving Part Weight, approx	mmovable-part	0.9	kg
Contact Force from Atmospheric Pressure	Fa	110	N

Mechanical requirements [3.)]:

Nominal Contact Stroke	snom	8.5±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.1-1.3	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.8-1.1	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required, Minimum @ Ip	FIp	2200	N

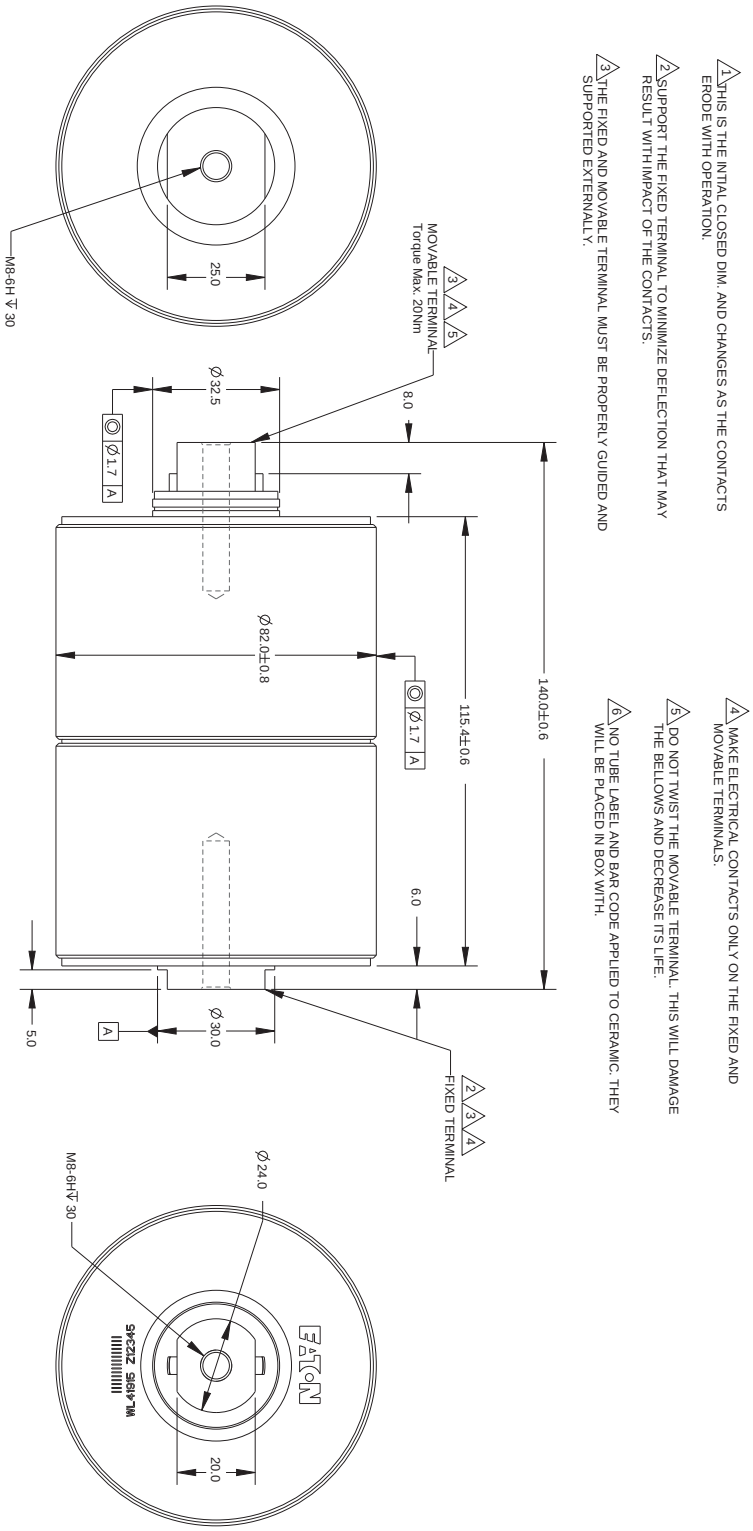
Life

Mechanical Life: @ snom	nmech.	30,000	operations
Contact Erosion Limit	derosion	3	mm
Shelf or storage life		20	years [4.)]
Average chopping current		3.5	A_{peak}

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) The VI is pre-compacted, no additional compaction due to mechanical operation;
4.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
5.) Meets or exceeds the electrical endurance reqiurement of a class E2 for autoreclosing duty per IEC 62271-100.

150-41915


1 THIS IS THE INTIAL CLOSED DIM. AND CHANGES AS THE CONTACTS ERODE WITH OPERATION.
2 SUPPORT THE FIXED TERMINAL TO MINIMIZE DEFLECTION THAT MAY RESULT WITH IMPACT OF THE CONTACTS.
3 THE FIXED AND MOVABLE TERMINAL MUST BE PROPERLY GUIDED AND SUPPORTED EXTERNALLY.
4 MAKE ELECTRICAL CONTACTS ONLY ON THE FIXED AND MOVABLE TERMINALS.
5 DO NOT TWIST THE MOVABLE TERMINAL. THIS WILL DAMAGE THE BELLOWS AND DECREASE ITS LIFE.
6 NO TUBE LABEL AND BAR CODE APPLIED TO CERAMIC. THEY WILL BE PLACED IN BOX WITH.
M8-6H ↧ 30
25.0
MOVABLE TERMINAL
Torque Max. 20Nm
3 4 5
8.0
Ø 32.5
Ø 1.7 A
Ø 82.0±0.8
115.4±0.6
140.0±0.6
6.0
5.0
A
Ø 30.0
FIXED TERMINAL
2 3 4
M8-6H↧ 30
Ø 24.0
WL-41915 212345
20.0

Interrupter, Part #: WL-41908

Application in circuit-breakers according to IEC62271-100 [5.]

Dimensional drawing: 150-41908

Electrical Ratings [1.], 3-Phase Symmetrical Rating

Rated Voltage	Ur	17.5	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	38	kV_{rms}
Rated Frequency	fr	50	Hz
Rated Impulse Withstand Voltage[2.]	Up	95	kV_{peak}
Rated Normal Current	Ir	1250	A_{rms}
Contact Resistance: @2800N added contact force	Rc	<20	µΩ
Rated short-circuit breaking current	Isc	31.5	kA_{rms}
Percentage DC.-component	%dc	40	%
Rated short-circuit making current	Imc	80	kA_{peak}
Rated Short-Time withstand current	Ik	31.5	kA_{rms}
Rated peak withstand current	Ip	80	kA_{peak}
Rated Duration of Short-Time current	tk	3	s
Rated cable-charging breaking current	Icable	31.5	A_{rms}

Mechanical data :

Interrupter Weight, approx.	minterrupter	2.6	kg
Moving Part Weight, approx.	mmovable-part	0.8	kg
Contact Force from Atmospheric Pressure	Fa	110	N

Mechanical requirements [3.]:

Nominal Contact Stroke	snom	8.5±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.1-1.3	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.8-1.1	m/s
Contact Bounce Duration, Max.	tbounce	2	ms
Added Contact Force Required, Minimum @ Ip	Flp	2800	N

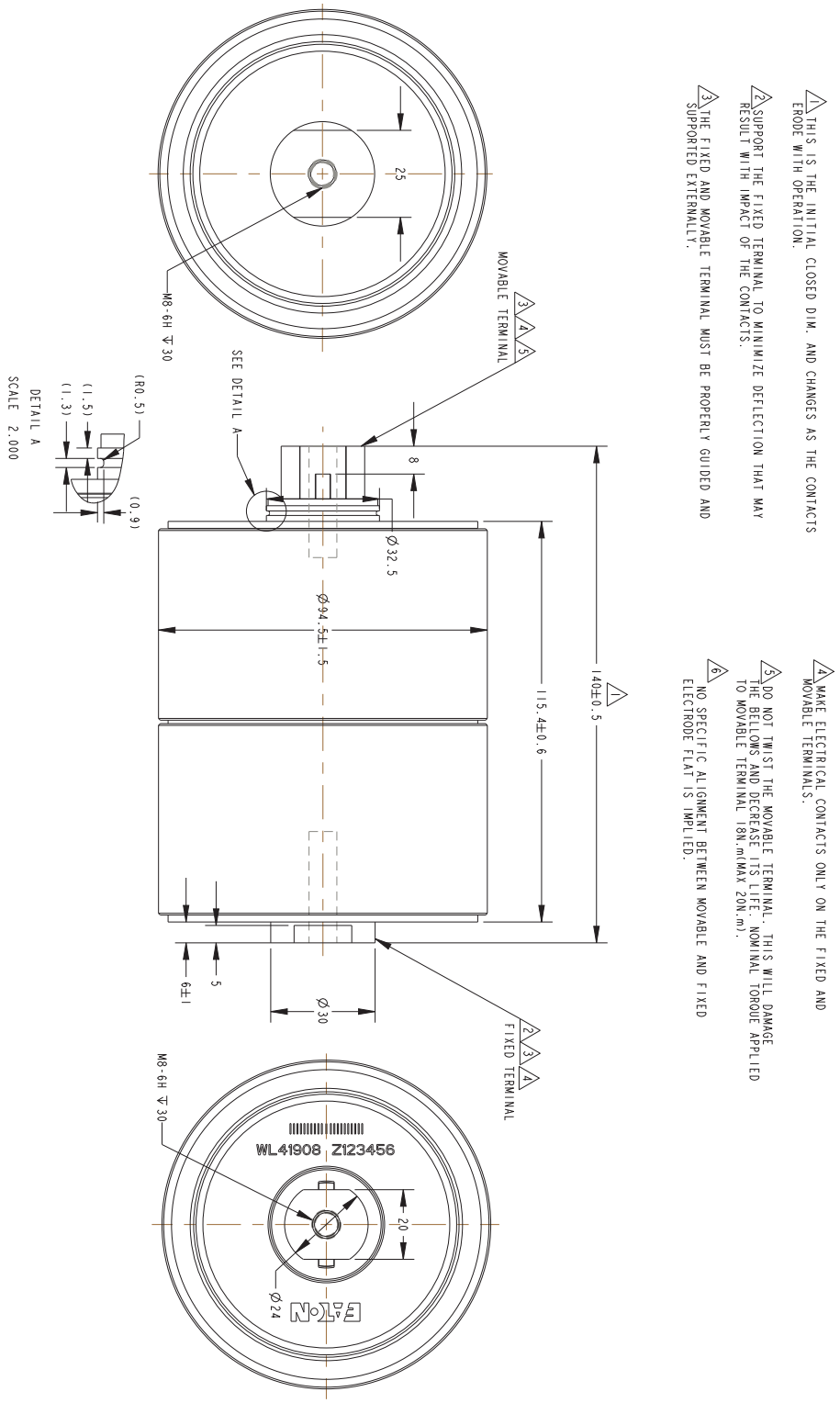
Life

Mechanical Life: @ snom	nmech.	30,000	operations
Contact Erosion Limit	derosion	3	mm
Shelf or storage life[4.]		20	years
Average chopping current		3.5	A_{peak}

Notes:

1.) All ratings must be fully verified by customer test;Ratings at nominal contact stroke;
2.) Extra external insulation is required for application in air;
3.) The VI is pre-compacted, no additional compaction due to mechanical operation;
4.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;
5.) Meets or exceeds the electrical endurance reqiurement of a class E2 for autoreclosing duty per IEC 62271-100.

150-41908


1 THIS IS THE INITIAL CLOSED DIM. AND CHANGES AS THE CONTACTS ERODE WITH OPERATION.
2 SUPPORT THE FIXED TERMINAL TO MINIMIZE DEFLECTION THAT MAY RESULT WITH IMPACT OF THE CONTACTS.
3 THE FIXED AND MOVABLE TERMINAL MUST BE PROPERLY GUIDED AND SUPPORTED EXTERNALLY.
4 MAKE ELECTRICAL CONTACTS ONLY ON THE FIXED AND MOVABLE TERMINALS.
5 DO NOT TWIST THE MOVABLE TERMINAL. THIS WILL DAMAGE THE BELLOWS AND DECREASE ITS LIFE. NOMINAL TORQUE APPLIED TO MOVABLE TERMINAL 18N.m MAX 20N.m).
6 NO SPECIFIC ALIGNMENT BETWEEN MOVABLE AND FIXED ELECTRODE FLAT IS IMPLIED.
25
M8-6H ↧ 30
MOVABLE TERMINAL
SEE DETAIL A
8
Ø 32.5
Ø 94.5±1.5
140±0.5
115.4±0.6
6±1
5
Ø 30
FIXED TERMINAL
M8-6H ↧ 30
WL41908 Z123456
20
Ø 24
EATON
DETAIL A
SCALE 2.000
(R0.5)
(1.5)
(1.3)
(0.9)

Interrupter, Part #: WL-41908A

Application in circuit-breakers according to IEC62271-100

Dimensional drawing: 150-41908A

Electrical Ratings [1.], 3-Phase Symmetrical Rating

Rated Voltage	Ur	24	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	Ud	50	kV_{rms} [2.]
Rated Frequency	fr	50	Hz
Rated Impulse Withstand Voltage	Up	125	kV_{peak} [2.]
Rated Normal Current	Ir	1250	A_{rms}
Contact Resistance: @2200N added contact force	Rc	<20	µΩ
Rated Short-Time withstand current	Ik	25	kA_{rms}
Rated peak withstand current	Ip	62	kA_{peak}
Rated Duration of Short-Time current	tk	3	s
Rated short-circuit breaking current	Isc	25	kA_{rms}
Percentage d.c.-component	%dc	40	%
Rated short-circuit making current	Imc	63	kA_{peak}
Rated cable-charging breaking current	Icable	31.5	A_{rms}

Mechanical data :

Interrupter Weight, approx	minterrupter	2.6	kg
Moving Part Weight, approx	mmovable-part	0.8	kg
Contact Force from Atmospheric Pressure	Fa	110	N

Mechanical requirements [3.]:

Nominal Contact Stroke	snom	10.0±1.0	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.1-1.3	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.8-1.1	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required, Minimum @ Ip	FIp	2200	N

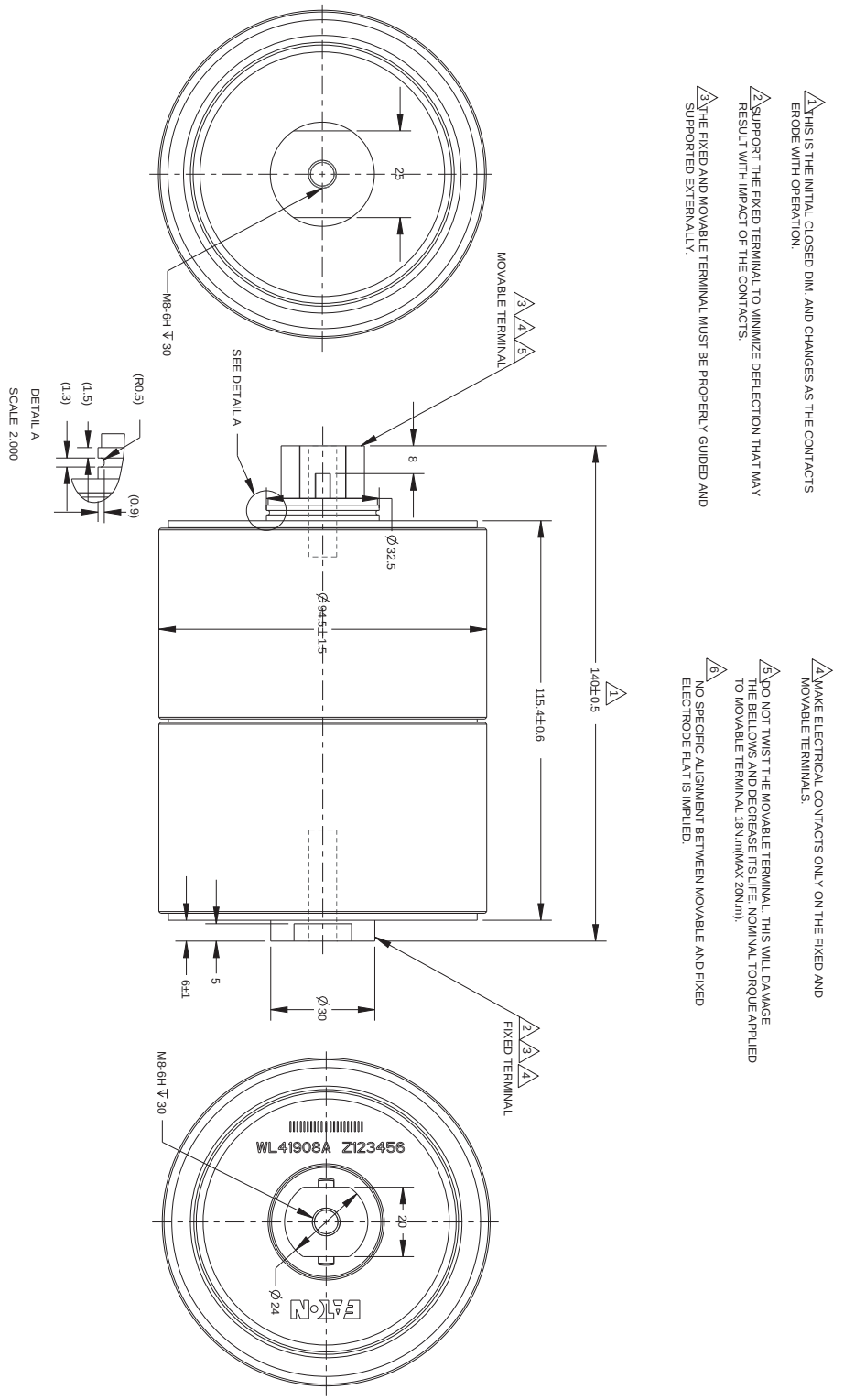
Life

Mechanical Life: @ snom	nmech.	30,000	operations
Contact Erosion Limit	derosion	3	mm
Shelf life (estimated)[4.]		>30	years

Notes:

1.) All ratings must be fully verified by customer test;Ratings at nominal contact stroke;
2.) External insulation required for application in air;
3.) The VI is pre-compacted, no additional compaction due to mechanical operation;
4.) Harsh environmental conditions could impair estimated shelf life.

150-41908A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3 THE FIXED AND MOVABLE TERMINAL MUST BE PROPERLY GUIDED AND SUPPORTED EXTERNALLY.
4 MAKE ELECTRICAL CONTACTS ONLY ON THE FIXED AND MOVABLE TERMINALS.
5 DO NOT TWIST THE MOVABLE TERMINAL. THIS WILL DAMAGE THE BELLOWS AND DECREASE ITS LIFE. NOMINAL TORQUE APPLIED TO MOVABLE TERMINAL 18N.m(MAX 20N.m).
6 NO SPECIFIC ALIGNMENT BETWEEN MOVABLE AND FIXED ELECTRODE FLAT IS IMPLIED.
M8-6H ↧ 30
25
MOVABLE TERMINAL
SEE DETAIL A
8
Ø 32.5
Ø 94.5±1.5
140±0.5
115.4±0.6
6±1
5
Ø 30
FIXED TERMINAL
M8-6H ↧ 30
WL41908A Z123456
20
Ø 24
DETAIL A
SCALE 2.000
(R0.5)
(1.5)
(1.3)
(0.9)

Interrupter, part #: WL-39080 [3.)]

Application in load-break switches according to IEC 62271-103

Dimensional drawing: 150-39080

Electrical Ratings [1., 2.)], 3-Phase Symmetrical Rating

Rated Voltage	U_r	17.5	kV_{rms}
Rated Power-Frequency Withstand Voltage	U_d	38	kV_{rms}
Rated Lighting Impulse Withstand Voltage	U_p	95	kV_{peak}
Rated Frequency	f_r	50/60	Hz
Rated Normal Current	I_r	630	A_{rms}
Maximum Symmetrical Interrupting Current	I_m	2500	A_{rms}
Rated Short-Time Withstand Current	I_k	25	kA_{rms}
Rated Duration of Short Circuit	t_k	3	s
Rated Peak Withstand Current	I_p	65	kA_{peak}
Rated Short-Circuit Making Current	I_{ma}	25	kA_{rms}
Rated Mainly Active Load-Breaking Current	I_{load}	630	A_{rms}
Rated Closed-Loop Breaking Current	I_{loop}	630	A_{rms}
Rated Cable-Charging Breaking Current	I_{cc}	31.5	A_{rms}
Rated Line-Charging Breaking Current	I_{lc}	10	A_{rms}
Rated Single Capacitor Bank Breaking Current	I_{sb}	400	A_{rms}
Rated Back-to-Back Capacitor Bank Breaking Current	I_{bb}	400	A_{rms}
Rated Earth-Fault Breaking Current	I_{ef1}	260	A_{rms}
Rated Cable-and Line-Charging Breaking Current under Earth-Fault Conditions	I_{ef2}	55	A_{rms}

Interrupter data [4.)]:

Contact Resistance: @ 2200N Added Contact Force	Rc	<15	µΩ
Interrupter Weight	m	0.95	kg
Moving Part Weight	mm	0.4	kg
Contact Force from Atmospheric Pressure	Fa	75	N

Mechanical requirements:

(Nominal) Contact Stroke	s	9.5±0.5	mm
Wipe Distance, Minimum	w	4	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.0-1.4	m/s
Initial opening Speed, Average over first 2ms, Min.	vi	1.0	m/s
Overshoot During Opening, Max.	do	1	mm
Rebound During Opening, Max.	dr	2	mm
Closing Speed, Average of Last 25% of Nominal Stroke	vc	1.0-1.2	m/s
Contact Bounce Duration, Max.	tb	1	ms
Added Contact Force Required : @ Ip	Flp	2200	N
Weight of Mechanism Moving Part (Unattached Mass)	mu	>2.ma	kg/phase [5.)]

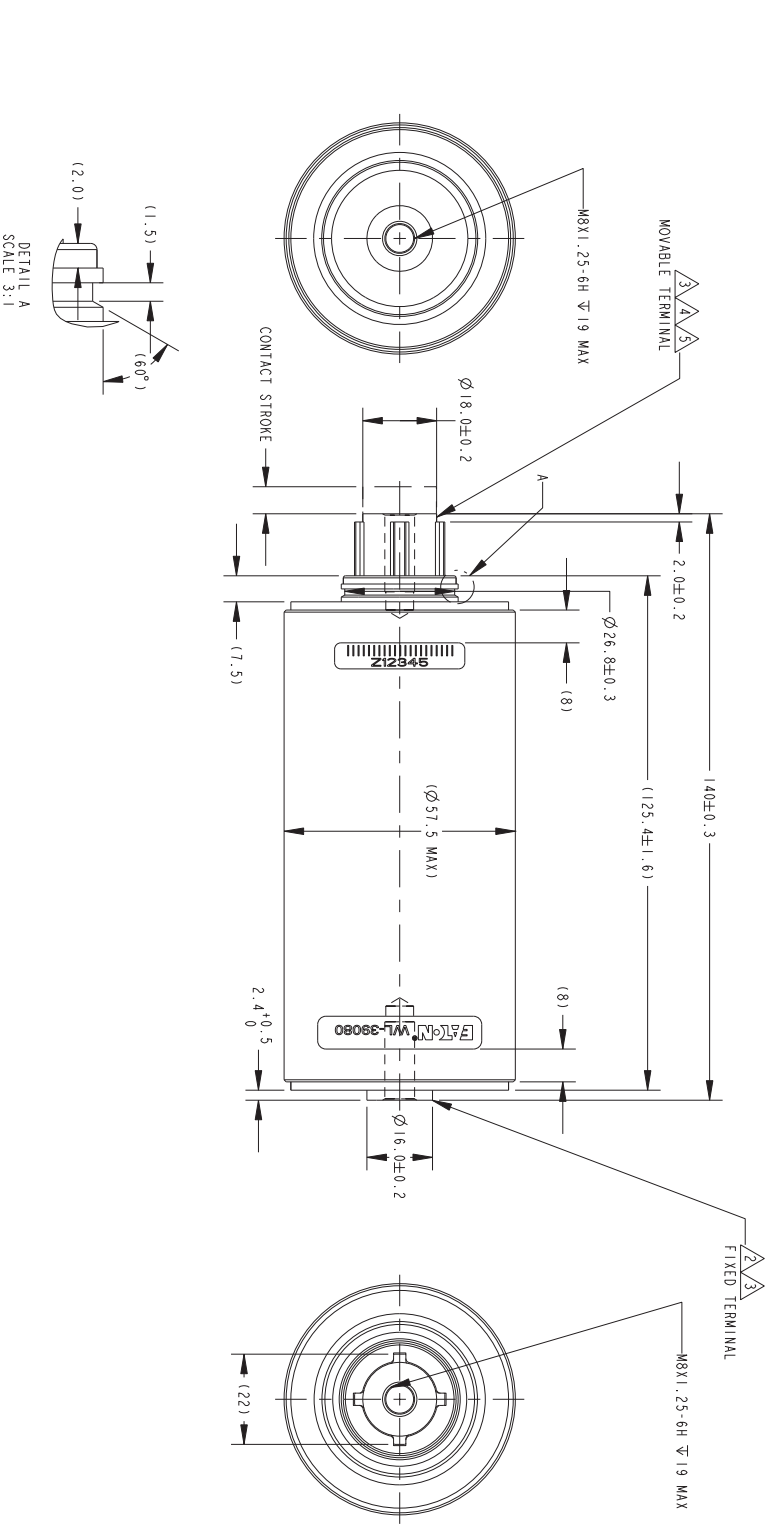
Life

Mechanical Life: @ snom	n	30,000	Ops
Contact Erosion Limit	e	3	mm
Storage Life		20	years [6.)]

Notes:

1.) All ratings must be fully verified by customer test;
2.) Ratings at nominal contact stroke;
3.) Meets or exceeds the requirements of a application in class E3 load-break switches per IEC 62271-103;
4.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
5.) The attached mass(ma) is defined as the interrupter moving part weeight (mm) plus any other equivalent component weigt located between the interruper movable electrode and contact pressure spring;
6.) Duration starting from the manufacturing date, provided that the vacuum interrupter is stored in a dry, clean environment at room temperature away from direct sunlight in the original packing material, at the end of which the product is still suitable for use;

150-39080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5 MOVABLE ELECTRODE MUST BE GUIDED EXTERNALLY SO AS TO KEEP ITS OUTER TIP FROM FALLING MORE THAT 0.76 OFF CENTER LINE OF MOUNTING FLANGE.
M8X1.25-6H ↧19 MAX
3 4 5 MOVABLE TERMINAL
CONTACT STROKE
Ø18.0±0.2
A
2.0±0.2
Ø26.8±0.3
(8)
(7.5)
Z12345
(Ø57.5 MAX)
140±0.3
(125.4±1.6)
(8)
2.4 +0.5 0
Eaton WL-39080
Ø16.0±0.2
2 3 FIXED TERMINAL
M8X1.25-6H ↧19 MAX
(22)
DETAIL A
SCALE 3:1
(2.0)
(1.5)
(60°)

Interrupter, Part #: WL-41090

Application in Load Break Switch according to IEC60265-1

Dimensional drawing: 150-41090

Electrical Ratings [1.], 3-Phase Symmetrical Rating

Rated Voltage	U_r	12	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	U_d	28	kV_{rms}
Rated Frequency	f_r	50	Hz
Rated Impulse Withstand Voltage	U_p	75	kV_{peak}
Rated Normal Current	I_r	630	A_{rms}
Contact Resistance: @1500N added contact force	R_c	<20	µΩ
Rated Short-Time withstand current	I_k	20	kA_{rms}
Rated peak withstand current	I_p	51	kA_{peak}
Rated Duration of Short-Time current	t_k	3	s
Rated maximum symmetrical interrupting current	$I_{interrupting}$	2500	A_{rms}
Rated short-circuit making current	I_{mc}	51	kA_{peak}
Rated cable-charging breaking current	I_{4a}	10	A_{rms}
Rated single capacitor bank breaking current	I_{4c}	400	A_{rms}
Rated earth fault breaking current	I_{6a}	260	A_{rms}
Rated cable and line-charging breaking current under earth-fault conditions	I_{6b}	55	A_{rms}

Mechanical data [2.]:

Interrupter Weight, approx	minterrupter	0.75	kg
Moving Part Weight, approx	mmovable-part	0.35	kg
Contact Force from Atmospheric Pressure	Fa	75	N

Mechanical requirements:

Nominal Contact Stroke	snom	7±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.0-1.3	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.9-1.2	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required, Minimum @ Ip	FIp	1500	N

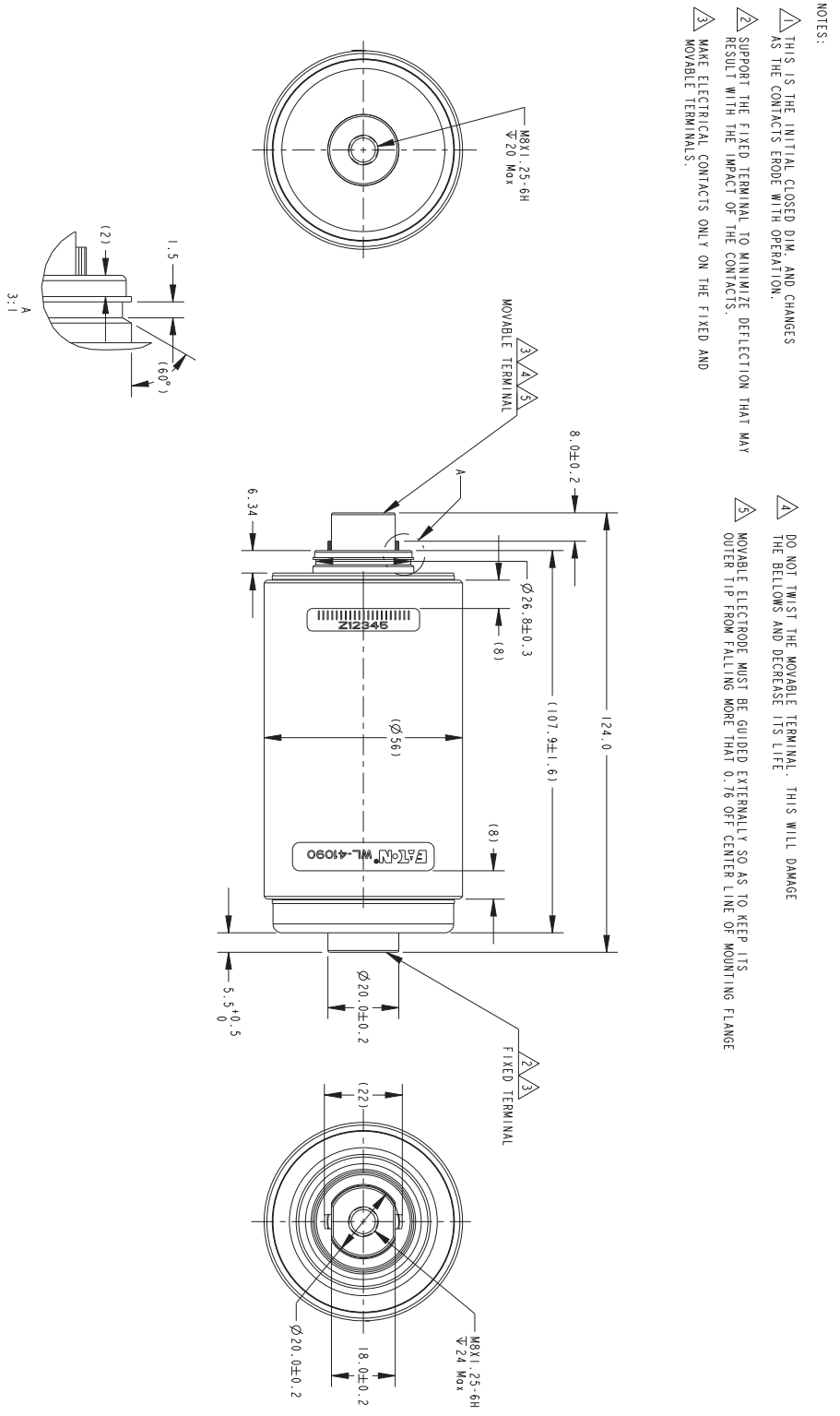
Life

Mechanical Life: @ snom	nmech.	30,000	operations
Contact Erosion Limit	derosion	3	mm
Service life (estimated) [3.]		>30	years

Notes:

1.) Ratings at nominal contact stroke, All ratings must be fully verified by customer test;
2.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
3.) Harsh environmental conditions could impair estimated service life.

150-41090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5 MOVABLE ELECTRODE MUST BE GUIDED EXTERNALLY SO AS TO KEEP ITS OUTER TIP FROM FALLING MORE THAT 0.76 OFF CENTER LINE OF MOUNTING FLANGE
M8X1.25-6H ↧20 Max
MOVABLE TERMINAL
FIXED TERMINAL
8.0±0.2
6.34
Ø26.8±0.3
(8)
(Ø56)
(107.9±1.6)
124.0
(8)
Z12345
EATON WL-41090
Ø20.0±0.2
5.5 +0.5 0
(22)
Ø20.0±0.2
18.0±0.2
M8X1.25-6H ↧24 Max
1.5
(2)
(60°)
A
3:1

Interrupter, Part #: WL-41092

Application in Load Break Switch according to IEC60265-1

Dimensional drawing: 150-41092

Electrical Ratings [1.], 3-Phase Symmetrical Rating

Rated Voltage	U_r	24	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage[2.]	U_d	50	kV_{rms}
Rated Frequency	f_r	50	Hz
Rated Impulse Withstand Voltage[2.]	U_p	125	kV_{peak}
Rated Normal Current	I_r	630	A_{rms}
Contact Resistance: @1500N added contact force	R_c	<20	μΩ
Rated Short-Time withstand current	I_k	20	kA_{rms}
Rated peak withstand current	I_p	51	kA_{peak}
Rated Duration of Short-Time current	t_k	3	s
Rated maximum symmetrical interrupting current	$I_{interrupting}$	2500	A_{rms}
Rated short-circuit making current	I_{mc}	51	kA_{peak}
Rated cable-charging breaking current	I_{4a}	31.5	A_{rms}
Rated single capacitor bank breaking current	I_{4c}	400	A_{rms}
Rated earth fault breaking current	I_{6a}	260	A_{rms}
Rated cable and line-charging breaking current under earth-fault conditions	I_{6b}	55	A_{rms}

Mechanical data [3.]:

Interrupter Weight, approx	minterrupter	0.95	kg
Moving Part Weight, approx	mmovable-part	0.4	kg
Contact Force from Atmospheric Pressure	Fa	75	N

Mechanical requirements:

Nominal Contact Stroke	snom	9.5±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.0-1.3	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.9-1.2	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required, Minimum @ Ip	FIp	1500	N

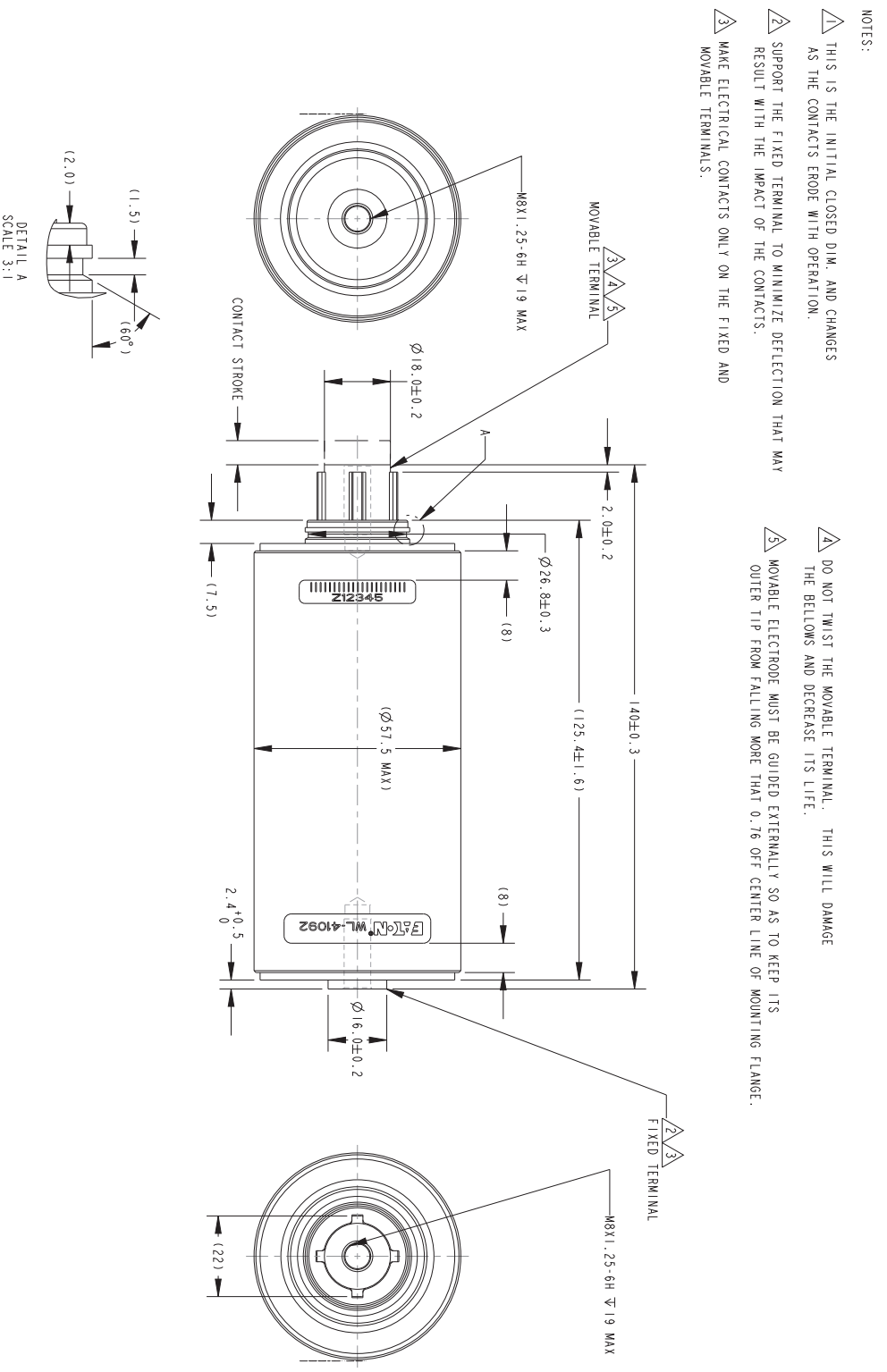
Life

Mechanical Life: @ snom	nmech.	30,000	operations
Contact Erosion Limit	derosion	3	mm
Service life (estimated) [4.]		>30	years

Notes:

1.) Ratings at nominal contact stroke, All ratings must be fully verified by customer test;
2.) External insulation is required;
3.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
4.) Harsh environmental conditions could impair estimated service life.

150-41092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M8X1.25-6H ∓ 19 MAX
3 4 5 MOVABLE TERMINAL
CONTACT STROKE
Ø18.0±0.2
A
2.0±0.2
Ø26.8±0.3
(8)
(7.5)
Z12345
140±0.3
(125.4±1.6)
(Ø57.5 MAX)
(8)
2.4 +0.5 0
EATON WL-41092
Ø16.0±0.2
2 3 FIXED TERMINAL
M8X1.25-6H ∓ 19 MAX
(22)
(2.0)
(1.5)
(60°)
DETAIL A
SCALE 3:1

Interrupter, Part #: WL-41093

Application in Load Break Switch according to IEC60265-1

Dimensional drawing: 150-41093

Electrical Ratings [1.], 3-Phase Symmetrical Rating

Rated Voltage	U_r	36	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage[2.]	U_d	60	kV_{rms}
Rated Frequency	f_r	50	Hz
Rated Impulse Withstand Voltage[2.]	U_p	170	kV_{peak}
Rated Normal Current	I_r	630	A_{rms}
Contact Resistance: @1500N added contact force	R_c	<20	μΩ
Rated Short-Time withstand current	I_k	20	kA_{rms}
Rated peak withstand current	I_p	51	kA_{peak}
Rated Duration of Short-Time current	t_k	3	s
Rated maximum symmetrical interrupting current	$I_{interrupting}$	2500	A_{rms}
Rated short-circuit making current	I_{mc}	51	kA_{peak}
Rated cable-charging breaking current	I_{4a}	20	A_{rms}
Rated single capacitor bank breaking current	I_{4c}	400	A_{rms}
Rated earth fault breaking current	I_{6a}	260	A_{rms}
Rated cable and line-charging breaking current under earth-fault conditions	I_{6b}	55	A_{rms}

Mechanical data [3.]:

Interrupter Weight, approx	minterrupter	1.3	kg
Moving Part Weight, approx	mmovable-part	0.4	kg
Contact Force from Atmospheric Pressure	Fa	75	N

Mechanical requirements:

Nominal Contact Stroke	snom	14±0.5	mm
Opening Speed, Average to 75% of nominal stroke	vo	1.6-2.0	m/s
Maximum Allowed Overtravel During Opening	dovertravel	1	mm
Maximum Allowed Rebounce During Opening	drebounce	2	mm
Closing Speed, Average of Last 25% of nominal stroke	vc	0.4-1.6	m/s
Contact Bounce Duration, Max	tbounce	2	ms
Added Contact Force Required, Minimum @ Ip	FIp	1500	N

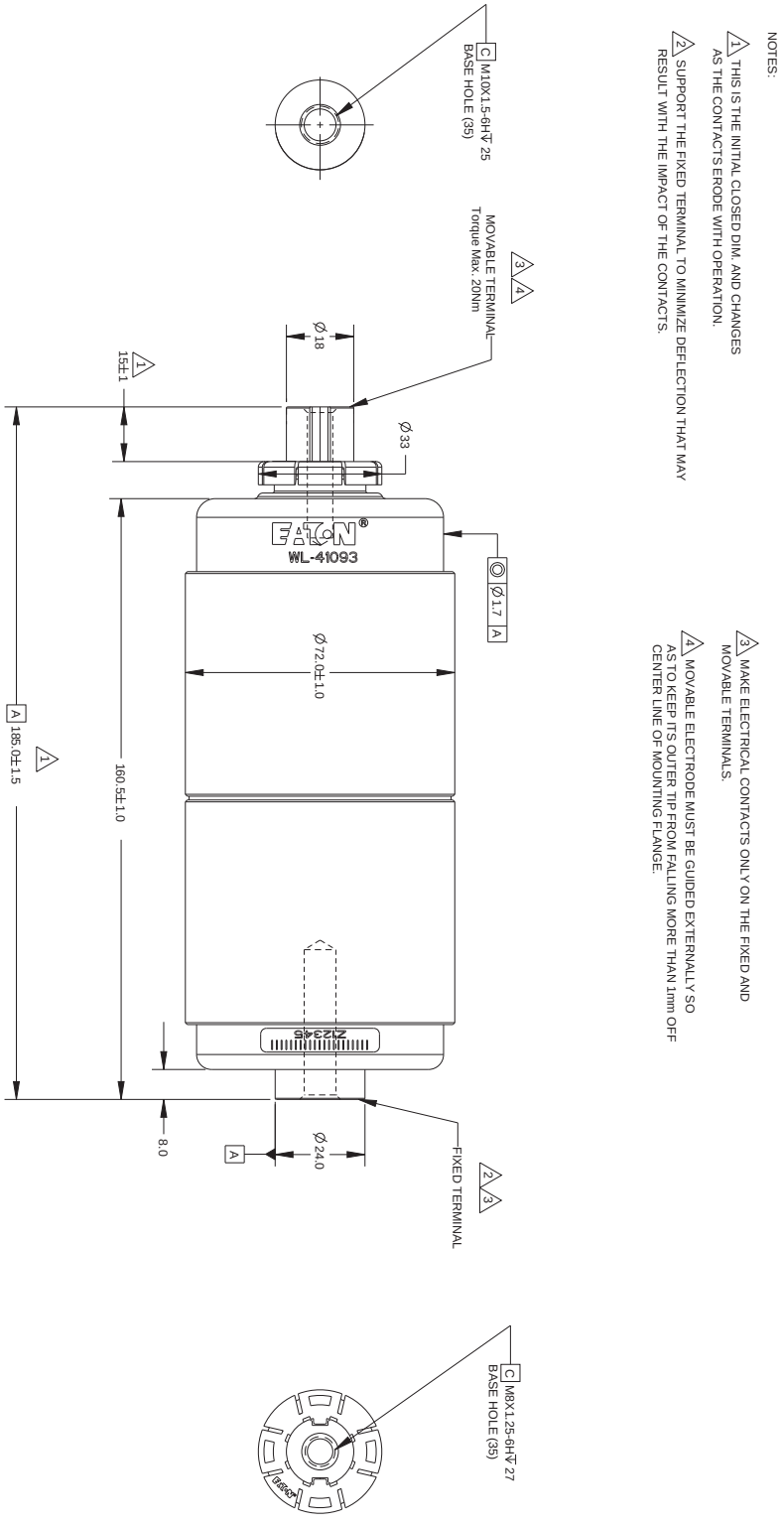
Life

Mechanical Life: @ snom	nmech.	30,000	operations
Contact Erosion Limit	derosion	3	mm
Service life (estimated) [4.]		>30	years

Notes:

1.) Ratings at nominal contact stroke, All ratings must be fully verified by customer test;
2.) External insulation is required;
3.) Interrupter is pre-compacted. No additional compaction due to mechanical operation;
4.) Harsh environmental conditions could impair estimated service life.

150-41093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C M10X1.5-6H↧ 25 BASE HOLE (35)
MOVABLE TERMINAL Torque Max. 20Nm
3 4
Ø 18
1 15±1
Ø 33
EATON®
WL-41093
Ø 1.7 A
Ø 72.0±1.0
A 185.0±1.5
1
160.5±1.0
Z12345
8.0
A
Ø 24.0
FIXED TERMINAL
2 3
C M8X1.25-6H↧ 27 BASE HOLE (35)

Interrupter, Part #: WL-41909

Application in Contactor according to IEC 60470 and 60694 and UL347

Dimensional drawing: 150-41909

Voltage Ratings at Rated Contact Stroke

Rated Frequency	f_r	50/60	Hz
Rated Voltage	U_r	12	kV_{rms}
Rated Short-Duration Power-Frequency Withstand Voltage	U_d	28	kV_{rms}
Rated lightning Impulse Withstand Voltage [1.]	U_p	NA	kV_{peak}

Current Ratings

Rated Continuous Current	I_n	400	A_{rms}
Rated short-circuit breaking current	I_{sc}	4	kA_{rms}
Rated Maximum Making current (symmetrical)-10 times rated	$I_{sc,\ make}$	4	kA_{rms}
Rated Short-Time withstand current (symmetrical)-15 times rated	$I_{sc,\ STC\ 15X}$	6	kA_{rms}
Rated Duration of Short-Time current	$t_{k,\ STC\ 15X}$	1	s
Rated peak withstand current (At required added contact force)	I_p	15	kA_{peak}
Rated Short-Time withstand current (symmetrical)-6 times rated	$I_{sc,\ STC\ 6X}$	2.4	kA_{rms}
Rated Duration of Short-Time current	$t_{k,\ STC\ 6X}$	30	s

Mechanical Data

Interrupter Weight	$m_{interrupter}$	0.52	kg
Moving Part Weight	$m_{movable\text{-}part}$	0.2	kg
Contact Force from Atmospheric Pressure	F_a	88	N

Mechanical Requirements

Contact Stroke[2.]	S_{now}	55±0.5	mm
Opening Speed, Average to 75% of rated stroke	v_o	0.6	m/s
Overtravel During Opening, Maximum	$d_{overtravel}$	1	mm
Rebounce During Opening, Maximum	$d_{rebounce}$	1	mm
Closing Speed, Average of Last 33% of rated stroke	v_c	0.3	m/s
Contact Bounce Duration, Maximum, Contact touch to end of bouncing	t_{bounce}	2	ms
Minimum Added Contact Force for peak withstand current	F_{lp}	358	N

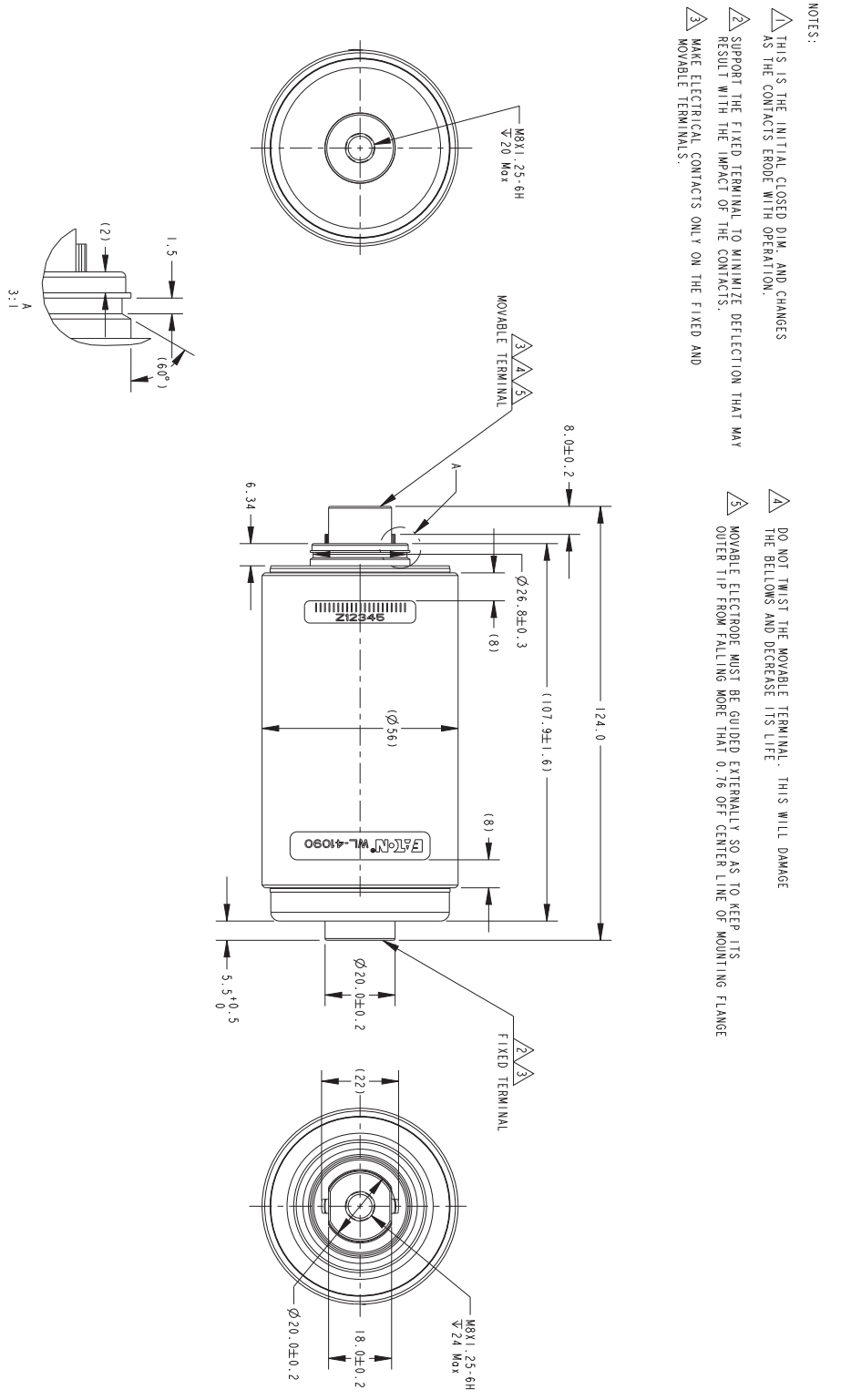
Life

Mechanical Life at required contact stroke and operating sppeeds	n_{mech}	1,000,000	Operations
Electrical life at rated normal current	$n_{emech.}$	250,000	Operations
Contact Erosion Limit	$d_{erosion}$	2	mm

Notes:

1.) The full rated lightning impulse withstand voltage is not required across the contacts of the open vaccum interrupter.
2.) Exceeding a total stroke of 7 MM will severely reduce mechanical life.

150-41909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M8X1.25-6H ↧20 Max
MOVABLE TERMINAL
8.0±0.2
6.34
Ø26.8±0.3
(8)
Z12345
(Ø56)
(107.9±1.6)
124.0
EATON WL-41090
(8)
Ø20.0±0.2
5.5 +0.5 0
FIXED TERMINAL
(22)
Ø20.0±0.2
18.0±0.2
M8X1.25-6H ↧24 Max
A
3:1
(2)
1.5
(60°)

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